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Fertility, Living Arrangements, Care and Mobility

Understanding Population Trends
and Processes – Volume 1

 Springer

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Understanding Population Trends and Processes

Volume 1

Series Editor

J. Stillwell

In western Europe and other developed parts of the world, there are some very significant demographic processes taking place at the individual, household, community and national scales including the ageing of the population, the delay in childbearing, the rise in childlessness, the increase in divorce, the fall in marriage rates, the increase in cohabitation, the increase in mixed marriages, the change in household structures, the rise in step-parenting, and the appearance of new streams of migration taking place both within and between countries. The relationships between demographic change, international migration, labour and housing market dynamics, care provision and intergenerational attitudes are complex to understand and yet it is vital to quantify the trends and to understand the processes. Similarly, it is critical to appreciate what the policy consequences are for the trends and processes that have become apparent. This series has its roots in understanding and analyzing these trends and processes.

This series will be of interest to a wide range of individuals with interests in demographic and social change, including demographers, population geographers, sociologists, economists, political scientists, epidemiologists and health researchers and well as practitioners and commentators across the social sciences.

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Fertility, Living Arrangements, Care and Mobility

Understanding Population Trends
and Processes - Volume 1

Edited by

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Foreword

One of the great undertapped sources of social science research has been the plethora of data from wonderful surveys and censuses, available for secondary analysis through the Economic and Social Data Service or elsewhere, which do not receive the rich and thorough analysis they deserve.

The Economic and Social Research Council (ESRC) has attempted to address this in two ways: through a sustained programme of methods development led by the National Centre for Research Methods and by developing the capacity of social scientists to undertake the secondary analysis of large data sets. This book contains a series of essays from some of the researchers on the very successful ‘Understanding Population Trends and Processes’ (UPTAP) scheme.

These essays are on linked themes of fertility, living arrangements, care and mobility which are central to one of ESRC’s key priorities. As UK society becomes ever more diverse, understanding the seismic changes occurring in the UK population has become increasingly more important and the need to develop policy responses has become more urgent. This excellent book provides some exciting and thoughtful insights into some important areas of both research and policy formation.

Finally I would like to thank John Stillwell, who has directed the programme with alacrity and drive for all his work, not only in the programme but, with Ernestina Coast and Dylan Kneale, on the production of this excellent volume, the first of a series on Understanding Population Trends and Processes.

Swindon
September 2008

Ian Diamond

Preface

The world is changing rapidly and population dynamics are a hugely important dimension of global transformation. Demographic restructuring is one of the big challenges of the twenty-first century. Not only do the components and complexion of population change provide a fascinating arena for the research community, they present questions of critical importance for practitioners and policy makers.

This book is the first in a series on ‘Understanding Population Trends and Processes’, all of which are based on research contributions to our knowledge of different aspects of population structure and distribution, all of which involve the analysis of secondary data from censuses, surveys or administrative records, and all of which report results for Britain (and elsewhere in Europe in some cases).

This volume brings together a series of studies that focus particularly on the household and the roles of adults and children. Particular attention is paid to studies of bearing and raising children, of living together or alone, of caring for those in need, and of moving home or changing school – hence the four cross-cutting themes that constitute the subtitle of the book – fertility, living arrangements, care and mobility.

Leeds, UK
London, UK
London, UK
September 2008

John Stillwell
Ernestina Coast
Dylan Kneale

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Chapter 1

Fertility, Living Arrangements, Care and Mobility

Dylan Kneale, Ernestina Coast and John Stillwell

Introduction

Demographic change constitutes one of the most important challenges of the twenty-first century. Population ageing has become the focus of attention for analysts seeking to establish its causes and consequences and policy makers charged with responding to its implications. The proportion of older people is expanding dramatically due to declining fertility and improving mortality.

In this book we are concerned with understanding the trends and processes occurring, particularly but not exclusively, in the earlier rather than the later stages of the life course. By assembling a number of research studies on the processes surrounding *fertility* and the patterns of *living arrangements* that characterise society in the new millennium, we hope to provide novel and detailed insights into socio-demographic change in the United Kingdom. However, the contents of the book also reflect two other key themes that have become increasingly important in recent years and are set to become even more so in the future. The first of these themes is that of *care* – not only that of the elderly by family members or other providers, but also care of children, sometimes by elderly relatives, when parents return to work, for example. According to United Nations projections (United Nations, 2005), the ratio of people of working age to those of non-working age, currently just over two for Europe as a whole, is projected to fall dramatically over the coming decades with severe implications for both the demand for care and care provision. The final theme is population *mobility*, a concept that embraces a series of behaviours at different spatial scales including international migration, residential mobility and daily commuting. International migration is clearly of fundamental significance on a global scale with major pressures mounting on Europe from the developing world (see Holzmann and Münz, 2004, for example). In this volume, the focus is much more localised, concentrating on the movement of different household types in the UK

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together with mobility of children between schools, topics which complement the chapters of the book on child-bearing and living arrangements.

This introductory chapter establishes a context for the chapters which follow, discussing each of the major themes on which the book is based and underscoring some of the key conclusions of the projects reported by the contributing authors, all of which have been undertaken under the umbrella of the Economic and Social Research Council's programme on *Understanding Population Trends and Processes* (UPTAP). All the chapters of the book contain the results of analysis of secondary data, the methodological requirement of UPTAP, and therefore we end the chapter with a summary of the data sets that have been utilised by contributing authors. We begin, in the next section, with fertility.

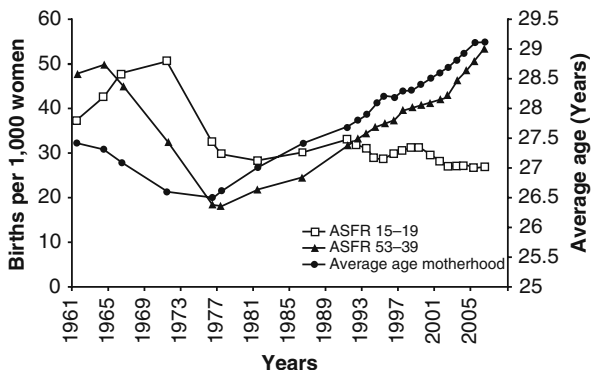
Fertility

Striking patterns of low and late fertility are now firmly entrenched within British demography, and are replicated across most developed countries. While movement towards, and maintenance of, relatively low fertility has been present since the turn of the twentieth century as a result of the first demographic transition (Jefferies, 2005), it is the change in the determinants of fertility that has been most noteworthy.

Following the first demographic transition in which death rates and birth rates moved over time from high to low levels, the second demographic transition theory outlines the changes said to be representative of the continuation of falling fertility rates – below replacement level fertility, growing old-age dependency ratios and decreasing child-dependency ratios – as well as outlining the determinants of these changes (Van de Kaa, 1987; Lesthaeghe and Neels, 2002). In particular, the notion of the second demographic transition describes a complement of social changes that lead to lower fertility including declining marriage rates, increasing divorce and cohabitation, pluralistic household structures and increased female participation in both higher education and the labour force (Van de Kaa, 1987). One of the salient characteristics of this transition is increasing age at first parenthood (Lesthaeghe and Neels, 2002) which is both predicted by the determinants of the transition, and in itself is a marker of lower fertility. Much attention in the chapters examining fertility in this book is focused upon age at first parenthood, both in terms of focusing on the predictors of age at family formation, as well as on the effects that parental age and other indicators of the second demographic transition, such as changing family structures and increasing mother's employment, have on children.

Statistics to evidence lower and later fertility in the UK are in no short supply. Since the 1970s, fertility has remained below replacement level (Smallwood and Chamberlain, 2005) and the total fertility rate has deviated little from around 1.7 children per woman in the past two decades up to 2006. While the level of fertility has largely remained constant over this time, the age at motherhood has continued to rise since the mid 1970s, from an average of 26.5 years in 1976 to almost 29 years

Fig. 1.1 Age-specific fertility rates (ASFR) for women aged 15–19 and 35–39 and average age at motherhood (Source: Office for National Statistics, 2007)



in 2006 (Office for National Statistics, 2007). Such a rise has not been observed uniformly across fertility schedules and represents some divergence for different groups of women.

Most of this rise in age at first motherhood can be seen to originate from the decreasing rates of entry into motherhood in the twenties and rises in older age fertility. There is an overall ‘flight from parenthood’ in the twenties, with many women postponing motherhood until their mid thirties. However, while later motherhood has become the trend for the majority of women, early and teenage motherhood persists for the minority (Hadfield et al., 2007). Figure 1.1 shows the maintenance of teenage age-specific fertility rates since the late 1970s despite several recent interventions (Social Exclusion Unit, 1999), with the UK identified as having the highest rates of teenage motherhood in western Europe (UNICEF, 2001). The average age at motherhood has also been increasing consistently since the late 1970s on a similar trajectory to that of the age-specific birth rate for women aged 35–39 years. Recently, the effects of postponement and rising age at first birth have been cause for concern for policy makers; although it is early motherhood that has remained as a prime concern where fertility is in question.

In this case, it is not the young age of the mother per se that is of concern to policy makers and academics, but the differences in the characteristics of women having children early and the outcomes of their children, particularly when compared to older women. This has been described as a process of social polarisation in entry to parenthood (Joshi, 2007) and is addressed in this volume by describing the characteristics, extent and effects of social polarisation in the time to first birth. Education has been identified as a key driver of postponement. Highly educated women are found to be those delaying family formation the most, having most to lose from time out of the labour market (Berrington, 2004; Gonzalez and Jurado-Guerrero, 2006; Rendall et al., 2005; Rendall and Smallwood, 2003); and educational class is perhaps the most important marker of this social polarisation. Polarisation in age of first motherhood and the relationship with education

represent an overarching theme in all the chapters that examine fertility in this volume.

Postponement and childlessness are examined in *Roona Simpson's* analysis of differences across two British birth cohorts reported in Chapter 2. Here, the characteristics of those remaining childless are compared with those who have entered parenthood. Simpson's research indicates that while both men and women are increasingly delaying transition to parenthood, men in particular are postponing transition to fatherhood. She also confirms the findings of other studies that show that women from lower social class backgrounds and those who hold lower educational qualifications are also those entering parenthood first. This work represents one of a growing number of works that seek to redress the gender imbalance in the majority of studies examining the determinants and markers of fertility, through examining patterns for both men and women. However, she also finds the same result among men and her chapter describes some of the polarised patterns of entry into fatherhood.

As discussed previously, postponement (and childlessness) is usually associated with high levels of education and strong ties to the labour market. A key issue that is addressed in this volume is how this attachment to the labour market has changed over time and its impact on entering motherhood. The analyses presented not only look at educational level and labour market participation as a predictor of entry into motherhood, but also at patterns after motherhood. Labour market participation is increasingly compatible with motherhood (Joshi, 2002; Edwards, 2002) and in fact, a growing number of mothers do find themselves working, either by choice or through necessity. However, working mothers have traditionally returned to work on a part-time basis, and have been concentrated in low paid, gender segregated work (Joshi, 2002; Dex et al., 1998; Coyle, 2005). Recent years have seen the introduction of family friendly workplace environments and policies, such as maternity leave allowance (Dex et al., 1998; Lewis and Campbell, 2007) and paternity leave, which may facilitate balancing work and motherhood. The analyses presented in this volume present a detailed description of working practices of mothers and in some ways, are a reflection of the impact of such policies. The implication of such increases in the numbers of working mothers is that childcare moves out of the sole domain of the mother; and for those who re/enter the labour market a range of childcare options growing in availability and diversity are available (Lewis and Campbell, 2007). Despite this growth, not all options may be available to every woman; it is highly educated women with strong ties to the labour market who are also those able to negotiate childcare arrangements with partners and relatives and who are able to purchase childcare elsewhere (Coyle, 2005). This, again suggests a slightly cyclical pattern whereby highly educated women have initially stronger ties to the workplace leading to the postponement of births; but are also those correspondingly who are able to reengage with the labour market, more often than not on a full-time basis.

In Chapter 3 on the effect of women's education on time to first motherhood, *Sarah Smith* and *Anita Ratcliffe* address the issue of polarised entry into motherhood but also consider in more detail the effect of this polarisation on mothers'

employment and childcare practices. They examine the literature on the links between education and entry into motherhood, showing a negative correlation generally, but they also demonstrate that the welfare state can buffer this association, and narrow the discrepancy between births among highly educated and less educated women. Differentials by educational level also extend into child care, where highly qualified women are also those most likely to rely upon formal childcare. Their results distinguish between those who left education at the minimum age, those who left at age 18 and those who left at 18 and went on to higher education, indicating that experience of any higher education appears to be particularly associated with postponement and childlessness.

In Chapter 4, *Kirstine Hansen*, *Denise Hawkes* and *Heather Joshi* begin by examining the age at first motherhood, finding that this increased between all three cohorts they study and that educational level remained the strongest predictor of transition to first parenthood. However, they also note the importance of childhood disadvantage as a predictor, with disadvantage propelling younger women into motherhood. Having established the link between education and timing of motherhood, and how educational level will influence labour market participation and advantage, Hansen et al. move to examine labour market participation among mothers specifically. As with Smith and Ratcliffe, they find an increased propensity among more recent cohorts of mothers to be employed. They also similarly find that higher qualified mothers are more likely to enter employment. However, they also find previous engagement in the labour market to be a strong predictor. Finally, after illuminating the links between the age of the mother, her education, and her labour market participation, they move on to examine childcare. They introduce analyses that highlight differences between modes of childcare, educational class and labour market participation. In addition the analysis goes one step further by assessing the quality of this childcare in terms of child outcomes, giving an indication of the implications of both maternal employment and maternal choices in childcare.

Polarised pathways to motherhood are explored further in this volume by examining the other end of the fertility spectrum – early parenthood. Teenage motherhood has long been associated with a range of negative characteristics including poor educational background, poverty and welfare dependence, and an unstable family life (summarised, for example, in Imamura et al., 2007; Harden et al., 2006). While teenage mothers are associated with these disadvantaged characteristics; a body of evidence suggests that there are negligible benefits for these mothers in delaying parenthood (Hotz et al., 2004; Goodman et al., 2004). This is mainly due to teenage motherhood being a marker, as opposed to a cause, of disadvantage; and concentrating childbearing at earlier points may actually be a beneficial strategy in terms of labour market opportunities for this specific group of women. But despite the questionable evidence as to teenage parenthood's status as a cause, as opposed to a marker, of poverty, this group has been the focus of several policy interventions. In Chapter 5, *Dylan Kneale* offers a short discussion on the politicisation of the term 'teenage' parents and questions why the under 20 and over 20 years cut-off has remained such a pervasive term for a diminishing group of parents.

In acknowledging that some of the focus may be justified in terms of outcomes for children, Kneale sets about examining the pre-existing characteristics of early parents to examine continuities between early parents into their early twenties and those aged under twenty. Continuities in terms of known and hypothesised predictors of the timing to young parenthood found in the literature are examined. Kneale highlights the strength of tenure over social class as a predictor of both early motherhood and fatherhood. Results on the effect of dislike of school and family building preferences as predictors of early parenthood are also presented. The chapter concludes that while there is not a structural break in the characteristics of teenage mothers compared to mothers in their early twenties, there is sufficient evidence to speculate that teenage fathers do actually represent a distinct group away from other fathers in their early twenties.

A key issue addressed in all of the chapters on fertility, and significant for policy makers and academics alike, is whether the socially polarised divide in reproductive timing is growing. Each of the chapters on fertility is able to inform on this issue specifically by analysing the reproductive behaviour of different cohorts of women, as opposed to taking a period approach. Most of the research takes a longitudinal, lifecourse approach through either examining childhood factors as predictors of later life fertility or through examining detailed occupational, educational and partnership histories of women. This gives much of the research on fertility contained within the volume a degree of insight that is absent from many other studies, through including information that would otherwise be impossible to obtain because of bias or recall error. This approach also allows for links to be made between individuals under study and the historical context and social structure present (Elliott, 2005). Individuals included in these analyses would have been subject to some major changes in terms of education with the raising of the school age participation in higher education (Power and Elliott, 2006), increasing equality in the workplace through legislation such as the Equal Pay Act (Dex et al., 1998), a move towards family friendly policies such as maternity leave (Dex et al., 1998), but also policies proscribing right and wrong pathways to motherhood (for example, Social Exclusion Unit, 1999).

Finally in this section, it is important to recognise that men have often been neglected in studies of fertility. In most cases, this has been because of either a lack of data or because of questionable reliability of male accounts of fertility (Rendall et al., 1999; Darroch et al., 1999; Greene and Biddlecom, 2000). This comparative lack of research, both on an intuitive and evidential level, does not reflect the importance of fatherhood (see for example, Pleck, 2007, Sarkadi et al., 2008). It is hoped that the results presented in this volume can make a contribution to family building policies and knowledge, said to have suffered thus far from the lack of input of male fertility histories (Flood, 2007). The results from Chapters 2–5 will also make an important contribution to knowledge on recent polarisations in reproduction and the multifaceted effects on age at first birth, labour market participation, childcare patterns and child outcomes. In the next section, issues relating specifically to changing household and family structures are discussed as we move

from discussing who has children and when, to living arrangements in which children also play a significant role.

Living Arrangements

The ways in which people organise their living arrangements are both causes and consequences of social and societal change. Living arrangements encompass a series of interlocking concepts, including family and household, and frequently form the basis of data collection, analyses and theorising. Broadly speaking, there are two linked questions. What are the types of and changes in living arrangements? What causes living arrangement change and variation?

The meanings associated with households and families continue to change, both at the individual level and at the normative or societal level. Such change is observed throughout history (Gillis, 2004; Jamieson et al., 2002; Elizabeth, 2000; Scott, 1999; Manting, 1996). In part changes in meanings, attitudes, values and beliefs are a function of generational change (Manning et al., 2007; Hall, 2006; Axinn and Thornton, 2000; Lewis, 1999, 2001b). Normative views on living arrangements, especially marriage, have always shifted (Coontz, 2004; Smock and Manning, 2004; Thornton et al., 2007). For example, there is greater acceptance of non-marital relationships (Thornton and Young-DeMarco, 2001), explained in part by greater experience of new forms of living arrangements by greater proportions of the population as a whole. Barlow (2005), however, makes the important distinction between accepting and tolerating new(er) forms of living arrangements, such as non-marital cohabitation and parenting, and argues that acceptance is replacing tolerance.

Much effort – both academic and political – has been expended into better understanding the decline in ‘traditional’ family arrangements and associated challenges to our understanding of the ways in which people live together. At the heart of this endeavour is a better understanding of relationships and living arrangements. The challenge is not only to capture and describe these trends in living arrangements, but also to better understand the processes that explain this change (Seltzer et al., 2005). It is worth considering what is meant by this traditional family, not least because its construction is time and space-specific, at its core child-bearing and rearing and sexual intimacy. It might be perceived as involving notions of social and legal recognition, combined with concepts of obligations and rights for the couple, all of which are rapidly shifting in the western world, mediated by gender, ethnicity (MacLean and Eekelaar, 2004), culture and religion (Eekelaar and Maclean, 2004; Lehrer, 2004). The picture is further complicated by heterogeneity across (Heuveline and Timberlake, 2004; Kiernan, 2001; Raley, 2001; Seltzer, 2004; Wagner and Weib, 2006) and within countries (Liefbroer and Dourleijn, 2006). In sum, across a range of settings, men and women might be described as being less dependent on marriage and the family for the fulfilment of a range of needs, including nurture, companionship and happiness.

Perspectives about whether change is beneficial or otherwise to society can be highly polarised. Ranging from constructs of the selfish individual (Morgan, 2000) to an outcome of the pursuit of democratic and consensual relationships (Giddens, 1993). Interestingly, and perhaps unsurprisingly, the latter perspective is most likely to be reported by cohabittees (Lewis, 2001a) and unmarried young people (White, 2003).

Legal systems have grappled for decades with how to best accommodate the multiple and changing forms of living arrangements (Probert, 2004; Therborn, 2007). Across Europe the development of statutory regulation of non-marital cohabitation has begun with, for example, French PACS and Dutch 'Registered Partnerships' (Bradley, 2001). Theorising about the causes driving these changes in living arrangements covers a broad spectrum, underpinned by demographic change, most notably declining fertility and population ageing. Theorists have argued that living arrangement changes are a response to, and at times a cause of, processes of individualisation (Alders and Manting, 2001), secularisation (Lesthaeghe and Moors, 1995) and risk identification and avoidance.

Living arrangements are becoming increasingly diverse (Allan et al., 2001), complex (ESRC, 2006), and multi-directional. They include: a rise in post-marital cohabitation relative to higher order marriages; reconciliations and multiple separations (Binstock and Thornton, 2003); multiple union creation and dissolution, described as 'sequential marital monogamy' (De Graaf and Kalmijn, 2003); non-co-resident step-parenting relationships and childrearing (Ermisch and Francesconi, 2000; Bumpass et al., 1995); same sex unions; complex carer relationships (familial and commercial); a proliferation of childrearing arrangements (Seltzer, 2000); growing rates of non-marital relationships for older populations post-marriage or bereavement (De Jong Gierveld, 2004; Mahay and Lewin, 2007); and, living-apart-together (LAT) relationships (Levin, 2004). Processes of globalisation and population mobility further add to the heterogeneity of living arrangements. Bledsoe (2006) has identified, for example, new forms of family creation among African migrant communities in Europe.

In moving from the perceived 'traditional' to the contemporary, as some of the emergent forms of living arrangement imply, there are complex inter-relationships above and beyond the dyad. Indeed, dyad relationship formation can result in many different forms of family structure. These relationships extend above and beyond simply who co-resides with whom. For example, Eggebeen (2005) finds that dyad relationship type was significantly associated with levels of support provided to parents. Cohabiting young adults were significantly less likely to exchange support with their parents than their married or single counterparts. Trends and processes in living arrangements do not operate in a vacuum from other processes of social change. There are complex inter-relationships, for example, between union transitions and other major life course transitions, including: (un)employment, education, geographic mobility, property ownership, fertility (Berrington and Diamond, 2000; Haskey, 2001; Oppenheimer, 2003; Flowerdew and Hamad, 2004; Osborne, 2005; Guzzo, 2006; Lauster, 2006; Musick, 2007).

This very complexity has implications for how we study, and the data we use to study, peoples' living arrangements. The processes of dynamics in living arrangements continue to be less well understood than the trends, which tend to be more amenable to secondary analysis of quantitative datasets. If we are to better understand the factors that affect changes in living arrangements, then we need to know what these living arrangements mean to those involved, whether they are a childless couple, an elderly parent and their middle-aged child, or a complex step-family with non-co-residential children. How do people respond to survey-based questions and categorise themselves and what might the implications be for analyses of contemporary living arrangements? (Glaser et al., 2005; Hunter, 2005; Knab and McLanahan, 2006; Murphy, 2000). In Chapter 6, *Ernestina Coast* uses prospective data from the British Household Panel Survey to analyse individuals' relationship expectations and subsequent outcomes between 1998 and 2005 and to investigate how attitudes towards cohabitation differ by age, sex, previous relationship history and parenthood. Her analyses underscore the heterogeneity of cohabitation and its meaning for cohabiters. The data shed some light on why people might cohabit, and for never-married respondents, suggest that cohabitation represents a way of assessing partner compatibility. Cohort changes in the experience of, and attitudes towards, cohabitation, emphasise underlying and powerful normative changes in society due to intra-generational change and generation succession.

As social scientists we need to consider data, and the way in which we collect and use them to understand the processes at work behind changing living arrangements. To illustrate this point, two examples are drawn from the body of evidence for non-marital cohabitation. De Vaus et al. (2005) note that the timing of evidence is crucial for our understanding of demographic processes. Much of the data used to theorise about, for example, the influence of pre-marital cohabitation on subsequent divorce, has been based on evidence from couples who cohabited in the 1970s and 1980s when cohabitation was much less commonplace in the general population. Secondly, living arrangements can be increasingly commonplace in society whilst being 'statistically invisible', viz cohabitation prior to the 1970s (Kiernan, 2000).

Mixed methods and qualitative approaches to studying living arrangements are relatively under-developed compared to quantitative approaches (Lewis, 2001a; Lampard and Peggs, 1999). There is an emerging body of qualitative research into the meanings of living arrangements (MacLean and Eekelaar, 2004; Manning and Smock, 2005), with specific focus on the inter-relationship between parenthood and union type (Reed, 2006; Gibson-Davis et al., 2005; Sassler, 2004; Smock et al., 2005).

Establishing good living arrangements is of primary importance in creating a good life style for the individuals involved but living arrangements may also be responsible for negative attributes such as loneliness, stress and intolerance that may lead to ill-health and unhappiness. In fact, living arrangements are closely associated with multiple aspects of well-being (Stafford et al., 2004; Dush and Amato, 2005), happiness (Zimmermann and Easterlin, 2006), risk behaviours (Duncan et al., 2006), domestic violence (Kenney and McLanahan, 2006) and mental health (Marcussen, 2005; Mastekaasa, 2006). There are two chapters in this

volume that are concerned with exploring the relationship between living arrangements and health and well-being of particular groups. In Chapter 7, *Harriet Young* and *Emily Grundy* focus on the possible consequences of different types of living arrangements for the health and well-being of older people. Using data from longitudinal studies, they show that older people living with a spouse had the highest levels of health and well-being in England and Wales, except for older women living alone who rated their health as better than those living with a spouse. Among the unmarried, on the other hand, those living alone considered themselves healthier than those living with others but more likely to be depressed and lonely than those living with others. They found some interesting variations in these associations across Europe, due to differences in culture and welfare regimes.

One increasingly common form of living arrangement is that associated with stepparenting and in Chapter 8, *Peteke Feijten*, *Paul Boyle*, *Zhiqiang Feng*, *Vernon Gayle* and *Elsbeth Graham* report on their study that attempts to assess the impact that stepparenthood has on the mental health of stepparents or their partners. In this case, they use another longitudinal study, the National Child Development Study (NCDS) to investigate a series of hypotheses which suggest adults living in step-families have a higher risk of having poor mental health than comparable adults in conventional families, although this effect may partly be due to selection of respondents with prior mental health problems into stepfamilies.

The household as a unit of analysis might be perceived as becoming less complex and smaller, not least through the rise in single person households and stepparenting arrangements. However, this means that we will need to shift our focus away from household-based sources of information and analyses, and acknowledge the growing importance of non-co-residential rights, obligations and networks. This is relevant across all stages of the lifecycle, and is becoming increasingly important at older ages.

Care

There are significant care implications arising from the research on living arrangements for older people reported in Chapter 7 and on stepparenting presented in Chapter 8. On a more general global level, demographic ageing poses huge challenges for societies since it will affect pension and social security systems, health care provision and the needs of both dependent children and particularly, the infirm elderly for family, social and state care. The medium variant of the United Nations world population projections (United Nations, 2005) indicates that in western and central Europe, the so-called EU25+ (25 EU members plus another 3 EEA members plus Switzerland), the size of the working age population (age 15–64) which in 2005 was 317 million, will start to decline after 2015 reaching 302 millions in 2025 and 261 million in 2050, a decline of 18%. On the other hand, due to increasing life expectancy and the ageing of the baby boom generation, the 65+

Table 1.1 Old age dependency ratio, 2005–2050, selected countries

Country	2005	2025	2050	Percentage change 2005–2050
Belgium	26.3	36.5	48.1	82.9
Czech Republic	19.8	35.0	54.8	176.8
Finland	23.7	41.4	46.7	97.0
France	25.3	36.9	47.9	89.3
Germany	27.8	39.3	55.8	100.7
Ireland	16.5	25.2	45.3	174.5
Italy	29.4	39.7	66.0	124.5
Slovakia	16.3	28.1	50.6	210.4
Sweden	26.4	36.5	40.9	54.9
United Kingdom	24.4	33.2	45.3	85.9
EU 25 average	24.9	35.7	52.8	112.0

Source: Eurostat (2004) based on the assumption that net immigration will amount to almost 40 million between 2005 and 2050.

age group will grow from 79 million in 2005 to 133 million in 2050, an increase of 68%, with the largest increases occurring for those people over 80 years of age. These figures are staggering; the old age dependency ratio in EU25 which, in 2005, was approximately 25 people aged over 65 to every 100 in the working age range, will more than double to almost 53 people in the age group 65+ per 100 of working age. Dependency ratios for a selection of countries in EU25 from Eurostat (2004) illustrate the extent of the challenge (Table 1.1). Whilst the UK has to consider a lower than average 86% increase in the dependency ratio, Ireland and the Czech Republic are both set to experience an increase of around 175% and Slovakia's projected increase exceeds 200%.

These changes will have a profound influence not only on the demand for care for the elderly but also on the complete state of intergenerational relations. We should not forget that Britain's welfare state was founded on an implicit intergenerational contract based on a principle of reciprocity, such that each generation, during its productive years, supports both younger and older generations in anticipation that when reaching a time of dependency itself, it can expect to receive support from subsequent generations. It is a contract that has been characterised as being based on duty, national collectivity and intergenerational solidarity (Walker, 1996; Phillipson, 1998). This intergenerational contract is already under pressure due to changing social attitudes rather than numbers. In Chapter 7, Harriet Young and Emily Grundy identify substantial changes in the living arrangements of older people, who are now more likely to live alone and less likely to live with relatives in multi-generational households. Low fertility and low mortality are altering intergenerational patterns within families such that it will become more and more common for families to have two generations of retirees, putting an increased burden of care on the middle 'productive' or 'pivot' generation who, at the same time, may experience delayed or indeed loss of inherited wealth due to their parents' care needs (Bengston et al., 1991).

As the generational contract has also been predicated on a gender contract (based on men's economic and women's caring contributions), the increased duration and intensity of caring activities will impact particularly on women but also increasingly on men. Women are playing an increasingly significant role in the labour market without any enhanced provision of state childcare, at a time when other caring demands are increasing, and men are becoming significant contributors of unpaid caring labour too (Buckner and Yeandle, 2006, 2007), although men's demographic behaviour has received little attention relative to women. These developments raise a set of challenges about how the work/care conundrum can be resolved for the productive generation; how organisational cultures/structures might need to change to accommodate this; and how gender and caring roles and relations might be transformed in the process (Williams, 2004; Yeandle, 2007). In Chapter 9, *Allison Smith Koslowski's* review of current literature confirms that in most western European countries, grandparents have become a very important source of childcare, particularly for infants. Her review highlights the gap in knowledge (and data) relating to informal grandparental care for grandchildren. She demonstrates the possible contradictions of caring for grandchildren versus a range of policies associated with 'active ageing', itself an underspecified term. This work, based on analyses of a range of datasets, demonstrates the need to reconsider our understandings of grandparenthood, its contributions and meanings.

There are major questions about how care will be provided in the context of rising life expectancy, divorce rates and higher dependency ratios. Historically, unpaid and family care for sick, frail or disabled family members, and dependent children, usually delivered in the home, was provided mainly by women. However, the erosion of the 'male breadwinner model', together with other changes, means that more women are active in the paid labour force – while men have begun to be drawn into family caring roles in larger numbers, especially in middle and later life in support of very aged parents, or of sick or disabled partners; nevertheless, gendered assumptions about responsibility for care, within and outside the family, remain strong and persistent.

The 2001 Census included, for the first time, a question on the provision of unpaid care: 'Do you look after or give any help or support to family members, friends or neighbours or others because of: long-term physical or mental ill-health or disability or problems related to old age?'. This revealed that, across England and Wales, 10% of the population – almost 5.2 million people – provide unpaid care, and almost 3.9 million carers are of working age of whom 1.5 million combine full-time paid employment with unpaid care. Of these working carers, 58% are men (Buckner and Yeandle, 2006). Moreover, the longer lives of disabled children and the increased longevity of sick and older people mean unpaid caring roles can last for many years – sometimes for decades. Shortages of labour in health and social care already pose problems for the delivery of formal care services, where recruiting and retaining staff and expanding the pool of potential recruits has proved very challenging in recent decades (Yeandle et al., 2006a, b). Most older people express a preference for independence and care at home and hospital discharge policies promote additional domiciliary care. Yet, the traditional source of domiciliary care

workers (unqualified, middle aged female returned to the labour market) is shrinking fast. Migrant workers are often cited as a source of extra caring labour but how sustainable this is in the longer term is open to question (Ungerson and Yeandle 2007). Migration brings the challenges of transnational care, with carers living and caring in different countries.

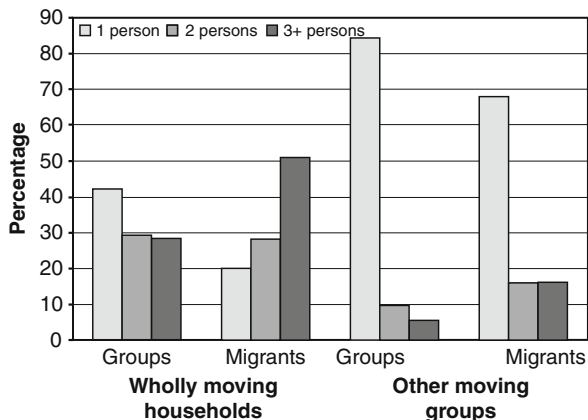
Mobility

International migration has received considerable attention in the academic and policy-oriented literature (e.g. Tamas and Münz, 2006). Some scholars have reviewed migration dynamics in various world regions (Appleyard, 1998); others have focused on theories within particular disciplines (Massey et al., 1998; Poot et al., 1998). Skeldon (1997) draws attention to the lack of clarity in the linkages between migration and poverty whilst a host of commentators have considered the effects of immigration on destination countries (such as Dustmann et al., 2003; Borjas, 2004), the effects of emigration on source countries (such as Fischer et al., 1997; Collyer, 2004), the role of remittances (such as Terry and Wilson, 2005), migration and the brain drain (such as Kapur and McHale, 2005), and the role of diasporas in development (such as Levitt, 2006).

Whilst international migration tends to grab the headlines, we should recognise that the flows of immigrants are relatively small compared with the volume of movement taking place within the UK and permanent changes of usual residence are themselves relatively small compared with the level of daily mobility, much of which is associated with the journey to work or to study. The 2001 Census tells us that just under 400,000 immigrants arrived in Great Britain in the 12 month period before the Census compared with over 6 million people moving internally out of the total population of 57.1 million. These are underestimates because we know that a further 450,000 people migrated but the Census has no record of their usual address at the start of the period. In contrast to these volumes, consider the daily journey to work in Great Britain involving 25.7 million trips of those of working age. These selected statistics, extracted online using the Web-based Interface to Interaction Data (WICID) (Stillwell and Duke-Williams, 2003), exemplify the extent of migration and commuting but tell us nothing about all the other interaction behaviour that we engage in. Census data underpins much of the migration and commuting research in the UK (such as Champion, 2005; Dennett and Stillwell, 2008; Frost and Shepherd, 2004; Coombes and Raybould, 2001), focusing in most cases on flows of individual migrants or commuters.

There are important associations between migration, commuting and living arrangements and in Chapter 10, *Oliver Duke-Williams* attempts to look more closely at the different units of migration. The household has always been a key unit in the decision-making process relevant to residential mobility (Rossi, 1955). Whilst many households consist of singletons, the decision to move for families is frequently the result of a combination of factors – many related to the life

Fig. 1.2 Proportions of migrants moving as wholly moving households or other groups by type of household, 2000–01
(Source: Census 2001 Special Migration Statistics)



cycle – impacting on different members of the group. Precise numbers of individuals involved in moving usual residence are available from successive censuses but the use of moving groups in the 2001 Census enabled some insights to be gained into the relative proportions of those moving together. Figure 1.2 illustrates the proportions of groups and migrants in one, two and three or more person households moving internally in the United Kingdom in the year before the Census either in wholly moving households and in other moving groups. Amongst the wholly moving households, single person groups dominate but over half the migrants are moving as families in households of three or more persons. Single migrants dominate the other moving groups to a much greater extent with a similar proportion of migrants in the 2 person and 3+ person households.

One key limitation with UK Census migration data is the absence of any question about motivation and yet it is this attribute which has captured the attention of migration analysts for many years seeking to distinguish those who move for economic or job reasons from those who keep the same job but change house, for example. *Oliver Duke-Williams* turns to the British Household Panel Survey in Chapter 10 to find answers to questions about motivation and demonstrates how motivations vary according to the type of household under consideration. In the case of lone parents, the move is motivated by the split from a partner, whereas single elderly people tend to move for health reasons.

In a recent audit of interaction data, *Dennett et al. (2007)* have drawn attention to the need for more research on different types of mobility using secondary data sets that exist but have not been used hitherto to their full capacity. These data sets include those based on administrative records and involve the collection of records arising from some transaction, registration or as a record of service delivery. They are collected for administrative rather than purely research purposes and many of these data sets are collected by Government departments (*Jones and Elias, 2006*). These data sources include variables that provide information about either the migration or the commuting characteristics of NHS patients, school pupils,

university students, asylum seekers, new migrant workers or those attending hospital. In some cases, registration data have much simpler structure than census data and are only available at a relatively aggregate spatial scale but are particularly valuable because they are produced on a regular temporal basis. In other cases, the information on migration or mobility has to be generated from the primary unit data using time-consuming data matching and manipulation algorithms.

One of these relatively new and unexplored administrative data sets, the Pupil Level Annual School Census (PLASC), is the focus for *Joan Wilson's* research reported in the last chapter of the book. Whilst the Census in Scotland provides details of the daily travel to study for students and children, similar data are not produced for England and Wales or Northern Ireland. However, the PLASC does collect data from each education authority in England and Wales on the location of pupils and the schools that they attend, potentially providing an extremely useful data set on the journey to school. Various data sets are collected and held by the Department for Education and Skills (DfES) within a centralised 'data warehouse', including the National Pupil Database (NPD), local authority data, school level data, school workforce data and geographical data (Ewens, 2005; Jones and Elias, 2006). The NPD was established in 2002 and contains linked individual pupil records for all children in the state school system which is updated annually. Each pupil is given a unique pupil number (UPN) and has an associated set of attributes: age, gender, ethnicity, special educational needs, free school meal entitlement, key stage assessments, public exam results, home postcode and school attended. It is the availability of the last two attributes which gives the possibility of identifying various mobility characteristics.

The linking of pupils from one year to the next using the UPN means that a longitudinal profile of each pupil is available whose extent depends on how long the pupil has been in the education system. Potentially, this means that pupils can be tracked over time and their transitions through the education system can be identified, including their movements between schools and between different home addresses (Harland and Stillwell, 2007a, b). The PLASC is therefore a potential source of data on commuting to school, i.e. on child migration from one usual residence to another and on pupil mobility between schools.

It is perhaps not surprising that these introductory comments on the content of the book which also attempt to provide some context to what follows, have come to an end with a discussion about data. The *Understanding Population Trends and Processes* programme, is, after all, about the analysis of secondary data sets. So, in completing this chapter, we provide a summary of the data sources that the contributors to this volume have used. Table 1.2 indicates that a variety of different longitudinal and cross-sectional survey and census data sets have been employed in the analyses that are reported in the book. No further explanation of these data sources is attempted here since each will be introduced in the corresponding chapter, together with the methods that have been adopted for data extraction, preparation and analysis as appropriate.

In drawing this chapter to a close, we hope that readers will find the chapters in this volume valuable as a means of understanding more about the current

Table 1.2 Main data sets used in forthcoming chapters

Chapter	Author(s)	Data sources
2	Simpson	National Child Development Study (NCDS); British Cohort Study (BCS70)
3	Smith and Ratcliffe	British Household Panel Survey (BHPS); Family Expenditure Survey (FES); Family Resources Survey (FRS)
4	Hansen et al.	British Birth Cohort Study (BCS70); Millennium Cohort Study (MCS); National Child Development Study (NCDS)
5	Kneale	National Child Development Study (NCDS); British Cohort Study (BCS70)
6	Coast	British Household Panel Survey (BHPS)
7	Young and Grundy	English Longitudinal Study of Ageing (ELSA); Office for National Statistics (ONS) Longitudinal Study (LS); European Social Survey (ESS)
8	Boyle et al.	National Child Development Study (NCDS)
9	Smith Koslowski	Survey of the European Community Household Panel (ECHP); the European Social Survey (ESS); Growing Up in Scotland (GUS); Millennium Cohort Study (MCS)
10	Duke-Williams	2001 Census Origin-Destination Statistics; British Household Panel Study (BHPS)
11	Wilson	Pupil Level Annual School Census (PLASC)

patterns and processes of fertility, living arrangements, care and mobility, but also for helping to recognise what implications these trends and processes have for practitioners and policy makers. Both of these are primary aims of the UPTAP initiative, along with the promotion of the use of large-scale social science data sets and building capacity in secondary data analysis amongst new and mid-career researchers. Further volumes in the series will extend our understanding by covering social and spatial disparities (Volume 2) and ethnicity and integration (Volume 3).

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Chapter 2

Delayed Childbearing and Childlessness

Roona Simpson

Introduction

Fertility patterns have changed significantly in most European countries since the 1960s. Although there are important differences both between and within countries in the pace of decline, by the 1990s fertility reached below replacement levels across Europe, with several countries experiencing lowest-low levels (less than 1.31 children per woman) (European Commission 2006a). Declining fertility is one aspect of an inter-related package of demographic trends that both reflect and constitute a transformation of the context in which people may or may not partner and parent. Debates within demography over the causes and consequences of the second demographic transition have been paralleled by sociological debate on the impact of individualism on personal life. This chapter considers these debates in relation to findings from analysis of the British cohort studies looking at changes over time in the propensity to delayed childbearing.

Within demographic debate a 'post-materialist values' perspective contends that changes in social and demographic behaviour have been driven by a growth in values of self-realisation in the context of a decline in tradition and diminishing constraints (Van de Kaa, 1987; Lesthaeghe, 1995; Leete, 1998). Similarly, much sociological theorising on the changing character of intimacy and partnership emphasises an increase in behavioural options in the context of increasing individualism (Bauman, 2000; Giddens, 1992; Beck and Beck-Gernsheim, 1995, 2002). Within these debates, increasing childlessness has featured as a signifier of a 'choice biography' or, in more pessimistic accounts, as indicative of self-interested individualism.

Whereas the decline of fertility below replacement level was previously viewed as the most important feature of the demographic transition (Van de Kaa, 1987), the postponement of first births is now portrayed as the most radical transformation (Lesthaeghe and Neels 2002: 33). While second and higher-order births are being postponed as well, this is mostly as a consequence of first-birth postponement rather

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than a manifestation of change in birth intervals (Sobotka, 2004). There is some debate in the literature as to the extent to which delayed childbearing is related to increased childlessness, or constitutes a 'postponement transition' towards a late fertility regime (Kohler et al., 2002: 659–661).

There are numerous factors proposed in the literature to explain delayed childbearing and much empirical research investigating their impact. These include the spread of access to modern contraception (e.g. Murphy, 1992, 1993), changes in participation in education (e.g. Kohler et al., 2002) and employment (e.g. Brewster and Rindfuss, 2000), the wider economic context (e.g. Bagavos and Martin, 2000) as well as the shifting character of intimacy and partnership relations in the context of shifts in balances of power between men and women (e.g. Lesthaeghe, 1995; Oppenheimer, 1994). However, many factors are clearly interconnected, with their relative impact difficult to quantify. Thus, in relation to contraception there are varying emphases on the interpretation of this as a technical factor addressing a demand for birth control (e.g. Castles, 2003) or as a precursor to broader behavioural and cultural changes, including changing partnership patterns more generally (e.g. Van de Kaa, 1994: 114). As well as understanding this as a necessary precondition for various other changes, some authors emphasise the social and psychological significance for women of the ability to control their fertility (Presser, 2001; Hakim, 2003). The expansion of post-secondary education in recent decades in a context of an increased emphasis on educational attainment in securing stable employment, adequate income and career development, has been interpreted as impacting directly on fertility. 'Being in education', during which students usually lack adequate resources and with future employment conditions uncertain, strongly reduces the likelihood of having a first child (e.g. Blossfeld, 1995; Hoem, 2000). However, as well as delay attributable to time spent in education, this influences the timing of parenthood indirectly, through increased career opportunities or a less traditional or family-centred value orientation (Oppenheimer, 1994).

Educational level is clearly linked to employment, associated with an enhanced position in the labour market. Much attention has focused on the demise of a 'male breadwinner model' and the increasing likelihood of women combining caring for children with participation in the labour market. Debates about the opportunity costs of childbearing for women and conflict between career aspirations and motherhood are prevalent in the demographic literature. The 'positive turn' in many countries, with higher fertility associated with higher female labour force participation, has drawn attention to specific policy contexts within which individuals seek to balance work and family aspirations (Esping-Anderson, 1999; McDonald, 2000a; Castles, 2003; Hobson and Olah, 2006a). Birth timing and spacing may be key strategies adopted to reconcile these (De Cooman et al., 1987; Brewster and Rindfuss, 2000). Empirical studies demonstrate substantial differences in first birth timing according to the level of education, with highly educated women postponing childbearing to a larger extent than women with less education who often continue to have children at early ages (Gustaffson et al., 2002; Joshi, 2002; Sobotka, 2004).

There has been much recent sociological attention to new social risks consequent on various inter-related changes occurring as part of a shift to a post-industrial

society. One aspect of this is the extent to which risk aversion applies to the personal sphere and influences the likelihood of people embarking on partnership or parenting (e.g. Beck, 1999; Taylor-Gooby, 2004; Lewis, 2006). There has also been attention to the impact of global restructuring and welfare state retrenchment of recent decades in demographic debates, with unemployment for example analysed as a factor that increases economic uncertainty and discourages union formation and parenthood (see Kohler et al., 2002; Meron and Widmer, 2002; Hobson and Olah, 2006b). Sobotka argues that the available evidence suggests the influences of uncertainty on first birth timings differ in time, across countries, by types of uncertainty and with a differing impact on various population groups (Sobotka, 2004: 21), citing in illustration a study of fertility in England and Wales (De Cooman et al., 1987) which found fertility reactions to economic change varying by stage in family formation, with labour market conditions influencing timing rather than the quantum of fertility.

Various inter-related changes have resulted in considerable transformations in family and household formations, as a now familiar list of trends including the delay and decline in marriage, the separation of marriage and reproduction (both childless marriage and non-marital fertility) and an increase in unconventional living arrangements such as solo living, demonstrate. These are occurring alongside a relative lack of change in some traditional elements of partnership and parenting, including in gendered divisions of labour (see Folbre, 1994; Hoshchild, 2001). Trends to delayed childbearing and increased childlessness in recent decades are clearly not independent of trends in partnership formation and dissolution. There is empirical data supporting the idea that more complex partnership patterns are associated with late entry into parenthood (e.g. Oláh, 2005). It is, however, transformations in ways of interacting within relationships, rather than changing structures per se, which are argued as having profound consequences for fertility. Whereas some authors contend these changes reflect an increasing emphasis on self-fulfilment (e.g. Van de Kaa, 2004), others have interpreted this in terms of women's greater independence allowing them to set higher standards in relation to partnership (e.g. Oppenheimer, 1994), including expectations around gender equity in the domestic sphere (e.g. McDonald, 2000b; Berrington, 2004; Wasoff and Dey, 2007).

There is considerable debate around which are the most significant factors driving contemporary changes in both partnership and parenting, and how it may be possible to identify primary factors (Kohler et al., 2002; Caldwell and Schindlmayr, 2003; Hobcraft, 2004). Several authors have also questioned individualist explanations of demographic behaviour as the outcome of a 'freeing' of agency from changing social conditions, arguing rather that individual choices are inseparable from the social contexts, including the structural process and cultural mores, within which they are made (Irwin, 2005; Smart, 2007).

Most research on fertility focuses on women, to the empirical neglect of men (Greene and Biddlecom, 2000: 81). This may be in part due to the greater reliability of reported fertility by women. Previous research suggests some unreliability in men's reporting of children, especially of non-marital births; for example Rendall et al. (1999). An evaluation of men's retrospective fertility histories from the British Household Panel Study found only 60 of men's births from a previous marriage

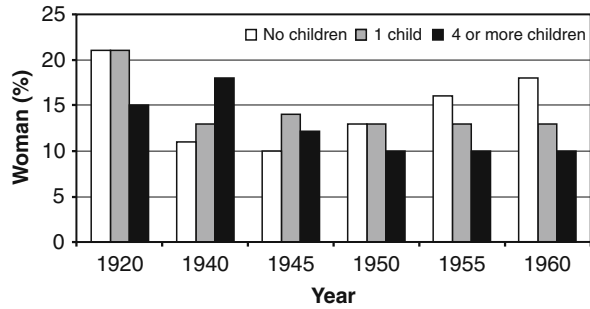
were reported per 100 of women's births, with women's fertility reports matching birth registration statistics (Rendall et al., 1999). Survey data do not lend themselves readily to explorations of the motivations and meanings individuals ascribe to statuses such as childlessness. Yet qualitative research studies on the experience of childlessness in recent decades similarly focuses on women (see Veever, 1980; Cameron, 1997; Lisle, 1999). Such a focus, as well as neglecting the experience of men, can reinforce a view of women as primarily reproductive (see Watkins, 1993). Furthermore, despite an emphasis in much of the sociological and demographic literature on 'choice' biographies, the emphasis on women risks ignoring the extent to which preferences and decision-making around parenthood are negotiated at the level of the couple. This reinforces the importance of considering contemporary change in the partnership context in which decisions about childbearing are being made.

In common with many other industrialized nations, there have been significant changes in the timing and context of partnership and parenthood in Britain in recent decades. In 1971, the average age of first marriage in England and Wales was 25 for men and 23 for women. However, by 2003, this had increased to 31 for men and 29 for women. Alongside this delay in marriage there has been a huge increase in cohabitation. Non-marital cohabitation amongst those under 60 in Great Britain doubled between 1986 (the earliest year for which data are available on a consistent basis) and 2006, from 11% to 24% for men, and 13 to 25% for women (ONS, 2008). There has also been a dramatic increase in recent decades of men and women living alone at ages conventionally associated with co-resident partnership and parenthood: over the past two decades the proportion of people living alone has doubled, from 7% to 14% of men aged 25–44 and from 4% to 8% of women in this age group (ONS, 2008: 19). These all have implications for the context of childbearing. Births by unmarried women accounted for 42% of all births in the United Kingdom in 2004, compared to an EU (15 countries) average of 33% (European Commission, 2006b). For women, the average age of first birth rose from 24 in the early 1970s to 28 in 2006, and this is even higher for first births within marriage, with an average age of 30 in 2006 (ONS, 2008: 24). There has also been an increase in delayed childbearing and childlessness. Whereas around 16% of women born in 1931 remained childless at 35, this compares with a quarter of women born in 1971. The proportion of women remaining childless at 45 has risen from 14% of women born in 1931 to just under a fifth (19%) of those born in 1961, the latest cohort to reach the end of their childbearing years (ONS, 2008: 24).

Figure 2.1 illustrates changes over time in the percentages of women remaining childless, having only one child, or large families (four or more children). Figures for 1920 are included to demonstrate that these figures are not unprecedented, with an average age of first birth of 28.7 for women born in 1920.

The previous discussion outlines the predominant factors identified in the literature with delayed childbearing. However, as noted above, there is relatively little attention to that of men. The following section reports analysis of the British cohort studies looking at men and women born in 1958 and 1970. As well as comparisons by sex, this inter-cohort analysis allows comparisons across time, thereby providing

Fig. 2.1 Completed family size, selected cohorts (%)
(Source: ONS Cohort Series FM1 No. 35, Table 10.5)



a picture of the impact of social change on the lives of cohort members. Previous analyses of the cohort studies demonstrate changes across a range of domains such as education, employment, health and family life, which reflect the wider social context in which these changes were experienced (Ferri et al., 2003). Those born in 1958 will have experienced their early adulthood during the 1980s, a very different political, social and economic context from those born in 1970: whereas the 1958 cohort initially experienced a buoyant labour market but faced worse conditions as they got older, the opposite occurred for those born in 1970. Rising living standards in recent decades have been accompanied by increasing polarisation in terms of wage inequality. Cohort members remaining childless in their early thirties will also have experienced this in differing circumstances, those born in 1958 in the early 1990s, and those born in 1970 in the early twenty-first century.

Data and Methods

The National Child Development Study (NCDS) and British Cohort Study (BCS) are longitudinal surveys following a sample of individuals born in Great Britain between 3–9 March 1958 and 5–11 April 1970 respectively. Surveys to monitor the educational, physical and social development of these cohorts have taken place at varying intervals, with data collected at birth, 7, 11, 16, 23, 33, 41/42 and 46/47 for the NCDS and at birth, 5, 10, 16, 26, 29/30 and 33/34 for the BCS. Earlier stages of the studies were conducted by various organisations, however data collection for these and other birth cohort studies is now the responsibility of the Centre for Longitudinal Studies, Institute of Education, University of London. Full fertility histories were produced for the NCDS cohort at age 33/34 (see Di Salvo, 2005), and these were drawn on in the analysis presented below.¹

Longitudinal data enabling the opportunity to investigate demographic events within a life course perspective, however, are subject to attrition, and approximately

¹Fertility histories are also collected at age 23 years for the NCDS cohort; although a cross-sectional approach was favoured for the analysis of NCDS data in this study.

two thirds of those taking part in the birth survey were interviewed in their early thirties. Previous analyses of the response bias arising from this suggests it is the most socio-economically disadvantaged that are over-represented amongst those lost over time (for further detail see Shepherd, 1995; Plewis et al., 2004). Both samples also under-represent those who began child-bearing in their teens (Berrington, 2003). The analysis assumes any attrition bias is similar in both surveys.

There are 11,407 men and women aged 33 in the NCDS5 cohort, and 11,261 aged 30 in the BCS 2000 cohort. The findings presented below report analysis conducted on individuals in these sweeps who were also present at ages 33/34 (BCS 2004) ($n = 9,665$), in order to conduct comparisons by cohort at exact age 33. Survival analyses were conducted on both cohorts, subsequent to cleaning the data to address those with missing/incomplete birth dates. As the focus of this chapter is on postponed fertility it only considers biological children, and childlessness is defined as not having had a live birth; those classified as childless may include respondents with adopted or step-children.

The analysis considered several variables identified as important in the literature.² As noted above, previous research has attributed fertility postponement to changes in education and employment (particularly for women), and partnership formation. However, these are mediated by social class (Berrington, 2003). The following section reports the results of analyses looking at childlessness by sex in relation to social class background identified using the occupational social class (Registrar General's definition) of the cohort member's father (or father figure) at age 16; educational attainment by age 33— those with no qualifications, school-level qualifications (including A/S level and their NVQ equivalents) and tertiary level qualifications, including Higher qualifications, degrees and NVQ equivalents (4–6); current economic activity—looking at those working full-time or part-time (whether employee/self-employed), unemployed and seeking work, permanently sick/disabled, or looking after home/family; and current marital and (co-residential) partnership status.³

²Initial analysis was carried out looking at religiosity. The Second Demographic Transition attributes declining fertility to, *inter alia*, a growth of values of self-realisation and freedom from traditional forces of authority such as religion and previous research reports a correlation between increased religious activity and more traditional attitudes to family (e.g. Berrington and Diamond, 2000; Oláh, 2005). However, while there was a decline in religiosity evident (only 11 per cent of the 1970-born cohort who defined themselves as having a religion attended services at least monthly, compared with 30 per cent of the 1958 cohort), there was no significant association with remaining childless in one's early thirties.

³Marital status distinguishes the currently married (whether first or subsequent), the previously married (the separated or divorced, as well as the very small numbers widowed in each cohort), and the never-married. Partnership status distinguishes those currently cohabiting: partnership histories record relationships in which respondents 'lived with someone as a couple' for a month or more. However, as Murphy (2000) observes, assuming all co-residential partnerships as equivalent raises several issues: these may differ not just in *de jure* status, but in terms of the meanings and motivations these hold for respondents.

The Propensity to Childlessness Among Young Adults – Differences by Sex and Changes Over Time

The analysis compares the propensity amongst men and women to remain childless by exact age 33, considering this in relation to various socio-economic characteristics and circumstances. Comparisons are also made with those who have had children at the same age, to provide a broad overview. As noted above cohort members who remain childless at 33 will have experienced this in somewhat different contexts.

Delayed Childbearing by Sex

As Figure 2.2 illustrates, there are significant differences by sex, with larger proportions of men remaining childless at age 33 compared with women in both cohorts. Thus, a third of men in the 1958 cohort remained childless at 33 compared to just under a quarter (24%) of women at the same age. For the 1970 cohort the figures were over half (51%) of men compared with less than two fifths (36%) of women at the same age.

These figures also illustrate a dramatic increase in childlessness amongst adults in their early thirties in just 12 years, particularly for men. The median age of first birth for women has increased from 27 to 30 and for men from 30 to 34. Previous analysis of the cohort studies (Berrington, 2003) finds that, alongside an increase in median age across cohorts, similar proportions (around 10%) became teenage mothers, indicating increasing polarisation between women in relation to age at first birth.

Delayed Childbearing by Social Class Background

As Figure 2.3 illustrates (see also Table 2.1), there are significant differences in the propensity to remain childless at age 33 by social class background, defined

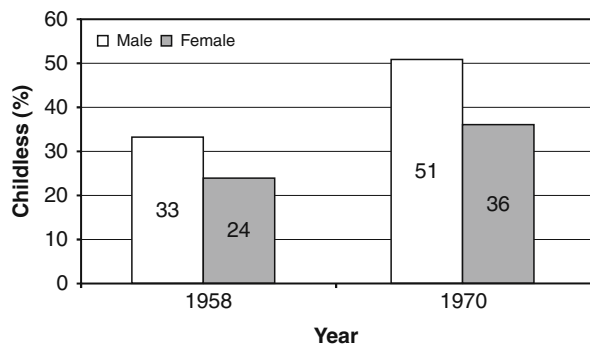


Fig. 2.2 Childlessness at 33 by sex and cohort (%) (Source: Author's calculations based on survey data)

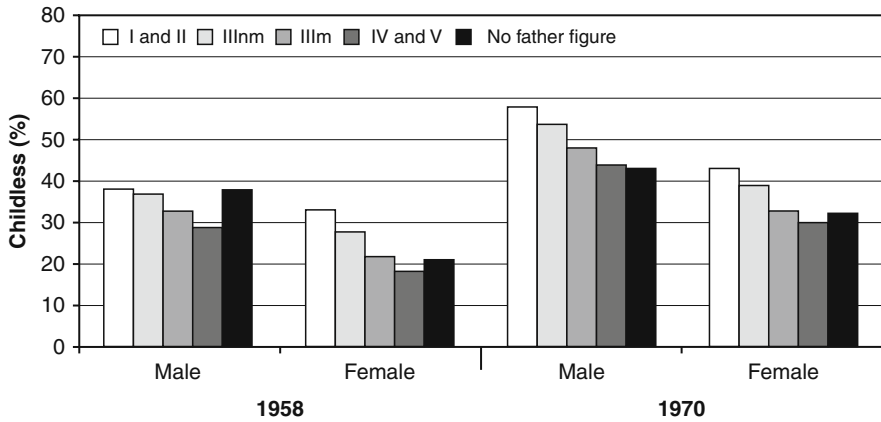


Fig. 2.3 Childlessness at 33 by social class background (%)
 (Source: Author’s calculations based on survey data)

by occupational social class of the cohort member’s father (or father figure) at the time of birth. Considering firstly those born in 1958, the differences are largest for women, with a third from professional or managerial backgrounds (I and II) remaining childless at 33 compared to less than a fifth (18%) of those with fathers

Table 2.1 Men and women remaining childless at 33 by cohort

	1958		1970	
	Male %	Female %	Male %	Female %
Social class background (father’s occupation at age 16)				
I and II	38	33	58	43
III non-manual	37	28	54	39
III manual	33	22	48	33
IV and V	29	18	44	30
No father figure	38	21	43	32
Highest educational attainment (by age 33)				
No qualifications	29	12	45	25
School level qualifications	31	21	46	29
Tertiary qualifications	40	37	61	48
Current partnership status				
Married	17	13	33	23
Previously married	35	21	41	29
Cohabiting	50	40	55	47
Single never married	96	80	89	67
ALL	33	24	51	36
Total (100%)	5,577	5,791	4,237	4,765

Source: Author’s calculations based on survey data.

in semi-skilled and unskilled occupations (IV and V). The differences for men of the same age across social class background are smaller, with the same proportion of men (38%) with no father figure at birth as those from professional or managerial backgrounds remaining childless at 33, with men with fathers in semi-skilled and unskilled occupations (IV and V) those least likely to remain childless (29%).

Looking at the 1970 cohort, here the differences are more extreme amongst men, a difference of 15 percentage points: 58% from professional or managerial backgrounds remaining childless at 33 compared with 43% of men with no father figure – those least likely to be childless from this cohort. The pattern for women born in 1970 remains the same as for those from the 1958 cohort, with higher proportions from professional or managerial backgrounds remaining childless at over-two fifths (43%), and those with fathers in semi-skilled and unskilled occupations least likely to remain childless (30%) at this age. The changes over time however are largest for men from professional or managerial backgrounds, an increase of 20 percentage points between cohorts.

Childlessness by Educational Attainment

Recent decades have seen a massive expansion in post-secondary education, with young adults spending an increasing proportion of time in education. The 1958 cohort experienced an educational context in which the majority (over 60%) of young people left school at 16, however by the time the 1970 cohort reached 16, in 1986, this had declined to around half (54% of males and 45% of females) (Makepeace et al., 2003: 41). Analysis comparing highest educational achievement by sex across the cohorts, not illustrated here, shows higher proportions of both men and women gaining tertiary qualifications by their early thirties, over a third of the 1970s cohort compared with a quarter for those born in 1958. As mentioned above there is a considerable literature addressing the influence of educational attainment on fertility, with a large body of empirical evidence of substantial differences in first birth timing according to levels of education (Sobotka, 2004). There has been much attention to increases in women's educational attainment in particular. Whereas for the 1958 cohort slightly higher proportions of men than women had tertiary educational qualifications by age 33 (28 versus 25%), amongst the 1970 cohort this was reversed, with 35% compared with 32% of men. However, as Makepeace et al. (2003) observe, this broad observation does not address continuities in the large differences by gender in subjects studied. Furthermore, their analysis of the cohort studies demonstrate that the gap in the chances of gaining tertiary qualifications for those from the highest and lowest social classes has widened steadily over time. Nevertheless, differentials in delayed childbearing by educational level are also evident for men. Table 2.1 presents figures for the proportion of men and women remaining childless in their early thirties, and differentials by educational attainment are significant for both men and women (Fig. 2.4).

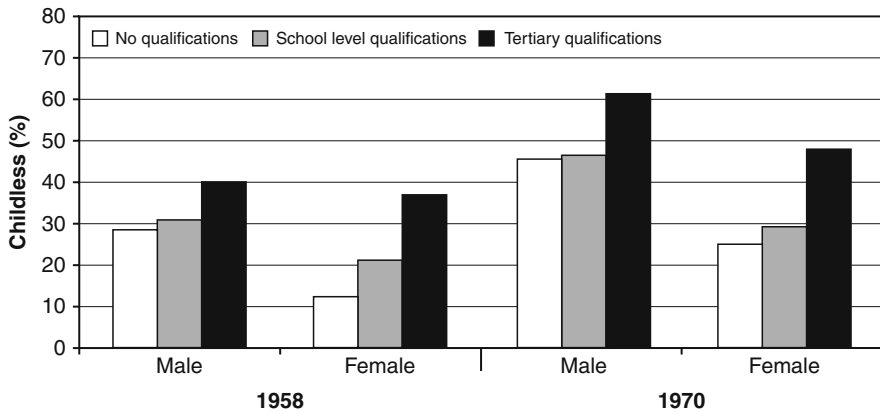


Fig. 2.4 Childlessness at 33 by educational qualifications (%)
(Source: Author's calculations based on survey data)

Looking at the 1958 cohort, nearly two fifths (37%) of women with tertiary qualifications remain childless at 33, compared with only 12% of women of the same age with no qualifications. While the differences are less stark between men, what is noteworthy is the difference by sex, with unqualified men more than twice as likely to be childless at this age compared with unqualified women. This differential by sex is also evident for the 1970 cohort: 25% of women with no qualifications remain childless at 33, compared with 45% of unqualified men. This difference by sex is also marked amongst those with tertiary education; where just under half (48%) of women in this cohort remain childless at 33, compared with nearly two thirds of men (61%).

Childlessness by Current Economic Activity

There has been much debate in the literature over the role of women's employment in particular in fertility decline. Several commentators propose women's increased labour force participation as an indicator of increasing gender equality; such claims however do not address continuing differences in hours of work or levels of pay (Perrons, 2002, 2003). Previous research by Makepeace et al. (2003) finds differences by sex in the proportions of men and women born in 1970 who experienced continuous employment between ages 16 to 30 to be 30% compared with 14% respectively. There is also an increasingly strong relationship between qualifications and continuous employment: in the 1970 cohort, highly qualified women are more likely to remain in continuous employment than both their less qualified contemporaries and their predecessors in the 1958 cohort (Makepeace et al., 2003: 58).

Preliminary analysis of the 1958 cohort's economic activity in their early thirties showed significant differences in economic status by sex: 89% of all men were

working full-time, compared with 36% of women; another third of women worked part-time (32%) while others looked after the home and family full time (28%). Similar analysis on the 1970 cohort in their early thirties shows an increase in the proportion of all women in full-time employment, to 43%, with a concomitant decrease in the proportions looking after home and family (19%). Similar proportions as in the previous cohort were working part-time (32%). However, for men, there is little change in the proportions working full time, around 90% in both cohorts.

Subsequent analyses considered the incidence of childlessness in relation to economic activity by parental status. Not surprisingly, there were significant differences evident amongst women, for both cohorts. Amongst the 1958 cohort, the vast majority who remained childless in their early thirties were in full-time employment (83% compared to 22% of mothers). The picture for men was very different however, with a slightly higher proportion of fathers (91% compared with 87% childless) working full-time. Looking at the 1970 cohort indicates very little change over time for men, however there are changes over time for women. The proportions of women who remained childless in their early thirties and who were working full-time declined compared with the earlier cohort, now standing at 77%. The proportions of childless women working part-time increased slightly, from 7% amongst the 1958 cohort to 11% of the 1970 cohort. Amongst mothers of the same age, there have also been changes over time, with slightly higher proportions working full-time (25% among the 1970 cohort) and part-time (from 39% amongst the 1958 cohort to 43%) of the 1970 cohort, with a concomitant decrease in the proportions categorised as looking after home and family full time, from over a third (35%) of those born in 1958 to a quarter (26%) of those born in 1970 (see also Hansen et al., this volume).

British men have the highest average number of working hours compared with other men in the European Union, while British fathers work longer hours on average than men without dependent children (Kiernan, 1998). This analysis shows men remain overwhelmingly in full-time employment, regardless of parental status. While the proportions of working mothers has increased, these figures comparing changes over time in economic activity suggest a relative lack of change in responsibilities for childcare between men and women.

Childlessness by Partnership Status

Previous analyses of the cohort studies have highlighted the considerable decline in marriage in just twelve years: whereas three quarters of women and two thirds of men had married by age 29, just over half of women and a little over a third of men born in 1970 had done so (Berrington, 2003). Some of the decline can be explained by an increase in cohabitation, and cohabitation was the most common form of first partnership for the 1970 cohort (Berrington, 2003). However, there is also evidence of a delay in partnership, whether marriage or cohabiting, alongside an increase in relationship dissolution. Women born in 1970 were much less likely to have entered their first partnership at a very young age (just over a quarter had lived with a partner

by age 20 compared with 40% of women born in 1958), while twice as many men and women born in 1970 have had at least one previous relationship by age 30; of those born in 1948, the majority (about 8 out of 10) were living with a partner by age 42 (Smith and Ferri, 2003). Nevertheless, these changes indicate a concomitant increase in an experience of singleness, either prior to or between relationships.

Changes over time in living arrangements also indicate a greater decline in residential partnership amongst men than women, with a higher proportion of men either living alone (14% compared to 9% of women born in 1970) or living in the parental home (one in six men born in 1970, more than twice as many compared to women of the same age) (Ferri and Smith, 2003). Analyses of the British Household Panel Survey (BHPS) note an increasing tendency since the 1980s for young adults to return to the parental home (Ermisch, 1996).

In part this may be related to changes such as the increase in partnership dissolution. However, this may also be associated with wider changes in areas such as housing or education, and indicates a delay in young adults establishing themselves as economically independent. Analyses of the cohort studies identify a significant decline in home ownership over time. Slightly higher proportions of women born in 1970 compared to men were buying with a mortgage in their early thirties (62 versus 58%), a reversal of the situation for the 1958 cohort (75% women compared with 78% men). While the proportion living in social housing (housing associations or local authority) remained the same at about 15%, the proportions of those privately renting had increased over time (from 6% to 21%) for the 1970 cohort, while the proportions classified as 'living rent free', including with parents, had also increased.

Analysis of the cohorts by legal marital status indicates a considerable increase in the proportions remaining never-married over time, as well as significant differences by sex. Just over a fifth (22%) of all men from the 1958 cohort remained never-married in their early thirties, compared to 15% of women of the same age. However, this had increased to 40 and 31% of the 1970 cohort respectively. Differences between men and women may be explained in part by the fact that traditionally women have tended to marry at younger ages than men. As this category does not distinguish cohabiting, subsequent analysis considered current *partnership* status, distinguishing those currently cohabiting regardless of previous marital status.

Comparisons of the cohorts in their early 30s indicate considerable change in partnership patterns, including the decline in marriage and increase in cohabiting. Whereas four-fifths of the women born in 1958 were or had been married (72% currently married with a further 8% previously married), this compared with less than two-thirds of the 1970 cohort (57 and 7% respectively). Alongside an increase in cohabitation (from around 10% of men and women in the 1958 cohort to around 20% of those born in 1970), there was also an increase in the proportions categorised as currently single and never-married, from 15% to 22% of men and 10% to 17% of women.

Table 2.1 shows figures for the proportions of men and women who remain childless at age 33 by current partnership status. The proportion of men from the 1958 cohort who have not had children at 33 ranges from less than a fifth (17%) of married

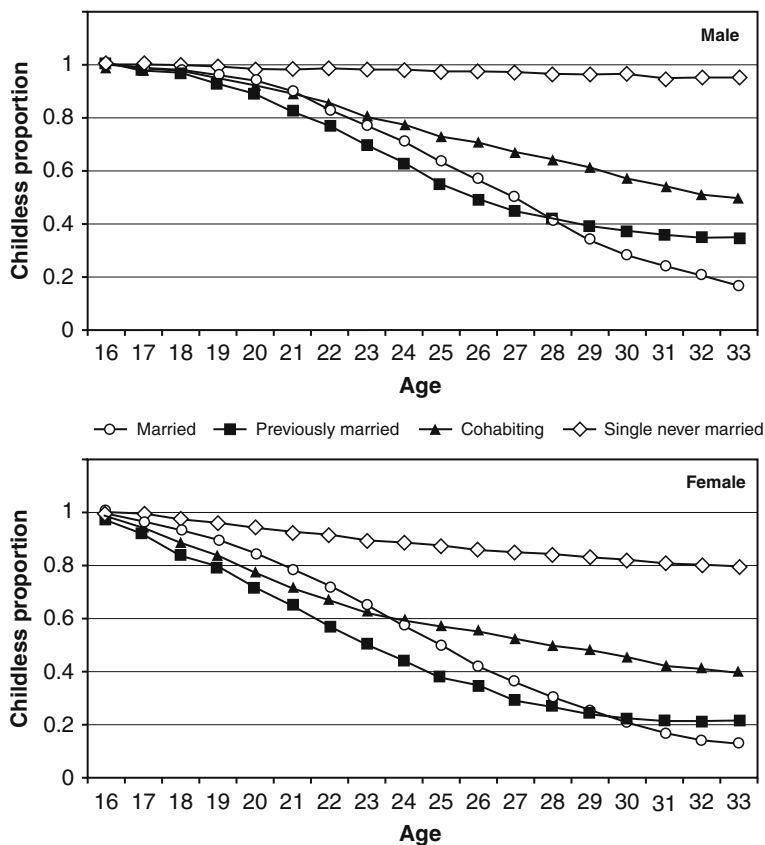


Fig. 2.5 Childless men and women by partnership status, 1958 cohort
(Source: Author's calculations based on survey data)

men to 96% of those never-married and currently single. Figures for childlessness amongst women of the same cohort range from 13% of married women to four-fifths of the single never-married.

Figure 2.5 illustrates these changes, showing the relative decline in childlessness as cohort members age. The graphs show that it is the previously-married amongst both sexes who have the highest likelihood of having children at earlier ages. However, by age 33, the lowest proportions of childlessness are amongst the currently married. For both sexes it is those who are single never-married who are most likely to remain childless at this age.

Figures for the 1970 cohort show that while childlessness at age 33 has increased generally, the broad pattern persists (Table 2.1). Given the changes in partnership patterns over time, we might expect the significance of marital status to wane. Yet, despite changes such as an increase in cohabitation, there is a persistent association between marriage and childbearing.

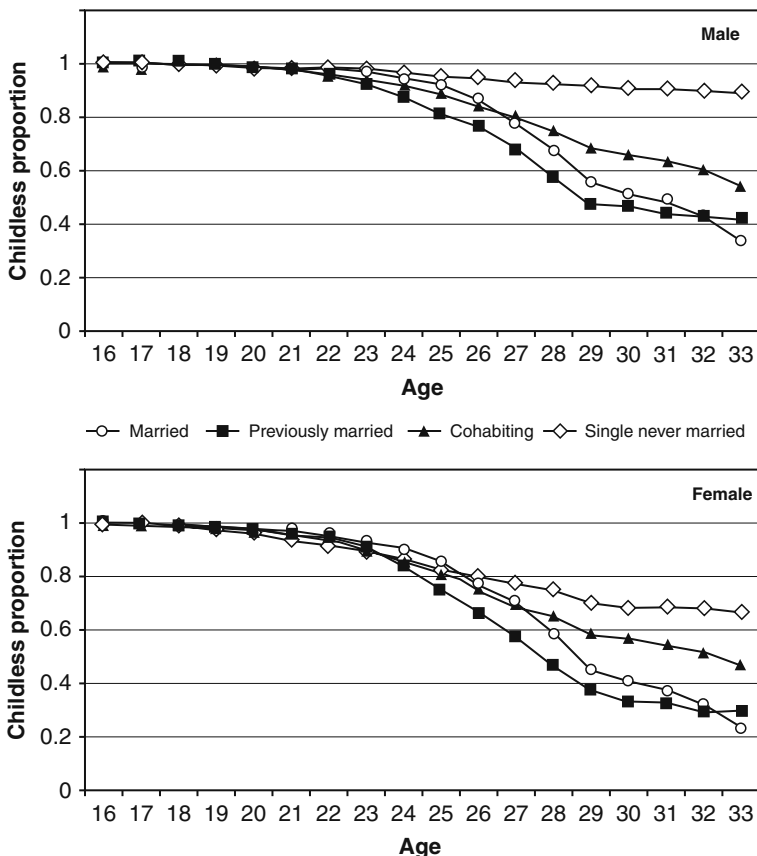


Fig. 2.6 Childless men and women by partnership status, 1970 cohort
 (Source: Author’s calculations based on survey data)

Nevertheless, the proportions of both men and women who are currently married and childless have nearly doubled over time, from 17% to 33% of men and from 13% to 23% of women. The incidence of remaining childless at age 33 amongst other categories has increased far less, and has decreased amongst those who are single never-married at 33, from 96% to 89% of men and from 80% to 67% of women.

The graphs in Fig. 2.6 illustrate the delay in childbearing relative to the earlier cohort, with the proportions remaining childless at specific ages starting to decline mostly from the mid-twenties onward for both sexes. There is then a more rapid decline in the late twenties.

Thus, while the later cohort indicates that there is a narrowing of the differentials by partnership status over time, these differences persist. This suggests that the pace of shifts in the context of childbearing (within marriage) lag behind shifts in partnership formation, a finding which has implications for future fertility patterns. The

decline in marriage may herald a shift to cohabitation, while the delay in partnership may reflect postponement rather than overall decline. However, there is considerable evidence that cohabitation is a more fragile relationship than marriage, and that divorce is more common in marriages preceded by cohabitation (e.g. Haskey, 1992, Ermisch and Francesconi, 1996). Previous research on the 1958 cohort (Berrington and Diamond, 2000) suggests that experience of independent living prior to partnership formation is associated with a preference for cohabitation rather than direct marriage, and higher separation rates amongst cohabiters. Relationship stability is related to both *timing* and *type* of relationship. This suggests that current patterns of fertility decline may be unlikely to alter dramatically in the future, given trends in partnership formation and dissolution and the association of childbearing and marriage identified above. The figures on partnership patterns also indicate the importance of further research on the gendered nature of these trends; while there has been a recent increase in research on singleness amongst women for example, there is little contemporary research on singleness amongst men (Simpson, 2005).

Conclusions

The analysis presented in this chapter seeks to identify changes over time in the timing and propensity to childbearing in Britain in relation to various factors identified as important in the literature. There is much attention in the sociological and demographic literature to notions of increasing individualisation and values of personal autonomy; nevertheless, in demonstrating consistent differences by factors such as social class background and educational attainment across cohorts, this analysis underlines the continuing influence of social structural processes.

However, these differences provide a descriptive context that highlights the need for more attention to the ways in which changes in demographic behaviour at the level of the individual or the couple are related to wider social processes. Authors such as Irwin argue for a more nuanced understanding of structure, not just in terms of choice and constraint, but in terms of changing contexts within which people make choices, and in which some courses of action are much more likely to be 'chosen' than others (Irwin, 2005: 179). Such scholarship emphasises the importance of considering the iterative relationship between individual motivations and behaviours and the particular social and historic context in which these are shaped.

In looking at both women and men, the analysis presented here demonstrates similarities not evident in research looking only at women, for example the association of tertiary educational qualifications with delayed childbearing amongst both women and men. It also however illustrated the differential impact of gender, for example on working practices, irrespective of parenthood status. There is increasing attention to the need to regard gender as an aspect of identity that is relational, rather than as a fixed attribute of individuals (see Watkins, 1993; Greene and Biddlecom, 2000). As well as attention to differences between socio-economic contexts and cultural mores, there is a need to look further at differences between men and women

in terms of both subjectivities as well as practices, in order to understand fertility behaviour more fully.

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Chapter 3

Women's Education and Childbearing: A Growing Divide

Sarah Smith and Anita Ratcliffe

Introduction

Women's family and working lives have changed enormously over the last 25 years in the United Kingdom (UK). Most of the changes are well-documented and several have been discussed in other chapters – women are increasingly delaying childbearing and more are remaining childless (see Simpson, 2009); they are also delaying partnership, increasingly choosing cohabitation instead of marriage, and a growing number are raising children as lone mothers; and women are working more, both before and after childbearing (see Hansen et al., 2009). What is shown in this chapter is that these changes have disproportionately affected better-educated women¹ and that over time there has been an increased divergence in family and working lives between women who have post-compulsory education and those who do not.²

Education has long been seen as a key factor associated with patterns of employment and childbearing for women. Having a high level of education is typically associated with later and less childbearing and the last 25 years have seen a substantial rise in levels of education among women. This is illustrated in Fig. 3.1 which shows current highest academic qualifications by cohort. Comparing the cohort of women born in 1944–48 with that born in 1974–78, the proportion with no academic qualifications fell from 30% to 5% while the proportion with a degree increased from 13% to 26%. The increase in education across cohorts has been greater for women than for men and the education gap has been substantially narrowed.

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¹For a discussion of changes in employment and childbearing among college graduates in the US, see Goldin (2006).

²See also Joshi (2002).

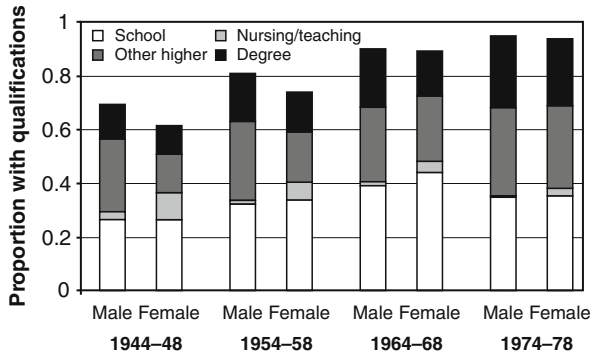


Fig. 3.1 Highest educational qualification, by date of birth cohort (Source: Authors’ calculations using data from the British Household Panel Survey, 1991–2005) School qualifications include A levels, O levels, GCSEs and equivalents; Nursing includes SEN, SRN and SCM, Teaching excludes degree; Other higher includes City & Guilds Certificate, HNC, HND, BEC/TEC/BTEC, Higher Certificate/Diploma, University Diplomas and any other technical, professional or higher qualifications; the omitted category is no academic qualifications

On its own this increase in education would have been likely to cause changes in employment and fertility across cohorts.³ However, there have also been important changes in family and working lives within education groups. The result has been an increasing divergence between the experiences of women who go on to further education and those who leave school at the compulsory school-leaving age. This is the focus of this chapter. The next section discusses the relationship between education and childbearing and possible reasons why that relationship might have changed over time. We then discuss the data and present trends by education in childbearing, employment and partnership. We conclude with a discussion of the implications of the increasingly strong association between education and childbearing – for the women themselves and for children born to mothers with different levels of education.

Education and Childbearing

Higher levels of education have typically been found to be associated with later and lower childbearing. For the UK, Rendall and Smallwood (2003) used data from the Longitudinal Study to compare childbearing among women with post-school qualifications to childbearing among women with no qualifications in a cohort of women born between 1954 and 1958. They found for this cohort that a higher level of education was associated with a greater incidence of childlessness (22.5% of those

³This categorization of education is fairly broad. Other studies have recognized that the field of study may matter as well as the level of education (see Hoem et al., 2005).

with higher qualifications remained childless compared to 15.2% of those without) and with later entry into motherhood (half of those with no higher educational qualifications had their first child by age 24, compared to one tenth of educated women). Conditional on age at first birth they found women with higher qualifications were more likely to go on to have a second birth and that the gap between first birth and second birth was typically shorter. Their analysis did not look at the combined effect of delayed first birth and higher and faster conditional progression to second and subsequent births on completed family sizes.

Other studies however have found a negative association between women's level of education and completed family size. Shkolnikov et al. (2007) calculate completed family sizes by education for a number of countries (excluding the UK). Their findings for the US and selected Western European countries, summarized in Table 3.1, reveal the inverse relationship. Women with higher levels of education have fewer children on average, with the biggest gap in the US and the smallest in Sweden.

This observed negative relationship between education and childbearing may be linked to a number of different factors. Several studies have considered the adverse impact of early childbearing on mothers' completion of education; although studies which attempt to identify the *causal* effect of teenage pregnancy typically find a fairly small effect (see, for example, Kaplan et al., 2004). In addition, there are a number of ways in which higher education might be expected to affect fertility – whether the desired number of children, or the timing. In the first instance, the particular difficulties of combining full-time education and childbearing because of the absence of any formal maternity provision for students is likely to result in a delay in childbearing. Higher levels of education are also typically associated with higher wages and so may raise the opportunity cost of taking time out of the labour market for own childcare which would tend to reduce the number of children (Becker, 1981; Cigno, 1991).

A further effect of education which would work to delay the onset of childbearing may operate through the shape of the expected income profile over the lifetime. Higher levels of education are typically associated with more steeply rising earnings profiles during the early years of employment and Happel et al., (1984) argue that, in the presence of imperfect capital markets, educated women may delay having children in anticipation of higher earnings in the future to cover the additional costs.

Table 3.1 Average completed fertility, women aged 35–49

	Year of survey	Lower education	Higher education
United States	1994	2.61	1.72
France	1994	2.41	1.74
Italy	1995–96	2.04	1.40
Sweden	1992–93	2.17	1.98

Source: Shkolnikov et al. (2007).

Table 3.2 Use of childcare by working women with pre-school children

Woman's current highest qualification	Formal paid childcare (%)	Informal childcare (%)
No qualifications	17.8	75.9
School qualifications	33.6	71.2
Nursing/teaching/other higher qualifications	45.3	67.4
Degree	63.9	49.3

Source: Authors' calculations using data from the British Household Panel Survey, 1991–2005.

The question asks about all uses of childcare and so the totals do not have to sum to 100%. Formal paid child care includes nanny, mother's help, workplace nursery, day nursery and childminder. Informal childcare includes spouse, partner, other relative, friend or neighbour.

However, not all of the potential effect of education is to delay or reduce child-bearing. Higher wages make formal childcare more affordable (Ermisch, 1989): as shown in Table 3.2, there is a strong positive relationship between a woman's level of education and use of formal paid childcare for pre-school children. Women with lower levels of education rely more heavily on informal childcare from family and friends. The ability to pay for formal childcare may reduce the importance of the opportunity cost effect for women in better-paid jobs and allow them to combine work and family more easily, particularly if state-provided childcare is limited.⁴ In addition, employers may have better incentives to retain qualified women and therefore offer them more flexible work schedules.

Another effect of education is to raise permanent income which will tend to increase the desired quantity of children (Becker, 1981), an effect that is likely to be amplified via assortative mating and partners' higher incomes. However, Becker also argued that higher levels of income may increase the desired quality rather than quantity of children, with families choosing to have smaller families and devoting more resources to each child.

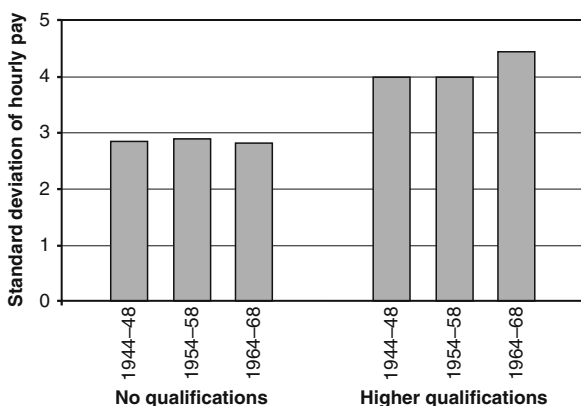
Overall, the effect of higher levels of education on fertility is a priori ambiguous. The observed relationship may suggest that negative factors dominate but, alternatively, it may be driven by selection effects (women with weaker preferences for childbearing selecting into further education) rather than by the causal effect of higher education. If selection is important, then the increasing participation of women in post-compulsory education over time might be expected to change fertility behaviour within education groups as the composition of educated women changes (assuming no change in the underlying distribution of preferences). In addition to this selection effect, however, there are other reasons for thinking that the relationship may have changed over time.

⁴Of course childcare arrangements may reflect, rather than determine, patterns of employment.

As discussed by Dex et al. (2005) and Wolf (2006), educated women are increasingly entering careers traditionally dominated by men, and they now make up a majority of medical students and trainee solicitors and barristers. What these careers have in common is an extended period of training compared to traditionally ‘female’ careers such as teaching and nursing and this is likely to result in further delay to entry into motherhood because of the difficulties of combining studying and motherhood. Aside from the direct enrolment effect, however, most of the impacts of higher education on childbearing (on opportunity cost and permanent income) work through employment choices post-education rather than being a direct effect of education per se.

Recent estimates suggest that the returns to a degree for women have been fairly stable across successive cohorts (see Walker and Zhu, 2003), which may suggest little effect on either opportunity cost or permanent income. However, the types of careers that educated women are increasingly choosing typically have a steeper profile of earnings growth which may work to delay childbearing further either through an opportunity cost effect or through the smoothing mechanism proposed by Happel et al. (1984). To illustrate this, Fig. 3.2 shows a measure of occupational wage dispersion by education and cohort. This is obtained by calculating the standard deviation of wages of all full-time employees at the occupation level (SOC90) using data from the Labour Force Survey and matching it to the actual occupations of women in the sample.⁵ The figure shows both increasing wage dispersion with education and increasing wage dispersion over time among degree-level educated women. As better-educated women increasingly move into occupations with steeper wage profiles they may have more to lose if time out of employment damages their career prospects. Since the estimates of wage dispersion are based on pooled cross-sectional data, the differences by education and cohort are driven solely by occupational choices rather than any change in wage dispersion over time.

Fig. 3.2 Wage dispersion, by cohort and highest qualification
 (Source: Authors’ calculations using data from the British Household Panel Survey and Labour Force Survey, 1993–2000)
 Higher qualifications include degree and other higher qualifications (see notes to Fig. 3.1)



⁵For further information on how this is done, see Gregg et al. (2008).

Other factors, however, may tend to work in the opposite direction, encouraging childbearing among educated women. These include increases in the generosity of maternity provision and the improved supply of nursery places following regulation (see Gregg et al., 2007, for an overview). While these changes in principle affected all women, educated women may be better placed to take advantage of improved opportunities to combine work and family because they can more easily afford to purchase formal childcare.

Overall, there is no reason to expect that the relationship between education and fertility should remain constant over time. However, compared to the many studies that have looked at the relationship between education and childbearing at a particular point in time, relatively few studies have explored whether and how this relationship is changing. For the US, Rindfuss et al. (1996) find that the association between education and childbearing has been growing stronger over time. Over the period 1963–89, college-educated women saw greater declines in fertility than high school graduates; they also experienced a greater shift towards later childbearing. By contrast, recent work by Kravdal and Rindfuss (2007) found that, for Norway, the education gap in fertility has narrowed across successive birth cohorts. Unlike the US, the greatest reductions in childbearing have occurred among the less well-educated, while childbearing among the better-educated has been relatively stable.⁶ This chapter adds to this literature by looking at what has happened to the relationship between education and fertility in the UK over time.

Data and Methodology

The data we use to analyse childbearing by education are drawn from successive waves of the Family Expenditure Survey (FES) 1978–2003, supplemented with waves of the Family Resources Survey (FRS) from 1995–2004. Both are cross-sectional household surveys, containing a standard set of demographic and socio-economic variables on household members, as well as detailed information on household spending (the FES) and income (the FRS). The surveys do not specifically collect information on women's fertility histories. Instead, we use the 'own child method' (see Murphy and Berrington, 1993) to infer fertility histories from the age of the mother and the age of her natural-born children living in the household.

First, we allocate children in the household to their natural mothers using information provided on relationships between household members and the benefit unit to which individuals belong. Then, for each woman we create pseudo-fertility histories – the age of the mother at birth and the birth order of the child – based on the current ages of the mother and children. So, for example, a woman aged 25 who has one child aged 0 is assumed to have had her first child at age 25; a woman aged 30 who has one child aged 2 is assumed to have had her first child at age 28; a woman

⁶The exception was women with higher degrees who did see completed fertility increase over time but this group constituted a small proportion of the sample.

aged 35 who has one child aged 10 and another aged 8 is assumed to have had her first birth at age 25 and her second birth at age 27, and so on. As these examples illustrate, we combine 'current' birth probabilities (i.e. whether or not a woman has a birth in the year in which she is observed in the FES/FRS sample) with retrospective birth probabilities (i.e. whether she had a birth in previous years based on the ages of her children). Finally, we use survival analysis to construct cohort parity progression ratios from the individual fertility histories.

Clearly, the own child method is not without its potential problems. One is that we observe the current ages of the mother and any children, but not their actual dates of birth. In practice, a woman aged 25 who has one child aged 0 may actually have given birth when she was 24. Since the woman could not be a year older than we currently observe her to be when she gave birth, our estimates of the proportion of women who have births of order b by a particular age, and the average age at birth order b , will tend to have a systematic downward bias. However, the bias should apply equally to all cohorts and education groups, and should not therefore affect the validity of the inferences we draw about differences in fertility behaviour over time and by education.

A second problem is that the own child method relies on information on surviving children in the household to infer fertility histories – infant mortality and household reconstitution will result in measurement error. However, low rates of child mortality⁷ and the fact that the overwhelming majority of children stay with their natural mother in the event of family break-up act to reduce the effect of these factors in practice.

Another potential problem – one that is more serious in practice – is that older women may have had children who have now left home. If we observe a woman aged 39 with no children, we cannot say for certain whether she has not yet had children, or she had one child when she was 17 who left home when they were 20.⁸ In the latter case, the own child method would fail to capture births to women who had children relatively young – we would tend to over-estimate the mean and median ages associated with different birth orders (i.e. the average ages of the mother at first, second and subsequent births) and to under-estimate family size for people who entered childbearing at a relatively young age.

A solution to this problem is to adopt a maximum age threshold, i.e. to exclude from our analysis women above a threshold age at which the problem of children leaving home starts to significantly affect the estimates of the proportion of women having births at younger ages. Assuming that women start having children from age 16, the selection problems may arise from as young as age 32. In fact, sensitivity

⁷There was a decline in infant mortality over the period. The rate of death in England and Wales of children less than one year was 14.3 per 1,000 live births in 1976, falling to 5.0 per 1,000 live births in 2006 "Infant and perinatal mortality 2006: health areas, England and Wales", Health Statistics Quarterly 35. Our estimates will therefore tend to underestimate births more at the beginning of the period.

⁸The problem is made potentially worse in practice by the fact that students who live away from home are not counted as part of the household in the FES/FRS.

analysis of estimates of the proportion of women having a first birth by age 20 made using successively older samples, shows that the threshold can be raised to 37 before there are significant effects.⁹

Our analysis of fertility therefore excludes births after age 38. This means that we under-estimate the proportion of each cohort having first and subsequent births. Murphy and Grundy (2003) suggest that fewer than 1% of births are to women aged 40+ among cohorts born after 1930. However, the recent trend towards later child-bearing suggests that the bias is likely to increase among later cohorts. Moreover, the effect of the bias will not be the same across education groups. This must be borne in mind when interpreting our results and we place more emphasis on our analysis of the age at first birth rather than completed fertility.

The advantages of generating cohort fertility profiles by applying the own child method to repeated cross-section data from the FES and FRS are that we have full information on birth order, which is only recently available in complete form in data derived from official birth registration data. We also have information on the mother's education, as well as other economic and demographic characteristics which we use to document changes in employment and partnership among women with different levels of education.

As a check of the validity of our approach, we compare an estimate of the period total fertility derived from the FES/FRS data from 1968 onwards, with the official measure of total fertility derived from registration data, shown over a longer period to highlight fertility trends. Total fertility measures the number of children a woman would have if she experienced the age-specific fertility rates in that year. As shown in Fig. 3.3, total fertility estimated using the FES/FRS is very close to the official measure. As is to be expected, our estimate is lower than the official measure since we exclude births over 37. However, we pick up the major trends in fertility (in particular, the decline in total fertility from around 2.5 in 1968 to 1.7 by the end of the period), and the average difference is relatively stable over time.

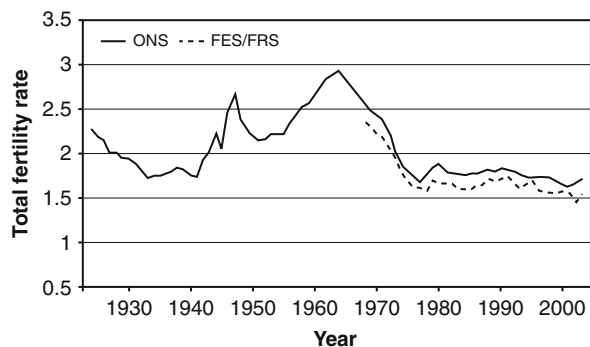


Fig. 3.3 Total fertility – FES/FRS estimate and ONS estimate (Social Trends 30 and Series FM1 No.35)

⁹This suggests that there may be a negative relation between the age of the mother at first birth and the age at which the child leaves home.

Changes in Childbearing by Education

Rendall and Smallwood (2003) looked at differences in childbearing in women born in 1954–58, between those with and without post-secondary-school qualifications. We extend the analysis to consider women born in earlier and later cohorts in order to assess the extent to which the education gap has changed over time. We focus on women born ten years' earlier (i.e. 1944–48) and ten years' later (i.e. 1964–68).

Information on academic qualifications is not available in all waves of the FES and FRS. Instead, there is consistent information available since 1978 on the age at which people leave full-time education. Replicating the exact split made by Rendall and Smallwood is therefore not possible. Instead, we define two groups of educated women – one who left full-time education at 19+ (we call these women with higher qualifications) and the other who left full-time education at 21+ (we call these graduate women). In both cases, we compare their outcomes with those of women who left school at 16 or below (we call these school leavers). Rendall and Smallwood report that 17% of their sample had obtained a higher qualification; the figures reported in Table 3.3 below suggest that this corresponds closely to the proportion leaving full-time education at age 19+. However, compared to Rendall and Smallwood, our sample may differ in that we may miss some women who obtained academic qualifications after they left full-time education, and not take account of women who stayed on in full-time education but did not obtain any qualifications.

Table 3.3 presents two sets of summary statistics on childbearing by cohort and education – completed fertility and the proportion remaining childless. In both cases, as already discussed, we only include women up to age 38. Rendall and Smallwood do not calculate completed fertility by education, but we can compare our estimates of childlessness with theirs for the 1954–58 cohort. For women leaving school at 16 (corresponding to their sample of women with no educational

Table 3.3 Summary measures of childbearing, by cohort and education

	1944–48	1954–58	1964–68
Completed fertility up to age 38			
Left school at 16	1.97	1.93	1.94
Left FT education at 19+	1.58	1.45	1.40
Left FT education at 21+	1.55	1.42	1.36
Proportion childless up to age 38			
Left school at 16	0.125	0.144	0.149
Left FT education at 19+	0.244	0.290	0.310
Left FT education at 21+	0.272	0.296	0.326
Proportion of cohort			
Left FT education at 19+	0.117	0.174	0.212
Left FT education at 21+	0.090	0.131	0.150

Source: Authors' calculations using data from the Family Expenditure Survey and Family Resources Survey, 1978–2005.

qualifications), we find that 14% are childless, compared to 15% in the Longitudinal Study. For women with higher qualifications, however, our estimate of childlessness is quite a bit higher – nearly 30% compared to 22.5% in the Longitudinal Study. Of course, births after the age of 38 may account for the difference. We obtain a much closer match when we look at the proportions having a first birth at different ages. In the Longitudinal Study, 10% of women with higher qualifications had their first birth by age 24 compared to 50% of women without. We obtain figures of 10% and 53% respectively.

The figures in Table 3.3 illustrate that the divide in childbearing by education appears to have been getting wider. Better-educated women in the 1944–48 cohort had lower completed fertility and a higher level of childlessness than those who left school at 16. By the 1964–68 cohort this gap had widened. Completed fertility fell by more among the group with higher qualifications than among those who left school at 16 and the gap in completed fertility between the two groups increased from 0.42 to 0.58. Of course, we cannot rule out that higher fertility at later ages among educated women may be enough to maintain levels of childbearing but other studies based on the UK cohort studies also point to increasing levels of childlessness among educated women (see Kneale and Joshi, 2007). The Table suggests that most of the increase in the gap occurred between the 1944–48 cohort

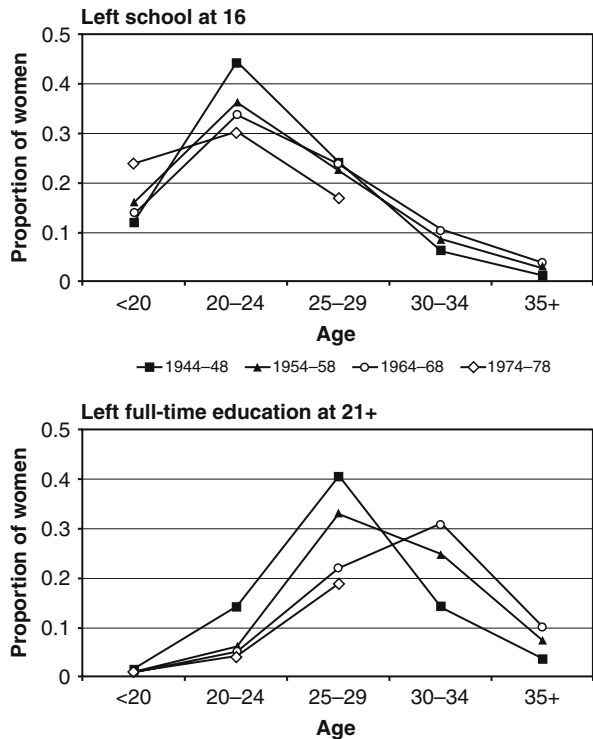


Fig. 3.4 Age at first birth, by cohort and education (Source: Authors' calculations using data from the Family Expenditure Survey and Family Resources Survey 1978–2005)

and the 1954–58 cohort; changes between the later cohorts appear to have been smaller.

The increased divide between education groups is clear if we look at changes in the timing of first birth – shown for different date-of-birth cohorts in Fig. 3.4. For women leaving school at age 16, there has been a decline in the size of the peak at ages 20–24, indicating a slight increase in the age at first birth. However, the peak has remained at 20–24 and there has been very little increase in the proportion of women having their first birth in their late 20s or 30s. There has been an increase in the proportion of women leaving school at 16 who are teenage mothers, particularly among the most recent cohort of women (born 1974–78).

By contrast, there has been a clear rightward shift in the distribution of age at first birth among graduates. Even among the oldest cohort, childbearing began later than among women leaving school at 16, but the most common age of entry into motherhood for graduates was 25–29 and most had their first child before age 30. By the 1964–68 cohort, this was no longer the case with the peak shifting to 30–34. Early evidence from the 1974–78 cohort however, shows less evidence of a further big shift in the age distribution.

The result is a greater polarization in age of childbearing by education. This is clearly illustrated in Fig. 3.5 which shows, for the 1944–48 and 1964–68 cohorts, the proportion of women having a first birth before 30 according to the age at which

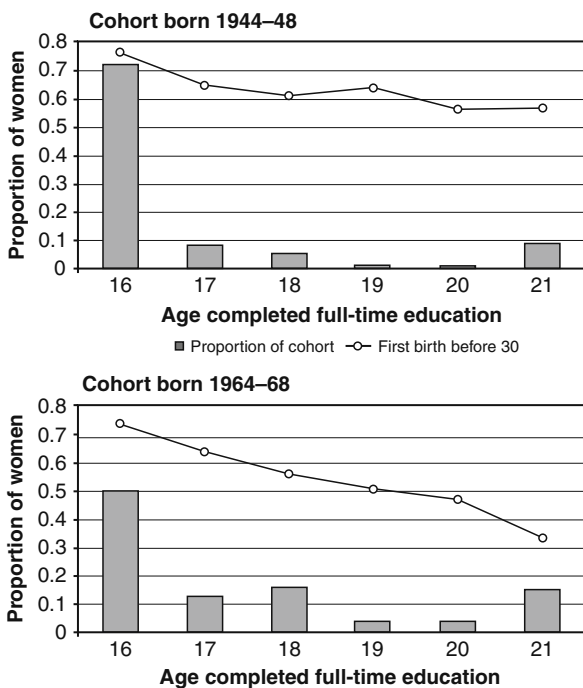


Fig. 3.5 Proportion with first birth by age 30, by cohort and education
 (Source: Authors’ calculations using data from the Family Expenditure Survey and Family Resources Survey 1978–2005)

they left full-time education. It highlights that the educational gradient steepened as educational attainment increased. In the earliest cohort the majority of all women, regardless of their education, had their first child by the time they were 30; this is no longer the case. There has been very little change in the proportion of women leaving school at 16 who have their first child by age 30 which remains over 70%. But there have been big changes for educated women – among those leaving full-time education at 21+ the proportion entering motherhood by age 30 has halved from around 60% to 30%. In the next section, we show that these changes in childbearing have been accompanied by differential changes in employment and partnership for educated women.

Changes in Employment and Partnership, by Education

Information on employment and partnership by education are available only in the years of the survey (1978–2004) and unlike the case of fertility we cannot construct retrospective histories; we therefore observe only parts of the age profiles for each of the cohorts using standard pseudo-cohort analysis. These are shown in Figs. 3.6 and 3.7. Each of the lines represents the age profile of a single cohort; gaps between the lines therefore indicate changes in behaviour across cohorts compared at the same age.

Figure 3.6 shows age profiles of average weekly hours. Weekly hours are zero for those not working and the changing profiles therefore reflect changes in participation as well as shifts between full-time and part-time employment. For school-leavers there has been an increase in average hours across cohorts but this has been fairly small and has caused little change in the overall shape of the age profile – the traditional ‘u’ dipping and rising at around the same ages, consistent with the peak in age at first birth remaining at 20–24.

The sample size of graduates in each cohort at each age is relatively smaller than that of school leavers, reflected in less smooth profiles. Nevertheless, the main trends are clear. There has been an increase in hours worked by graduate women in their 20s and 30s across successive cohorts and the shape of the age profile is moving

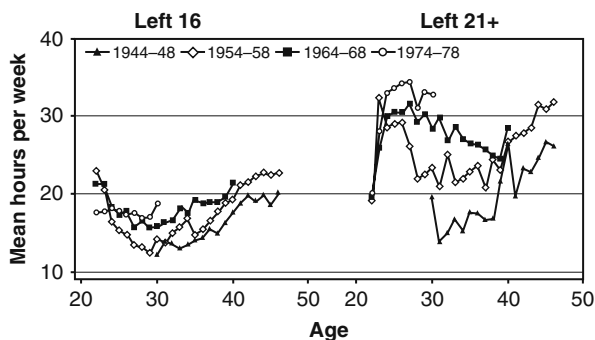
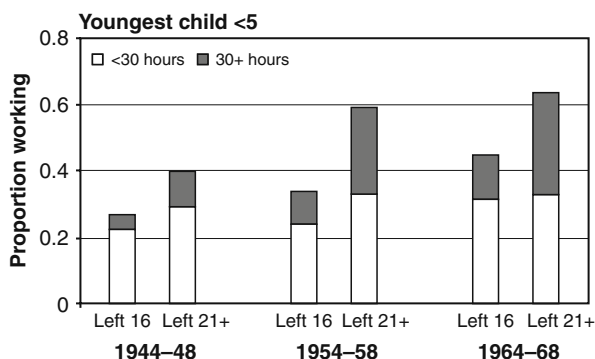


Fig. 3.6 Age profile of weekly hours worked, by cohort and education (Source: Authors' calculations using data from the Family Expenditure Survey and Family Resources Survey 1978–2005)

Fig. 3.7 Employment among women with pre-school children, by cohort and education

(Source: Authors' calculations using data from the Family Expenditure Survey and Family Resources Survey 1978–2005)



away from the traditional 'u', in part reflecting an increasing dispersion of age of entry into motherhood. There have also been changes in employment before and after childbearing. First, there has been a prolonged period of full-time employment prior to childbearing with very little decline in average weekly hours before age 30 for both the 1964–68 cohort and the 1974–78 cohort. Second, there has also been an accelerated return to work after childbearing. Using data from the UK birth cohorts, Joshi (2002) reports that the median return to work time for graduate mothers fell from five years in the 1970s to less than one year in the 1990s. For women with no qualifications the median return to work time remained at five and a half years. The result is an increase in employment among women with young children, particularly among graduates. This is shown in Fig. 3.7.

Between the 1944–48 cohort and the 1964–68 cohort, the rate of employment of graduate women with pre-school children increased from 40% to 60% and almost all of the increase was from a rise in full-time employment (>30 hours). For women who left school at 16, the increase in the rate of employment was

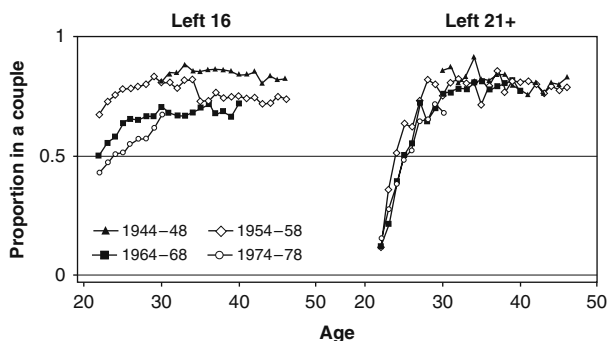


Fig. 3.8 Age profile of partnership, by cohort and education

(Source: Authors' calculations using data from the Family Expenditure Survey and Family Resources Survey 1978–2005)

smaller (from 26% to 43%) and was driven by rises in both part-time and full-time employment. By the 1964–68 cohort, part-time employment rates among school leavers had caught up with those of graduate mothers but the full-time employment rate was still much lower. This is consistent with the pattern of childcare use among the two groups with educated women making more use of formal paid childcare which is more likely to be available on a full-time basis.

Among graduate women the biggest increase in full-time employment occurred between the 1944–48 and 1954–58 cohort, most likely reflecting the introduction of maternity leave in 1975 which benefited the later cohort. This has allowed more women to combine employment and children as shown by the increase in full-time employment among women with pre-school children (shown in Fig. 3.7). It may also explain the move towards “career” jobs since maternity leave allows women to combine work and family, enabling them to reap some of the benefits of early investment in a career.

Trends in partnership have also differed by education. For graduate women, there has been a trend towards delayed partnership formation (here partnership includes both formal marriage and cohabitation) but the eventual rate of partnership among graduate women in their mid-30s has remained fairly stable at around 80%. For women leaving school at age 16, the story is quite different. Not only are partnership rates lower at younger ages, but they have shifted downwards at all ages with each successive cohort. The rate of partnership at age 35 has fallen from 85% among the 1954–58 cohort to below 70% among the 1964–68 cohort. There has been a correspondingly greater increase in lone-motherhood among this group. Among graduate women with pre-school children, the proportion who are lone mothers increased from 2% among the 1944–48 cohort to 5% among the 1964–68 cohort. Among those leaving school at 16, the increase was from 6% to 22% (Fig. 3.9).

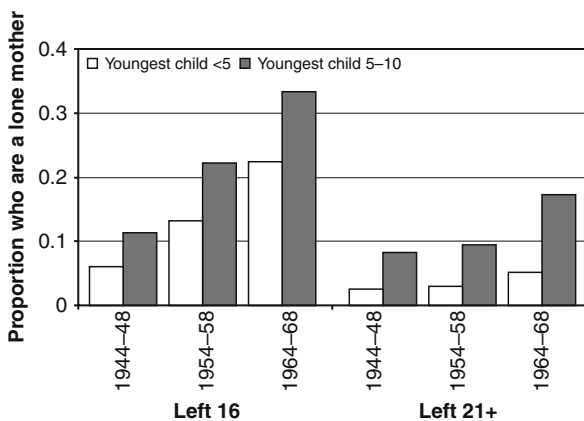


Fig. 3.9 Lone-motherhood, by cohort and education (Source: Authors’ calculations using data from the Family Expenditure Survey and Family Resources Survey 1978–2005)

Conclusions and Discussion

By comparing childbearing, employment and partnership across successive date of birth cohorts, this chapter has highlighted the increased polarisation between the family and working lives of women with different levels of education.

Across cohorts of women born in 1944–48, 1954–58 and 1964–68, the pattern of childbearing and employment for women leaving school at 16 has remained relatively stable. There has been little change in the age at which they begin childbearing; around half have their first child by age 25 and more than three-quarters by age 30. There has been an increase in employment among those with children, but part-time work remains the norm. The biggest change has been in partnership, with an increasing proportion of lone mothers. This reflects both increasing rates of divorce and separation and a rise in the number of never-married mothers.

Graduate women have experienced much greater changes in childbearing and employment. Childbearing is increasingly delayed and fewer than 30% now have their first birth before age 30. There has been a greater increase in full-time employment – both before and after employment. Partnership has been delayed but whilst the eventual rate of partnership remains much the same, the rise in lone-motherhood has been smaller. Childbearing and partnership are put on hold as more graduate women pursue careers but more (if not the majority) now combine careers with motherhood.

Thus increasing levels of educational attainment across successive generations of women can account for some – but not all – of the observed changes over time in women's family and working lives. The lives of graduate women themselves have also changed compared to the lives of earlier cohorts of graduate women. Predicting what will happen in the future to women's childbearing and employment therefore involves more than just observing changes in educational attainment, but also understanding the evolving family and working lives of women at different education levels. For later cohorts (born 1974–78) the evidence presented here points to less dramatic shifts in behaviour among graduate women. Figure 3.4 shows similar rates of childbearing by age 30 to the earlier cohort, while Table 3.4 shows that rates of employment among graduate women with pre-school children have not continued to increase at such a fast rate. This may indicate that, while there is now a greater divide, it is less likely to widen further.

The increased polarisation is likely to have hugely important effects for the lives of the women involved and for their children. The fact that women of different education backgrounds no longer share recognisably the same family and working lives is seen by some as marking the end of a common sisterhood (Wolf, 2006).

For children, the changes in work and family lives mean a greater material advantage for those born to educated mothers. Table 3.4 summarises information on maternal employment, lone-motherhood and household income for pre-school children (<5) by mother's education and year. Unlike previous analysis, which compared women of different date-of-birth cohorts whose children would have been

Table 3.4 Women with pre-school children, by education and year

	Proportion working 30+ hours		Proportion working < 30 hours		Proportion who are lone mothers		Mean real weekly income	
	16	21+	16	21+	16	21+	16	21+
1978–82	.048	.063	.198	.272	.084	.026	£55	£79
1983–87	.075	.143	.221	.333	.124	.023	£73	£121
1988–92	.095	.242	.253	.295	.183	.037	£87	£181
1993–97	.114	.304	.282	.312	.254	.065	£115	£210
1998–02	.137	.315	.318	.317	.282	.069	£139	£231

Source: Authors' calculations using data from the Family Expenditure Survey and Family Resources Survey 1978–2005.

Income is household disposable income in constant 2003 prices.

born at different points in time because of differences in childbearing ages, this directly compares children of the same age at the same point in time.

Of course, the picture from looking at trends in employment and lone-motherhood over time is much the same as looking across cohorts. However, the final column shows a measure of household income. The aim is to look at what has happened over time to family material well-being for children born to women with different levels of education. Reflecting the changes to age at first birth, maternal employment and partnership, there has been an increasing divide between household incomes, by education. At the beginning of the period (1978–82) the ratio of household incomes of female graduates to school leavers was 1.43. Ten years later, this had grown to over 2. More recently, the gap has narrowed back to 1.66, likely as a result of large increases in child-contingent benefits targeted mainly at low-income households. Between 1999 and 2003, government spending per child increased by 50% in real terms, a change that was unprecedented over the previous thirty year period and most of the additional spending was targeted at low-income households. However, even this massive increase in government spending has not been enough to counter the effect of changes in employment, childbearing and partnership on relative incomes. Compared to 25 years ago, the income gap has widened.

Children born to graduate women now live in households with relatively higher incomes in their early childhood. Because of rising levels of full-time employment, however, they are also more likely to spend time in formal childcare at young ages. Reductions in inputs of maternal time may offset the positive impact of increases in household income. Predicting how these changes will play out in terms of later outcomes depends on the overall effects of both these changes. There are extensive literatures which attempt to measure the causal effect of income on child outcomes (health and educational attainment) and of maternal employment on child outcomes. Very broadly these literatures suggest that a higher level of permanent income has a positive effect, particularly at younger ages, although this is relatively small compared to the effect of family background variables, including

maternal education (Blow et al., 2005). Maternal employment has generally not been found to have a negative effect (Gregg et al., 2005), with some evidence for long-term positive effects of pre-school formal childcare (Goodman and Sianesi, 2005). If anything, therefore, the changes in working and family lives that have occurred seem likely to amplify further the advantages for children born to graduate women.

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Chapter 4

The Timing of Motherhood, Mothers' Employment and Child Outcomes

Kirstine Hansen, Denise Hawkes and Heather Joshi

Introduction

The last decades of the twentieth century have witnessed, as part of the second demographic transition affecting most industrial countries (Van de Kaa, 1987), two features of particular interest here – a delay in entry to motherhood and an increased chance of women being employed even after they have children. In Britain, these trends have not been experienced uniformly across the social spectrum. The research reported in this chapter attempts to establish links between these two phenomena, to quantify the extent of social differentials (in the timing of first motherhood and maternal employment) and to investigate their impact on the development of children.

In the not so distant past, very few mothers had paid work, especially during the early years of their child's life. Becoming a mother in your early twenties and staying at home was the normal course of events and the conventional wisdom at the time disapproved of anything, such as employment, which might disrupt the bond (or attachment) between mother and her child. However, over the past fifty years much has changed. There was a baby boom in the 1950s and 1960s followed by falling fertility rates and rising age at first, and subsequent, births from 1970 onwards. By the twenty-first century, mothers working had become the norm. Two thirds (65.4%) of mothers with dependent children were in employment in 2002. Over half (52.9%) of those with a child under five had jobs (Duffield, 2002). Fifty-four per cent of the members of the Millennium Cohort Study had an employed mother when they were three years old (at sweep two, 2003–5) whilst 58% had an employed mother when they were five years old (at sweep three, 2006). Of those mothers who were employed at sweep two, 76% were working part-time (Ward and Dex, 2007). However, the increase in maternal employment has not occurred

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uniformly across the population. Those who are more likely to be in paid work are also those who are most likely to have had their children relatively late. Indeed, the age at which a woman enters motherhood has become more spread out in recent years, with those from the most disadvantaged situations still tending to become mothers at a young age, and subsequently, being most likely to be out of the labour market.

For the families of mothers in employment, a key decision is who takes responsibility for their children whilst they are at work. There are social differences here too, with those who can afford it purchasing formal childcare from trained providers, while for others cost remains a barrier to this type of care. Other parents put a premium on informal care, attracted by knowing the carer or the flexibility of making informal arrangements with family and friends. The impact of these childcare modes on children is a growing area of research amongst social scientists (UK studies include Gregg et al., 2005; Hansen and Hawkes, 2009; Sylva et al., 2004).

Since 1997, the Government has brought in a suite of measures to reduce child poverty and inequality. The Social Exclusion Unit (SEU) has initiated attempts to reduce teenage motherhood and to attempt to improve life for the mother as well as the child (SEU, 1999). Several other policies have attempted to reduce child poverty by increasing the employment of mothers. These include the provision of good quality childcare, local child and family-based initiatives through the Sure Start programme, the introduction to the right to ask for flexible working agreements, the extension of maternity leave, the introduction of paternity leave and, for those who have been out of the labour market for some time, the introduction of additional training and job search advice through 'New Deal for Lone Parents'.

This drive towards increasing mothers' employment, especially when children are very young, has led many researchers, as well as the public, to ask about the impacts on the children. Our research has focused on the consequences of maternal employment and the timing of motherhood for cognitive and behavioural outcomes in children. Our data resource is the UK birth cohort studies of 1958, 1970 and the Millennium (Bynner and Joshi, 2007). We use these data to illuminate differences across families by age at first motherhood, maternal employment, childcare and subsequent child outcomes.

This chapter therefore presents the results of our project in three key areas: the timing of motherhood, maternal employment, childcare and the consequences for the children. We address the following questions:

- What are the main determinants of age at motherhood, and have these changed between the cohorts?
- What are the main determinants of maternal employment in a child's early life?
- What are the impacts of the childcare decisions, maternal employment and age at motherhood on cognitive and behavioural outcomes for children?

In the conclusion, we turn to the possible impact of Government policies in the last ten years on child cognitive and behavioural outcomes by addressing the following questions:

- Will the policies of the last decade help to reverse the increasing polarisation of age at motherhood and maternal employment that we saw develop in the second half of the 20th century?
- Will this help to reduce the social disadvantage felt by those who grow up in some of the most socially disadvantaged households in the UK?

In undertaking this research, we are adding to an existing literature on the socio-economic variations around the timing of the initiation of childbearing, which it may be useful to review briefly.

Literature on Timing of Motherhood

Despite a general and international trend towards later motherhood, early childbearing is still relatively common in the UK compared to other European countries (Chandola et al., 2002). It is also distinctive for its socio-economic covariates (Buxton et al., 2005; Rendall et al., 2008). Less advantaged women still tend to have children earlier and it is the most advantaged who have increasingly deferred childbearing (Rendall et al., 2005). This social polarisation in age at motherhood has emerged in Britain as the trend towards later childbearing in the last three decades of the century has affected various social groups differentially, and has differential consequences.

There are many studies of the socio-economic determinants of the timing of motherhood (e.g. Kiernan and Diamond, 1983; Kiernan, 1992, 1997; Ermisch and Pevalin, 2003a; Rendall and Smallwood, 2003). In particular, teenage motherhood is associated with exclusion from both employment and education (Bynner and Parsons, 1999; SEU, 1999). Research attempting to disentangle the causes of early motherhood and associated problems suggests that early motherhood is a marker rather than a driver of subsequent labour market disadvantages. Work by Ermisch and Pevalin (2003b, 2005) on the British birth cohort of 1970 suggests that a teen birth has little independent effect on a woman's qualifications, employment or earnings at age 30. Work on sisters in the US (Geronimus and Korenman, 1992) and twins in the UK (Hawkes, 2008) also suggest that early motherhood is strongly associated with poor family background. The apparent effects of entering motherhood early on household income and educational attainment are much smaller once antecedent factors are taken into account. However Ermisch and Pevalin (2003b, 2005) do attribute the lower employment and educational attainment of any partner present when a teen mother reaches 30 to a reduction of prospects in the 'marriage market'. Liao (2003) finds another independent, adverse, effect of early motherhood on a woman's mental health.

The timing of motherhood, early or late, may be the outcome of a deliberate strategy or it may be unintended, early because of unplanned pregnancy, or late because of unplanned infertility (or unanticipated absence of a suitable partner). Probably each type of account applies to some individuals. Early motherhood may constitute, for some, a rational choice in the face of limited alternative prospects in education or employment, along with the safety net of the UK benefit system (Rendall et al., 2008). For others, the main explanation might be a lack of planning and information (Barrett and Wellings 2002; Allen and Bourke Dowling, 1998; Kneale, 2009). Young mothers may or may not have positively wanted to have a baby at the time they did, and they may not be consciously aware of the state benefits available. Whatever the explanation for their mothers' behaviour, any differential outcomes for families started early and late are certainly not chosen by the children. Whatever its cause, young age at motherhood could be viewed as a signal of disadvantage on a number of fronts, including consequences for the children (Pevalin, 2003).

The implications of these associations are not only present for the mother, but also for the next generation. As the established British Birth cohort studies of 1958 and 1970 have shown (Gregg et al., 1999; Hobcraft and Kiernan, 2001; Feinstein, 2003; Blanden et al., 2005; Schoon, 2006), being born into an advantaged or disadvantaged family may affect the experience of childhood and prospects in later life for children. Being born to a mother who had her first child in her teens or early twenties is emerging as an increasingly distinctive feature of the intergenerational transmission of disadvantage, which at the same time accelerates the cycle.

Timing of Motherhood

Although the post-war era started with rising fertility and falling age of childbearing, the decades since 1970 and the generations of women born since 1940 have been characterised by a general postponement of motherhood. Later first birth pushes second and subsequent births to later ages, although there has also been a downward trend in the proportions proceeding to families larger than two. The age by which half of a cohort had embarked on having at least one child reached a low of around 23 for cohorts of women born in the 1940s and has been rising ever since to nearly 29 for cohorts born in the mid 1970s. These estimates for England and Wales are based on births up to 2006 and the adjustments made for true birth order (Smallwood, 2002; ONS, 2007, Table 10.3).

An alternative indicator is the mean age of women having their first birth in a given calendar year. This statistic was 27.6 years in 2006 and 25.5 in 1990, as shown in Fig. 4.1. This period measure of age at entry to motherhood is plotted for the years 1990–2006 for all birth orders, and first births only, incorporating adjustments for true birth order (Smallwood, 2002; ONS, 2007, Table 1.7b). This shows that across those 16 years the age at first birth rose by nearly two years, while the age of mothers at all births rose by 1.4 years. The upward drift of delayed entry to motherhood also pushes up ages at higher orders.

Fig. 4.1 Mean age at all and first births, England and Wales, 1990–2006 (Source: ONS, 2007; Smallwood, 2002)

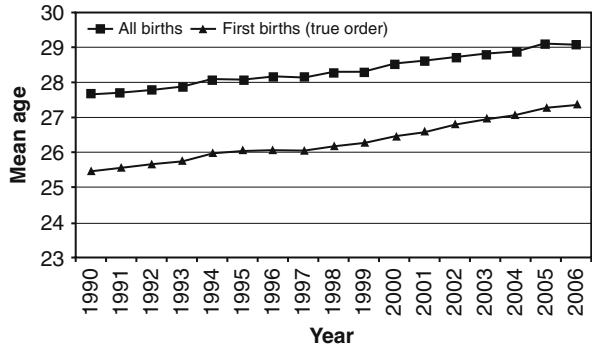


Figure 4.2 shows a time series for England and Wales from 1958 until 2004 based on the more generally available data on first births within marriage, and all births outside marriage, for which birth order is not collected at registration (ONS, 2005). We can see that since 1970 for both groups there has been an upward trend in the age at birth. We can also see that those who had births outside of marriage were younger, on average, than those who had first births inside of marriage, despite the rise in childbearing within cohabitations boosting the numbers of non-marital births in the later years.

Table 4.1 presents the mean age at childbearing in three UK birth cohort studies and the national registration taken from the ONS (2005) for first births and all births. For both series, the age of the cohort child's mother in the three cohort studies reflects the general trend found in the national data, with ages starting to rise from 1970. Mothers in the Millennium Cohort Study (MCS) were significantly older, in terms of both all birth orders and first births only, than those in the National Child Development Study (NCDS) of 1958 as well as the British Cohort Study (BCS) in 1970. The difference in age at first births is nearly four years (3.8) between 1970 and 2000–1.

The upward trend in the age at first birth has not applied uniformly to the whole distribution, which is more easily seen by considering cohorts, women themselves born in a particular year, rather than as above, all the women giving birth in a particular year. Figure 4.3 presents the age by which successive quintiles of the

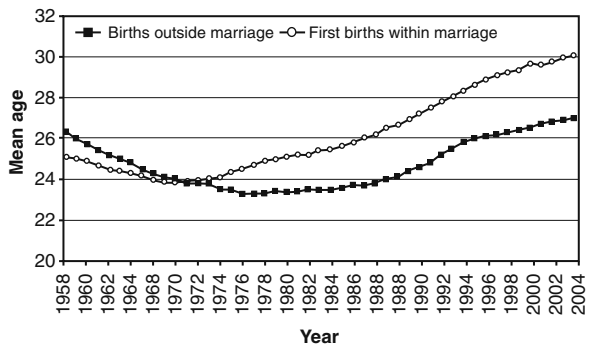


Fig. 4.2 Average age at first births within marriage and all births outside marriage, England and Wales, 1958–2004 (Source: ONS, 2005).

Table 4.1 Age of mothers at first and all births, three birth cohort studies and registration statistics

Year	NCDS	BCS	MCS
	1958	1970	2000–1
Mean age of mothers having first birth	24.4	23.1	26.9
[95% Confidence Interval]	[24.3, 24.5]	[22.9, 23.2]	[26.5, 27.2]
Mean age of all mothers at birth of cohort	27.5	26.0	28.9
[95% Confidence Interval]	[27.4, 27.5]	[25.9, 26.1]	[28.7, 29.1]
Births of any order registered in England and Wales (ONS, 2005)	27.8	26.2	29.1

Source: Authors’ analysis; ONS (2005).

whole cohort had entered motherhood. This shows that the first 20% of successive cohorts have entered motherhood under or around age 20. The rising age of motherhood for cohorts born since 1940 has particularly affected ages over 25 with half of the cohort entering motherhood later, if at all. The number of years between the first 20% and the last was 8 years for the 1940 cohort and 18 for the last one we have a complete fertility history for, those born in 1965. In the 1940 cohort entry to motherhood was relatively compressed into the twenties. Two to three decades later it is becoming more spread out, and as we shall see below, more socially differentiated.

We have already seen in Fig. 4.2 that the persistence of young entry to motherhood is associated with births outside marriage. Another dimension, along which women vary by age at first motherhood, is education. In particular, there is a link between higher education and delayed motherhood. From their analysis of the women born in the mid 1950s in the Longitudinal Study (LS) of England and Wales, Rendall and Smallwood (2003, p. 25) conclude that women “who obtained a higher-education qualification began motherhood, on average five years later than

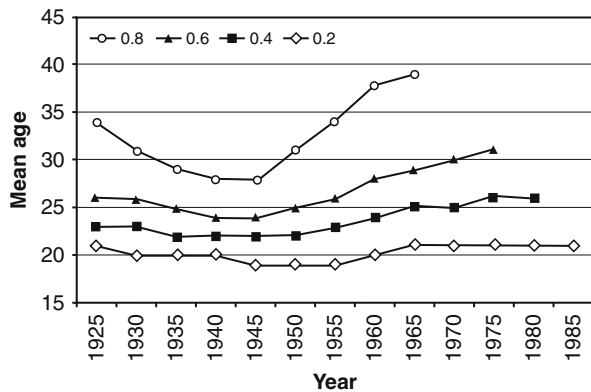


Fig. 4.3 Age by which successive quintiles of the whole cohort had entered motherhood (Source: ONS, 2005)

did women who did not obtain a higher qualification". They also show that the proportion of first-time mothers who have a higher qualification is greater at later ages.

As part of this project, Jenkins et al. (2008a) consider the timing of motherhood for women born in 1958, exploiting the richness of the fertility and employment history data available in the NCDS. As these data are longitudinal and the participants in the survey have been followed for over 45 years it is possible to consider the entry to motherhood for the cohort members themselves in terms of information across their life course to date. Using event history analysis, i.e. looking at the probability of having a birth of a given order, at a given time, for women who had not (yet) had such a birth; Jenkins et al. (2008a) find the strongest predictor of transition to a first birth is the woman's education. The chance of having a first birth is strongly negatively associated with the level of education, even after controlling for a number of childhood background factors and making allowances for an otherwise unobserved propensity to progress to the next birth. The next birth is defined as births from the second up to the fourth.

Jenkins et al. (2008b) extended their work on the NCDS to consider the timing of motherhood for members of the BCS70 cohort, taking birth orders up to the third birth and allowing for the possibility of an effect of the aggregate labour market on birth decisions. The association of early childbearing and individuals with particularly poor labour market prospects (noted above) led to the hypothesis that the incentive to avoid early motherhood might be stronger when labour market prospects were better. The NCDS cohort encountered particularly adverse labour markets when they were in their mid-twenties and mid thirties. For BCS70 members these recessions occurred when they were in their mid teens and early twenties. For the BCS sample, education remained the dominant explanatory variable for the transition to first birth, but the effect was weaker than for the NCDS sample. For the earlier cohort, women with tertiary education were, all else equal, seven times less likely to embark on motherhood at a given time (if they had not already done so) while the comparable estimate for women born in 1970 was 3.6, relative to those with no qualifications.

The aggregate unemployment rate showed a significant relationship with the hazard of the first birth only for the BCS70 cohort. The estimate was found to be negative, contrary to expectation, and to earlier results, which pooled both cohorts' birth histories up to 2000 only (Dex et al., 2005). According to the 2008 results, 'bad times' tend to discourage rather than bring births forward. Further investigation could be made of the possibility that unemployment effects vary within the cohort, or that there were changes in the economic and policy environment in the years after 2000 that were relevant.

Using data on both men and women in the NCDS and the BCS70, Kneale and Joshi (2008) consider the patterns of postponement and the childlessness across the two cohorts. Once again a major factor in both postponement and childlessness for women, and also men, was education, with the more educated becoming parents later, if at all, than their less educated peers. However, they suggest that if the 1970 cohort do turn out to have a higher incidence of childlessness

(as predicted), this may be due to the unintended consequences of delaying the decision rather than an active decision not to have children, given the preferences for parenthood expressed by those still childless at 34.

The MCS consists of data on around 19,000 children born across the UK in 2000/2001 (Hansen, 2008). Hawkes (2008) and Jayaweera et al. (2005) use data on the mothers of the cohort members to consider possible determinants of the age at first birth. The results of these regressions reflect the patterns in the earlier NCDS and BCS70 cohorts, found by Jenkins et al. (2008a, b), among others, but unlike the event history approach, the analysis is necessarily confined to women who have actually become mothers. Hawkes (2008) finds that the age at first child is associated with both antecedent and current disadvantage. Once again, the woman's education is a strong positive correlate of the age at first birth. In addition to low education, those who enter motherhood earlier are more likely to have experienced disadvantage in their own childhood, the separation of their own parents, spent time in care and having an unemployed father at the age of fourteen.

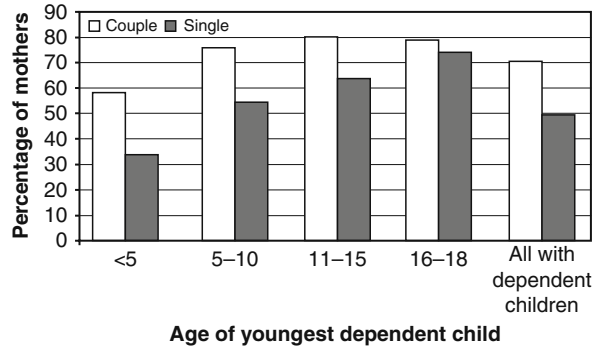
Certain ethnic minority groups (especially Pakistani and Bangladeshi) are associated with early motherhood. Being born outside the UK is surprisingly found to be associated with later motherhood for some of this sample (though not to Pakistanis and Bangladeshis). One possible explanation for this positive association of age at motherhood and immigration is that the migration process itself has disrupted and delayed family formation. Another is that migration is selective of more enterprising and career-motivated individuals, which may be underlined by the selectivity of immigration controls. Finally, higher unemployment, measured locally and nationally at the time of conception, is found to be associated with earlier motherhood. This finding reflects those of Dex et al. (2005) on births up to 2000, but not in the updated data set analysed by Jenkins et al. (2008b).

In summary, we confirm that young motherhood is strongly linked to indicators of childhood disadvantage, such as having an unemployed father and experiencing family break-up, as well as being associated with the situation in the labour market. However, education plays a key role in the timing of motherhood with those who invest in more education delaying their entry to motherhood, not only to extend their enrolment in post compulsory education, but to pursue careers thereafter. It is likely that maternal education will also be a key determinant in the labour market attachment of a mother, and that the anticipation of a career after childbearing, signalled by the level of qualifications, may play a role in decisions about when childbearing starts. Therefore in the next section we turn to considering maternal employment.

Maternal Employment

Maternal employment, even in the early years of a child's life, is now more usual than not in the UK. Figure 4.4 shows the proportion of mothers working by partnership status (Duffield, 2002). As shown in Fig. 4.4 by the age of the child, maternal employment appears to be linked to partnership status. Across all of the age groups those mothers who are single are less likely to be in work. This may

Fig. 4.4 Employment rates for partnered and single women by age of youngest dependent child, UK, spring 2002, not seasonally adjusted (Source: Duffield, 2002)



reflect the relative ease of combining employment with parenthood when there is a second parent present, but it may not be a pure effect of partnership status alone. It is likely to be confounded with the woman's age, since early childbearing is associated with relatively unstable, if any, partnership, as well as low earning power (see Fig. 4.2 and Hawkes et al., 2004). Thus, children who have a young mother are more likely to have a mother with neither job nor partner. This situation will be linked to a range of disadvantageous experiences for children including a very high risk of family poverty and a reliance on means-tested benefits which can form a barrier to labour market entry.

The Birth Cohort Studies can offer a longitudinal perspective on the secular increase in the employment of mothers of young children. Table 4.2 shows the percentage of the members of the three Birth Cohort Studies who had an employed mother at some point in the first five years of their life. Although the numbers are not exactly comparable, they appear to have doubled from 29% in 1958–1963 to around 58% in 2000–6, with most of the increase occurring before 1970–1975.

Table 4.2 Percentage of mothers in work during time child aged under five years, across three birth cohorts

	NCDS	BCS	MCS
Employment in first 5 years	29%	48%	58%
Base sample of mothers	13,966	11,474	14,396
Coverage		GB	UK

Source: Authors' analysis.

NCDS reports mothers having any paid work before the child went to school. BCS70 reports mothers having any paid work at up to the age 5 interview who held a job which started more than a year earlier. MCS reports current employment at age 5 interview. It will include a few who only started after the 5th birthday, but it does not include those who had worked before age five who were not currently employed. Percentage is weighted.

Source: NCDS and BCS rates from Hansen et al. (2006), MCS numbers from Dex and Ward (2008).

Fig. 4.5 Month of return/entry to employment after birth
(Source: Authors' analysis)

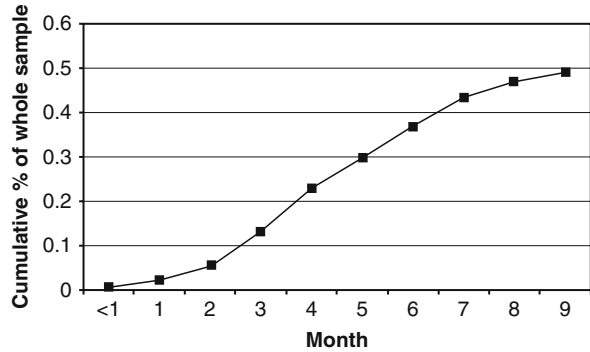


Figure 4.5 shows the proportion of mothers in the MCS who had entered employment in the nine months after the birth of the cohort member. The steeper gradient between three and four months matches with the end of the paid maternity leave at the time of the study.

Table 4.3 presents some information on the hours of employment the MCS mothers were undertaking in the first nine months of life. The majority were employed in part-time jobs with very few undertaking very long hours.

Crosby and Hawkes (2007) consider the determinants of maternal employment in the first nine months. The main determinants are maternal employment in the year prior to the birth and maternal education. Those employed the year before the birth are much more likely to be employed by nine months after the birth than those who were previously out of the labour market. Of course, being in the labour market a year before the birth is also likely to be related to maternal education. Maternal education is also directly linked to early employment post birth, with the more educated being more likely to enter employment in the first nine months. Other significant predictors of non-employment include having no partner, younger (currently under 20) and older (currently over 35 or 40) or belonging to an Asian ethnic group.

In this strand of our work we have also made international comparisons with MCS. This research looks for determinants of the timing of employment after childbirth and attempts to infer the role of government policy in these decisions. The results suggest that maternal employment, especially in the early years of

Table 4.3 Work schedule for mothers employed when child aged nine months, MCS

	Hours	Regularity
Part-time	72%	
Full-time (31–39 hours)	23%	
40+ hours per week	5%	
Works regular, daytime hours		54%
Other pattern		46%
Unweighted n	7,954	

Percentages are weighted
Source: Crosby and Hawkes (2007)

a child's life, can also be linked to the structure of public policies. Crosby and Hawkes (2007) examine differences in the UK (MCS) and the US (Early Childhood Longitudinal Study of Births (ECLS-B)) while Baxter et al. (2006) compare the UK (MCS) with Australia (Longitudinal Study of Australia Children (LSAC)). While women's education and earning power are associated with the chances of getting back into the labour market by the end of the first year in all three countries, there are striking contrasts in patterns of entry and re-entry during those early months.

Both international comparisons provide evidence of the role of the benefit system and maternity leave policies in the timing of employment after child birth. The nature of means-tested benefits appears to discourage employment for the potentially low paid in the UK but not the US. In the UK the drive to reduce child poverty may have had unintended consequences on the incentives of low paid mothers with regard to employment. Maternity leave policies, applying to at least some of those who were employed before the birth, appear to encourage returning to employment after a birth, by permitting a delay, which is longer in the UK than US. In Australia, many mothers stayed away from their job for most of the 12 month duration of their unpaid leave of absence, whereas in the UK, those with maternity leave rights tended to go back to work either at the expiry of paid leave after four months, or after unpaid job protection ended at seven months. In the US, where mothers experience a lack of paid maternity leave and a lack of state benefits, most women entered employment very soon after birth. Differentials by education are exacerbated in that it sorts women into either low paid jobs or jobs with better than statutory maternity leave pay. This is the case in the UK.

Other important determinants of maternal employment in the first nine months of the child's life include: being the first born, being a twin/triplet, and low birth weight which all tend to postpone mothers' employment. Lone motherhood predicts later entry into post-birth employment for UK (but not US) mothers.

In summary, we find that the maternal employment is strongly linked to the mother's characteristics especially her education. International comparison between the UK and the US/Australia suggest that employment after child birth is also conditioned by the benefit system and maternity leave policies.

Childcare and Child Outcomes

Once a mother has decided to enter employment after childbirth one of the most important decisions she has to make is who shall look after her child whilst she is at work. Table 4.4 presents evidence of the childcare use in the early years for mothers across the three cohort studies who worked when the child was under 5. This shows the growing importance of formal childcare in the pre-school years across the three cohorts.

Table 4.5 presents results from a National Survey of Childcare Use (Bryson et al., 2006). For those under five years much of the childcare is informal. Of this informal provision, grandparents appear to be undertaking the lion's share of the task.

Table 4.4 Any source of childcare for working mothers of young children across the three birth cohorts

	NCDS 1958–1963 (0–4 years)	BCS70 1970–1975 (0–4 years)	MCS** 2000–2005 (0–5 years)
Informal only	73.5	19.9	14.3
Formal only		39.0*	17.7
Both formal and informal		41.1*	63.9
At least some formal	26.5		81.6
Observations	4,144	4,246	12,392

Sources: NCDS and BCS numbers from Hansen et al. (2006); MCS numbers from Hansen et al. (2008, Table 5.5).

Informal care includes self provision and care provided by partners, grandparents, other relatives and friends. Formal care includes nanny, childminder, nursery, crèche provision. Missing numbers in the columns for NCDS and BCS70 represent the different ways of collecting the data due to the growing interest in child care issues.

* Formal only in BCS70 and the mixed category each reduces to 20% if playgroup only is discounted (see Table 4.7b in Hansen et al., 2006).

** The MCS figures are based on all families present in all three sweeps of the MCS, not just those with working mothers. They also include nursery school as a form of formal childcare.

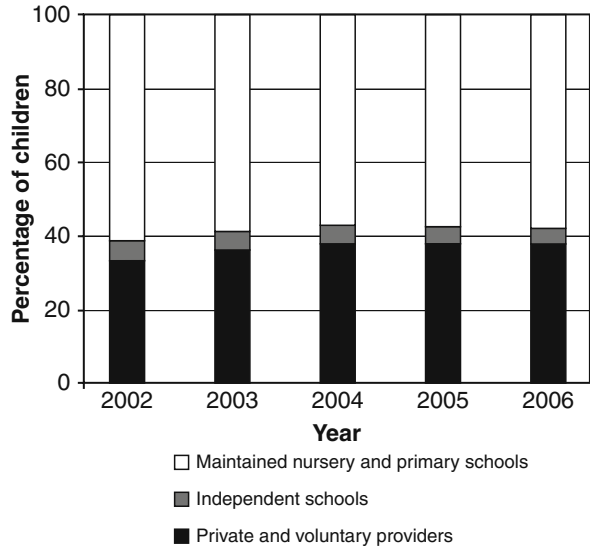
Table 4.5 Use of provider types in the last week, by age of child

	0–2%	3–4%	5–7%
<i>Early years provision and formal childcare</i>			
Nursery school	2	10	+
Nursery class	1	22	+
Reception class	0	28	5
Day nursery	18	12	+
Playgroup or pre-school	9	18	+
Childminder	5	5	4
Nanny or au pair	1	2	1
Babysitter	3	2	3
Out-of-school club on-site	+	2	13
Out-of-school club off-site	+	1	4
<i>Informal childcare</i>			
My ex-husband/wife/partner	3	4	5
The child's grandparent(s)	29	26	22
The child's older brother/sister	1	1	2
Another relative	7	6	5
A friend or neighbour	5	6	9
<i>Base: All families Umveighted base</i>	<i>1451</i>	<i>1507</i>	<i>1348</i>

Source: Bryson et al. (2006).

The Department for Children, Schools and the Family (DCSF), formerly the Department for Education and Skills (DfES), publishes data on the use of pre-school provisions for those who are three or four years old. Figure 4.6 presents these data graphically, showing the majority of those aged three to four in England and Wales

Fig. 4.6 Percentage of children aged three and four taking up early education places by type of early education provider (Source: Department for Education and Skills, 2006)



attend a state nursery or primary school (nearly 60% in all years between 2002 and 2006), with a minority attending independent schools (5% a year) and the remainder attending other private and voluntary places.

Why are these patterns important? We are concerned with the impact of these three decisions (timing of motherhood, maternal employment and childcare choice) on the outcomes for children (cognitive, behavioural and health). This will provide us with an indication of possible externalities for children of the government policies towards parents. Externalities could be a positive or negative in terms of outcomes for children. We present here the results of our project which consider the impact on child outcomes (cognitive, behavioural and health) on the timing of motherhood, maternal employment and childcare choices.

Firstly, Verropoulou and Joshi (2008) use the NCDS second generation data to consider the association between pre-school employment for the NCDS cohort members on the later outcomes for their children, observed in 1991. They find that reading is slightly poorer where less educated mothers work in the child's first year of life. They find few other interactions with employment, but do detect intergenerational transmission of behavioural as well as cognitive characteristics. The age at first birth has a significant independent association only with one of the four outcomes investigated – the child's maths score which is lower for children with mothers aged 20 or less. As all of the children in this study are the offspring of relatively young mothers, it may be difficult to generalize from these findings. However, in so far as the associations of mothers' employment with indicators of child development are mixed and minor, they are broadly similar to those estimated for the children of mothers of all ages in the ALSPAC study (Gregg et al., 2005).

Secondly, Crosby and Hawkes (2008) considered the association between employment in the first nine months of life and child cognitive and behavioural outcomes measured at age three years old. The results using the MCS show that maternal employment has a positive association with child cognitive outcomes (measured using a vocabulary test and a school readiness measure) and child behaviour. However, it is negatively associated with child health, as measured by the body mass index (BMI). After controlling for the selection process into employment, only the association between child health and maternal employment is maintained, albeit weakened. The results suggest that maternal education rather than maternal employment in the UK is the main driver for all four child outcomes. Of course education also plays a strong role in the selection process into employment.

In our third study, Hansen and Hawkes (2009) consider the role childcare choice has on child cognitive and behavioural outcomes using the MCS. This paper finds that for those in employment, different types of childcare have different impacts on child cognitive and behavioural outcomes at age three. Formal childcare is found to have positive associations with school readiness measures compared to other types of childcare. This is true particularly for children from disadvantaged backgrounds. Care by grandparents appears to have positive effects on a child's vocabulary development but is also negatively associated with behaviour, largely through poorer peer relations.

Finally, we examine mother's age at first birth; whether and when she took up employment in the child's first nine months; what main childcare arrangements were made at nine months; and measures of child development at age three. These are shown in Table 4.6, for mothers of first-born children in the MCS. Although we have estimated age at first motherhood for cohort children who were not first-born, we do not have such detailed data on employment and childcare in the first year of their eldest sibling's life. The three indicators of child development are the Bracken School Readiness, British Ability Scales (BAS) Naming Vocabulary, and the Total Difficulties Score of the Strengths and Difficulties Instrument. All indicators appear in terms of standard deviations, and are adjusted for age at interview by inclusion of child's age in the battery of controls noted in Table 4.6. Bear in mind that the Difficulties Score falls when child behaviour improves.

Taken singly, each of these three factors was significantly associated with better child outcomes: older mothers, employment in first nine months and use of formal childcare. However, the multiple regression model enables us to see how far these positive associations are attributable to other things. The mother's level of qualification is a dominant predictor of all the outcomes. Putting all the factors in the model together moderates the differences attributable to age at first motherhood and mode of childcare, and completely accounts for any differences by time of return to employment in the first year. Once we allow for other factors, particularly for the education of their mothers, there are few significant differences between children whose mothers were employed in their first nine months and those who were not. Children whose mothers worked and had been in formal group care had higher school readiness scores and lower vocabulary scores than other children. They also had significantly better behaviour ratings than children whose mothers stayed at

Table 4.6 Child development at age three analysed by mother's age, employment and childcare in the first year, and other controls: multiple regression of mothers whose cohort child was their first

	School Readiness (Bracken)		Naming Vocabulary (BAS)		Total Difficulties Score (SDQ)	
	Coefficient	Standard error	Coefficient	Standard error	Coefficient	Standard error
Mother's qualifications (baseline: no qualifications)						
NVQ Level 1	0.20	0.07	0.19	0.08	-0.17	0.09
NVQ Level 2	0.28	0.06	0.27	0.07	-0.32	0.07
NVQ Level 3	0.42	0.06	0.31	0.06	-0.45	0.07
NVQ Level 4	0.54	0.06	0.42	0.07	-0.52	0.07
NVQ Level 5	0.68	0.10	0.39	0.09	-0.46	0.09
Overseas and other qualific's	0.34	0.15	0.03	0.13	-0.31	0.15
Mother's age at (first) birth (baseline: 14-19)						
20-24	0.14	0.06	0.06	0.05	-0.06	0.06
25-29	0.30	0.06	0.23	0.05	-0.22	0.06
30-34	0.41	0.06	0.30	0.06	-0.22	0.06
35-39	0.35	0.08	0.28	0.06	-0.26	0.07
40+	0.50	0.22	0.24	0.15	-0.12	0.15

Table 4.6 (continued)

	School Readiness (Bracken)		Naming Vocabulary (BAS)		Total Difficulties Score (SDQ)	
	Coefficient	Standard error	Coefficient	Standard error	Coefficient	Standard error
Returned to employment (baseline: not returned to employment during the first nine months)	-0.18	0.11	0.08	0.09	0.20	0.10 *
First three months	-0.19	0.11	0.10	0.08	0.17	0.09 *
Between four and six months	-0.12	0.11	0.12	0.09	0.15	0.10
From seven months						
Child care whilst mother employed (baseline: not using child care)	0.02	0.12	-0.22	0.11	-0.30	0.12 **
Informal non group	0.00	0.11	-0.07	0.09	-0.23	0.11 **
Father/partner	0.13	0.11	-0.03	0.08	-0.15	0.10
Grandparent	0.08	0.12	-0.15	0.09	-0.24	0.10 **
Formal non group	0.23	0.11	-0.18	0.09	-0.29	0.10 ***
Formal group						
R squared	0.23		0.19		0.19	
Observations	4,647		4,870		5,101	

Source: Authors' analysis.

All regressions control for the following: Developmental controls: Age at assessment, female, low birth weight, multiple birth; Family Controls: Ethnicity, English only spoken at home, partner, employed partner, household income, owner occupied housing, mother's depression at nine months, mother employed full time before nine months, region. Only first born children used in this analysis. *** 1% ** 5% * 10%

home, as did those in most other types of childcare except grandparent. Looking at age at motherhood, child outcomes are worst for those who were teenagers at birth (the reference category) and improved as the mothers age rises to some point in the thirties. The improvements reverse somewhat for the small number of mothers having their first child in their forties. The two cognitive scores peak among mothers aged 30 to 34, and the best behavioural adjustment, other things equal, found among children whose mothers were aged 35 to 39. After these ages the numbers having first births tails off (compare Fig. 4.3). The strength of the association with age at motherhood can be compared with that of education.

For the school readiness score, the peak difference between having a teenage mother and one whose first birth was at age 30 to 34 (0.41) is equivalent to the difference between a mother having no qualifications and A levels (NVQ 3). Here a degree is 'worth' a premium over no qualifications of 0.54 and a post-graduate qualification – NVQ5 – a premium of 0.68. The child's vocabulary score is not so strongly related to either education or maternal age, but their 0.30 differential between mothers in the early thirties and teenagers corresponds to the premium for NVQ 3. Among age groups of mothers, those aged 35–39 had children with the best behaviour scores, 0.26 below the behaviour problems of the children of teenagers. This can be compared to the indicator with the biggest differential, mothers' education. The behaviour scores for children of mothers with NVQ 4 or 5 was 0.52 below parents with no qualifications. Comparing a mother who had both tertiary qualifications and later entry to motherhood (as most do) with a mother who had her child as a teenager and had no qualifications would involve adding the qualifications and age terms. According to this model therefore, a larger part of the developmental lead observed in the children of older mothers is attributable to their mothers' education, but there are more disadvantages to having a very young mother than those associated with her lack of education, or correspondingly, more advantages associated with later motherhood than just those attaching to maternal education. These advantages may be other material, social or psychological 'capital' not adequately captured in the model, but they do suggest there could be a gain for the child if its arrival is delayed until at least well into the twenties.

Conclusions

In this final section, we respond to the three questions asked at the outset:

What are the Main Determinants of the Age at Motherhood, and Have these Changed Between the Cohorts?

Later motherhood in Britain has involved a widening of the span of ages at which women have their first child. This has gone along with widening educational and employment opportunities for women and increasing childbearing outside marriage.

Education drives fertility beyond those years of post-compulsory enrolment which lead to qualifications but inhibit early fertility. Whether education is enlightening or merely a way of signalling better access to the labour market, it can be argued that, by raising the opportunity costs of motherhood it creates an incentive to defer beyond years of study, if not avoid it. The case for the widening in ages being driven by dispersion in educational achievement rather than vice versa can be made by arguing that women with more human capital, or aspirations to accumulate it, have a greater incentive to defer motherhood than those with poorer educational or career prospects. Much early motherhood may be unintended, but since fertility control, including abortion, has become available to those with the motivation and knowledge to use it, it will tend to be those who have least to lose who will become mothers soonest.

The modelling of the hazard of having a first birth in both the 1958 and 1970 cohorts found that a woman's education was a strong predictor of entering motherhood even after allowing for measured (and unmeasured) characteristics and abilities of the women with which it is correlated. However, the strength of this predictor was weaker in the second cohort, where more women had tertiary education. In the analysis of the Millennium cohort, whose mothers come from a number of birth cohorts themselves, we also found poor education and childhood disadvantage to be predictors of early motherhood, as too was ethnic variation. The NCDS and MCS studies reach opposite conclusions in the attempt to associate poor labour market conditions with early births, but perhaps the structure of constraints is changing.

What are the Main Determinants of Maternal Employment in a Child's Early Life?

Here again we find the woman's education strongly associated with her employment career, both before and in the year after the Millennium cohort child's birth. Education predicts independently employment in those early months of life and employment before the birth of the child. Higher employment and higher labour force attachment are bound up with older motherhood. Over and above the association with employment, education and partnership status, the modelling detected some further minor differentials by (current) age of mother. International comparisons helped to reveal how mothers' employment behaviour in the UK is structured by state policies. Maternity leave provisions structure the timing of mothers' return to work, and the provisions of the means-tested benefits presumably account for the lower rates of employment of lone mothers in the UK than the US, and than partnered mothers in the UK. An important consideration in the maintaining of career continuity after a birth is the arrangements a mother is able to make for childcare. The higher purchasing power of those with high wages and higher qualifications is crucial in this respect.

What are the Impacts of the Childcare Decisions, Maternal Employment and Age at Motherhood on Cognitive and Behavioural Outcomes for Children?

Until the National Childcare Strategy inaugurated in 1998, most working mothers in the UK used informal childcare before their children reached school age. The mothers of the Millennium Cohort encountered more group nurseries and a greatly expanded nursery education provision once their children reached the age of three. During their child's first year, however, relatively few used formal group day care, and grandparents were an important source of care. Analysis of child outcomes for children of the 1958 cohort, assessed in 1991, suggests little impact on the development of those children in that context. The investigation of evidence emerging on the development of children born in the Millennium, and assessed at age three (mostly in 2004), also finds little direct impact of early maternal employment on child outcomes, although there are signs of some types of child care being associated with better results on some outcomes. The pattern is nuanced in both the study of the children of NCDS members and the results presented here on MCS, it is the verbal score which has a significant negative association with early employment. The latter does not apply if the care arrangement is informal, particularly with a grandparent. It is too early to see how the experience of group childcare and nursery education at ages 1 to 4 may be traced in child outcomes. While there seems to be little gained or lost in terms of child development if the mother maintains career continuity, there does seem to be a considerable advantage to the child in being born to a mother with a reasonable level of education as well as one who is closer to age 30 than age 20. This confirms the supposition that the intergenerational transmission of social advantages is playing out in the most recent cohort to be studied, as well as its predecessors.

Policy Implications

This research has shown that education is a key correlate of the life course of both women and their children. Whilst maternal age at first birth, maternal employment and childcare play a role, maternal education appears to be a very strong determinant of future success. To what extent it is a fundamental determinant, serving to enlighten and raise skills in production and childrearing; a reflection of capabilities inherited from home rather than school; or a signal for social sorting, has not been fully established. Whatever lies behind educational attainment it accounts for much of the difference in outcomes between early and late mothers and in the development of their children. This also suggests that policies which are successful in limiting educational failure, such as provision of basic skills and prolonging and supporting years in education are likely to stem the polarization between early and late mothers and their children, and have the positive externality of helping the next generation.

The independent association of young age at motherhood with poorer or delayed cognitive and behavioural scores at age three may just reflect unmeasured disadvantaged antecedents of the minority of women who become mothers in their teens and early twenties. However, the very fact of their youth, perhaps through a lack of maturity and of unmeasured current economic and social resources, may compound the disadvantages facing their children. If so, government policies to reduce unintended teenage motherhood should, if successful, improve the prospects for both the women and children involved.

To the extent that early motherhood has its own costs, avoiding it would be an advisable policy for the private individual as well as public intervention, which can, after all, only inform and support private decisions. There is no evidence here to suggest that the gains to postponing motherhood continue indefinitely, at least beyond the early thirties.

We find little evidence for maternal employment in the first year systematically either harming or promoting child development. We find formal childcare having both positive and negative associations with different aspects of child development. This suggests that policies making childcare available to mothers across the spectrum are likely to be beneficial to both mothers and children, but that attention needs to be paid to its quality. The development of integrated childcare centres under the Sure Start programme and other childcare policies aimed at improving the quality of childcare received may help have positive spillover effects on some child outcomes and contribute to reversing the polarity between advantaged and disadvantaged family backgrounds.

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Chapter 5

Early Parenthood: Definition and Prediction in Two British Cohorts

Dylan Kneale

Background

Since the baby boom of the 1960s, births in the United Kingdom (UK) have been falling in number while age at first birth has risen. Low and late fertility is an important part of the second demographic transition (Van de Kaa, 1987). In the first years of the new millennium, while the total fertility rate has fluctuated slightly and has once again begun to rise, or catch up, the tendency to postpone entry to motherhood has persisted with a continued rise in average age at first birth (Office for National Statistics, 2007). However, this rise has not occurred as a neutral shift towards older ages. While teenage fertility rates have only dropped slightly since peaking in the late 1990s, this pace of change has not matched the dramatic rise in fertility among older age groups (Office for National Statistics, 2007). In 1996, the age-specific birth rate for teenagers stood at 29.7 per 1,000 women, dropping to 26.6 in 2006.¹ In the same period, the rate increased from 37.5 to 53.8 births per 1,000 women aged 35–39 years. A picture of decreasing fertility in the twenties is painted when we recognise that by the age of 30 years, 67% of women born in 1960 would have become mothers while for women born just fifteen years later, in 1975, this estimate had dropped by 10 to 57% (Office for National Statistics, 2007).

Such decreases are usually attributed to postponement, as opposed to large-scale avoidance of parenthood (Kneale and Joshi, 2008). Put in succinct terms, this almost denotes “a move towards older fertility for the majority and early fertility for the minority” (Hadfield et al., 2007, p. 255). This unequal shift in the fertility schedule is understood to be representative of social polarization in age at first birth (Joshi, 2007, Kneale and Joshi, 2008). Older first-time mothers are associated with a range of advantageous characteristics not shared by early first-time mothers. It is

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¹It can be assumed that most teenage births would represent first births. To the author’s knowledge, statistics on birth order for births outside marriage are not collected. We therefore demonstrate these trends using statistics on all births.

this polarization in the characteristics and outcomes of first-time mothers –and by extension, fathers and their children – that is the cause of continued concern about the transition into early parenthood.

One of the widespread conventions of the literature on early parenthood is that parenthood stops being ‘early’ at the age of 20 years. There are various definitions of ‘teenage’ motherhood in the literature – pregnancy under 16, 18 or 20 – as well as a more literal cut-off of giving birth while still aged 19 or under (Social Exclusion Unit, 1999; Birch, 1996). The concern here is why the line should be drawn at age 20. Despite the shift of the fertility schedule, albeit somewhat unbalanced, towards older ages, this convenient definition of teenage parenthood remains a pervasive concept in studies, with very few extending the cut-off point for early parenthood beyond this.² In studies examining teenage parenthood, there is little or no justification given as to why the clock stops at 20 years.³ This is despite the fact that many of our parents and grandparents may have been teenage first-time parents themselves (Geronimus, 1997). In fact, in her later work, Geronimus describes teenage parenthood as more a political tool than a social construct (Geronimus, 2003), and certainly, there are grounds to question this distinction. Not only does the age 20 threshold come at a convenient point in the coding of ages into five-year bands, but the term ‘teenage’ has other connotations – of adolescence, immaturity and not being old enough for the ‘adult’ role of a parent. A ‘teenage parent’ is almost a contradiction in social terms.

In terms of outcomes, there are only a few studies where the distinction of teenage and early parenthood has been explored. In their study, Hobcraft and Kiernan found that the widest gulf in terms of adult outcomes was between those having a first birth under 23 years and those between 23 and 32 years, although this was reinforced by ‘teenage’ parenthood (Hobcraft and Kiernan, 2001). As mentioned however, studies that experiment with a definition of ‘early’ in terms of outcomes are few and far between. Some researchers who have taken a counterfactual approach to the timing of parenthood by asking ‘what would have happened had the teenage (mother) delayed childbearing?’ have found no substantial benefit to delaying motherhood among this group (Goodman et al., 2004) and have even found early motherhood to be a beneficial strategy (Hotz et al., 2004). This again would appear to suggest that joining the labels of teenage and parent in such an unchallenged way is the product of a form of manufactured risk. Throughout this chapter, it is the hypothesis that focus on teenage parents has stemmed from a stigmatised view of the ‘correct path to parenthood’ (Hadfield et al., 2007). This focus has seemed disproportionate given their low and diminishing prevalence. It is the proposition here that in terms of predictors, their characteristics do not vary significantly from early parents in their twenties.

²The works of Robson and Berthoud (2006) and Hobcraft and Kiernan (2001) provide two examples of a more inclusive definition of ‘early’ parenthood.

³This is addressed fully in Kneale (2008).

To examine the validity of the teenage construct, this research uses a number of definitions of ‘early’ through which to examine transition to early parenthood as well as using different ways of modelling ‘early’. Although this chapter is focused firmly on whether age 20 is still a meaningful boundary as concerns the transition to parenthood, it can also be seen as a contribution to the literature on the timing of ‘youth transitions’ in the life course generally, with many other aspects of adult roles, in the labour and housing markets for example, being ‘delayed’ well beyond age 20 (Pollock, 2008).

Predicting Early Parenthood

The labels ‘early parent’ or ‘teenage parent’ apply to a diverse group of people. Indeed, it has been speculated that the only commonality binding early parents is just that – that they were young when having children (Harden et al., 2006). However, there is a considerable body of quantitative and qualitative studies finding recurring themes and patterns that have predictive power over the timing of parenthood. These can be grouped under the following four headings⁴ and while these groups are not exhaustive, they serve as a useful framework of the factors that are known to be significant. This framework applies to becoming a parent. It is not within the range of this study to examine factors associated with becoming pregnant but avoiding parenthood (abortion) or to examine predictors of avoiding conception (abstinence and contraception).

Educational Factors

Educational underachievement and cognitive ability have been linked in several studies to an increased likelihood of becoming an early parent (Ermisch and Pevalin, 2003b; Harden et al., 2006; Jaffee et al., 2001). The pathway often suggested is one of low qualifications leading to poorer labour market prospects. This in turn lowers the opportunity costs of having children early (Ermisch and Pevalin, 2003b). This pathway has applied to the case of early motherhood. For early fatherhood, educational factors are included as a matter of course, although there is little theoretical development of such a causal pathway for men as in the case of women. In particular, while low educational achievement is likely to lead to poorer trajectories in the labour market; there is no theorised substitution of parenthood for career as is the case for women. A possible pathway that could form from the view that education may be important is the partnership market. Low levels of education may, through ‘assortative mating’ (or homogamy), go along with a partner with low educational level for whom the opportunity cost of early childbearing is low, or who is herself

⁴References represent only a selected group of studies that examine these predictors.

impatient to start a family. Alternatively, lower educational achievement may be associated with a greater preponderance to risk taking behaviour which may include fathering early pregnancies.

A limited number of studies have explored the effect of education further through examining the effect of disliking school on early pregnancy (Bonell et al., 2005, 2007; Imamura et al., 2007; East et al., 2006). In Bonell's 2005 study, dislike of school was found to be a potent predictor of early teenage (under 16) pregnancy and replaced other personal factors. However, this association was statistically accounted for by the inclusion of socioeconomic features (Bonell et al., 2005). In East and colleagues' study, school orientation was measured as achievement and ambition for higher education, both of which were insignificant alongside other factors (East et al., 2006). In qualitative research, links have also been made between dislike of school and pregnancy, thought to operate along a pathway to reduced opportunity costs in having children early (Arai, 2003). In these data, dislike of school has been included in models of entry into parenthood specifically and represents the first such research to do so to the author's knowledge.

Socioeconomic Factors

Socioeconomic factors have been implicated in a wide range of studies of the predictors of early parenthood and are pervasive in most research, either explicitly or as background controls (Bynner et al., 2000, Ermisch and Pevalin, 2003b, Ekert-Jaffe et al., 2002). Usually socioeconomic factors include income, social class and tenure. In this research, while all three spheres are tested to a certain extent, tenure is found to be the strongest predictor.

All three factors are meant to capture an effect of disadvantage and to predict the probability of poor labour market success. Schoon and colleagues' research provides a useful framework with socioeconomic background being "one of the main predictors of cognitive development, which provides the underpinnings of academic achievement upon which much success in later life depends" (Schoon et al., 2002, p. 1486). However, the fact that socioeconomic factors retain significance and sometimes outweigh the effect of educational predictors of early parenthood suggests that socioeconomic factors are capturing an element of labour market disadvantage not completely accounted for by educational factors. Other pathways through which socioeconomic factors can operate include lowered personal, social and sexual negotiation skills, limited access to healthcare, lack of positive role models and living in dangerous environments (Singh et al., 2001). In this research, socioeconomic factors are found to be instrumental in distinguishing some definitions of 'early' parenthood and are also found to have differential effects between motherhood and fatherhood.

Demographic Factors

An unstable home life is consistently identified as a predictor for the timing of motherhood. This can include a history of being in social services care, sexual abuse, parental divorce and parental mental health problems (Kiernan and Hobcraft, 1997).

In this research, against other background controls, an indicator of unstable parental structure (covering divorce, separation, death and foster care) is found to be a relatively weak predictor of early parenthood. A far more consistent predictor is the age of cohort members' parents at first birth. This is consistent with other literature which finds a cyclical pattern of the timing of motherhood. The Social Exclusion Unit reports that sisters and daughters of teen mothers are six times more likely to become pregnant at an early age (Social Exclusion Unit, 1999). In their analysis of BCS70 data, Ermisch and Pevalin find that women born to teenage or young adult mothers (20–23 years old) are around two and a half times more likely to have a teenage birth themselves (Ermisch and Pevalin, 2003a). This evidence is also consistent with studies of early fatherhood (Berrington et al., 2005).

Ethnicity is also deemed an important predictor of the timing of motherhood, with non-white women usually at risk of experiencing early births in the UK and US (Social Exclusion Unit, 1999, Singh et al., 2001; Robson and Berthoud, 2006). Unfortunately in these data, it is not possible to investigate ethnicity fully because of the low numbers of cohort members from ethnic minorities included in the NCDS and BCS70.⁵

Behavioural and Philoprogenitive Factors

In a large portion of the literature on early parenthood, and on teenage motherhood in particular, entry into parenthood is viewed as the outcome of a risk-taking personality, with early parenthood being linked to other risk-taking behaviours such as smoking, drug taking and alcohol consumption (Birch, 1992; Social Exclusion Unit, 1999; Jaffee et al., 2001). This would appear to support a theory that early parenthood may be equated with unplanned parenthood – unprotected sex being a risk factor and early parenthood the outcome. While for the more educated cohort members and for the BCS70 cohort as a whole compared to NCDS, access to abortion as recourse would be easier, this would not have been an option for many cohort members. The assumption of unplanned parenthood could be viewed as a criticism of the theory of the importance of opportunity costs as a motivation of early parenthood. However, the choices once pregnant may instead be viewed as a reflection of this. In this research, proxy measures for family-building orientation are examined as predictors of early parenthood.

In addition, this research examines some of the drivers that could influence family-building intentions through analysing indices of behaviour. Behavioural characteristics may operate directly on a pathway to early parenthood through influencing family-building intentions or may operate through lack of self esteem or poor sexual negotiation skills (Jaffee et al., 2001; Hobcraft and Kiernan, 2001; Kendall et al., 2005; Birch, 1996). In particular in their study of early fatherhood, Jaffee and colleagues found a history of conduct disorder to be a significant predictor of early

⁵The later Millennium Cohort Study over-sampled within areas with a high ethnic minority population so that ethnic group effects could be researched. See chapter in this volume by Hawkes et al.

fatherhood (Jaffee et al., 2001) which may be linked to more general social dysfunction and withdrawal. Hobcraft and Kiernan (2001) examined anxiety, aggression and restlessness as drivers of early motherhood. Similar indicators using Rutter score measures are used later in this research, where it is found that behavioural and various other measures do not account for family-building orientation, suggesting this orientation may be linked to other measures such as contextual predictors. Further work on contextual predictors investigates this hypothesis further (Kneale, 2008).

While it is not within the scope of this chapter to examine all these factors simultaneously (data constraints being one reason), the results presented in this chapter do successfully unpack some of these processes occurring in childhood. In particular, given the rich data source used in these analyses, a number of these predictors can be compared across definitions of 'early' parenthood, across gender and, to a certain extent, across time. These results are discussed in detail in later sections once the aims of the research have been clarified, the data sources have been discussed, and the research methodology has been introduced.

Research Questions and Data

The aim of the rest of this chapter is to examine, in brief, the following research questions:

- Do teenage parents differ in their backgrounds to parents in their early twenties?
- Do the predictors of early motherhood vary from those of early fatherhood?
- How have the predictors of early parenthood changed between two British cohorts?

As these questions are wide ranging, full results from every model are not presented comprehensively. This chapter highlights some of the main findings from the results of the modelling exercise and to signpost the reader to potential considerations when researching patterns of transition to early parenthood. In addition, this chapter only presents results from parsimonious models. While a full range of predictors, listed later, were tested; only those significant in models containing other controlling factors are discussed. We return to the methodology once the data sources have been considered.

This research uses two of the four British birth cohort studies – prospective longitudinal studies following the lives of individuals born during 1958 (the National Child Development Study (NCDS)) and 1970 (the British Cohort Survey (BCS70)). Recent papers have outlined the history of these studies and some of their most prominent findings (Plewis et al., 2004; Bynner and Joshi, 2007; Ferri, 1993; Elliott and Shepherd, 2006; Power and Elliott, 2006). Both studies prospectively followed individuals and were essentially a census of all born in one week in 1958 and 1970. For the NCDS, further data collection has occurred at ages 7, 11, 16, 23, 33, 41/42 and 46 years. Data from BCS70 cohort members were collected at ages 5, 10, 16, 26, 29/30 and 34 years. Data relevant to a wide spectrum of disciplines have been

collected through these studies and combined, over 1,200 publications have documented some of the major findings of these studies (Elliott and Shepherd, 2006; Power and Elliott, 2006).

This research exploits the breadth of these data in examining a number of childhood factors that are thought to predict early parenthood in the literature and explores some new predictors. NCDS was a pioneer in asking men to report their birth histories. It is nevertheless acknowledged that fatherhood is likely to be under-reported (Rendall et al., 1999). This is particularly likely if the father is not living with the mother of his child and again particularly likely for the youngest mothers and fathers (Greene and Biddlecom, 2000; Rendall et al., 1999). In this chapter, live births reported by cohort members are examined, excluding stillbirths and other fertility outcomes. Those still pregnant or those who have fathered a pregnancy not carried to full term and, inevitably, births which were not reported by either men or women are excluded.

Fertility histories were collected from NCDS cohort members from age 16 onwards; while full histories for BCS70 members were not collected until 30 years. For the NCDS cohort full fertility histories were collected at 23, 33, 42 and 46 years.⁶ In total, over 14,000 fertility histories are available for NCDS while for BCS70, almost 12,000 fertility histories are available. Analysis of transition to first parenthood using survival curves suggest that both cohorts are representative in terms of fertility patterns when compared to Office for National Statistics estimates (Kneale, 2008; Office for National Statistics, 2007).

Methodology

Even in the 12 years between cohorts, age at first parenthood has increased significantly while the teenage parent population decreased. Among women, 13% of NCDS cohort members became teenage mothers dropping to 10% among the BCS70; while among men, 4% of the NCDS cohort were teenage fathers, dropping to a mere 3% among BCS70 members. Event history treatment of the data put the point at which the first 25% (lower quartile) of the whole NCDS cohort had entered into motherhood at 22 years 2 months. For BCS70, this point had risen by over 1 year 6 months to 23 years 11 months. For fatherhood, the pattern was even more startling, with the age limit of the first quarter to enter fatherhood rising from 24 years 11 months among NCDS to 27 years 1 month among BCS70. Such a rise would give the first indications that a definition of 'early' that is grounded against normative patterns of parenthood would respond to changes over time. This is reflected in Fig. 5.1, which also demonstrates the unequal shift in the rise in age at first birth mentioned above.

⁶Some observations have been artificially truncated at age 23 years, while information for a small minority of others has not been used in this analysis.

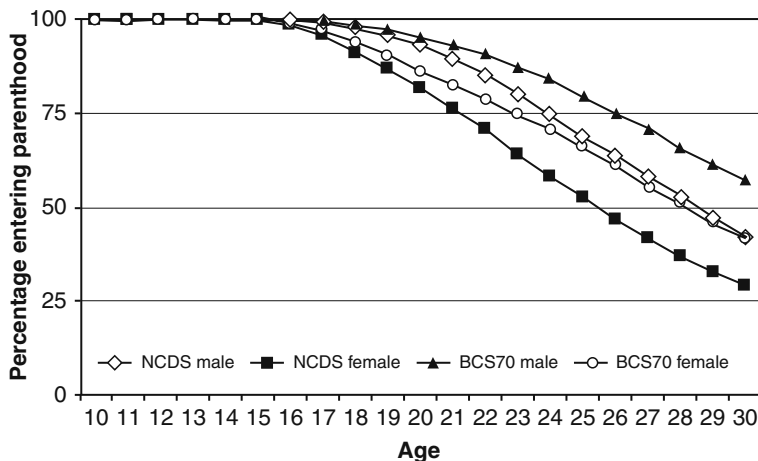


Fig. 5.1 Entry into parenthood up to 30 years by gender and cohort: NCDS and BCS70 cohorts (Source: Author's analysis)

The assumption often made in the literature that teenage parents significantly differ from those in their twenties, was tested through piecewise linear regression. Using predictor and outcome information in univariate analysis, this technique only located break points (the points at which the trend differs significantly) well into the twenties, and even into the thirties in the case of BCS70 fatherhood (Kneale, 2008). This cast doubt on the usefulness of threshold of early parenthood at age 20. However, using break points derived from piecewise regression may be a poor choice if there is a need to make comparisons across genders and cohorts.

Another approach is to explore a relative definition of 'early'. Two of these are tested here: firstly, 'very early' representing the first 12.5% of the cohort (by gender) to enter into parenthood, and secondly, 'early' as the first 25% to enter parenthood; besides the absolute dividing line at age 20.⁷ These are displayed in Table 5.1.

Binary logistic regression models are used to examine the strength of predictors using these definitions of early and employing a backward elimination method. These estimate the probability of becoming an early parent versus not becoming an early parent after accounting for a number of known predictors. Those not becoming an early parent include those who became a parent at a later stage, who remained childless, or who left the studies and were lost to follow up.⁸ Binary logistic as opposed to multinomial logistic regression models are used because of the uncertainty between the categories that represent 'not becoming an early parent'. Event history models are used to examine the effect of predictors of the timing

⁷Information for models of very early motherhood in NCDS are not presented because this distinction corresponds very closely with the teenage definition.

⁸Censoring began at 23 years onwards for some NCDS cohort members and 30 years onwards for BCS70.

Table 5.1 Age at entry into parenthood at each quartile and levels of childlessness at last observation: BCS70 and NCDS cohorts

Gender	Cohort	First 12.5% to become parents (very early)	First 25% to become parents (lower quartile)	First 50% to become parents (median)	First 75% to become parents (upper quartile)	Childless at last observation (%)
♂	NCDS	22 years 5 months	24 years 11 months	29 years 5 months	38 years 2 months	20.8
	BCS70	23 years 10 months	27 years 1 month	33 years 2 months	–	41.6
♀	NCDS	19 years 10 months	22 years 2 months	26 years 6 months	32 years 5 months	15.6
	BCS70	20 years 9 months	23 years 11 months	29 years 2 months	–	27.4

Source: Author's analysis.

of parenthood over the 'early' years, but these results are not presented in detail here. The focus of results presented here is the effect of childhood factors (measured up to the age of 16 years) as predictors of early parenthood. While it is recognised that early adult predictors may increase and actually overtake childhood factors in their potency, given their proximity to the event under study, they could introduce problems of reverse causality and are left beyond the scope of this study.

Summary of Results

As can be observed in Table 5.2 for the NCDS cohort and Table 5.3 for the BCS70 cohort, representing only a summary of significant factors in full models, a complex and diverse formula of states and factors help to predict entry into early parenthood.⁹ A number of significant trends stand out that not only illuminate the predictors of early, as opposed to teenage parenthood, but also challenge conventional wisdom. In particular, of note are: housing tenure as a predictor over social class for both cohorts; the consistency of disliking school as a strong predictor for both sexes; and the case of age 20 as being a break in the continuum of early fatherhood characteristics; as being distinct in these data. In these tables, the area under the ROC curve

⁹The results in these models represent the most parsimonious fitting model for predicting each definition. Other predictors tested but not found to be significant against other controls were as listed: NCDS: Parental Structure at ages 0, 7 and 11; other education test scores at ages 7 and 11; Cohort Participation. BCS70: Parental Structure at ages 0 and 10; other education test scores at ages 5 and 10 (and 16); receipt of Unemployment and Sickness benefits and School Attendance at age 11 years.

Table 5.2 Summary of significant predictors of early parenthood: NCDS Cohort

NCDS	♂			♀	
	Early (First 25%)	Very early (First 12.5%)	Teenage	Early (First 25%)	Teenage
Father's social class	✓	✓		✓	
Tenure	✓	✓		✓	✓
Personality (Age 16)	✓				✓
Intentions (Age 16)	✓		✓	✓	✓
Maths score (Age 16)	✓	✓	✓	✓	✓
Reading score (Age 16)				✓	
School dislike (Age 16)	✓	✓		✓	✓
Attendance (Age 16)				✓	✓
Parental age at first birth	✓	✓	✓	✓	✓
Parental structure age 16				✓	
Sample size	2,367	3,278	2,859	1,955	2,784
Area under ROC curve	0.729	0.744	0.793	0.794	0.822

Source: Author's analysis.

(Receiver Operating Characteristic) is calculated. This is reflective of the accuracy of the model – for example 0.75 is reflective of the fact that we would correctly estimate an observed early parent to have a higher probability of early parenthood than someone who wasn't an observed early parent 75% of the time. Generally, a value above 70% is considered acceptable and a value above 80% excellent (Hosmer and Lemeshow, 2000).¹⁰

Direct measures of childhood socioeconomic conditions here signify the social class environment, tenure environment and receipt of unemployment or sickness benefit at age 10 (BCS70) and age 11 (NCDS). Social class environment measures the number of times a cohort member's father has been identified as belonging to non manual classes (NCDS) and Social Class I and II (BCS70). This is then categorised into all observations, some observations or never recorded. In order to maximise sample size, while incorporating some measure of social class mobility within

¹⁰All models also passed the Hosmer-Lemeshow goodness of fit test which is a comparison of observed and expected frequencies of events across strata and is also a good indicator of redundant variables in models. In addition, likelihood ratio tests were also used to assess the significance of individual variables.

Table 5.3 Summary of significant predictors of early parenthood: BCS70 Cohort

BCS70	♂			♀		
	Early (First 12.5%)	Very early (First 12.5%)	Teenage	Early (First 12.5%)	Very early (First 12.5%)	Teenage
Father's social class	✓			✓		✓
Tenure	✓	✓		✓	✓	✓
Personality (Age 5)		✓		✓		
Personality (Age 10)		✓				
Personality (Age 16)	✓	✓	✓	✓		✓
Intentions (Age 16)				✓		✓
Parental education English	✓	✓	✓			
Vocabulary Score (Age 5)					✓	✓
Maths score (Age 10)				✓		
Reading score (Age 10)	✓			✓	✓ ¹	✓ ¹
Matrices score (Age 10)		✓				
School dislike (Age 16)	✓	✓	✓	✓	✓ ¹	✓ ¹
Parental age at first birth	✓	✓	✓	✓	✓	✓
Parental structure (age 5)			✓			
Parental structure (age 16)		✓				
Unemployment/sickness benefits (Age 16)				✓	✓	
Truancy (Age 16)						✓
Sample size	3,206	2,220	3,712	2,704	2,809	3,232
Area under ROC curve	0.709	0.763	0.792	0.781	0.797	0.807

¹Reading Age 10*School Dislike Interaction Term

Source: Author's analysis.

the parental generation, this variable did not differentiate by the number of observations recorded for a cohort member. For example, a cohort member in a certain social class at age 10 years but not observed another time would be classified as having all observations in that social class. This decision was taken after it was

observed that transition between waves remained relatively stable after the birth and first waves of data collection, which in themselves have high wave response rates. In an acknowledgement that this variable is highly dependent of participation at childhood waves of data collection, a control variable was tested that measured participation, although was found to be insignificant for the most part.

A similar strategy was adopted for tenure (with a breakdown given later) while the benefits variable was a binary variable reflecting receipt of state unemployment and sickness benefits at a point in childhood. Measures of behaviour represent components derived from principal components analysis of Rutter Score measures (Rutter, 1967) that are common to both cohorts. These are an established set of measures to monitor signs of behaviour disorders in children and teenagers including aggression, disobedience and nervousness. These differ in their importance between models, with an index of aggression/misbehaviour particularly important for definitions of BCS70 fatherhood).

Teenage Fatherhood as a Choice Versus Teenage Motherhood as an Adaptation: Breaks in the Continuum

As mentioned previously, the focus on teenage parents has seemed disproportionate given their low, and diminishing, prevalence and a large part of the investigation has been to examine if, in terms of predictors, their characteristics vary significantly from people who became parents in their early 20s. This was not generally found to be the case. However, a peculiarity that does stand out in terms of the results is the weak roles that direct measures of socioeconomic status have in the case of teenage fatherhood. This did not apply to more extensive definitions of early fatherhood, and appears to break the continuum between teenage and other forms of early fatherhood. This phenomenon is present in both cohorts, with a total absence of direct socioeconomic measures registering in the models of teenage fatherhood. In fact for the NCDS model of early fatherhood, few conventional predictors are found to predict entry into this state.

All variables included in the fatherhood models presented in Tables 5.2 and 5.3 have significant predictive power. Model fit statistics suggest that the models for predicting early fatherhood provide a weaker framework of predictors than teenage fatherhood. While it would be expected that early fatherhood would constitute a more diverse group of fathers than teenage fatherhood; these results suggest that those joining the early fatherhood group (that already includes teenage fathers) are actually a group that is governed by a significantly different set of predictors than those of teenage fathers, to the point where modelling two distinct populations as a joint category produces a relatively poorer fitting model.¹¹ This is demonstrated

¹¹ Using the Hosmer-Lemeshow test; although these results appear to be dependent on the way that predictions are grouped (Harrell, 2001) and are not presented here in favour of ROC curve results, that are less responsive to this.

Table 5.4 Goodness of fit statistics (area under ROC curve): binary definitions of early fatherhood

Cohort	Definition of fatherhood	Model excluding direct childhood socioeconomic measures	Model excluding behavioural and philoprogenity measures*	Full model	N
NCDS	Early	0.699	0.708	0.722	2,256
	Very early	0.702	0.719	0.728	3,205
	Teenage	n/a	0.728	0.758	3,263
BCS70	Early	0.697	0.708	0.709	3,206
	Very early	0.759	0.750	0.763	2,220
	Teenage	n/a	0.735	0.792	3,712

Source: Author's analysis.

*Includes Dislike of School

in Table 5.4, which shows the impact of removing different sets of predictors, with higher values representing a better prediction. Socioeconomic factors have greater predictive influence in more inclusive early fatherhood models but are found to be insignificant in teenage models.

The results suggest that while transition to fatherhood in the early 20s is an adaptation to socioeconomic factors and probably more proximal measures of socioeconomic status; fatherhood under 20 is associated more with behavioural, motivational and possibly role model elements. In the case of fatherhood therefore, the continuum appears to move from different sets of predictive factors (from behavioural to socioeconomic) that govern transition, while for motherhood it appears more of a continuum moving gradually in terms of strength of prediction of the same variable groupings.

In particular, the model for teenage fatherhood may be more of a model reflecting sexual behaviour among teenagers than conscious transition to fatherhood. Unfortunately, it is difficult to assess this supposition given that there are few studies that collect behavioural measurements with information on sexual behaviour, with the latter not collected in the NCDS or BCS70. The inclusion of mother's age of finishing continuous education in the BCS70 teenage fatherhood model and the significance of mother's and father's age at first birth in the BCS70 and NCDS models respectively may represent a socioeconomic dimension or may well reflect parental input (including an element of having a role model), which may be moderators of teenage sexual behaviour.¹²

The BCS70 teenage fatherhood model finds that having a high score for an aggressive, disobedient and destructive nature at age 16 years to be significant. In fact, those with a score in the highest quartile for this component were 4.6 times (CI: 1.9–11.2) more likely to become teenage fathers than those with a score in the lowest quartile. For BCS70, dislike of school at age 16 (discussed later) was found

¹²Parental environment is examined in depth in other parts of the wider research Kneale (2008).

to be highly significant. Those who disagreed in full with a statement on disliking school were 83% less likely to become teenage fathers in BCS70 (odds ratio (OR): 0.17; CI: 0.07–0.43). In NCDS, those who were uncertain as to the ideal age at which they wanted to start a family were 85% (OR: 0.15; CI: 0.03–0.44) less likely to become teenage fathers than those who thought it ideal to start a family at age 16–19 years. While some of these factors were significant in more inclusive definitions of ‘early’ fatherhood; it was the fact that these were more prominent than socioeconomic measures that defines teenage fatherhood from early fatherhood in these models.

Teenage motherhood models show a greater continuum between teenage and other definitions of early motherhood. In addition, as might be expected, a greater range of covariates have been identified as significant for early motherhood than early fatherhood, which may indicate a less random social profile of young mothers. The stronger socioeconomic component suggests that early motherhood (or its avoidance) is more of an adaptation to economic circumstance than is the case for early fatherhood, which appears to be governed by behavioural rather than economic factors. This could be because fathering a child as a teenager is less likely to involve co-residence with the child than is the case for teenage motherhood and is likely to have less of a direct economic consequence. This is a temporal state however and has been observed to change over time where some teenage fathers take up residence with their children a few years after birth (Clarke et al., 2000). In essence as has been stated, in the case of teenage fatherhood, often but not always it may be a case of modelling sexual behaviour and partnership patterns rather than conscious behaviour.

For both cohorts, all three definitions of early motherhood are governed by similar sets of predictors. Universal predictors of young motherhood across both cohorts include tenure, dislike of school at age 16, and cohort members’ mother’s age at first birth. As a generalisation, the effect of covariates wanes slightly between teenage and early motherhood models, with early motherhood models representing a more diluted category, as a greater number of significant predictors are included in the more inclusive early motherhood models. However, in summary, it would appear that a continuum does exist between these definitions of early motherhood, given that the predictors appear to maintain their effect (Fig. 5.2).

The Potent Effect of Disliking School on Entry into Early Parenthood

Dislike of school itself has been examined as a predictor of early pregnancy with mixed results (Bonell et al., 2005). This is, to the author’s knowledge, the first attempt to include ‘school dislike’ in models of entry into parenthood. Dislike of school is found to be a potent predictor of early entry into parenthood, not only of teenage motherhood, but also across most definitions of early parenthood

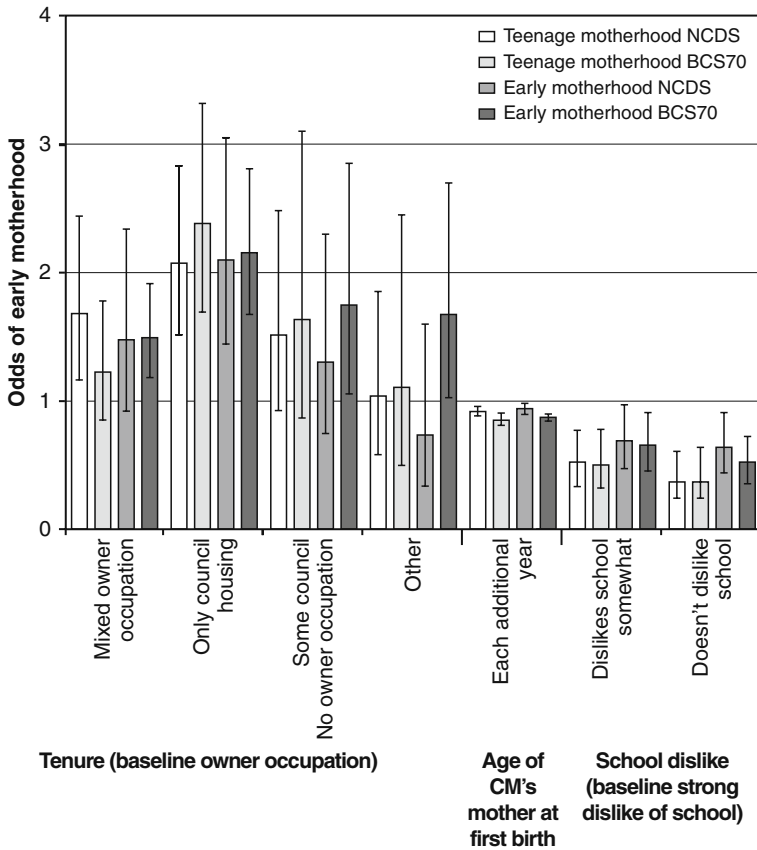


Fig. 5.2 The odds of becoming an early or teenage mother: the effects of selected covariates from models with full controls (Source: Author’s analysis)
 See Tables 5.1 and 5.2 for a full list of controls and sample sizes
 The NCDS scale has been mapped into a three point scale for the purposes of Fig. 5.2 and Table 5.4, but maintains a 5 point scale elsewhere in the models

(including fatherhood). Furthermore, given that dislike of school is measured in a fairly consistent way across both cohorts, its effect appears to be increasing over time.

In these data, aversion to school has been measured as the agreement or disagreement with the statement ‘I do not like school’. This was measured at age 16 in both cohorts – in the NCDS as a five point scale while in the BCS70 this was as a three point scale. As the BCS70 cohort had a particularly low response of the age 16 sweep (Plewis et al., 2004), a missing category was created, which was replicated for NCDS for comparability purposes. Among NCDS boys, 17% reported a strong dislike of school with 18% in BCS70, while the levels for girls was slightly lower at 15 and 16% respectively for NCDS and BCS70. While the level of dislike

Table 5.5 The effect of school dislike on early parenthood: odds ratio results from parsimonious main effects models NCDS and BCS70

Cohort	Definition	School dislike (Baseline: strong dislike of school)		
		Dislikes school somewhat	Does not dislike school	Item non-response***
NCDS	Early fatherhood	0.842	0.706*	n/a
	Very early fatherhood	0.816	0.522**	n/a
	Teenage fatherhood	Not significant in full model		
	Early motherhood	0.744	0.710*	n/a
	Teenage motherhood	0.517**	0.411**	n/a
BCS70	Early fatherhood	0.658*	0.592**	0.994
	Very early fatherhood	0.520*	0.329**	0.770
	Teenage fatherhood	0.209**	0.170**	0.520*
	Early motherhood	0.593**	0.507**	0.951
	Very early motherhood	0.557**	0.503**	0.561
	Teenage motherhood	0.502**	0.394**	0.656

p < 0.01; *p < 0.05 *As the item non-response for dislike of school remained fairly low for NCDS (accounting for less 20%); this category was not created.

Source: Author’s analysis.

of school has remained fairly constant, the effect may be growing. The results for school dislike in models containing a full set of significant predictors are presented in Table 5.5.

Using those who dislike school as a baseline, it appears that even partial disagreement with the statement ‘I do not like school’ is highly protective against early parenthood, particularly for the BCS70 cohort. In the case of teenage fatherhood, even partial disagreement leads to a 79% reduction in the odds of becoming a teenage father. In lognormal event history models, for entry into fatherhood between the ages of 16–23 years among BCS70 males, partial disagreement with the statement leads to a 14% increase in the time spent childless (time ratio (TR): 1.14; CI: 1.08–1.21) with full disagreement leading to an 18% increase (TR: 1.17; CI: 1.09–1.25). Dislike of school produces the largest coefficients in this model, and maintains this effect when the observation time is extended to 30 years, overshadowing socioeconomic effects.

Dislike of school in the case of BCS70 teenage fatherhood outweighs the significance of socioeconomic measures, while it is significant alongside socioeconomic measures in other models. Such a finding has not been replicated in the other few studies of dislike of school (Bonell et al., 2005). In addition, in these data dislike of school is found to be significant alongside measures of educational achievement, and again, overshadowing their impact in several cases. The effects were amplified with educational attainment in BCS70, so that high achievement and liking school were mutually reinforcing protective effects against early motherhood. From a policy perspective, this finding is highly significant and suggests that where early parenthood is viewed as problematic, that school based interventions to

improve engagement could have measurable results. Also of interest in these data and possibly related to dislike of school is the prominence of family building intentions and values as predictors of early parenthood, explored in the next subsection.

Early Parenthood as Planned Parenthood

Philoprogenitive tendencies (tendencies orientated towards children) might appear as obvious predictors of early parenthood, but they have actually received little attention. This is, possibly because of the assumption that very early parenthood is the result of unplanned pregnancy (Social Exclusion Unit, 1999), because these tendencies are subject to revision, because of reliance on socioeconomic theories of fertility or because of the lack of prospective data. In fact, family building intentions have been more the focus as concerns of postponement and childlessness (Simpson, 2006; Kneale and Joshi, 2008; Berrington, 2004) than early fertility, although some focus has been made in studies of teenage motherhood. One example is the index of 'positive orientation towards early motherhood' coined by Afable-Munsuz and colleagues, composed of a series of statements about the value of children where a latent desire for children was found among those becoming early mothers (Afable-Munsuz et al., 2005). However, a drawback of Afable-Munsuz's study is that it that its sample was a narrow population of African-American young women who were existing patrons of family planning services. East and colleagues also found similar results within a narrow high risk population (East et al., 2006). In the present data, information has been collected in a less selective way, for two cohorts of both genders.

NCDS cohort members aged 16 year olds were asked about the age at which they would ideally start a family, with responses grouped by age and also a category formed for those who intended to be childless. The modal response category for both sexes was 22–25 years and actually only a small number of cohort members chose the youngest category of 16–19 years¹³ (2% of boys and 3% of girls; those choosing under 22 years had higher numbers; 13% of boys and 18% of girls). Almost 10% of females and 3% of males choosing the childless category became teenage parents. BCS70 cohort members were asked about the importance of children in their own life to come at the age of 16 years on a three point scale. Females were most likely to answer that children mattered very much while males had higher levels that answered that children only mattered somewhat. While both measures are proxies of intentions, both will give an indication of family building preferences as predictors, and are referred to as family building intentions from this point forward.

These data find that philoprogenitive tendencies are generally a better predictor of early motherhood than early fatherhood. Only the models for NCDS early and teenage fatherhood find these to be a mildly significant predictor. In the case of

¹³This is a combined category in the data of 16–17 and 18–19. There was no option to choose any earlier.

Table 5.6 The effect of intentions, as measured by importance of children, on early parenthood: odds ratios from parsimonious main effects models

	Early motherhood	Teenage motherhood
Baseline (children very important)		
Children somewhat important	0.540**	0.660
Children not important	0.524**	0.402**
Item non-response	0.672*	0.884

**p < 0.01; *p < 0.05

models of early motherhood among NCDS cohort members, the age at which the cohort member regards as the ideal age at first birth operates in a non-linear fashion (and is modelled as a categorical variable), with those uncertain about the ideal age or those selecting 26–30 years having the lowest odds of becoming early mothers. Among BCS70 models of early motherhood, the importance of children is a significant predictor of teenage and early forms of motherhood with those deeming children to be unimportant half as likely to become early or teenage mothers than those deeming children to be very important. The results are presented in Table 5.6 and Fig. 5.3.

These data confirm that becoming an early mother is a process based upon more than just economic adaptation. For many young mothers, becoming an early mother is grounded in a desire to enter motherhood at an early age and a high value placed upon children. These factors remain significant even after controlling for socio-economic factors, educational achievement, behavioural factors and more relevant perhaps, school dislike. Early motherhood is often taken for granted solely as a rational adaptation to economic factors, with poor labour market prospects leading to some reduced opportunity costs in having an early child (Ermisch and Pevalin, 2003b; Hoem, 2000). These data would demonstrate that even after accounting for

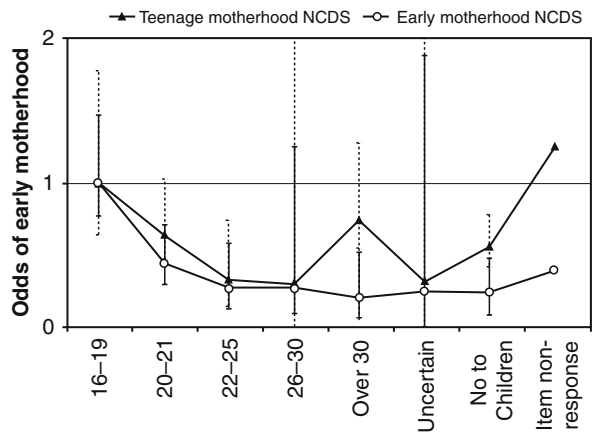


Fig. 5.3 The effect of intentions, as measured by ideal age at first birth, on early parenthood: odds ratios from parsimonious main effects models (Source: Author’s analysis) Hatched lines represent confidence intervals for teenage motherhood model

factors influencing labour market opportunity costs (including educational factors and dislike of school), that a social norm influencing childbearing orientations remains for women. Should these preferences and social norms be consolidated on a community or neighbourhood level, it would be better to think of a teenage or any early mother as being “an emerging adult participant in active multigenerational social networks, than as a rebellious adolescent set apart from her elders” (Geronimus, 1997, p. 418).

The Dominant Role of Housing Tenure Over Social Class

A striking find in this analysis is the dominant role that housing tenure has in predicting early parenthood, alongside or even eclipsing the role of social class. Results from models of fatherhood are presented in Table 5.7 while Fig. 5.2 shows some results for motherhood. Housing tenure is one of the few predictors that moderates entry into nearly all forms of parenthood in both cohorts (with the exception of teenage fatherhood) in both event history and binary logistic modelling strategies. One could take the view that housing tenure represents a proxy for the type of neighbourhood. It could also be a direct measure of childhood socioeconomic conditions. The significance of tenure contributes to an emerging theme of the importance of contextual factors (Kneale, 2008).

Table 5.7 shows that tenure has an equal and sometimes greater association with entry into early fatherhood than it has with entry into very early fatherhood. This is mirrored to some extent in BCS70 motherhood, but is contrary to most other results in this research that have found that common predictors among definitions have waned with more inclusive definitions of young parenthood. What this analysis, backed up by results from Event History models, adds to the story of early transition to parenthood is that housing tenure in childhood has effects

Table 5.7 The effect of tenure on early parenthood: odds ratio results from parsimonious main effects models NCDS and BCS70 of fatherhood

Cohort	Definition of Fatherhood	Tenure (Baseline: owner occupation)			Other
		Mixed owner occupation tenure	Only council tenure	Some council, no owner occupation tenure	
NCDS	Early	1.52**	1.83**	1.52	1.67*
	Very early	1.34	2.07**	2.33**	1.55
	Teenage	Not significant in full model			
BCS70	Early	1.14	1.49**	1.29	1.31
	Very early	1.23	1.50*	0.78	1.08
	Teenage	Not significant in full model			

** $p < 0.01$; * $p < 0.05$

Source: Author's analysis.

lasting beyond conventionally defined adolescence and well into the twenties. In addition, this analysis shows that in certain cases, experiencing social housing, even if accompanied by upward movement into owner occupation, which may have been facilitated by the right-to-buy scheme for BCS70, has significant and lasting effects. This may well be as related to retaining community ties such as maintaining school or peer groups, or the lasting legacy of childhood poverty. These conclusions mirror those of other research that has examined childhood tenure and adult outcomes (Feinstein et al., 2008).

Conclusions: Building a Picture of Early Parenthood Patterns in the UK

In this chapter, a definition of early parenthood bounded by the age at which one quarter of a cohort had become parents was explored. For women born in 1958, this was just over 22; for those born in 1970 it had risen to just over 24. The corresponding figures for men were around 25 and 27. On this definition most 'early' childbearing is no longer confined to teenagers who account for less than 13 and 10% of women and 4 and 3% of men among the NCDS and BCS70 cohorts.

Early parenthood has been viewed through a wide prism in this research and as a result, this chapter illuminates several themes in the story of young parenthood in the UK. One of the first themes identified was the inadequacy of drawing the line at age 20. This inadequacy was revealed through univariate techniques, reinforced by multivariate exploration of predictors. However, the story was not straightforward. While teenage motherhood and early motherhood were described by similar processes and were essentially viewed as being on a continuum, the even smaller group of males reporting fatherhood as teenagers appeared to be a distinct group. In particular, the lack of association between teenage fatherhood and socioeconomic factors was hypothesised as reflecting teenage male sexuality and risky behaviour rather than planned fatherhood. There are greater means and incentives for women to avert the consequences of an unplanned pregnancy than males. In the case of early fatherhood, there was a discontinuity as the earliest (teenage) fatherhood was associated with behavioural factors and movement towards socioeconomic factors with age.

Looking at particular predictors of early parenthood revealed some novel results. The dislike of school was identified as being pervasive in most models of early parenthood for both cohorts and genders. Having been previously linked to early pregnancy alone, and then only in models excluding socioeconomic predictors, its continuing strength in predicting early parenthood was surprising. The pathway behind this finding is unknown. This could reflect reduced opportunity costs of entering parenthood early, as is hypothesised in literature on early parenthood (Ermisch and Pevalin, 2003b); or alternatively be more of an indicator of contextual factors such as peer group, school or community effects; or a combination of both. The significance of *philoprogenity*, as measured by ideal age at first birth and importance of children in the NCDS and BCS70 respectively, even when

controlling for a battery of other predictors, may again signify the importance of contextual factors. Finally, the strong predictive power of housing tenure and the observed effect of experience of poverty threw into question traditional measures of social class as sole measures of socioeconomic circumstance.

Cross-cohort comparisons throughout have revealed slight nuances between the cohorts in the way these predictors operate. However, the overwhelming theme is one where the issue of comparability between cohorts can only really be made when relative measures are used. The inadequacy of using a teenage definition of early parenthood becomes particularly acute for BCS70 where the ‘absolute’ definition of early applies to an increasingly marginalised group. Of note as well is the increased potency of some predictors among the BCS70 cohort across all models suggesting that as a whole, social polarisation in age at first birth is forming a stronger discourse in the more recent cohort.

The results presented here have composed a picture of transition to early parenthood as being governed by numerous processes. In particular they have identified numerous pathways to early transition that vary from conventional predictors and definitions of early parenthood. These investigations have also revealed avenues for future work in investigating contextual predictors that are under investigation in further research (Kneale, 2008). While a number of significant predictors have been found to govern early parenthood, model fit statistics suggest that many more are yet to be found under the assumption that the timing of parenthood is more than just a random event.

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Chapter 6

Currently Cohabiting: Relationship Attitudes, Expectations and Outcomes

Ernestina Coast

Introduction

The rise in cohabitation – pre-marital, non-marital and post-marital – represents one of the most significant changes in union formation patterns in many developed economies. The importance of cohabitation, and the public debates it generates, are reflected in the media attention it has received. In 2006, there were 2.3 million cohabiting couple families in the UK (ONS, 2007).¹ The increase in cohabitation has occurred alongside other, related, major demographic shifts, including: rising levels of divorce; delay in entry into marriage and childbearing; and a rise in the proportion of births taking place outside marriage. These are all characteristic of the second demographic transition (Van de Kaa, 1987; Lesthaeghe and Surkyn, 2004b), although rising levels of cohabitation in the UK have only partially offset declining marriage rates (Berrington and Diamond, 2000). Even within Europe, divergent trends in the timing, duration, type and composition of cohabiting unions have been identified (Liefbroer and Dourleijn, 2006; Kiernan, 2001; 2004; Prinz, 1995). Theorising about cohabitation encompasses a broad range of perspectives, from notions of selfish individualism and breakdown of the family (Morgan, 2000) to those of the democratic, consensual and “pure” relationship (Giddens, 1992; Beck-Gernsheim, 2002).

Cohabitation may be narrowly defined as “an intimate sexual union between two unmarried partners who share the same living quarter for a sustained period of time” (Bachrach et al., 2000), assuming a defined duration (Mynarska and Bernardi, 2007). Typologies of cohabitation continue to evolve (Haskey, 2001; Martin and Thery, 2001; Casper and Bianchi, 2002), reflecting the changing nature of living arrangements in general and cohabitation in particular. As both a

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¹There are no annual official estimates of the cohabiting population of England and Wales, unlike legal marital status, and trends tend to be derived from surveys such as the Labour Force Survey and General Household Survey (GAD).

demographic process and event, cohabitation is fuzzy (Knab, 2005), elusive (Teitler and Reichman, 2001) and heterogeneous (Oppenheimer, 2003). Union formation in general, and cohabitation in particular, are characterised by increasing number and complexity, with the duration of cohabiting unions appearing to be lengthening (Haskey, 2001).

Theorists seeking to explain the rise in cohabitation incorporate a wide range of explanatory perspectives, including: increased secularization (Lesthaeghe, 2002; Thornton et al., 1992; Lehrer, 2004); increased female labour force participation; shifts in the meaning of marriage (Allan and Crow, 2001), including a decline in its socio-cultural function (Alders and Manting, 2001); risk reduction (Mulder and Manting, 1994; Galland, 1997); a decline in the cultural importance of kin; and the separation of sex and reproduction.

Cohabitation may now be considered normative in the UK, evidenced by survey and opinion poll data. Such attitudinal data can contribute to the body of evidence about prevailing social norms (and stigma) and associated behaviour. Attitudinal data about cohabitation provide one strand of evidence about the acceptability of cohabitation as a social institution, and contribute to the substantive demographic evidence about the role of cohabitation in contemporary societies. Responses to questions about attitudes to cohabitation reveal the extent to which individuals have internalised norms about appropriate and 'normal' behaviour with respect to union formation (Oropesa, 1996). In 1981, a special edition of the journal *Alternative Lifestyles* dealt with cohabitation as a new form of living arrangement. Today, cohabitation has moved from being a 'deviant' or 'alternative' lifestyle choice to one that is normative (de Vaus et al., 2005), both before and after marriage (Bumpass et al., 1991, 1995).

Context

Normative Attitudes

Attitudes are inherently subjective and virtually impossible to verify. When interpreting attitudinal data generated by surveys, it is important to note that respondents have to create judgements quickly in response to the question asked, often in relation to some implicit standard, even if the judgements are themselves rooted in a firmly held view (Tourangeau et al., 2000). Whilst all survey questions are context-dependent, evidence shows that attitudinal questions are particularly at risk of this effect (Schuman and Presser, 1996). There are two broad types of attitudinal survey data: normative and individual. Normative attitudinal responses, such as those collected in opinion polls, allow an individual to distance themselves from their own circumstances. Individual attitudinal responses are, theoretically, grounded in reality. Norms and values relating to union formation are dynamic and respond to the interaction between individual experiences and social responses (Bachrach et al., 2000) and both contribute to, and arise from, changes in society (Heuveline and

Timberlake, 2004). Attitudinal surveys are used extensively in policy debates, for example, recent debates about the legal position of cohabiting relationship in Britain have incorporated attitudinal information as part of their corpus of evidence for legal change (Dey and Wasoff, 2007).

Changes in normative attitudes towards cohabitation are poorly represented before the final quarter of the twentieth century, mirroring the paucity of substantive data on the prevalence of non-marital cohabitation (Gillis, 2004; Murphy, 2000a, b; Kiernan, 2004). Globally, attitudes toward pre- and non-marital cohabitation have become more ambivalent and less unaccepting of non-traditional living arrangements in general, and cohabitation in particular (Thornton, 1989). For example, Thornton's research identifies a clear trajectory of changing attitudes towards cohabitation in the US, with rapid changes in the 1960s and 1970s, slowing down in the 1980s. Normative differences in attitudes towards cohabitation have been studied in a variety of comparative settings, particularly in the US (Carter, 1993; Oropesa, 1996; Thornton, 1989; Sweet and Bumpass, 1992; Thornton and Young-DeMarco, 2001; Nock, 1998; Heuveline and Timberlake, 2004; Axinn and Thornton, 2000; Thornton, 1995), and elsewhere such as Sweden (Bernhardt, 2004; Trost, 1978), Europe (Kiernan, 2004), the UK (Haskey, 2001; Barlow et al., 2001), and Poland (Kwak, 1996; Mynarska and Bernardi, 2007). An increase in the acceptability of cohabitation can reasonably be interpreted as evidence for weakening of the social norms surrounding marriage, referred to variously as the deinstitutionalisation of marriage (Cherlin, 2004), *démariage* (Théry, 1993) and the disestablishment of marriage (Coontz, 2004, quoting Cott).

Responses to normative questions are grounded in a specific time and context. Because cohabitation (and other forms of intimate relationship) are dynamic – a moving target, responses to questions about the acceptability of cohabitation posed in the 1980s potentially have different meanings than responses to questions posed in the twenty-first century, even if the question wording and response categories are exactly the same. In Britain, two key sources of population-level attitudinal data about cohabitation are the British Household Panel Survey (BHPS) and British Social Attitudes Survey (BSA). The data reported here update and expand upon Haskey's (2001) review of population-level attitudes towards cohabitation in Britain.

The BHPS has asked a series of repeated self-completion questions about attitudes towards cohabitation using Likert-scale responses. It is important to note that the phrasing of the self-completion questions changed at Wave 8 (1998). Previous waves (1992, 1994, 1996) used the statement "Living together outside of marriage is always wrong". Subsequent waves (1998–2004) used the statement "It is alright for people to live together even if they have no interest in considering marriage". The BHPS also includes a separate youth questionnaire for all household members aged 11–15 years (inclusive), incorporating the repeated statement response "Living together outside of marriage is always wrong". Interestingly, whilst this phrasing was changed for adult BHPS respondents, it has remained constant for youth respondents.

The annual cross-sectional BSA survey has included a combination of repeat and *ad hoc*² questions about attitudes to cohabitation (Haskey, 2001; Barlow, 2004). This review focuses on repeat elements, namely attitude responses to statements in 1989, 1994, 2000 and 2002 (Do you agree or disagree? It is a good idea for a couple who intend to get married to live together first” “Do you agree or disagree? It is all right for a couple to live together without intending to get married.” “Do you agree or disagree? People who want children ought to get married”). Table 6.1 summarises normative data relating to cohabitation in the BHPS (1992–2004). More than two thirds of respondents have reported agreement with the statement “It is alright for people to live together even if they have no interest in considering marriage” in each of four successive waves.

Disaggregating responses to statements about cohabitation by birth cohort, a clear generational pattern emerges, with older cohorts much less likely to approve of non-marital cohabitation relative to younger cohorts. This is mirrored by trends in reported ever-cohabitation by birth cohort. Less than 3% of respondents born

Table 6.1 Percentage distribution of respondents’ attitudes to cohabitation in general, 1992–2004

	“Living together outside of marriage is always wrong”			“It is alright for people to live together even if they have no interest in considering marriage”			
	1992	1994	1996	1998	2000	2002	2004
Strongly agree/Agree	16.7	14.7	14.1	66.4	69.7	68.4	69.4
Neither agree nor disagree	30	28.9	28.5	21.4	19.5	20.3	20
Strong disagree/ Disagree	53.3	56.4	57.4	12.2	10.8	11.3	10.6
N	9,284	8,940	9,027	10,427	14,799	15,215	14,341

Note the phrasing of the self-completion questions changed at Wave 8 (1998). Previous waves (2, 4, 6) used the statement “Living together outside of marriage is always wrong”. Subsequent waves (8, 10, 12, 14) used the statement “It is alright for people to live together even if they have no interest in considering marriage”. n = valid cases, excluding missing or don’t know responses. Source: BHPS 1992–2004 documentation and questionnaires: <http://www.iser.essex.ac.uk/ulsc/bhps/doc/volb/indexes/subject20.php#Values,%20Opinions%20and%20Attitudes> Accessed 30/06/08.

²BSA ad hoc questions on attitudes towards cohabitation are as follows: 1986 “Do you agree or disagree? As a society we ought to do more to safeguard the institution of marriage”. 1986 “Do you agree or disagree? Most people nowadays take marriage too lightly”. 1989 “Do you agree or disagree? Personal freedom is more important than the companionship of marriage”. 1989 “If you were advising a young (wo)man, which of the following ways would you recommend? Live alone with no partner /Live with a partner and not marry / Live with a partner and then marry/ Marry first”. 1989 and 1994 “Do you agree or disagree? The main advantage of marriage is that it gives financial security”. 1994 “Imagine an unmarried couple who decide to have a child, but do not marry? What would your general opinion be?”. 2000 “Many people who live together without getting married are just scared of commitment”. 2000 “There is no point getting married - it’s only a piece of paper”.

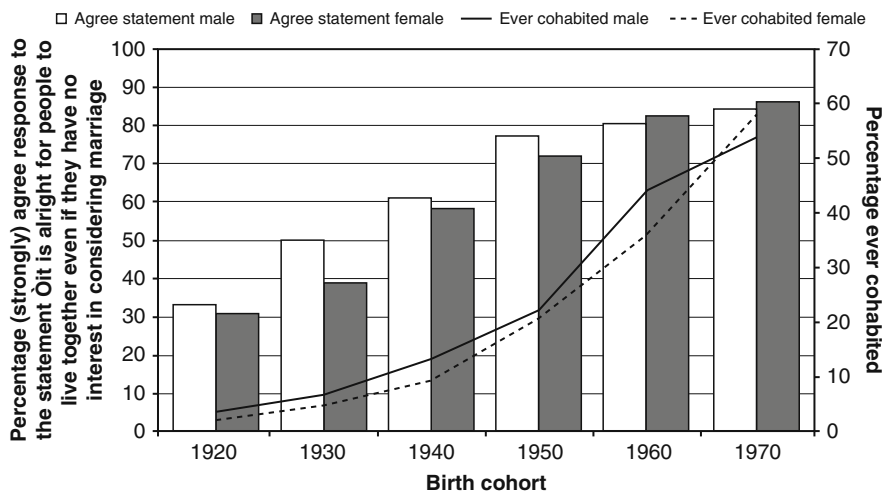


Fig. 6.1 Distribution of attitudes towards, and experience of, cohabitation, by birth cohort and sex, 1920–1970
(Source: BHPS, 2004.)

in the 1920s reported ever having cohabited, compared with 57% of respondents born in the 1970s. Men appear to have slightly more accepting attitudes towards cohabitation, although this differential is negligible for more recent birth cohorts (Fig. 6.1).

Individuals who have ever-cohabited are significantly ($p < 0.000$) more likely to report approving attitudes towards cohabitation, with just 1.7% of ever-cohabiting respondents disagreeing with the statement “It is alright for people to live together even if they have no interest in considering marriage”. This significant relationship holds for all birth cohorts. It is possible to examine whether an individual’s attitude towards cohabitation in general changes over the six year interval between the first (1998) and most recent (2004) waves including attitudinal statements on non-marital cohabitation. Normative attitudes reported in the BHPS are relatively stable. Nearly three quarters (74%) of respondents report the same broad response in both 1998 and 2004. Of those that change their broad response category over the period, the majority shift towards a more accepting attitude over time.

Successive generations tend to have less traditional attitudes when compared with preceding generations, a function of both generation succession and intra-generational change (Scott et al., 1996). Adolescents’ attitudes provide insight into the probable trajectory of normative attitudes and behaviours in the near future. The attitudes of adolescents are important for determining future choices (Burt and Scott, 2002; Manning et al., 2007), with young adults who approve of cohabitation more likely to enter into a cohabiting relationship (Axinn and Thornton, 1993). Successive BHPS waves (1994, 1999, 2000, 2001, 2005) asked young people aged

Table 6.2 Percentage distribution of youths aged 11–15 years (inclusive) response to the question statement “*Living together outside of marriage is always wrong*”

	Living together outside of marriage is always wrong				
	1994	1999	2000	2001	2005
Strongly agree/Agree	19.0	12.8	11.9	10.6	13.3
Neither agree nor disagree	21.2	27.9	26.7	23.5	30.8
Strong disagree/Disagree	59.8	59.3	61.4	65.9	55.9
n	759	929	1,409	1,404	1,401

n = valid cases, excluding missing or don't know responses.

Source: BHPS 1994–2005 documentation and questionnaires: <http://www.iser.essex.ac.uk/ulsc/bhps/doc/volb/indexes/subjcat20.php#Values,%20Opinions%20and%20Attitudes>.

11–15 years their attitude toward the statement “Living together outside of marriage is always wrong”. Treating the data as cross-sectional for descriptive purposes, the broad pattern appears to be one of increasing ambivalence, with nearly one third of respondents neither agreeing nor disagreeing with the statement in 2005 (Table 6.2).

When using panel data to examine normative attitudes, it is useful to try to disentangle whether observed changes in attitudes develop because the observed individuals have adopted new attitudes or because new individuals with different attitudes have entered the population. For example, the five year gap between the 1994 and 1999 rounds of the youth questions on cohabitation meant that very few of those interviewed in 1994 would have still been eligible for interview in 1999. By contrast, repeat of the questions in successive years (1999, 2000, 2001) would have repeatedly captured a proportion of the population who remained within the 11–15 age group. The BSA has asked a set of questions about attitudes towards cohabitation in subsequent survey years (1994, 1998, 2000, 2002). The proportion of individuals expressing negative views about cohabitation, and its relation to marriage, has declined across all age groups (Fig. 6.2).

Questions about attitudes towards cohabitation are just one element of the battery of attitudinal questions contained in surveys such as the BSA. For example, the BSA has asked questions annually about non-marital (pre- and extra-) sexual relationships since 1983. It is important to note that attitudes of increased acceptance of cohabitation have changed more rapidly than attitudes towards other aspects of intimate relationships such as extra-marital sex and same-sex relationships. As such, cohabitation has emerged as an aspect of intimate relationships that has come to be regarded differently (perhaps separately?) from other indicators of sexual freedom (Murphy, 2000b; Reynolds and Mansfield, 1999). Acceptance of cohabitation is likely to increase in the future, a function of the social processes of cohort replacement, socialisation and social diffusion (Seltzer, 2004).

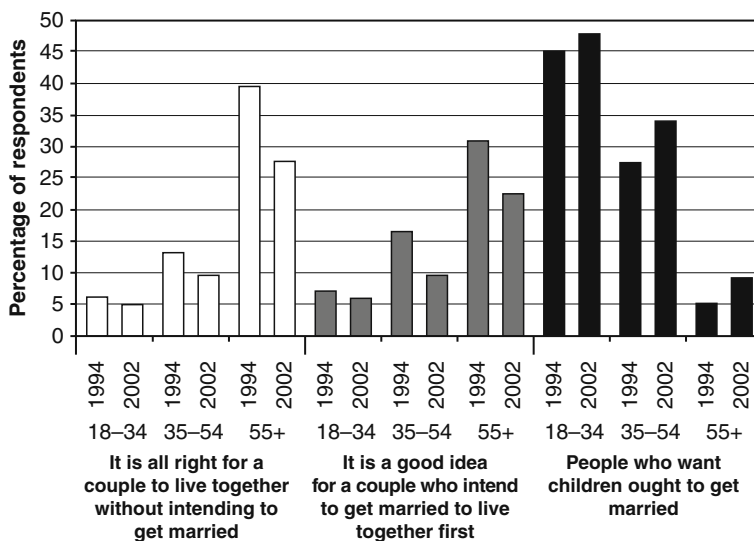


Fig. 6.2 Percentage distribution, by age group,³ of respondents who disagree, or strongly disagree, with statements about cohabitation and marriage, 1994 and 2002 (Source: BSA.)

Individual Attitudes, Expectations and Outcomes

In the USA, a limited number of studies have examined the effects of cohabitators' own assessments of their relationship on union outcomes. Brown (2000) combines both relationship assessments (positive versus negative) and expectations. Research elsewhere has considered the relationship between relationship expectations and outcomes. For example, Manning and Smock (1995) found that cohabiting couples that express an intention to marry are four times more likely to marry compared with couples with no reported plans to marry. Reports of plans or expectations to marry by cohabiters can be interpreted as indicative of cohabiting unions representing a transitional state leading to marriage. Relationship expectations cannot be used as proxy indicators of relationship 'quality'. For example, an expectation of relationship transition to marriage might be an expression of a perceived absence of alternatives to the current cohabiting relationship. Similarly, an expectation of splitting up may be an expectation based on externalities such as forthcoming university attendance in another part of the country.

Much research compares cohabitation to marriage, and compared to married couples, cohabiting couples differ in several distinct ways (Bachrach et al., 2000) including higher rates of union instability (Waite and Gallagher, 2000; Ermisch and Francesconi, 2000; Bouchard, 2006). It is important to note, however, that much of the earlier research into the dissolution of cohabiting versus married partnerships used data on unions from the 1970s and early 1980s when cohabitation was

³Age at time of interview.

much rarer (de Vaus et al., 2005). The influence of cohabitation has been examined on a wide range of outcomes, and is associated with: relationship dissatisfaction (DeMaris, 1984); higher levels of conflict and violence (Thomson and Collela, 1992; Forste, 2002; Kenney and McLanahan, 2006); lower quality of partner communication (Cohan and Kleinbaum, 2002); lower levels of sexual exclusivity (Forste and Tanfer, 1996), greater dependency on family of origin (Rindfuss and VandenHeuvel, 1990); and lower relationship quality (Brown and Booth, 1996).

Relationship expectation reports are cross-sectional, and it might be that an individual entered into a cohabiting relationship with no expectations of marriage, but that these expectations changed over time. The absence of expectations to marry can represent one of three positions: firstly, an ideological position that opposes marriage; secondly, an assessment that their current partner is not marriage material, but an absence of an ideological opposition to marriage *per se*; thirdly, they have yet to transition to thinking about marriage. The purpose of looking at relationship expectations is to throw some light on whether cohabitation represents an alternative to marriage, or an integral component of the transition to marriage. For example, older cohabitators tend to be more likely to report their relationship as an alternative to marriage, whereas younger cohabitators are more likely to report cohabitation as a precursor to marriage (King and Scott, 2005). It is important to analyse gendered relationship expectations and attitudes. Considerable research into the gendered aspects of marriage has revealed 'his' and 'her' marriages, first identified by Bernard and Bernard (1982) and subsequently Fowers (1991), and it is reasonable to hypothesise that there are 'his' and 'her' cohabitations.

Analyses

Data

This research uses data from the BHPS to analyse individuals' relationship expectations and subsequent reported relationship behaviour (University of Essex, 2006). It deals with the relationship intentions of those individuals who report a non-marital cohabiting partner. How do cohabiting relationship expectations differ by age, sex, previous relationship history and parenthood? For people in cohabiting relationships, how do attitudes towards cohabitation differ by age, sex, previous relationship history and parenthood? Do individuals achieve their relationship expectations? How are cohabiting couples' relationship expectations associated with relationship outcomes (marriage, separation, continued cohabitation)?

Begun in 1991, the BHPS surveys approximately 5,000 households annually. In the eighth wave, in 1998, and again in the thirteenth wave, in 2003, individuals aged 16 and above who were in cohabiting relationships were asked about their expectations of this cohabiting relationship. They were shown a card with a range of responses and asked to "read out the number of the statement which you feel applies most closely to your current relationship". The responses included: "Planning to marry", "Probably get married", "Just live together", "No thought to the

future”, “Don’t know” and “Other”. A supplementary question was asked of those respondents who replied “Don’t know” or “Just live together”. The supplementary question also used a showcard, and asked for a response to the statement “how likely it is that you will ever get married (or remarried) to anyone in the future?”. The responses included: “Very likely”, “Likely”, “Unlikely”, “Very unlikely” and “Don’t know”.

Cohabiting respondents were asked a series of questions about their perceptions about cohabitation in general. It is important to note that this series of questions did not explicitly ask respondents to reflect upon their own current cohabiting relationship, but the questions did explicitly compare cohabiting relationships to marriage, rather than to any other form of union. The questions were: “Do you think there are any advantages in living as a couple, rather than being married?” and “Do you think there are any disadvantages in living as a couple, rather than being married?”. If a respondent answered yes to either of these questions, they were prompted for open ended responses (up to two mentions) with the question “What do you think are the (dis)advantages of living as a couple?”

Also in the eighth wave, in 1998, and again in the thirteenth wave, in 2003, individuals aged 16 and above were asked “Do you have a steady relationship with a male or female friend whom you think of as your ‘partner’, even though you are not living together?” Respondents that reported such a partner were then asked their intentions about this relationship, based on show card responses to the question “Please look at this card and read out the number of the statement you feel applies most closely to this relationship?”, with responses of “Expect to marry”, “Expect to cohabit”, “No plans to marry or cohabit” and “Don’t know”. For those individuals who reported a partner, but did not report an expectation of marriage or cohabitation with this partner, a supplementary showcard response question was asked “Can you please look at this card and tell me how likely it is that you will **ever** get married or remarried to anyone in the future?”, with responses of “Very likely”, “Likely” “Unlikely”, “Very unlikely” and “Don’t know”. Because the BHPS only collects data from coresidential members of a household, data and analyses on non-co-residential partners are restricted to those individuals who are members of the BHPS sample, and not their partners.

Descriptive Overview

Cohabitation is heterogeneous, involving pre-, intra- and post-marital cohabiting relationships (Table 6.3). For women and men born in the 1970s, 72 and 75%, respectively, of first unions were cohabiting. The normative status of cohabitation as a first type of union is underlined by examining the relatively small numbers of individuals born in the 1980s and aged 16 and over included in the BHPS. Of those members of this most recent cohort who have entered live-in unions ($n = 470$), 91% report cohabitation as the first type of union, underlining the primacy of cohabitation as first union (Berthoud, 2000).

Table 6.3 Percentage distribution of respondents reporting a cohabiting relationship, by sex, 1998 and 2003

	1998 n = 1,187		2003 n = 1,511	
	Male	Female	Male	Female
Current legal marital status				
– Married	1.2	1.9	1.1	0.5
– Separated	3.2	3.2	3.7	1.9
– Divorced	24.0	25.6	22.9	25.8
– Widowed	1.4	2.3	1.2	2.3
– Never married	70.1	67.0	71.0	69.5
Parent	32.0	40.8	40.5	50.8
Length of cohabiting relationship at interview				
– < 6 months	15.6	16.4	6.9	8.8
– 6–12 months	13.1	13.8	10.7	9.5
– 1–2 years	18.2	16.4	17.2	17.9
– 2–5 years	31.3	29.4	29.8	30.4
– > 5 years	21.8	23.9	35.4	33.6

Source: BHPS, 1998 and 2003, author's analysis.

In terms of the characteristics of individual cohabiting couples, more than half (55.1%) of all cohabiting relationships in 2003 where neither partner had been previously married, involved both partners born in the 1970s.

Cohabiting Relationship: Attitudes

Cohabiting relationship attitudes and expectations were collected in both 1998 and 2003. When examining whether relationship expectations are achieved, data are used from the 1998 wave forwards to the most recent interview for each individual. The short time span between the 2003 wave of relationship expectation data and the most recent published wave of the BHPS (2005) precludes detailed analysis of relationship outcomes from the 2003 wave forwards.

An individual can report both advantages and disadvantages of cohabitation when compared to marriage, and the two are not mutually exclusive. In 1998 and 2003 the majority of cohabiting respondents reported neither an advantage nor a disadvantage (47 and 55% respectively) (Table 6.4). In 2003 less than one third of individuals in cohabiting relationships reported that there was an advantage to living in a cohabiting relationship when compared to marriage. Responses from never-married individuals are based on perceptions about marriage, rather than direct experience of it. Overall, there is no significant relationship between sex and whether an individual reports an advantage to cohabitation compared to marriage. However, respondents who are parents are significantly (1998 $p < 0.005$; 2003 $p < 0.000$) less likely to report advantages of cohabitation compared to non-parents. Examining in detail

Table 6.4 Percentage distribution of attitudes about cohabitation, currently cohabiting respondents, 1998 and 2003

	1998 n=1,115	2003 n=1,514
Advantages in living as a couple	40.0	32.0
First mentioned advantage ¹		
– trial marriage	30.7	23.6
– no legal ties	29.8	24.5
– improves relationship	5.2	3.6
– previous bad marriage	1.6	2.7
– personal independence	10.0	10.9
– financial advantage	16.1	22.2
– companionship	2.0	3.1
– prefer cohabitation	1.4	1.3
– other	3.2	8.2
Disadvantages in living as couple	26.7	23.6
First mentioned disadvantage ²		
– financial insecurity	39.0	30.4
– no legal status	16.6	32.1
– effects on children	5.4	6.2
– lack of commitment	15.6	9.6
– social stigma	16.3	11.3
– other	7.1	10.4

¹ Second mentioned advantages were collected in both 1998 and 2003, but have not been included in analyses here due to the relatively small numbers (n = 44, n = 33, respectively) reporting a second advantage.

² Second mentioned disadvantages were collected in both 1998 and 2003, but have not been included in analyses here due to the relatively small numbers (n = 16, n = 44, respectively) reporting a second disadvantage. Source: BHPS, 1998 and 2003, author's analysis.

the four most commonly reported advantages of cohabitation (trial marriage, no legal ties, personal independence and financial advantage), there are no significant differences by sex. Parenthood status is significantly related (1998 $p < 0.001$; 2003 $p < 0.005$), with non-parents more likely to report trial marriage, and parents more likely to report personal independence and the absence of legal ties as advantages of cohabitation.

Approximately one quarter of respondents report disadvantages in living as a couple in both 1998 and 2003, with women significantly more likely to report disadvantages compared to men if they had a previous live-in relationship ($p < 0.000$) or were a parent ($p < 0.050$). For the subset of individuals whose cohabiting relationships extended across the 1998 and 2003 interviews (n = 144), it is possible to examine the consistency of responses over time. Of those individuals reporting attitudes on the same cohabiting union in 1998 and 2003 (n = 132), overall attitudes are fairly consistent, reporting the same response to whether there are advantages or disadvantages (62.1 and 68.9%) to cohabitation. This suggests that those individuals in long duration cohabiting relationships have well-established attitudes towards their

Table 6.5 Percentage distribution of responses to the statement “How likely is it that you will ever get married to anyone in the future?”, by currently cohabiting, never married respondents with no plans to marry their current partner, by sex, 1998 and 2003

	1998 n = 268		2003 n = 401	
	Male	Female	Male	Female
Don't know	11.6	8.6	10.2	6.8
Very likely	4.7	5.8	3.1	3.4
Likely	24.0	28.8	18.9	23.9
Unlikely	25.6	38.8	40.8	42.9
Very unlikely	34.1	18.0	27.0	22.9

Source: BHPS, 1998 and 2003, author's analysis.

union. Substantial proportions of never-married, currently cohabiting respondents with no expectation of marriage for the current cohabiting relationship, report that they are unlikely or very unlikely ever to marry, with 67.8 and 65.8% of men and women, respectively, reporting this expectation (Table 6.5).

The percentage of those respondents who reported no plans to marry in 1998, and thought it was (very) unlikely they would ever marry, did actually go on to marry (18.5% split up and 71.4% were still cohabiting at their most recent interview).

Cohabiting Relationships: Expectations

If cohabitation is part of the marriage process, then one might reasonably expect individuals to respond that they have plans to marry the longer they have cohabited. For cohabiting individuals interviewed in 2003, the relationship between the duration of the cohabiting relationship is significantly ($p < 0.000$) associated with relationship intentions (Table 6.6).

The majority of individuals in what might be described as long-term cohabiting relationships do not report an expectation of marriage, but of continued cohabi-

Table 6.6 Percentage distribution of future relationship expectations, by duration of current cohabiting relationship, 2003

		Future of current cohabiting relationship		
		Plan to marry	Probably marry	Live together
Duration of current cohabiting relationship	< 1 year	30.5	38.0	31.6
	1–2 years	29.9	44.4	25.7
	2–5 years	19.8	48.5	31.7
	> 5 years	9.2	33.4	57.4

n = 1,1015 respondents

Source: BHPS, 2003, author's analysis.

Table 6.7 Distribution of expectations by prior relationship history, 1993 and 2003

Future of current cohabiting relationship	1998 (n = 1,007)		2003 (n = 1,343)	
	No previous live-in relationship	Prior live-in relationship	No previous live-in relationship	Prior live-in relationship
Planning to marry	24.7	13.3	22.7	16.9
Probably marry	46.8	37.6	47.2	33.7
Live together	28.5	49.0	30.1	49.4

Source: BHPS, 1998 and 2003, author's analysis.

tation. The BHPS does not collect information on whether a couple has become engaged – in and of itself not a formal or binding event – but it is reasonable to infer that individuals with relatively short-lived cohabiting relationships have moved in because a marriage is already planned. Individuals who had a prior live-in relationship (whether married or cohabiting) are significantly ($p < 0.000$ for both 1998 and 2003) more likely to report an intention to continue cohabiting compared with individuals who have not had a prior live-in relationship (Table 6.7).

Cohabiting Relationships: Outcomes and Expectations

Table 6.8 shows the distribution of outcomes of cohabiting relationships identified in 1998. For never-married, childless respondents interviewed in 1998, the subsequent birth of a child within the relationship is significantly ($p < 0.050$) associated with the relationship outcome, with subsequent parents more likely to continue to cohabit and less likely to marry compared to non-parents.

What proportion of individuals achieve their relationship expectations? Based on responses to questions about cohabiting relationships in 1998, it is possible to examine the outcome of those relationships to the most recent interview (Table 6.9).

For those respondents that reported a 'definite' expectation (plan to marry/ probably marry/continue to cohabit), there is a highly significant ($p < 0.000$) relationship between expectation and outcome, for both men and women and for both parents

Table 6.8 Percentage distribution of relationship outcomes, for cohabiting unions identified in 1998.

	Subsequent outcome		
	Split up	Marry	Continue to cohabit
All	16.6	30.3	53.1
Never married	17.3	31.2	51.5
Ever-married	15.1	28.4	56.5

Source: BHPS, 1998 and 2003, author's analysis.

Table 6.9 Percentage distribution of outcome of cohabiting relationships by relationship expectations expressed in 1998

Outcome to date	Future of current relationship				
	Plan to marry	Probably marry	Live together	No thought to future	Do not know
Split up	0.9	7.0	6.6	1.3	0.1
Marry	10.7	13.6	4.8	0.6	0.1
Continue to cohabit	4.2	20.9	23.9	3.7	1.5

Source: BHPS, 1998 and 2003, author's analysis.

and non-parents at the time of interview. More than two thirds (67.9%) of those individuals who reported that they planned to marry their cohabiting partner then went on to marry that partner.

In order to examine concordance and discordance of relationship expectations between men and women, we select couples where both partners provided full responses to questions about the advantages and disadvantages of cohabitation, and their expectations of the current cohabiting relationship (Table 6.10). Analyses here are restricted to those individuals reporting on cohabiting unions which represented their first ever live-in relationship. Because analyses are based on fully responding couples, the responses may be biased for homogeneity of response (Berrington, 2004). It is possible to identify whether anyone else was present during the BHPS interview, but interviewers report very low levels of influence of third parties when they are present during interview.⁴

Levels of concordance (either both report "Yes" or both report "No") within couples are high, with most concordance for "No" responses to questions about disadvantages and advantages of cohabitation when compared with marriage. Where both partners report an advantage of cohabitation over marriage, the most common concordant response is as a trial marriage, in both 1998 and 2003 (32.4 and 26.5%

Table 6.10 Percentage distribution of couple concordance on attitudes towards cohabitation

	1998	2003
	n=168 couples	n=231 couples
	Couple concordant %	Couple concordant %
Advantages	65.4	64.9
Disadvantages	63.9	74.0

Source: BHPS, 1998 and 2003, author's analysis.

⁴For example, in 1998, of 187 interviews of currently cohabiting couples, 108 (58 per cent) record a third party as being present. 96 of these 108 interviews (89 per cent) are coded as no influence exerted by the third party.

of couples). Levels of agreement within couples about specific disadvantages of cohabitation are much lower, although financial insecurity is the most commonly mentioned where both partners report a disadvantage.

In terms of future expectations about their current cohabiting union, there are high levels of concordance within couples. Of course, concordance does not equal achievement of these desires, concordant couples may still be disappointed in the future.

For those cohabiting couples interviewed in 1998, it is possible to examine their relationship outcomes by the date of their last interview (Table 6.11). 81.5% of those couples who agreed in 1998 that they planned to marry did go on to marry, whereas only 39.5% of those couples who agreed they would probably get married went on to convert their relationship to a marriage. Three fifths of couples who agreed in 1998 that they would continue to cohabit were still cohabiting at their most recent interview wave in the BHPS.

Table 6.11 Couple relationship expectations, currently cohabiting couples, 1998 and 2003

	1998 n = 137 couples			2003 n = 196 couples		
	Women			Women		
	Planning to marry	Probably get married	Just live together	Planning to marry	Probably get married	Just live together
Men						
Planning to marry	20.4	8.0	0.7	19.9	5.1	1.0
Probably get married	3.6	43.8	5.8	3.6	37.8	10.7
Just live together	0	5.8	11.7	0	4.6	17.3

Source: BHPS, 1998 and 2003, author’s analysis.

Discussion

The data reported here underline the heterogeneity of cohabitation, a heterogeneity that raises challenges for researchers to make generalisations about the processes that underlie it, the forms it takes, and the intentions that people report.

In this study the majority of cohabitators assert that they will marry their partner (including both “Plan to marry” and “Probably marry”), in keeping with US analyses (Bumpass and Sweet, 1989; Carlson et al., 2004; Manning and Smock, 2002). Such responses would imply that cohabitation is one element of the process of marriage, and that cohabitation represents a considered step on the pathway to marriage. However, what we cannot tell is whether these intentions to marry preceded becoming a co-residential couple, or whether they emerged as a result of having co-resided. Recent work suggests that many (if not most) cohabiting couples ‘slide’ rather than

'decide' into a co-residential cohabiting relationship (Stanley et al., 2006), echoing findings from Lindsay's (2000) work in Australia.

Current cohabiters who have a previous live-in relationship and are already parents are more likely to report an expectation of cohabitation rather than marriage, echoing work in the US (Bumpass et al., 1991). Smart and Stevens' (2000) study of cohabiting families in Britain reports that some cohabiting mothers prefer to continue cohabiting rather than marry a man whom they were uncertain they could rely on for support or to enter into single parenthood. The reported advantages and disadvantages of cohabitation *relative to marriage* among current cohabiters in the BHPS suggest that, at least for never-married respondents, assessing compatibility through a 'trial marriage' is important. King and Scott's (2005) work in the US using the National Survey of Families and Households, reports that compatibility assessment by younger cohabiters was a key reason for cohabitation.

The wording of survey questions such as those included in the BHPS tend to pose statements about cohabitation *relative to* marriage. This standpoint reflects much of the broader academic endeavour surrounding cohabitation, which has debated whether cohabitation is a prelude to marriage, or whether it is an alternative to marriage. A body of work has suggested, however, that a more productive line of enquiry might be to view cohabitation as an alternative to being single (Rindfuss and VandenHeuvel, 1990) and/or a progression of an intimate non-co-residential relationship (Casper and Bianchi, 2002; McGinnis, 2003). It is also quite possible that each rationale may operate at different points over time for an individual.

Datasets, including the BHPS, rarely collect information on engagements, which affect the entering into, and dissolution of, cohabiting unions. If couples are cohabiting as a result of engagement with an intention to marry, then engagement-driven cohabitation explains in part both the rise in cohabitation and delays in marriage. Such compositional shifts (Oppenheimer, 2003) in cohabitation, further complicate its study. One possible reason, rarely explored, for reported intentions not to convert a cohabiting union into a marital union, is that of the costs of a wedding (Kravdal, 1999). Whilst a marriage in England and Wales costs approximately £100, the cost of a wedding can run to tens of thousands of pounds, and for many people, the marriage and the wedding are indivisible as processes (Otnes and Pleck, 2003). Such cost-related concerns can become more sharply focused if one or both of the cohabiting partners is a parent, notwithstanding other economic needs identified as prerequisite to marriage (Gibson-Davis et al., 2005).

Future research needs to widen the pool of potential couples available to enter into a co-residential union, whether cohabiting or married, and their relationship intentions. 'Living-apart-together' (LAT) relationships, in which two partners regard themselves as a couple but do not cohabit, have recently been recognised in the social science literature (Levin and Trost, 1999; Bawin-Legros and Gauthier, 2001; Karlsson and Borell, 2002; Borell and Karlsson, 2003; Milan and Peters, 2003; Levin, 2004; de Jong Gierveld, 2004; Haskey, 2005; Lewis and Haskey, 2006) as an emergent form of living arrangement. It is estimated that there are some two million men and women in Great Britain who report having a partner who lives in another household (Haskey, 2005). The BHPS

has collected information from sample members on non-co-residential partners, but does not collect detailed information from or about these non-co-residential partners. As people's living arrangements and households become smaller and more complex, their commitments and networks outside of the traditional 'household' tend to become greater, meaning that social science research needs to better understand and reflect non-household-based definitions and sources of information (ESRC, 2006).

There is a need for more finely grained qualitative research into the processes underlying cohabiting unions, including their formation and dissolution. The vast majority of research on cohabitation is based in the U.S. and is quantitative (Lewis, 2001). Large-scale, representative, quantitative datasets such as the BHPS give us some clues as to potential avenues for further investigation. However, they cannot fully account for the rapidly changing role of cohabitation in contemporary society. There is an emergent body of qualitative research into cohabitation, including its processes and meaning (Manning and Smock, 2005; Sassler, 2004; Lindsay, 2000). There is a need to understand better what trends in cohabitation in particular, and living arrangements in general, actually signify (Oppenheimer, 2003). Cohabitation has emerged relatively recently and rapidly as a normative behaviour in many settings, and is therefore in a situation of flux and change (Seltzer, 2000). The reasons underlying decisions (whether articulated explicitly or otherwise) to cohabit may, therefore, also be subject to rapid change, making cohabitation very much a moving target to study.

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Chapter 7

Living Arrangements, Health and Well-Being

Harriet Young and Emily Grundy

Introduction

Populations throughout Europe and the developed world are ageing, with growing proportions over age 60, associated with increases in life expectancy and falling birth rates. Between 1960 and 2004, the proportion of people aged 65 and over in the UK increased by a third from 11.7 to 15.6%, and the proportion of the population aged 85 and over nearly tripled (Soule et al., 2005). In the same time period, there have been major changes in living arrangement patterns of older people throughout Europe and the developed world. Older people are much less likely to live with relatives in multi-generational households than previously and are much more likely to live alone (Elman and Uhlenberg, 1995; Glaser et al., 2004; Iacovou, 2000). For example, in Italy the proportion of women aged 65 and over living alone was 22% in 1971, and had risen to 36% by 2000 (Tomassini et al., 2004). In the last decade, there has been a stalling of the trend towards increased solitary living among older people in Europe, but this has been driven by demographic changes, notably increases in the proportion of older people who are married, rather than by changes in the residence patterns of the unmarried (Grundy, 1996; Tomassini et al., 2004). The overall pattern, however, is of greater residential independence among older people with larger proportions living alone or just with a spouse.

These changes in the living arrangements of older people reflect, it has been hypothesised, a number of factors, including attitudinal shifts towards a greater desire for privacy and individualisation, especially in northern Europe (De Jong Gierveld et al., 2001; Pampel, 1992). Economic changes which have led to increasing financial independence coupled with improvements in health status have, it is argued, allowed more older people to realise their desires for independence

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(Glaser et al., 1997; McGarry and Schoeni, 2000; Michael et al., 1980). Other factors include demographic changes such as increased life expectancy and changing age at completion of childbearing (Grundy, 2006).

Despite the common direction of this shift throughout Europe, there are still significant differences between European countries in living arrangement patterns. In southern Europe, older people are still more likely to live in multi-generational households and less likely to live alone than in northern Europe. In Spain, the proportion of older people living with relatives decreased from 58% in 1970 to 23% in 1993, but in Sweden in the mid 1990s, only 2% of older people lived with children (Sundstrom and Tortosa, 1999). These differences may be associated with cultural and attitudinal variation across Europe, and differences in welfare regimes and family-related policies (Daatland and Herlofson, 2003; Millar and Warman, 1996; Reher, 1998).

Much of the debate about these trends has centred on the public policy implications of possible reductions in the availability of family support for older people at a time when the numbers and proportions of older Europeans are rapidly increasing (European Commission, 2006). Equally important are the implications for the health and well-being of the older population, as recognised in the Madrid Plan of Action adopted at the 2002 Second World Assembly on Ageing. This called for more research on the advantages and disadvantages of different living arrangements for older people (United Nations, 2002). In England, a study of risk factors in social exclusion found that those living alone are likely to experience exclusion on multiple dimensions (ODPM, 2006) which may well have implications for health and well-being. Indeed, older people living alone in England have been identified as a potential 'at risk' group for mental health problems (Department of Health, 2001).

In this chapter, we investigate the association between living arrangements and health and well-being in England and Wales and make comparisons with data on other European countries. We first describe living arrangement patterns in England and Wales and in Europe. Second, we examine in detail the associations between living arrangements and health and emotional well-being in England, and health and mortality in England and Wales. Using longitudinal data, we additionally examine the possible influence of health selection on our results. We also make comparisons with analyses of European data on associations between living arrangements and health and well-being, to observe the moderating effect that different cultural and political environments may have on these associations.

Previous Research

Research generally suggests that older people who live with a spouse have lower levels of mortality, better physical health (Kendig et al., 2007; Koskinen et al., 2007; Murphy et al., 2007) and higher levels of emotional well-being than those not living with a spouse (Kendig et al., 2007; Kohler et al., 2005; Mindel and Wright, 1982). Living with a spouse may provide emotional intimacy, economic benefits, social

control of behaviour, and more opportunities for social integration (Hughes and Waite, 2002; Murphy et al., 2007; Pillemer et al., 2000), all of which are likely to influence health and well-being.

For unmarried older people living independently (rather than in communal establishments), choices revolve around living with relatives and friends or living alone. A number of studies from England, Spain, Canada and the USA report that older people living alone are more likely than others to report poor health status, low levels of psychological health and quality of life than those living with others (Burnette and Mui, 1996; Garcia et al., 2005; Hall and Havens, 2001; Kharicha et al., 2007). One study from Denmark found that women aged 75 and over who lived alone had higher mortality risks than those living with others (Lund et al., 2000). There are a number of reasons why living alone might be associated with poorer health and well-being than living with others. Older people living alone are often portrayed as a vulnerable group who need support, and who are potentially at risk of poorer mental and physical health (Barnes et al., 2006; Kharicha et al., 2007). One illustration of such vulnerability was the elevated risk of death among older people living alone in the heat waves in Paris in 2003 and in Chicago in 1995 (Crumley, 2003; Klinenberg, 2002). There are also a number of potential benefits of living with others rather than alone for health and well-being. Older people spend larger amounts of time at home than others and the household is an important context in which both financial and social support, companionship and care are provided and exchanged (De Jong Gierveld et al., 2001; Grundy, 1999; Hahn, 1993).

Opposing these results, however, is a substantial body of research from the UK and the USA which indicates that older people living alone experience better health, lower levels of loneliness and depression and higher quality of life compared with the unmarried living with others (Gustavson and Lee, 2004; Iliffe et al., 1992; Michael et al., 2001; Netuveli et al., 2006; Sarwari et al., 1998; Wenger, 1984). Lower levels of mortality among those living alone compared with those living with others have also been reported in Japan and Italy (Murata et al., 2005; Pizzetti et al., 2005; Walter-Ginzburg et al., 2002). These findings may in part be explained by the fact that the majority of older people living alone are not isolated and have extensive social contacts and support from family and others outside the household, and they may prefer to be independent of support from children for as long as possible (Daatland and Herlofson, 2001; Silverstein and Bengston, 1994; Ulbrich and Warheit, 1989). Living with others rather than alone may also contribute to poorer health status. The return home of children needing support may be stressful and therefore damaging to health (Grundy, 2000). Higher levels of loneliness among unmarried older people living with family have also been reported, due to an increased sense of obligation, and a loss of privacy and self-determination (De Jong Gierveld et al., 2001; Wenger, 1984).

Associations between living alone and better health may also be an artefact of health selection. A health selection hypothesis would suggest that those living with others do so because of poor health or disability, and that those still living alone are able to do so because they are in good health and can continue to support themselves, as has been demonstrated by previous research (Brown et al., 2002; Grundy,

1993; Mui and Burnette, 1994). Health selection is one of the reasons hampering an understanding of the effects of living arrangements on health and this may at least in part explain the mixed findings of the research mentioned above. However, results from different longitudinal studies in the USA which control for initial health status still produce conflicting results (Michael et al., 2001; Mor et al., 1989; Sarwari et al., 1998).

Another important consideration when investigating the association between living arrangements and well-being is that the health implications of a particular living arrangement are likely to be mediated by other factors including cultural and socio-economic factors, the availability of extra-household resources and individual factors such as domestic skills (Grundy, 2001). There is evidence that cultural variation influences the association between living arrangements and well-being. Studies of older people in Spain, for example, have shown that older women living with their children report higher levels of satisfaction than other women (Garcia et al., 2005; Zunzunegui et al., 2001). In contrast, a study conducted in Wales found that older people living with relatives were the most likely to report loneliness and poor morale (Wenger, 1984). There is also evidence that the possible consequences of living alone depend on the extent of extra-household social support and interaction. Fratiglioni found that, in Sweden, older people living alone who had no satisfying contacts outside the household had a higher risk of cognitive decline than those with such contacts (although risks of cognitive decline were higher among those living alone with extra household interaction than among those living with others) (Fratiglioni et al., 2000). Wealth may also influence the association between living arrangements and health status (Ulbrich and Warheit, 1989), and financial support and transfers from co-residents may be important for health outcomes for those on low incomes (Grundy, 2001).

Data and Methods

Data Sources and Study Populations

We used three datasets for our analyses, the English Longitudinal Study of Ageing (ELSA) with data on England only; the Office for National Statistics (ONS) Longitudinal Study (LS) with data on England and Wales; and the European Social Survey (ESS) with data on 19 European countries. For all datasets, we defined our study population as those aged 60 and over who were living in the community. The LS included data on those living in communal establishments (defined as establishments providing managed accommodation with full- or part-time supervision, for example hospitals, care homes, prisons, and sheltered accommodation where at least half of residents do not possess their own cooking facilities (Office for National Statistics, 2004)) but the other two datasets did not, and so we excluded this population from our LS analyses. Note that LS analysis including those living in communal establishments in 2001 did not alter the results presented.

The ELSA was initiated in 2002, and the original sample was selected from respondents of the Health Survey for England (HSE) in 1998, 1999 and 2001, each of which had response rates of between 67 and 70% (Marmot et al., 2002). To date, three waves of ELSA data have been collected and in our analysis we use data from the first two waves, which had response rates of 67 and 82% respectively. We used a cross-sectional sample of 7,226 individuals present at the first wave, and another sample of those who were still in the study at wave two, consisting of 5,034 sample members. Of the wave one sample not present at wave two, 54% refused to answer, 26% had died since the first wave, and the remainder were ill and unable to answer, had entered a communal establishment or were lost to follow up (Banks et al., 2006; Marmot et al., 2002).

The ONS LS is a record linkage study of 1% of the population of England and Wales, initially based on those enumerated at the 1971 Census (approximately 500,000 people) (Hattersley and Creaser, 1995). Sample members were selected on the basis of birthday and the sample has been maintained by recruitment of new births and immigrants born on LS birthdays. Record linkage has been used to add to the dataset information from subsequent censuses (1981, 1991, 2001) and from vital registration including death of a spouse and death. Census information on all household members at each census point is included in the dataset including information on the relationship to the LS member. We used a sample of 78,751 respondents aged 60 and over at the 2001 Census and also present at the previous three census points. Sample members had to be present at the 1971 and 1981 Census points so that we could establish their socio-economic status when they were of employment age, and had to be present at the 1991 Census for longitudinal analyses of changes in living arrangement.

The ESS is a biennial social survey, and to date three rounds have been carried out in 2002, 2004 and 2006, including 22, 26 and 25 countries respectively. Samples in each country were selected randomly to ensure representativeness of the population. A strength of the ESS is that there are clear and detailed central survey specifications which all country studies adhere to, and close collaboration on protocols to ensure correct translations to multiple languages (Jowell, 2003). We used the first two rounds of data in our analysis, and pooled them, selecting 19 countries for analysis. We excluded certain countries (Italy, France, Luxembourg, Switzerland) with response rates below 50% in either round; Ireland because it was anomalous in terms of living arrangements and health status with respect to our country groupings discussed below and Iceland because of differences in welfare regime to other Scandinavian countries (Olafsson, 2003). The resulting sample comprised 17,770 people aged 60 and over in 2002 or 2004. We were not able to carry out detailed country-specific analysis due to small individual country sample sizes. Instead we made four regional groupings: northern, western, southern and eastern Europe (Table 7.1), on the basis of established typologies of predominant family cultures, welfare regimes, and geographic location (Kohli and Albertini, 2006; Millar and Warman, 1996). To check the appropriateness of these groupings, we examined the distributions of living arrangements, health, happiness and satisfaction with life by country within region, to ensure reasonable

Table 7.1 Regional groupings for European countries used in analysis of the ESS

North	West	South	East
Denmark	Austria	Greece	Czech Republic
Finland	Belgium	Portugal	Estonia
Norway	Germany	Spain	Hungary
Sweden	Netherlands		Poland
	UK		Slovakia
			Slovenia
			Ukraine
n = 3,621	n = 5,867	n = 3,857	n = 4,786

homogeneity within regional groupings. This satisfied us that these regional groupings were appropriate.

Variables

Outcome variables included depression and loneliness (ELSA), happiness (ESS), self-rated health (all three datasets), presence of a limiting long-term illness (LLTI) and an indicator of death between the 2001 Census and 2004 (LS). We describe these in more detail in the relevant results sections. In analyses of all three datasets, we used a living arrangement variable with three categories including those living with a spouse and, for the unmarried, those living alone and those living with others. The unmarried group included those who were never-married, divorced, separated and widowed. For longitudinal analysis of the LS, we developed a variable measuring change in living arrangement between 1991 and 2001, focusing on those not living with a spouse in 1991. This variable had five categories including two categories of no change (living alone at both time points; living with others at both time points) and three categories of change (changing to live with a spouse; changing to live alone; and changing to live with others). Other co-variables used in analysis included age and various indicators of socio-economic status in all three datasets; presence of a LLTI for analyses of emotional well-being using the ESS and ELSA and health selection using the LS; and region for analyses of the whole European sample using the ESS.

Analysis Methods

In the first part of our analysis, we examined living arrangement patterns in England and Wales and the other European countries included in the ESS sample. We then analysed the associations between living arrangements and health and well-being, first examining associations descriptively, and then using multivariate methods to

model associations controlling for other co-variates. We used logistic regression to model binary outcomes including presence of loneliness, depression, poor self-rated health and, for analysis of the LS, death between the 2001 Census and the end of 2004.

The outcome measure for logistic regression models is the odds ratio (OR). This is a measure of association between two factors and compares whether the probability of a certain event is similar for two groups. In Table 7.2, for example, the odds ratio for the model with the outcome of depression for men comparing those living with a spouse to living alone is 0.41, which implies that men living with a spouse are 0.41 times as likely (i.e. 59% less likely) to be depressed than men living alone. We also used ordinal logistic regression to model happiness, an outcome with an ordinal scale, in ESS analysis. The odds ratio from ordinal logistic regression represents the odds of being in a higher category than a lower category (e.g. a score of 10 rather than 9; 9 rather than 8 *et cetera* on the happiness scale). A higher odds ratio therefore indicates higher levels of happiness.

Results

Living Arrangements in England and Europe

Figures 7.1 and 7.2 show the living arrangement distributions of the samples for each dataset separately by gender. The results from ELSA and the LS are, unsurprisingly, almost identical and show that in England and Wales, approximately

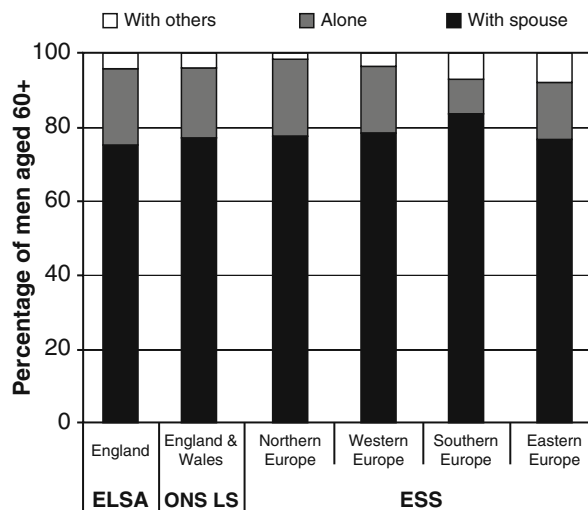
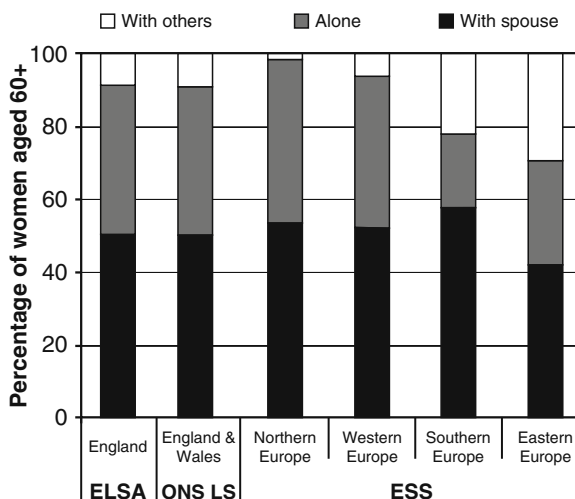


Fig. 7.1 Distribution of men aged 60+ by living arrangements in England, England and Wales and regions of Europe (Source: ELSA, 2002; LS, 2001; ESS, 2002 and 2004; authors' analysis.)

Fig. 7.2 Distribution of women aged 60+ by living arrangements in England, England and Wales and regions of Europe (Source: ELSA, 2002; LS, 2001; ESS, 2002 and 2004; authors' analysis.)



three quarters of older men and half of older women lived with a spouse. More detailed analyses (not shown) indicated that a vast majority lived only with a spouse and that those living with a spouse and others were most likely to live with a spouse and children. Of those not living with a spouse in our ELSA and LS samples, the majority of both men and women lived alone. In the LS sample, 41% of women and 18% of men aged 60 and over lived alone. Among those aged 75 and over, propensity to live alone was even higher, at 60% for women and 29% for men, largely reflecting the higher likelihood of being widowed among the oldest old. The gender difference reflects the higher life expectancy of women than men, combined with the fact that women tend to marry men older than themselves. The ESS data demonstrate variation in living arrangements by region of Europe, consistent with a large body of other research (Iacovou, 2000; Reher, 1998; Tomassini et al., 2004). The pattern for England and Wales mirrors that of the western European region (which includes the UK). In the northern region, older unmarried people were the most likely to live alone and in eastern and southern Europe, they were much more likely to live with others. These differences were still evident in multivariate analysis (not shown) in which we controlled for age and socio-economic status.

Living Arrangements, Depression and Loneliness in England

In the following sections, we consider the associations between living arrangements and health and well-being in England, and England and Wales. We focus first on emotional well-being and second on self-rated health and mortality, and make comparisons with analysis of European data.

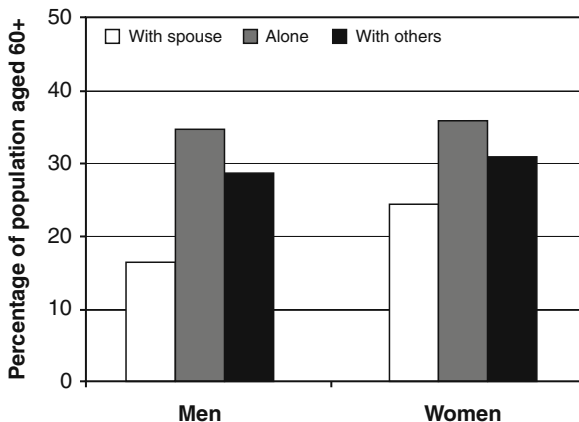
Using ELSA, we examined the association between living arrangements and two outcome variables, depression and loneliness. In ELSA, depression was measured using the Centre for Epidemiological Studies eight-item scale of depressive symptoms and psychological distress (CES-D) (Radloff, 1977; Steffick, 2000). The CES-D scale measures a continuum of depression rather than the presence or absence of a psychiatric disorder (Steffick, 2000), but for the purposes of this chapter, we used a cut-off point of three or more symptoms to indicate a high likelihood of depression, a convention used in other research (Comstock and Helsing, 1976, and refer to this group as having depression. In our sample, 26% had at least three symptoms of depression and this was more likely for women than men (30 and 21% respectively) and for those aged 75 and over than 60–74 year olds (for women, 36 and 26% respectively). Data on loneliness was collected at wave two only, using a four item scale (Hughes et al., 2004), based on the 20-item Revised UCLA loneliness scale (Russell, 1996). We collated this into a summary score of zero to nine based on addition of scores (0–2) from each item. We developed a binary measure and those with scores of 5 and above were considered to be lonely. Women were more likely to report loneliness than men (17 compared with 13%), and for men only, loneliness was more common among those aged 75 and over compared with those aged 60–74 (16 compared with 11%).

We calculated prevalences of depression at wave one and loneliness at wave two by living arrangement at wave one. We then carried out multivariate analysis using logistic regression to examine associations between living arrangements and the outcome variables controlling for age, socio-economic status and for presence of illness, all of which have been shown to be associated with emotional well-being (Braam et al., 2005; Montgomery et al., 2007; Wilson et al., 1999). Analysis of loneliness as an outcome excluded those who were lost to follow up by wave two. To check whether this was likely to bias results, we compared our depression analysis which used wave one data with analysis of depression score at wave two as an outcome, and results were similar, and so we do not expect a major bias in loneliness analysis.

Men and women living alone had the highest prevalence of depression, while those living with a spouse had the lowest (Fig. 7.3), particularly among men. A similar pattern was evident for loneliness, and among men 22% of those living alone had high loneliness scores compared with only 10% of those living with a spouse. When controlled for age, presence of an illness and socio-economic status, women living with a spouse had a significantly lower likelihood of being lonely and depressed than those living alone. Those living with others were also less likely to be depressed and lonely than those living alone, although only significantly so for women (of borderline significance for depression) (Table 7.2). Other factors associated with depression and loneliness in our models were presence of a LLTI, lower levels of wealth, and for depression only, lower levels of education.

In the next section, we examine the associations between living arrangements and emotional well-being in Europe, to ascertain how other areas of Europe compare with England and Wales in this regard.

Fig. 7.3 Proportion of the population aged 60 and over with high depression scores by living arrangement and gender, England (Source: ELSA, 2002; authors' analysis.)



Living Arrangements and Happiness in Europe

In the ESS, a measure of happiness was derived from responses to the questions ‘taking all things together, how happy would you say you are?’ Respondents rated their answer on a scale of zero (extremely unhappy) to ten (extremely happy). For descriptive analysis, we derived a binary measure, and those with scores below 6 were considered to be unhappy. For multivariate analysis using ordinal logistic regression, we derived a six category variable (0 to 4, 5, 6, 7, 8 and 9 to 10), as very few respondents gave answers at the top or bottom of the range.

We observed striking differences in happiness between the 19 European countries included in our sample. The northern region had the highest average happiness scores, followed by the west, south and finally the eastern region, and this gradient can be observed in Fig. 7.4. At the country level, average happiness scores were the highest in Denmark and lowest in the Ukraine, and Great Britain had the fifth highest average score. These country differences in mental health have also been well-documented elsewhere (Castro-Costa et al., 2007; Lehtinen et al., 2005), although cross-cultural variability in response to questions in the CES-D scale have been reported, which may also have affected our findings (Iwata and Buka, 2002).

In all regions of Europe, those living with a spouse had the lowest prevalence of unhappiness (Fig. 7.4). In the southern region, those living alone had a higher prevalence of unhappiness than those living with others among both men and women, but in other regions, findings were mixed. It is worth noting here that regional differences were so distinct that in the eastern region, even men living with a spouse reported a higher prevalence of unhappiness than those in all other living arrangement groups in other regions.

We next used ordinal logistic regression to ascertain whether differences were significant after control for age and socio-economic status. These analyses demonstrated that in all regions, those living with a spouse were significantly happier than those living alone (results not shown). Among unmarried women for all regions

Table 7.2 Results from logistic regression model of proportion of men and women with depression in 2002 and loneliness in 2004 by living arrangements and other factors in 2002, England

		Men			Women		
		Odds ratio	p-value	95% CI	Odds ratio	p-value	95% CI
Depression^a							
Living arrangements	Alone	1.00			1.00		
	With spouse	0.41	***	0.33,0.51	0.76	**	0.63,0.91
	With others	0.77		0.47,1.25	0.75		0.56,1.01
Age		1.00		0.98,1.01	1.01		1.00,1.02
LLTI	No	1.00			1.00		
	Yes	3.89	***	3.20,4.74	2.98	***	2.56,3.47
Net wealth	Less wealth	1.19	***	1.10,1.29	1.18	***	1.10,1.26
Housing tenure	Owner occupier	1.00			1.00		
	Renter	1.18		0.93,1.49	1.18		0.97,1.42
	Higher secondary or above	1.00			1.00		
Highest educational qualification	Lower secondary	1.05		0.79,1.40	1.05		0.81,1.37
	None	1.47	**	1.15,1.87	1.58	***	1.31,1.90
		n = 3,093			n = 3,739		
Loneliness^b							
Living arrangements	Alone	1.00			1.00		
	With spouse	0.44	***	0.33,0.60	0.47	***	0.37,0.59
	With others	0.52		0.25,1.06	0.66	*	0.45,0.98
Age		1.01		1.00,1.03	0.98	*	0.97,1.00
LLTI	No	1.00			1.00		
	Yes	1.85	***	1.42,2.39	1.69	***	1.38,2.08
Net wealth	Less wealth	1.09		0.98,1.22	1.14	**	1.04,1.24
Housing tenure	Owner occupier	1.00			1.00		
	Renter	1.09		0.77,1.53	0.82		0.63,1.07
	Higher secondary or above	1.00			1.00		
Highest educational qualification	Lower secondary	1.24		0.88,1.75	1.04		0.76,1.42
	None	1.16		0.85,1.58	1.14		0.90,1.44
		n = 2,395			n = 2,997		

^aComparing those with three or more symptoms of depression to those with two or fewer symptoms. ^bComparing those with a score of 5–9 to those with a score of less than 5. *p<0.05 **p<0.01***p<0.001.

Source: ELSA, 2002; authors' analysis.

combined, those living with others were significantly happier than those living alone. However, analysis by region demonstrated a significant association in the eastern, southern and western regions (supporting our findings from ELSA), but not in the northern region.

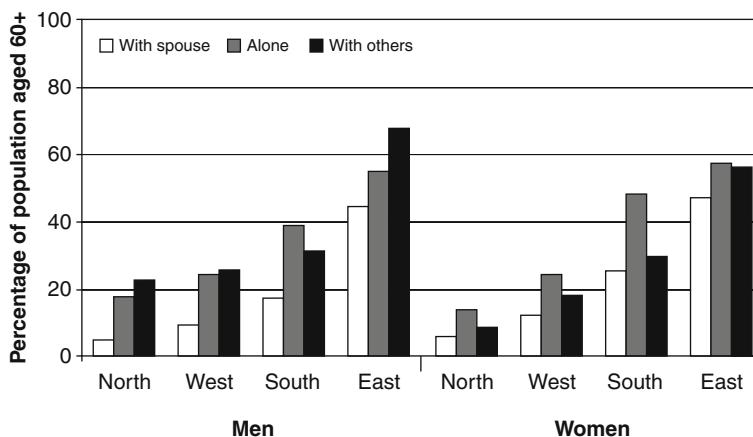


Fig. 7.4 Proportion of older people with low happiness scores by European region and gender (Source: ESS 2002, 2004; authors' analysis.)

Among men, we found no significant associations between living arrangements and happiness for the unmarried in any region or for all regions combined, in accord with our findings from ELSA. The gender difference in our results is consistent with the results of some studies which indicate that it is the presence of a partner that is important for men's mental health whereas for women, alternative bonds, such as with children, may more often offer an alternative (De Jong Gierveld, 2003; Josselson, 1996). However, this finding for men is also in contrast to a few single country studies (Grundy, 1989; Zunzunegui et al., 2001), and it is likely that small sample sizes, especially of those living with others, limited the statistical power of our analyses. We next examined the association between living arrangements and self-rated health and mortality. Self-rated health is a general indicator of health status, encompassing both psycho-social and physical dimensions of health.

Living Arrangements, Self-rated Health and Mortality in England and Wales

The questions on self-rated health were different in ELSA and the LS, as were the response categories. For both datasets, we developed a binary self-rated health variable, and aimed to include a quarter of the sample in the poorer self-rated health category; the categories achieved represent a best-fit. In ELSA, respondents were asked to rate their health as excellent, very good, good, fair or poor. These categories were aggregated into a binary variable with poor and fair versus excellent, very good and good self-rated health, with 32% of the sample in the poorer health category. In the LS, answers to the question on self-rated health at the 2001 Census were categorised as good, fair or poor. These were aggregated into good and fair versus poor health, and 21% of the sample had poor health. Our other LS outcome

variable was an indicator of death between the 2001 Census and the end of 2004, and 13% of the sample died during this follow up period. For men and women in both the LS and ELSA samples, the prevalence of poor self-rated health was lowest among those living with a spouse, intermediate for those living alone and was highest for the unmarried living with others (Fig. 7.5). The prevalence of mortality was lowest among those living with a spouse, but the difference between those living alone and with others was marginal.

Logistic regression was used to examine this association controlled for age and socio-economic status, both of which are known to be associated with health status and with living arrangements (Table 7.3). Among the unmarried, analysis of the LS indicated that those living with others were more likely to report poor health and had higher risks of mortality than those living alone. Odds ratios from analysis of ELSA also indicated that living with others was associated with poor health, but results were not significant. This may reflect small sample sizes of those living with others, which reduced the statistical power of the analysis. Rather surprisingly, women living with a spouse were significantly more likely to rate their health as poor than those living alone after control for age and socio-economic status in both the LS and ELSA. Further investigation of this association in the LS by age demonstrated that this association was only present for women aged 75 and over. This finding is consistent with research from the UK and the USA, which also shows that older old women living alone report better health than those living with a spouse. This may reflect the fact that this group includes the never-married who have stronger social bonds with others outside the household (Goldman et al., 1995; Grundy and Sloggett, 2003), and that they do not have to provide support and care for a spouse,

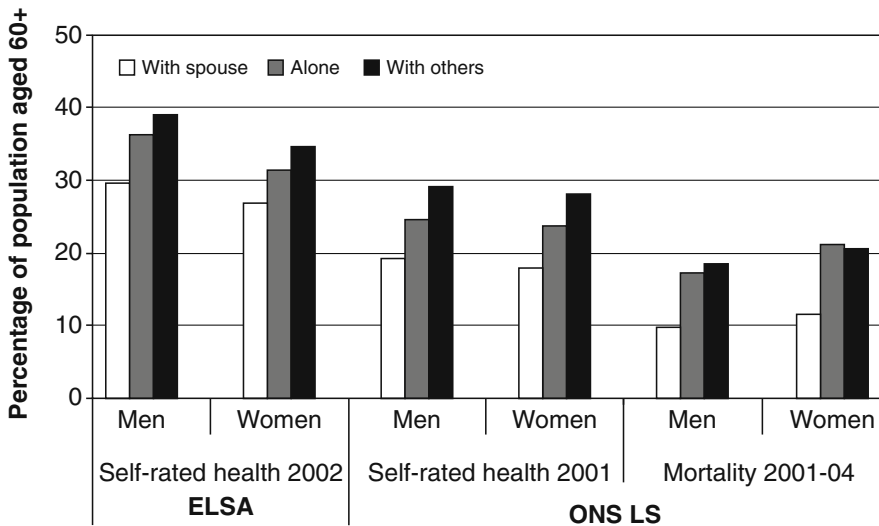


Fig. 7.5 Prevalence of poor self-rated health and mortality for the population aged 60+ by living arrangement and gender

(Source: ELSA, 2002; ONS LS, 2001–2004; authors’ analysis.)

Table 7.3 Results from logistic regression model of proportion of men and women aged 60+ with poor self rated health 2001/2002 and mortality 2001–2004 by living arrangements and other factors, England 2002, England and Wales 2001

		Men			Women		
		Odds Ratio	p-value	95% CI	Odds Ratio	p-value	95% CI
ELSA: Poor self-rated health 2002 ^a							
Living arrangements	Alone	1.00			1.00		
	With spouse	1.11		0.91,1.36	1.25	*	1.05,1.49
	With others	1.17		0.75,1.83	1.10		0.82,1.47
Age		1.01	*	1.00,1.02	1.02	***	1.01,1.03
Net wealth	Less wealth	1.28	***	1.20,1.37	1.34	***	1.26,1.43
Housing tenure	Owner occupier	1.00			1.00		
	Renter	1.78	***	1.46,2.18	1.37	***	1.14,1.64
	Higher secondary or above	1.00			1.00		
Highest educational qualification	Lower secondary	1.06		0.84,1.34	0.98		0.75,1.27
	None	1.64	***	1.35,1.99	1.49	***	1.24,1.79
		N = 3,176			N = 3,837		
LS: Poor self-rated health 2001 ^b							
Living arrangements	Alone	1.00			1.00		
	With spouse	0.98		0.91,1.04	1.16	***	1.10,1.23
	With others	1.30	***	1.14,1.48	1.36	***	1.25,1.47
Age		1.03	***	1.03,1.03	1.05	***	1.05,1.05
Region	South & East	1.00			1.00		
	Central	1.30	***	1.22,1.38	1.38	***	1.31,1.46
	North & Wales	1.58	***	1.48,1.68	1.51	***	1.43,1.60
Tenure and car access ^c	Lower score	1.24	***	1.22,1.27	1.24	***	1.22,1.26
Social class 1971		1.18	***	1.14,1.23			
		N = 35,689			N = 43,062		
LS: Mortality 2001–2004							
Living arrangements	Alone	1.00			1.00		
	With spouse	0.85	***	0.79,0.92	0.93		0.87,1.01
	With others	1.11		0.96,1.30	1.24	***	1.13,1.37
Age		1.12	***	1.12,1.13	1.12	***	1.12,1.12
Region	South & East	1.00			1.00		
	Central	1.06		0.99,1.15	1.04		0.97,1.12

Table 7.3 (continued)

		Men			Women		
		Odds Ratio	p-value	95% CI	Odds Ratio	p-value	95% CI
	North & Wales	1.07		0.99,1.16	1.12	**	1.04,1.21
Tenure and car access ^c	Lower score	1.17	***	1.14,1.20	1.14	***	1.12,1.16
Social class 1971		1.03		0.98,1.08			
		N = 35,689			N = 43,062		

^aOutcome variable self rated health categorised into very poor and poor versus fair, good and very good health. ^bOutcome variable self rated health categorised into not good versus fairly good and good health. ^cSummary score of tenure and car access in 1971 and 1981. * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$.

Source: ELISA, 2002; ONS LS, 2001–2004; authors' analysis.

with possible negative implications for health and well-being. However, the never-married only accounted for 13% of those living alone, and the majority were widowed. In opposition to our finding for self-rated health, women living with a spouse had a lower (of border line significance) odds of mortality compared with those living alone. These differences by type of health indicator show that different measures are indicators of different processes. For example, self-rated health captures socio-psychological dimensions of health (Grundy and Sloggett, 2003; Idler and Benyamini, 1997). Our model results also showed that increasing age, having lower levels of socio-economic status, and living outside the South and East of England were associated with poorer self-rated health and higher mortality.

Our results consistently indicated that among the unmarried, those living with others were more likely to have poor self-rated health and higher mortality than those living alone. This finding may be a result of health selection and we next examine the part that health selection may have played in our results using the LS. To do this, we examined the association between living arrangement change from 1991 to 2001 health outcomes in 2001 for a subpopulation of our LS sample. We focused on LS members in our sample who were unmarried and did not report a limiting long term illness (LLTI) at the 1991 Census. We excluded those who were living with a spouse in 1991 in order to exclude the health influence of widowhood in the inter-censal period on our results (Lee et al., 2001; Wilcox et al., 2003). The sample may still have included individuals who were unmarried in 1991 but then were married and widowed before 2001, but this proportion would be small in the age groups we consider. We excluded those with a LLTI in 1991 because we were interested in health related changes in living arrangement. We made the assumption that individuals who did not have an LLTI in 1991 and did in 2001 and who changed to living with others were likely to have made a health-related change. If those who changed to living with relatives rather than living alone or living

with others at both time points were more likely to have developed poor self-rated health in 2001, we assumed that this would demonstrate a health selection effect on our results.

We used logistic regression to model the association between living arrangement change and all three health outcome variables, controlling for age and socio-economic status (Table 7.4). This analysis confirms that those changing to live with others were significantly more likely to have an LLTI and poor self-rated health in 2001 than those who lived alone at both time points. They also had increased odds of death 2001–2004, but this association was not significant. Among women, those living with others in both 1991 and 2001 were also more likely to experience poor health outcomes in 2001, but the magnitude of the odds ratios was marginally

Table 7.4 Results from logistic regression model of proportion of men and women who were unmarried and who had no LLTI in 1991, who then had poor self rated health or an LLTI in 2001 or died 2001–2004 by living arrangement change 1991–2001, controlled for other factors, ^a England and Wales

Living arrangement change 1991–2001		Men				Women				
		OR	p-value	95% CI	N	OR	p-value	95% CI	N	
Self-rated health										
No change	Alone – alone	1.00			1,980	1.00			6,638	
	With others – with others	1.15		0.90,1.46	615	1.39 ***		1.21,1.59	1,697	
Change	Alone – with others	2.29 ***		1.40,3.74	85	1.67 ***		1.27,2.19	312	
	With others – alone	1.03		0.80,1.33	637	0.95		0.80,1.14	1,444	
	Alone or with others – spouse	1.17		0.88,1.56	509	0.97		0.70,1.34	428	
Limiting long term illness										
No change	Alone – alone	1.00			1,980	1.00			6,638	
	With others – with others	1.08		0.89,1.30	615	1.23 ***		1.10,1.38	1,697	
Change	Alone – with others	2.16 ***		1.38,3.37	85	1.70 ***		1.34,2.17	312	
	With others – alone	1.00		0.82,1.22	637	1.04		0.91,1.18	1,444	
	Alone or with others – spouse	1.06		0.85,1.32	509	0.85		0.67,1.07	428	
Death 2001–2004										
No change	Alone – alone	1.00			1,980	1.00			6,638	
	With others – with others	0.97		0.75,1.26	615	1.23 *		1.05,1.44	1,697	
Change	Alone – with others	1.25		0.70,2.22	85	1.31		0.96,1.79	312	
	With others – alone	1.10		0.84,1.45	637	1.12		0.92,1.38	1,444	
	Alone or with others – spouse	0.72		0.50,1.04	509	0.61		0.36,1.04	428	
					N = 3,826					
						N = 10,519				

^aControlled for age, socio-economic status and LLTI in 1991. *p<0.05 **p<0.01 ***p<0.001. Source: ONS LS, 1991–2004; authors' analysis.

smaller than for those who only lived with others in 2001. Therefore, while health selection may account for some of the association between living with others and poor health, those living with others for longer time periods are also more likely to change the rating of their health from good or fair to poor. It is worth noting, however, when applying these results to the general population that only very small proportions (two per cent of this subpopulation) moved to live with others and only 16% lived with others at both time points. Much larger proportions lived alone at both time points.

Living Arrangement and Self-rated Health in Europe

Having established that older people living with others were generally more likely to have poor self-rated health than those in other living arrangements in England and Wales, at least in part due to health selection, the ESS was used to examine this association in different regions of Europe. In the ESS, self-rated health was measured using a five category variable including very good, good, fair, bad and very bad health. We dichotomised the variable into very good, good and fair versus bad and very bad self-rated health, with 23% of the sample rating their health as bad or very bad. Note that this categorisation is in line with our LS and ELSA analysis above.

Unmarried men living with others had the highest prevalence of poor self-rated health in all regions, except the west region where the prevalence was higher for

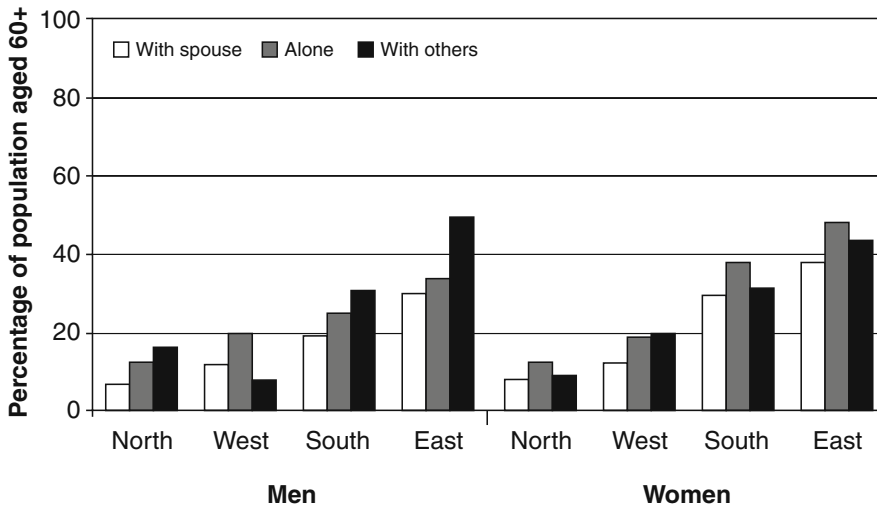


Fig. 7.6 Proportion of the population aged 60+ with bad or very bad self-rated health by region and gender, 19 European countries (Source: ESS 2002 and 2004; authors’ analysis.)

those living alone (Fig. 7.6). Among unmarried women, the prevalence of poor self-rated health was in general higher among those living alone than among those living with others. Multivariate analyses, using logistic regression controlling for age and socio-economic status demonstrated that, as for England and Wales, those living with a spouse were less likely to have poor self-rated health than those living alone (results not shown). However, results indicated that in all regions combined, women living with others had a lower likelihood of poor self-rated health than those living alone, in opposition to our findings from ELSA and the LS.

When we analysed regions separately, this association was significant for the eastern region ($p = 0.01$) and was of borderline significance in the southern region ($p = 0.10$), but there was no significant association in the northern and western regions. There were also no significant associations among unmarried men for all regions combined or by region. For self-rated health and mortality, we therefore found differing results by region. While in England and Wales there was an association between living with others and poor self-rated health, in southern and eastern Europe, living alone was associated with poor self-rated health rather than living with others.

Conclusions

What do these results show about the associations between living arrangements and health and well-being? In England and Wales, as expected, older people living with a spouse had the best levels of health and well-being, except for older women living alone who rated their health as better than those living with a spouse. Among the unmarried in England and Wales, those living alone rated their health better than those living with others and were less likely to die during the follow-up period, but they were also more likely to be depressed and lonely than those living with others. We found, as expected, that these associations varied by region of Europe, which is likely to be associated with differences in culture and welfare regimes.

In northern Europe (here comprising Sweden, Norway, Finland and Denmark), unlike all other regions, we found no association between living alone and low levels of well-being. This may be due to the fact that older people in this region have preferences for autonomy and independence, and receive generous benefits and support from the state to enable them to live independently (Daatland, 1990; Daatland and Herlofson, 2001; Millar and Warman, 1996; Reher, 1998). The association between living alone and poorer emotional well-being in England and Wales was also found in western, southern and eastern Europe, and may be associated with the importance of the role of the family in supporting older people in these regions. In southern Europe, public policy reinforces the traditional focus of care and support by the family (Twigg, 1996), and high percentages of the population in Mediterranean Europe support the move of elderly parents into the child's home when unable to cope alone (Tomassini et al., 2004). In eastern Europe, there are still relatively low

levels of community social care (Botev, 1999; De Jong Gierveld et al., 2001; Tobis, 2000), and perhaps older people living alone are particularly disadvantaged and unhappy due to a lack of family support. The UK is similar to Scandinavia in terms of public attitudes to family responsibility (Katz et al., 2003), but welfare policy places obligations on the nuclear family for support and care unlike Scandinavian countries (Millar and Warman, 1996). Future research on this topic could include an investigation of the further possible negative implications for well-being of living alone for women in eastern, southern and western regions of Europe using larger longitudinal datasets.

While we found that living with others was associated with poorer health in England and Wales, in eastern and southern Europe, those living *alone* were likely to rate their health as poorer than those living with others, in addition to a having a higher likelihood of unhappiness. Self-rated health has a psychological component to it and this finding may reflect a preference for living with others rather than alone in these areas, especially in southern Europe. As already mentioned, lower levels of community based social services in eastern and southern Europe than in other regions of Europe (Bond and Cabrero, 2007; Tobis, 2000) may mean that those living with family receive higher levels of care and support than those living alone, resulting in better self-rated health. Additionally, in the southern and eastern regions, it is more normative to live with others and as there are higher proportions of people doing so, they are less likely to be a group selected for poor health. In northern and western Europe, where there are fewer older people living with others, those who do are more likely to be in poor health. In line with this, we found that in England and Wales, the association between living with others and poor self-rated health was at least in part due to health selection. However, we also found that those living with others for longer periods of time were more likely to develop an LLTI than those living alone. It is important to note that in terms of generalising these results to the population, the majority of unmarried older people live alone in England and Wales and very few move to live with others. To fully eliminate the effects of health selection and to establish causal pathways, we would need longitudinal data with more frequent follow ups. We would also need data on health status at the time of a living arrangement transition, and more detailed measures of health status. This may be possible for England once further waves of ELSA have been completed. European regional differences in health selection could also be investigated further using longitudinal datasets such as SHARE when more rounds of data have been collected.

Some caution is needed when interpreting results because some analyses lacked statistical power due to small sample sizes, especially of men living with others in the northern and western regions. Further work using more detailed health indicators might also reveal associations between health and disability and living arrangements which we were unable to detect using the relatively crude indicators available in these datasets. Additionally, regional analysis may obscure country-level associations and so more detailed country specific studies are also needed to elucidate associations between living arrangements and well-being, and the factors underlying them. Nevertheless, our findings demonstrate that whether or not living alone has positive or negative consequences for older people's health and emotional

well-being depends on the cultural context and the availability and acceptability of alternative supports for those in need of assistance. With growing proportions of the population in older age groups and a high propensity to live alone, numbers of older people living alone are projected to increase in the coming decades in the UK and throughout Europe. These increases may well have negative implications for the health and well-being of some.

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Chapter 8

Stepparenting and Mental Health

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and Elspeth Graham

Introduction

Demographic changes in the Western world over the last few decades, such as later marriages, lower fertility, increasing divorce rates and rising rates of cohabitation, have brought about significant changes in household formation and composition. One outcome is a growing number of stepfamilies, where a parent, whether never married, separated, widowed or divorced, forms a new marriage or partnership. Nowadays, most stepfamilies result from divorce, while in the past they were more likely to result from widowhood.

Despite the rising incidence of stepfamilies and the demographic and social differences between stepfamilies and traditional families with two biological parents, researchers concerned with family life and parenting were relatively slow to acknowledge the importance of such non-traditional families (Ferri and Smith, 1998; Utting, 1995). While there has been an increase in social science research on stepfamilies in recent years much remains to be done (Coleman et al., 2000). For example, numerous researchers have explored the effect of living in a stepfamily on *children*, including studies of their psychological well-being but, perhaps surprisingly, little research has considered the potential psychological impacts on the *adults* (stepparents and their partners) of living in such a household arrangement. This is the focus of this study.

Background

In the UK most people live in ‘traditional’ households, but non-traditional households are becoming more common. Of those marrying during the 1990s, nearly 50% will end up divorced if current trends continue (Allan, 1999), and a growing number of divorcees are starting new relationships. Haskey (1994) estimated that 12% of British children will live in a stepfamily before their sixteenth birthday. Recent

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estimates for Britain suggest that about 40% of mothers will experience being a lone parent and about 75% of lone mothers will go on to form a stepfamily (Ermisch and Francesconi, 2000). Currently nearly 90% of stepfamilies involve children living with their mother and a new male partner (Finch, 2002). Importantly, stepfamilies differ from traditional families demographically because they tend to include more and older children than do first families (Haskey, 1994). The greater complexity of intra-household relationships in stepfamilies provides scope for tensions to arise and, perhaps, increases the potential for negative health impacts for both the children and the parents.

Numerous studies highlight the strains that every-day life in stepfamilies may entail and the effects this may have on *stepchildren's* health and well-being (Brown and Booth, 1996; Pryor and Rodgers, 2001). Not only do stepchildren experience the breakdown of their parents' relationship but they often feel relatively neglected by the biological parent. This may be combined with the potentially disruptive effects of having to divide their time between two homes. Most studies of the effects of remarriage on children fail to show a benefit, despite the financial advantages that usually result (Fergusson et al., 1994; Pagani et al., 1998; Walper, 1995; Duncan and Hoffman, 1985; Zill, 1988). Some findings point to negative effects, with stepchildren performing worse at school (Pong, 1997; Teachman et al., 1996), five-year old children in stepfamilies being significantly more at risk of behavioural and developmental problems than children in traditional families (Wadsworth et al., 1985), and a higher risk of drinking alcohol, drug abuse and problem behaviour among schoolchildren living with a stepfather (Del Carmen et al., 2002; Mekos et al., 1996). While Joshi et al. (1999) found that maternal educational attainment and, to a lesser extent, family economic circumstances eliminated the relationship between family structure and children's cognitive and behavioural outcomes, the majority of quantitative studies suggest that stepchildren are at greater risk of a range of problems (Coleman et al., 2000; Ram and Hou, 2003).

There is also a considerable literature on the effects of family arrangements and marital status on *adult* health. Higher mortality rates among the unmarried, those who live alone and the divorced, compared to those who are married, are well established (Seeman et al., 1987; Trovato and Lauris, 1989; Gardner and Oswald, 2004). More depressive symptoms are apparent among both the recently separated (Neff and Schluter, 1993) and those who have been separated for longer (Richards et al., 1997), even when mental health status prior to separation/divorce is taken into account (Wade and Pevalin, 2004). In some studies, the beneficial effects of marriage are found for men but not women (Berkman and Syme, 1979; Avlund et al., 1998). Lone parenthood has also been studied in some detail. Hope et al. (1999) found that lone parents suffer higher levels of mental distress than other parents, although this may be related to the significantly higher poverty levels they experience (Keirnan and Mueller, 1998; Shouls et al., 1999). Notably, within this large literature, there are virtually no studies examining explicitly the effects of living in a stepfamily on stepparents' and their partner's health.

Another strand of the literature which is relevant to this study considers 'marital quality' and how people cope with the redefinition of kinship that follows

divorce and remarriage (overviews are provided by Coleman and Ganong, 1990; Pasley et al., 1993). Remarriage has been found to lead to lower marital quality and satisfaction than first marriage (Clingempeel, 1981; White and Booth, 1985), and this may have an impact upon mental health. In a qualitative study by Simpson (1994), it was argued that the roles of remarried persons compared to married persons, and stepparents compared to biological parents, are less well defined and thus harder to fulfil with confidence and satisfaction. This is sometimes labelled as the 'incomplete institution hypothesis' (Cherlin, 1978). We found one study specifically focusing on the experience of stepparenting and how this affected marital quality and the stepparent-stepchild relationship. Ambert (1986) showed that an intimate relationship between stepparents and stepchildren was harder to establish when stepchildren were not resident and that the birth of a common child into the stepfamily made the stepparent-stepchild relationship better for men, but not for women.

Thus, stepfamily arrangements are potentially stressful since they involve the negotiation of different intra-household relationships that may introduce new sources of tension. For example, Hetherington and Jodl (1994) found that stepparents remain less engaged and more authoritarian in parenting stepchildren than in parenting their biological children, illustrating the scope for friction between biological parents and stepparents. Yet a recent wide-ranging literature review on remarriage and stepparenting cited only a small number of studies on the psychological health of adults, the majority of which examined the general effects of remarriage (Coleman et al., 2000). A study by Ferri and Smith (1998) suggested that adults in stepfamilies were more likely to express 'negative feelings' and suffer from depression than those in first families. Also, a recent study considered the relationship between depression and being a parent in the US (Evenson and Simon, 2005). Parents with young children living at home were shown to have significantly higher rates of depression than non-parents and those with adult children who have left home. However, no increased risk of depression for stepparents with minor aged stepchildren was found and this study only considered the mental health of stepparents, not their partners.

In addition to the lack of previous work on the topic, another challenge to any quantitative study of stepparenting comes from relatively recent, largely qualitative studies that have begun to undermine the *idée fixe* that divorce is always harmful, at least to children (Smart, 2003). These new approaches benefit from life course perspectives and deploy different conceptual categories, which recognise the wide variety of stepfamilies that exist. In developing our quantitative research design, we have tried to incorporate a greater subtlety into our analysis than some previous quantitative studies, by recognising that there are many types of stepfamily and that health impacts may change over time.

Coleman et al. (2000) state that more longitudinal quantitative studies of the effects of stepparenting are required. One particularly important reason for this is that cross-sectional studies cannot control adequately for selection effects. Thus, while stepparenting may result in poorer mental health, the opposite effect is also possible; those prone to poorer mental health may be more likely to end up living

in stepfamilies (Amato, 2000). Only with longitudinal data could this be explored. The National Child Development Study (NCDS) collects data for a large birth cohort based on all children born in a single week in 1958 and provides information from birth throughout childhood and adolescence into young and middle age adulthood. These data made it possible to control for adolescent characteristics which may influence subsequent mental health. This is a simple but effective way of providing improved statistical control for the potential of increased representation of mentally ill people into step-parenthood.

In sum, there is a dearth of research on the mental health of adults living in stepfamilies, a need for a large scale quantitative longitudinal study in the UK and a demand that such a study gives due consideration to new and challenging conceptualisations of family arrangements. Our study, a longitudinal analysis using secondary data from a British birth cohort study, is designed to respond to all three of these points.

Research Aims and Hypotheses

The study aimed to fill the gap in knowledge about the relationship between step-parenting and mental health in the UK. Our main research question was, 'how does the mental health of adults in stepfamilies differ from the mental health of adults in otherwise comparable first families?' We were also interested in several dimensions of stepfamilies that are identified in the literature as affecting marital quality and personal well-being. These relate to the characteristics of the stepparent, such as age, income and attitude, and the characteristics of the children in the stepfamily, such as age and whether they are resident or non-resident. Thus, we derived the following hypotheses:

1. Stepparents have worse mental health outcomes than parents in first families.
2. The partners of stepparents have worse mental health outcomes than parents in first families.

These first two hypotheses are at the heart of our study, as described above.

3. The poorer the stepfamily, the greater the negative effect on mental health for both partners.

This has been identified as an understudied area in stepfamily research, but we base our hypothesis on reports that financial issues are one of the primary sources of stress in stepfamilies (Coleman and Ganong, 1990).

4. The younger the stepparent, the greater the negative effect on mental health for both partners.

Firstly, young age indicates a lack of experience with children. Palisi et al. (1991) found that stepparents who had previous parenting experience performed better at stepparenting than those with no experience. Secondly, young age can be interpreted as a proxy for time spent in the stepfamily. There is some evidence that the family situation improves when the stepparent is longer in the family (Pasley et al., 1993).

5. The presence of a child born to the two partners in a stepfamily reduces the likelihood of poor mental health outcomes for both partners.

Studies in the past (Berman, 1980; Ambert, 1986) have found that a common child increases the quality of the relationship of partners in a stepfamily, and this leads us to expect that it also positively affects the mental health of the partners. However, the quality of the relationship between stepparents and stepchildren has not been found to improve as a result of the birth of a common child (White and Booth, 1985).

6. The presence of adolescent stepchildren increases the likelihood of poor mental health outcomes for both partners in stepfamilies.

In a study on the well-being of stepchildren, Hetherington and Clingempeel (1992) showed that stepparents found it particularly hard to cope with adolescent stepchildren who were often coercive and hostile towards the stepparent, whereas with younger children it was often easier for the stepparent to find a parenting style that worked. The relationship between stepfathers and adolescent stepdaughters was found to be especially problematic.

7. The likelihood of poor mental health outcomes for both parents in stepfamilies increases where stepparents hold more traditional views.

Those with traditional views often have an authoritative parenting style, and the literature shows that authoritative parenting styles do not work well with stepchildren (especially older stepchildren) (Hetherington et al., 1988; Hetherington, 1991). Therefore, we expect traditional views to lead to an increased risk of poor mental health for such parents.

8. The presence of non-resident children in the household increases the likelihood of poor mental health outcomes for both partners in stepfamilies.

Relationships between stepparents and resident children have been shown to be closer than between stepparents and non-resident stepchildren. Stepparents with non-resident stepchildren may have to manage a relationship with the ex-spouse and it may also be difficult to develop close bonds with stepchildren who rarely visit (Ambert, 1986). These issues may add stress to the relationship and subsequently affect the stepparent's mental health.

Methods

The data used for this study is the National Child Development Study (NCDS), which is a sample of all babies born in the UK in one week in the spring of 1958. The sample originally included 17,416 respondents and they have been returned to seven times to collect a variety of data on issues including: mental health, partnership histories, and other time-invariant and time-varying demographic, health and socio-economic variables (University of London, 2007). We focused in this study on characteristics as recorded in 1991 when the sample members were aged 33, but we also included some variables from earlier in the life course which we expected to be related to subsequent mental health status (University of London, 2000). The sample ($n = 6,121$) includes those with children, those with valid

measures of behavioural/mental problems at age 16 and age 33, and those with family status information. Descriptive statistics for all the variables are given in Table 8.1.

Our outcome variable of interest is mental health. The measurement instrument used to measure mental health in the NCDS is the Malaise Inventory Scale (MIS) developed by Rutter et al. (1970). It consists of 24 questions which are designed to capture depression and anxieties, obsessions and phobias. It has commonly been

Table 8.1 Descriptive statistics for variables used in the study

Variable	Number	Percentage
Mental health age 33		
Good health	5395	88.1
Poor health	726	11.9
Behavioural problems at age 16		
Home Behaviour Scale score < 7	4823	78.8
Home Behaviour Scale score \geq 7	1298	21.2
Family type age 33		
First family	4638	75.8
Lone parent	420	6.9
Stepparent	400	6.5
Partner of stepparent	494	8.1
Both stepparents	169	2.8
Sex		
Male	2,714	44.3
Female	3,407	55.7
Employment status		
Full-time working	3,264	53.3
Part-time working	1,356	22.2
Unemployed	195	3.2
Other not working	1,306	21.3
Highest completed educational level		
No education completed	1,076	17.6
CSE 2-5	1,201	19.6
O levels	2,482	40.5
A levels	604	9.9
Degree	684	11.2
Unknown	74	1.2
Social class		
Unskilled	280	4.6
Partly skilled	1,046	17.1
Skilled manual	1,137	18.6
Skilled non-manual	1,388	22.7
Managerial / technical	1,642	26.8
Professional	212	3.5
Unknown	416	6.8
Domestic tension age 7		
No	5,194	84.9
Yes	255	4.2
Unknown	672	11.0

Table 8.1 (continued)

Variable	Number	Percentage
School abilities age 7		
Most abilities below average	4,181	68.3
Most abilities on or above average	1,331	21.7
Unknown	609	9.9
Financial hardship age 7		
No	5,071	82.8
Yes	378	6.2
Unknown	672	11.0
Living with natural mother age 16		
No	245	4.0
Yes	5,876	96.0
Father interested in child's education age 16		
No	781	12.8
Yes	3,022	49.4
Unknown	2,318	37.9
School abilities at age 16		
More than half below CSE 1/O levels	1,189	19.4
Half or more above CSE 1/O levels	1,989	32.5
Unknown	2,943	48.1
Variable	Mean	S.d.
Mean number of children by family type		
Overall mean	2.1	1.0
First family	2.0	0.8
Lone parent	1.9	1.0
Stepparent	2.7	1.2
Partner of stepparent	2.5	1.1
Both stepparents	4.2	1.5

Source: Authors' analysis based on survey data.

used as a mental health screening instrument and several studies have tested and confirmed the alpha reliability and internal consistency of this scale (e.g., Cherlin et al., 1998; Hirst and Bradshaw, 1983). The distribution of the MIS scale is highly skewed, and a common solution to deal with this is to divide the scale into a binary variable. As in other studies, such as Flouri and Buchanan (2002) and Power et al. (1988), we defined a score of 7 or higher out of 24 as an indicator of poor mental health. As Chase-Landsdale et al. (1995: 1619) point out, the MIS is merely a screening instrument, and a score of 7 or higher must be interpreted as 'a clinical cut off score, indicating a high likelihood of the presence of mental illness and the need for psychiatric help'. Twelve percent of adults aged 33 have a score over 6 on the MIS.

We also wanted to control for proneness to poor mental health at the onset of adulthood, because we hypothesised that this may influence whether people are more or less likely to end up living in a stepfamily – a potential sample selection effect. This was operationalised through the Home Behaviour Scale (HBS), also developed by Rutter et al. (1970). This measure was collected in 1974 when

respondents were aged 16. The instrument consists of a 22-item scale that is meant to signal both externalizing (where the child shows under-controlled behaviour such as aggression or disobedience) and internalizing (where the child shows over-controlled behaviour such as anxiety or depression) behavioural disorders in children. Again, a score of 7 or higher was chosen as a threshold for defining behavioural problems. Twenty one per cent of children at age 16 have a score over 6 on the HBS.

In order to distinguish different types of (step)families, we created a categorical variable with five categories: (1) respondents in first families, (2) respondents in lone parent families, (3) respondents who are stepparents, (4) respondents who are the partners of stepparents and (5) respondents who are stepparents and partners of stepparents at the same time (i.e., both partners have children from a previous relationship). We label this group 'dual stepfamilies', and the results show that this group is particularly important (not all studies consider this rarer group).

Finally, we extracted additional explanatory variables expected to influence mental health. We used variables from different points in the life course. Some reflect the status of the sample respondents in the year of analysis, 1991, when respondents were 33 years old. These included the sex of the respondent, their economic status, highest educational qualification and social class. We also included the number of children in the family, as stepfamilies are larger than first families on average. Then, we included variables about respondents' characteristics at ages 7 and 16, to control for previous circumstances expected to be associated with mental health outcomes in later life (see Cherlin et al., 1998; Flouri and Buchanan, 2002). These included domestic tension at age 7, financial hardship in the child's household at age 7, whether the child lived with his/her natural mother at age 16, whether the father was interested in the child's education at age 16, and school abilities at ages 7 and 16.

The method used is logistic regression, with mental health status at age 33 (1991) as the binary dependent variable (0 = non-poor mental health; 1 = poor mental health). All models include the control variables described above, and the results are expressed as parameter estimates in the tables. We first estimated a model without behavioural problems in adolescence, and then a model that included this variable, where we were particularly interested in the effects of the interaction between behavioural problems at age 16 and family status at age 33 on mental health status at age 33. We also graphed the coefficients by family status. In order to better facilitate appropriate visual comparisons between categories of the explanatory variable, we have plotted comparison intervals as suggested by Firth (2003) and further illustrated by Gayle and Lambert (2007).

Results

Description of Stepfamilies

We distinguish between stepparents, partners of stepparents, and families where both partners are stepparents to each other's children in our study

Table 8.2 Demographic characteristics by family type

	Distribution family type (%)	Average number of children (resident children only)	Average number of children (incl. non-resident children)	Average age range children (resident children only)	Average age (step)parent*
First family	75.6	2.0	2.0	2.8	33.3
Lone parent family	7.2	1.7	1.9	3.0	–
All stepfamilies	17.3	1.8	2.8	4.5	34.7
Stepparent	6.4	1.7	2.7	4.1	37.5
Partner of stepparent	8.1	1.8	2.5	4.9	32.0
Both stepparents	2.8	2.3	4.2	4.6	36.1

Source: Authors’ analysis based on NCDS sweep 1991.

* This statistic is based on partners of NCDS cohort members, because cohort members themselves were all aged 33 at the time of the survey.

(‘dual stepfamilies’). The distribution of respondents over these family types is shown in Table 8.2 (column 1). Table 8.2 also shows that adults living in stepfamilies are different from adults living in first families and lone parent families, in terms of age, number of children in the household and the age range of these children (see also Haskey, 1994). The second and third columns show the average number of children per family type (excluding and including non-resident children). Columns four and five show the average age range of the children in the household, and the average age of (step)parents per family type. It can be seen that adults in stepfamilies are on average older and have more children, who are of a wider age range, than people in first families and lone parent families.

Association Between Being a (Partner of a) Stepparent and Mental Health

Table 8.3 shows the numbers and percentages of people with poor and non-poor mental health, by family type, at age 33. Adults in stepfamilies (both stepparents and their partners) were more likely to suffer poor mental health than adults in first families, but less likely than lone parents.

Table 8.3 Poor mental health by family type

	Non-poor mental health		Poor mental health	
	n	%	N	%
First family	5,631	90.7	575	9.3
Lone parent family	434	73.9	153	26.1
Stepfamily	176	83.1	240	16.9

Source: Authors’ analysis based on NCDS sweep 1991.

Health Selection into Stepfamilies?

As argued above, it is possible that part of this association is due to health selection into stepfamilies. Table 8.4 shows the numbers and percentages of people with and without behavioural problems at age 16 who ended up in a stepfamily at age 33. Those with behavioural problems at age 16 were significantly more likely to live in a stepfamily as an adult (22.9%) than those who had no behavioural problems at age 16 (15.9%). This supports the idea that at least part of the worse mental health of (partners of) stepparents is due to the selection of people prone to poorer mental health into stepfamilies. This is therefore accounted for in the models below.

Table 8.4 Behavioural problems at age 16 by stepfamily status at age 33

Behavioural problems at age 16?	In a stepfamily at age 33?				Total %
	No		Yes		
	n	%	n	%	
No	4,057	84.1	766	15.9	100
Yes	1,001	77.1	297	22.9	100

Pearson $\chi^2(1) = 34.9$; $p < 0.000$.

Source: Authors' analysis based on NCDS sweeps 1974 and 1991.

Modelling Results

All hypotheses were tested in models with and without control variables, which included: sex, household size, employment status, highest completed education, social class, domestic tension at age 7, financial hardship at age 7, school abilities at ages 7 and 16, living with the natural mother at age 16, and father interested in education at age 16. Table 8.5 shows the results from two multivariate analyses. Model 1 does not take behavioural problems at age 16 into account while Model 2 does.

We see, first of all, that the number of children in the household does not affect the risk of having poor mental health (Model 1). Gender does have an influence: our result replicates the well-known finding that women have a higher risk of poor mental health than men (Bird and Fremont 1991). The employment status variable shows that people who do not work are at increased risk of having poor mental health, especially those who are unemployed. Also, those with lower levels of education and from lower social classes have an increased risk of poor mental health.

Childhood circumstances at age 7 also affect mental health at age 33. Living in a household with domestic tension or financial hardship, or performing below average at school increases the risk of being in poor mental health. Those who lived with their natural mother or had a father who was interested in their education at age 16 have better mental health at age 33. Also school abilities at age 16 are positively associated with mental health at age 33. Our main variable of interest at age 16 is whether the respondent had behavioural problems. Model 2 shows that those with

Table 8.5 Modelling results for mental health status at age 33 (1991) (n=6,121)

Variable	Model 1		Model 2	
	Coef.	p-value	Coef.	p-value
Constant	-2.378	0.000	-2.470	0.000
Behavioural problems age 16				
HBS score < 7			0.000	
HBS score >= 7			0.554	0.000
Family type age 33				
First family	0.000		0.000	
Lone parent family	0.692	0.000	0.572	0.001
Stepparent	0.401	0.017	0.282	0.187
Partner of stepparent	0.329	0.017	0.211	0.240
Dual stepfamily	0.869	0.000	0.966	0.000
Behavioural problems age 16 * Family type age 33				
First family			0.000	
Lone parent family			0.194	0.468
Stepparent			0.257	0.452
Partner of stepparent			0.206	0.463
Dual stepfamily			-0.320	0.429
Number of children in the household (incl. non-resident)	-0.011	0.797	-0.021	0.630
Sex				
Male	0.000		0.000	
Female	0.658	0.000	0.624	0.000
Employment status age 33				
Fulltime working	0.000		0.000	
Part-time working	-0.080	0.556	-0.076	0.576
Unemployed	0.628	0.001	0.572	0.003
Other not working	0.228	0.079	0.224	0.086
Highest completed educational level age 33				
No education completed	0.000		0.000	
CSE levels 2-5	-0.410	0.001	-0.373	0.002
O levels	-0.523	0.000	-0.481	0.000
A levels	-0.734	0.000	-0.663	0.001
Degree or subdegree	-1.064	0.000	-0.985	0.000
Unknown	-0.617	0.119	-0.528	0.184
Social class age 33				
Unskilled	0.000		0.000	
Partly skilled	-0.157	0.371	-0.139	0.434
Skilled manual	-0.235	0.212	-0.219	0.250
Skilled non-manual	-0.431	0.018	-0.401	0.029
Managerial / technical	-0.510	0.008	-0.469	0.016
Professional	-0.802	0.063	-0.725	0.094
Unknown	0.195	0.202	0.221	0.278
Domestic tension age 7				
No	0.000		0.000	
Yes	0.497	0.004	0.428	0.015
Unknown	-1.449	0.152	-1.454	0.158
Financial hardship age 7				
No	0.000		0.000	

Table 8.5 (continued)

Variable	Model 1		Model 2	
	Coef.	p-value	Coef.	p-value
Yes	0.370	0.012	0.360	0.016
Unknown	1.474	0.141	1.471	0.149
School abilities age 7				
Most abilities on or above average	0.000		0.000	
Most abilities below average	0.231	0.023	0.215	0.037
Unknown	0.070	0.736	0.080	0.702
Living with natural mother age 16				
No	0.000		0.000	
Yes	-0.440	0.013	-0.433	0.015
Father interested in child's education age 16				
No	0.000		0.000	
Yes	-0.326	0.008	-0.332	0.008
Unknown	-0.279	0.018	-0.270	0.023
School abilities at age 16				
Half or more of subjects above CSE 1/O levels	0.000		0.000	
More than half of subjects below CSE 1/O levels	0.375	0.023	0.339	0.041
Unknown	0.425	0.007	0.389	0.014

Source: Authors' analysis based on survey data.

behavioural problems at age 16 had a significantly higher risk of poor mental health at age 33. To summarise, most control variables, both at age 33 and in childhood, are associated with mental health in the hypothesised directions.

Family Type

Of particular interest were the effects of family type. Figure 8.1 graphs the regression coefficients for the five family types (as in Model 1, Table 8.5). Compared to those in first families, the risk of poor mental health is significantly higher for lone parents and all three types of stepfamily. For lone parents, the odds of poor mental health are twice as high ($\exp(0.692) = 2.0$) as for those in first families, and for dual stepfamilies 2.4 times as high ($\exp(0.869) = 2.38$). The difference between people in first families and people in families with only one stepparent is smaller, yet significant at the 95% confidence interval level. These initial results are consistent with the hypothesis that the various strains involved in stepparenting may result in poorer mental health for both stepparents and their partners compared to those in first families, and that these strains are even stronger in more complex stepfamilies where both partners have stepchildren.

However, as we argued earlier, it is also possible that those prone to poorer mental health may be selected into stepfamilies, and we showed in section "Research Questions and Data" that those with a high HBS score at age 16 were more likely to end up in a stepfamily at age 33 than those with a low HBS score at age 16. Therefore, we controlled for behavioural problems in adolescence in Model 2, by

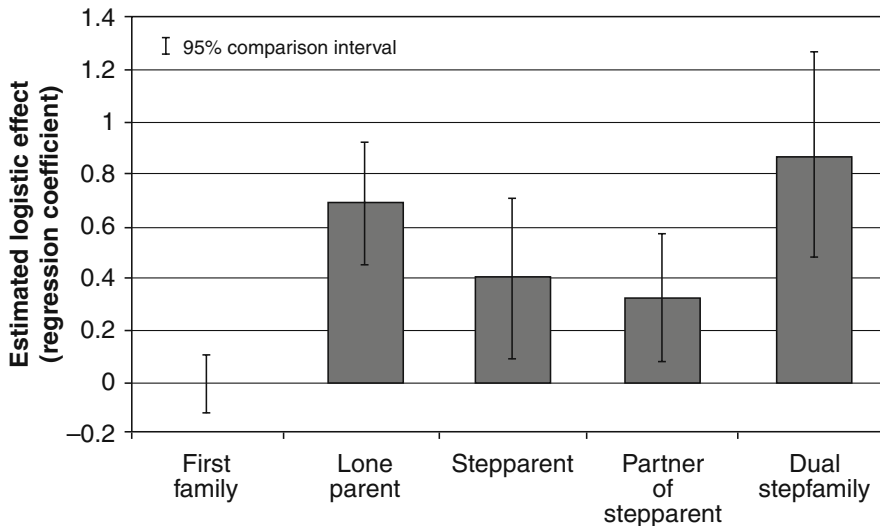


Fig. 8.1 Poor mental health at age 33 (1991) by family status (derived from Model 1, Table 8.5; Source: Authors’ analysis based on survey data.)

including an interaction between family type at age 33 and behavioural problem status at age 16.

Figure 8.2 shows the coefficients calculated from the main effects and interaction effects of family type (at age 33) and behavioural problem status (at age 16) from Model 2 (Table 8.4). Of those who had few behavioural problems at age

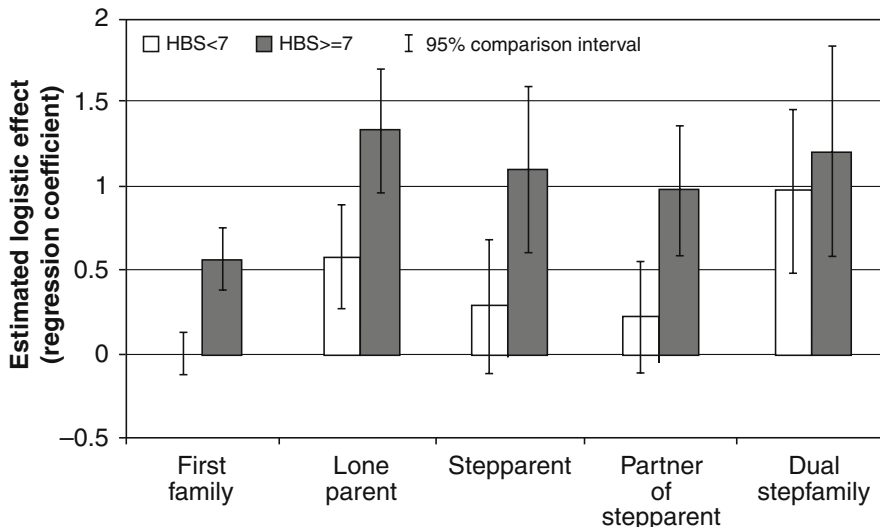


Fig. 8.2 Poor mental health at age 33 (1991) by family status (derived from Model 2, Table 8.4; Source: Authors’ analysis based on survey data.)

16 ($HBS < 7$), only lone parents and those couples where both partners were stepparents had significantly worse health than those in first families at age 33. This fits in with the finding from earlier studies that stepparent-stepchild relationships were more distant if both parents had their own children living in the household (Coleman and Ganong, 1990). In the more common stepfamilies, where only one of the adults was a stepparent, neither the stepparents nor their partners had significantly worse health than those in first families, if they had few behavioural problems at age 16.

On the other hand, the risk for those who had a high HBS score at age 16 was considerably higher in every family status category. Comparing across the categories for those with high HBS scores at age 16, we find that lone parents, stepparents and partners of stepparents and partners who were both stepparents, all have a significantly higher risk of poor mental health at age 33 than their counterparts in first families (although only significant at the 90% confidence interval level for partners of stepparents and dual stepfamilies; note that the larger confidence interval for dual stepfamilies will partly be caused by the small number of observations in this category ($n = 55$)). Hence our results suggest that those who had behavioural problems in adolescence are much more likely to suffer poor mental health in later life, but that those who end up living in *stepfamilies* (and lone parent families) suffer a significantly heavier burden on their mental health.

Finally, we compare those with and without behavioural problems at age 16 within each family type. For those in first families who had high HBS scores at age 16 the risk of having poor mental health at age 33 was significantly higher than for those in first families with low HBS scores at age 16. Also, lone parents, stepparents and partners of stepparents have a significantly higher risk of having poor mental health if they had high HBS scores at age 16 than if they had low scores. For dual stepfamilies there is no difference in poor mental health risk for those with and without behavioural problems in adolescence. For both groups the risk is high, indicating that living in a stepfamily with children from both partners' previous relationships leads to stress and worries, no matter what the prior mental health status.

The next five hypotheses, concerning the characteristics of the adults and the children in stepfamilies, were tested in multivariate models with the same set of control variables as shown in Table 8.4. The effects of the control variables in all models were very comparable to those in Table 8.4 and are not discussed further.

Characteristics of the Adults in Stepfamilies

We hypothesised that being poor affects the mental health of those in stepfamilies, because financial problems are a primary source of stress. We measured socioeconomic background in three ways: highest completed level of education, social class and economic activity status (income information in the NCDS is not suitable for this present analysis as it includes a lot of missing data, so we did not use it). Each dimension shows the same picture, but the results for labour market activity are the most marked, and remain largely significant after controlling for background

variables. The results show that people who do not work have a higher risk of poor mental health than people who work. Among those who work, those working part-time have a slightly elevated risk of poor mental health compared to full-time workers, but only in the model without control variables. Overall, our findings confirm that adults in stepfamilies with poorer socio-economic circumstances have a higher risk of having poor mental health. However, we also find this effect for adults in first families and lone parent families, so it is not exclusively true for stepfamilies. When we control for background variables, the effects of level of education and social class remain in the same direction, but their magnitude decreases and they become largely insignificant.

Our next hypothesis was that the younger the stepparent, the greater the negative impact of stepparenting on mental health. In the NCDS, it is not possible to test hypotheses about age differentiation directly, because NCDS cohort members are all the same age. However, we explored this by comparing results at age 33 (NCDS sweep 1991) and age 41/42 (NCDS sweep 2000). Comparison of the results shows that differences in mental health between those in first families and those in stepfamilies were larger at age 33 than at age 41/42, confirming our hypothesis. Of particular interest is the finding that at age 33, adults in stepfamilies have a higher risk of poor mental health than those in first families, and this difference has disappeared at age 41/42 (although, only for those with behavioural problems at age 16 in the model with control variables). When we compare those who did and did not have behavioural problems in adolescence within each family type, we also see that differences were bigger at age 33 than at age 41/42.

Last, we find some confirmation for our hypothesised effect of traditional attitudes on the likelihood of poor mental health for adults in stepfamilies. We did this analysis on the data at age 41/42, with attitudes as measured at age 33 (prior attitudes should provide a better explanation of current behaviour than current attitudes, as the direction of effect is difficult to determine if both are measured concurrently). A traditional attitude was measured as a cumulative score on several attitudinal items such as “wives who don’t have to work should not do so”. The results show that adults in lone parent families and dual stepfamilies who held more traditional views at age 33 have a slightly higher risk of poor mental health at age 41/42 than their counterparts who held less traditional views (although, only significant for those who had no behavioural problems in adolescence). For people in first families and ‘single’ stepfamilies, attitude does not affect mental health. For people who had behavioural problems in adolescence, attitude has no effect for stepfamilies and lone parent families, but it does for first families (the more traditional, the higher the risk of poor mental health).

Characteristics of the Children in Stepfamilies

The presence of a child born to both parents in a stepfamily was expected to reduce the risk of poor mental health, because it can cement the bond between family members and provide more role clarity to the stepparent. We found marginal support for

this, as having common children did reduce rates of mental illness, but none of the differences between adults in stepfamilies with and without common children were statistically significant, even in the models without control variables.

The presence of adolescent children (age 13–17) in the household does increase the likelihood of poor mental health, but this is true for all family types, not just stepfamilies. In fact, the effect is greatest for adults in first families. When we control for background variables, the differences between families with and without adolescent children disappears, except for those in first families and those in dual stepfamilies who had no behavioural problems in adolescence.

Lastly, we studied the effect of having non-resident children (that is, either or both adults in the stepfamily have a child or children who live(s) somewhere else, usually with the other biological parent) on mental health. We expected that having non-resident children would increase the risk of mental health problems. Firstly, for the parent him/herself because (s)he is always in the shadow of the parent with whom the children live, and because (s)he may miss the child(ren) and suffer from feelings of guilt that (s)he does not spend more time with them. The stepparents of non-resident children may also find it difficult to cope with stepchildren who they only see infrequently, and to support their partner. Our results show a consistent effect of having non-resident children in both the models with and without control variables. Lone parents and adults in stepfamilies with non-resident children are more likely to have mental health problems than their counterparts who do not have non-resident children. The differences between those with and without non-resident children are particularly large among people who had behavioural problems in adolescence.

Summary and Conclusions

This study has shown that there are significant differences in mental health between adults in first families and different types of stepfamilies. Stepparents themselves, and their partners, are more at risk of having poor mental health than their counterparts in first families. When both adults in a stepfamily are stepparents to each other's children, their mental health is even more at risk.

However, as we also showed, part of this association is due to the fact that adults who live in stepfamilies are more prone to poor mental health in the first place. This 'proneness to poor mental health' was captured using a variable that measured behavioural problems at age 16, which is a good predictor of mental health problems in later life. Those who had behavioural problems at age 16 were more likely to end up in stepfamilies, and therefore make up a larger proportion of the stepfamily population than they do of the first family population. The temporal ordering of these events means that cross-sectional data would not allow this issue to be explored. Evenson and Simon (2005), for example, show a higher likelihood of depression among some types of stepparents compared to parents in first families, but they acknowledge in their discussion that this may partly be due to selection into and out of stepfamilies of people with different prior mental health status (interestingly,

they speculate that it may be people with *better* initial mental health who select themselves into stepfamilies).

Once we took prior mental health into account, we found that stepfamily life is particularly harmful to the mental health of people who had behavioural problems in adolescence. They appear to find it hard to cope with the role of being a stepparent, or the partner of a stepparent, possibly because of the problems and tensions in stepfamilies that are largely absent in first families. Adults who did not have behavioural problems as an adolescent only have an increased risk of poor mental health if they live in dual stepfamilies or lone parent families.

Several other elements of stepfamilies were also shown to account for the adverse effect of stepfamily life on mental health. When stepfamilies have non-resident children, that is, one (or both) of the adults has children who live in another household, this increases the risk of poor mental health. The age of the stepparent also mattered: the younger they were, the higher the likelihood of poor mental health. Other factors increasing the likelihood of poor mental health in stepfamilies are: not working, or working part-time (compared to working full-time), and having adolescent (step)children in the household. However, these factors also increase the risk of poor mental health for adults in the other family types (first families and lone parent families), and are thus not only true for stepfamilies.

This study is one of the first of its type to compare the risk of mental health problems for stepparents, or partners of stepparents, compared to those in first families. Although we could not directly compare our outcomes with any previous studies, the results do conform to studies on related topics. Studies arguing that stepfamilies are more stressful environments than first families (such as Brown and Booth, 1996; Pryor and Rodgers, 2001) seem to be supported by our findings. Also, the worse mental health of people in stepfamilies may affect marital quality and marital stability of couples in stepfamilies. This would provide an additional explanation for the markedly higher divorce rates found in remarriages that involve stepchildren. Such marriages have been found to suffer from worse marital quality (e.g. Coleman and Ganong, 1990; Pasley et al., 1993), but the explicit link with mental health has not been made in such studies.

It is also possible that our results underestimate the adverse effect of stepfamily life on mental health. If those who find it hard to cope with being a (partner of a) stepparent are more likely to end the relationship, they will be ignored in our analysis. While their mental health may have been most seriously affected by step-parenthood, leaving the relationship may have caused improvements making it difficult to estimate the effect of stepparenting. Only long-running panel data (with frequent waves) would allow us to examine such a case, as we would be able to observe people entering and exiting different types of households over their life course, and relate their (changing) family type to their mental health status.

Our results demonstrate the value of longitudinal analysis, which has allowed the subtlety of the relationship between stepparenting and mental health to be explored and we support Coleman et al.'s (2000) plea for more longitudinal analyses of complex family circumstances. Clearly, the health outcomes for stepparents and their partners would appear to deserve more attention and the results of such analyses

may be of interest to family researchers, as well as clinicians and counsellors working with adults who are struggling with stepparenting issues.

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Chapter 9

Grandparents and the Care of Their Grandchildren

Alison Smith Koslowski

Introduction

Across Europe, certain grandparents are being relied upon to provide informal care for their grandchildren, particularly as part of a package of early-years childcare provision (Gray, 2005; Lewis et al., 2008). The increased participation of women in the labour market (Crouch, 1999), without concomitant and equivalent increased participation of men in informal care (Hook, 2006) means that the demand for informal care is likely to increase whilst supply decreases. Evidence suggests that grandparents are the informal carers of choice after the parents themselves (Wheelock and Jones, 2002). However, certain interest groups representing grandparents have raised the concern that grandparents may be making a rather larger contribution to the care and upbringing of their grandchildren than they had anticipated (e.g. Age Concern, 2006). Regular primary care of small children is a time consuming activity, which is both physically and emotionally demanding and as such, not a task that grandparents had necessarily envisaged as a core part of their grandparental role.

There has been an increasing focus on informal care provision by mothers and their subsequent labour market and other outcomes (e.g., Joshi et al., 1999) and less, but some work, on informal care provision by fathers (Smith Koslowski, 2008). There has also been recognition of the prevalence of the informal care provided by older people for other older people, whether care for a spouse or for very elderly parents (e.g., Bolin et al., 2007). However, there has been little research in Europe into informal care provision by grandparents for grandchildren. Estimates for the value of unpaid childcare provided by grandparents in the UK suggest considerable activity, ranging from £3,886 million a year (Age Concern, 2004), to £50 billion (Rowlatt, 2007) to £220 billion (Greengoss, 2007). Such macro-economic accounting relies in part on information about the time use of older persons.

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For grandparents, there may well be financial implications associated with caring informally for their grandchildren, although the costs and benefits will certainly extend beyond the financial, including implications for health, volunteer work and leisure (for example, Bamford et al., 1998). For grandchildren, distinct developmental outcomes for children are associated with being cared for by a grandparent (e.g., Hansen and Hawkes, 2009). In order to calculate and thus understand the costs and benefits of grandparental informal childcare, the first step is to obtain data, which tell us about the amount of time grandparents spend looking after their grandchildren.

If policy makers are concerned to increase the supply of informal care, the importance of support, financial and otherwise for individual care providers, requires consideration. It may be that an increased reliance on grandparents as informal carers is in contradiction with other policy goals associated with 'active ageing', concerned with raising the employment rates of older people (Lewis et al., 2008). However, a broader definition of 'active ageing' may incorporate and recognise such informal care work. The provision of informal grandparental childcare is likely to be gendered. Whilst grandfathers as well as grandmothers are shown to be active child carers, grand-maternal care is more prevalent (Gray, 2005). Such gendered informal care is likely to be one of several contributory factors leading to women in later life experiencing an increased risk of poverty than men (Price, 2006). A review of the time spent looking after children by grandparents, is a first step in the process of assessing the implications of grandparental childcare for the grandparents involved, be they financial and otherwise, positive or negative.

The role of grandparents and their contribution to society is increasing in profile, not least due to there being more grandparents than ever before as mortality decreases, despite a substantial decline in fertility (cf. Murphy and Grundy, 2003), and due to the increase in divorce rates and subsequent extended family, resulting in more complex grandparent and step-grandparent relationships. Indeed, an array of dynamic demographic factors including increasing life expectancy, delayed childbearing, decreasing fertility rates, teenage pregnancy rates and increased inter-generational geographic mobility contribute to the complexity of this issue. There has been somewhat of a lull in the latter part of the twentieth century as regards research into extended family relations (Dench and Ogg, 2002). As such, it is difficult to contextualise grandparental time in recent historical perspective and to know whether there is a revival of extended family relations, or if ties are as active as they ever were.

This chapter presents a cross-national review of the time that grandparents report spending on childcare in Western Europe. Estimates are largely drawn from data representing the time period 1994–2005. First, the various forms of grandparental childcare are presented, introducing the focus of the chapter, namely whether the grandparent is acting as an informal childcare provider typically whilst the parents go out to work, although grandparents might also provide informal care as respite for non-working parents. Second, the extent to which informal grandparental childcare can be expected to vary across Western Europe is discussed. Inevitably, different welfare state systems create varying circumstances with regard to childcare

provision and parental household employment patterns. A discussion of the complexity of the measurement of grandparental childcare time then precedes a review of currently available estimates.

Grandparents as Informal Childcare Providers

The initial picture of grandparents spending time with their grandchildren perhaps conjures up thoughts of Sunday afternoon family visits and proudly displayed school photographs and no doubt, this is a grandparental model for many families. A concern of this chapter however, is to highlight a particular category of grandparental childcare; that where the grandparent is a primary informal carer on a regular basis. The use of the term 'primary' indicates the parents' absence typically for a period of hours at any one time, but in some cases more long term to the extent of surrogate parenting. Grandparental childcare that extends beyond multi-generational family visits and holidays can be said to exist in two forms. The first form is where the grandparent becomes a co-residential surrogate parent to the grandchild. The second form is where the grandparent becomes the primary informal childcare provider. The latter is the more commonplace. Both across and within these categories of grandparental childcare, grandparents are a heterogeneous group, not least in terms of health, wealth and age.

Co-residential childcare carried out by grandparents acting as surrogate parents is the form of grandparental childcare that has attracted most research attention in recent years, though much of this literature is non-European (Hirshorn, 1998; Richards, 2001; Grandparents plus and Adfam, 2006; Brennan and Cass, 2007; MacKenzie, 2007). This particular form of grandparental childcare occurs in the event of parental failure, whether as the result of the death of the parents, or more commonly, a parental custodial prison sentence or substance abuse. In such cases, grandparents will frequently step in and take on the role of surrogate parent. Social workers may refer to grandparental care as a subset of kinship care. The support of grandparents has been identified as a significant protective factor for children (Kroll, 2007) as kinship placements are more likely to enable children to remain within a family network than placements with non-kin carers (Broad, 2004). However, complications for the grandparents may be caused by uncertain legal status, prior relationship difficulties with the parents, and factors such as their health, wealth and age (as described in Kroll, 2007). This group of grandparents are perhaps particularly vulnerable and in need of state support. The number of grandparents acting as surrogate parents is relatively small; Clarke and Cairns (2001) estimate that 1% of grandparents in Britain had grandchildren living with them on such a basis.

A small number of grandparents are co-resident with their children and grandchildren. The percentage of parental households with resident grandparents and dependent children ranges from just 0.12% in the Netherlands to 15.6% in Portugal (Table 9.1). Single grandparents living with children are more likely to look after grandchildren, compared to those who do not live with their children (Croda and Gonzalez-Chapela, 2005).

Table 9.1 Co-resident parental households containing grandparents and dependent children

	% households with grandparents	N
Portugal	15.64	25,566
Greece	14.98	24,190
Austria ^b	14.13	13,066
Spain	11	31,584
Luxembourg ^a	6.85	1,984
Italy	6.41	36,204
Ireland	5.51	17,146
UK ^a	2.22	6,852
Germany ^a	1.89	7,288
Belgium	1.5	14,036
Finland ^c	1.45	14,040
France	1.29	29,234
Denmark	0.47	10,952
Netherlands	0.12	22,124

Source: ECHP pooled sample 1994–2001 inclusive as available, author's calculations.

^a Data coverage 1994–1996 inclusive.

^b Data coverage 1995–2001 inclusive.

^c Data coverage 1996–2001 inclusive.

More commonplace, but less evident in the literature are those non-residential grandparents providing regular informal childcare in the absence of the parents. Informal childcare may be met with some cash payment, but frequently other forms of reciprocity and redistribution come into play, commonly fulfilled over a long period of time. In contrast, formal childcare can be defined as that provided by external private service providers, the state or by not-for-profit organisations (Land, 2002). In the latter quarter of the last century and into the present decade, there has been significant growth in the employment rates of mothers (Crouch, 1999). There is cross-national variation, but this is an overall European trend (Lewis et al., 2008). The Lisbon Agenda, as set out by the European Council in March 2000, is an action and development plan for the European Union which, among other priorities, promotes the active employment of women with dependent children, including lone mothers. Many of these women will have young children who require childcare, and grandparents are an important source, as recognised by the UK Government in its 1998 consultation paper *Supporting Families*. Indeed, much evidence points to grandparents being the most important source of such care in some countries, including the UK (Douglas and Ferguson, 2003; Bradshaw et al., 2008).

There is as yet little to no financial assistance for grandparents who are caring for their grandchildren as primary informal care providers (Douglas and Ferguson, 2003; Rowlatt, 2007). Currently, such grandparent childcarers are rarely eligible for statutory support. In Hungary, grandparents have the possibility to take over some

of the paid parental leave afforded to parents (Szikra, 2008). Portugal offers the opportunity for the mother of an under-age teenage mother to take parental leave in her place (OECD, 2004).

Informal care is for many parents a positive choice (Land, 2002). Informal care arrangements may be better able to withstand the complex timetabling associated with atypical working hours (Le Bihan and Martin, 2004). This preference may be associated with the affordability, availability and quality of formal childcare provision, all characteristics which vary cross-nationally. Whilst many grandparents provide regular primary informal childcare willingly, there is some evidence to suggest that a significant minority would prefer not to take on such an intense role, but rather keep to a less involved grandparental status (Dench and Ogg, 2002; Douglas and Ferguson, 2003).

There is considerable heterogeneity within the members of the population who might describe themselves as grandparents. It is difficult to generalise the life stage at which grandparents may find themselves, as grandparenting is a contingent and complex process (Kemp, 2003). Becoming a grandparent can occur at anytime from around 35 years to 75 years of age and beyond. Evidence suggests that 27% of all grandparents across Western Europe are below the age of 60, and so not of retirement age (Hank and Huber, 2007). The high prevalence of teenage pregnancy in the UK, has led to a relatively high prevalence of young grandparents, themselves still of child bearing age (BBC3, 2008). This group of grandparents are particularly likely to be turned to for informal primary childcare (Anderson et al., 2007). At the other end of the socio-economic spectrum, delayed childbearing leads to a relatively high prevalence of older grandparents. The opportunity costs, in particular the financial implications of becoming a grandparent at various stages along the life course will differ according to whether a person is still active in the labour market, non-employed or retired.

Grandparental childcare is a gendered activity. Various studies show that maternal grandparents appear to be more significant in the life of grandchildren than paternal grandparents, and that grandmothers appear to be more involved than grandfathers (Dench and Ogg, 2002; Douglas and Ferguson 2003). Adding further complexity, many grandchildren will have more than four grandparental figures in their lives (e.g. Kemp, 2003; Bradshaw et al., 2008). Largely this is the result of parental divorce and re-partnering as well as grandparental divorce and re-partnering, both of which lead to step-grandparenthood. Social grandparenting refers to those who take on a grandparenting role without necessarily being bound by biological ties. Depending on survey construction, studies often implicitly collect data from social grandparents.

In brief, two forms of grandparental childcare have been outlined; surrogate parenting and primary informal childcare provision. The focus of this chapter is on the latter category, predominantly because the former group is not large enough to be picked up by most survey data collection due to relatively small sample sizes. Whilst this does represent a particular form of grandparental contact and childcare, those grandparents involved cannot be considered to be a homogenous group. The heterogeneity between those grandparents giving regular informal care has potentially

important consequences for the financial implications and other associated costs or benefits to the provider of such care work.

Determinants of Cross-National Variation in Informal Grandparental Childcare Provision

Cultural differences and nationally specific institutional structures will contribute to cross-national variation in grandparental care. Furthermore, by comparing across countries we can explore whether socio-economic factors are consistently correlated with grandparental time spent on informal childcare provision. If this is found to be the case, variation in prevalence of informal grandparental childcare provision may be explained in part by compositional differences. In this section, the implications for grandparental care of variation in state intervention and parental household employment patterns are particularly explored.

Grandparental care is likely to become increasingly important when parents, particularly mothers, are involved in employment. To the extent that children are a public good, the state can ease the difficulties associated with combining parenthood and work. How it does so will affect the prevalence of grandparental childcare as mediated by the demands on the parents. Government regulated childcare provisions can be classified into three distinct categories (Ditch et al., 1996): firstly, cash transfers (via fiscal policies, family allowances and other forms of social assistance); secondly, provision of services (e.g., the public provision of childcare), and thirdly, leave from the labour market. Generous cash transfers and provision of services in particular will enable parents to draw on formal care rather than rely on informal care by grandparents. If parents are better supported financially and in the absence of very high childcare costs, working long hours for more money may prove unnecessary. Statutory leave provisions are positively associated with the time that mothers and fathers spend looking after their children (Smith and Williams, 2007). If parents are able to spend more time caring for their children, again the burden on grandparents will be reduced.

Assuming the involvement that grandparents may continue to have, even in light of the better case scenarios described above, the state can also introduce forms of additional social assistance for grandparental carers, and/or a form of (paid) leave from the labour market.

The European Union provides an ideal opportunity for comparative work. Whilst the member states share a common institutional framework, there is also internal diversity in terms of the welfare states, the governing institutions, traditions and cultures, which allows for variation in the explanatory variables. Additionally, there is also a practical rationale for focusing on the EU-15: the data situation is optimal for these countries.

There has been some considerable debate on whether there has been a European welfare state convergence or divergence (see Castles, 2004), and there is a burgeoning literature on the more recent emergence of the European social model

(e.g., Esping-Andersen et al., 2002). The basic premise of a European social model is that the EU institutions harmonise social policy in Europe so as to provide social protection in a distinct fashion from that found elsewhere in the developed world (Castles, 2004).

The Social Chapter was adopted at the European Council in December 1989 by all member states except the UK (EC, 1990) and included the statement that “measures should also be developed enabling men and women to reconcile their occupational and family obligations” (CEC, 1989, p. 5, cited in Neilson, 1998, p. 72). In December 1991, at Maastricht, the member states (with the exception of the UK) agreed to implement the Social Chapter by means of the Protocol on Social Policy and the Agreement on Social Policy, which was annexed to the Treaty on European Union (EC 1992; Neilson, 1998), thus writing mother- and father-friendly policy concerns firmly into the agendas of the member states.

A council recommendation in 1992 (92/241/EEC) was passed, in which member states are encouraged to take and/or progressively encourage initiatives to enable women and men to reconcile their occupational, family and upbringing responsibilities arising from the care of children (Article 1). A recommendation such as this is an example of soft law, meaning that, unlike hard law, there are no sanctions on non-compliance. No mention was made of grandparents being part of the solution. More generally, the legal position of grandparents will vary across countries. Currently, in English and Scottish law, grandparents have “no particular legal status underpinning their relationship with their children” (Douglas and Ferguson, 2003, p. 42). In contrast, Germany has specific rights of grandparental access, subject to the welfare of the child, as does the USA (Douglas and Ferguson, 2003, p. 43).

Different welfare state systems inevitably lead to variation in the manner and extent of provision for children. Gornick and Meyers (2003) identify how important it is to develop an ‘end vision’ which honours the importance of earning and caring, child well-being and gender equality. Crompton (1999) has conceptualised one such society, a dual-earner-dual-carer society. As Gornick and Meyers note:

“This is a society that recognises the rights and obligations of women and men to engage in both market and care work and one that values children’s need for intensive care and nurturance during their earliest years” (Gornick and Meyers, 2003, p. 12).

Europe is still far from such a dual-earner-dual-carer vision. Despite increasing European harmonization considerable variation remains across countries with regard to the extent of childcare provision, and consequently the reliance of parents on informal grandparental care.

Across Europe, the emphasis has been on the labour market activation of mothers and not on the care activation of fathers. In some countries, more help is given however, to enable fathers to spend more time looking after their children via father-friendly provisions (Smith and Williams, 2007). In the case that mothers are turning to their parents for help, rather than to fathers, this can be said to be symptomatic of a country holding less gender egalitarian attitudes. The suggestion is not that fathers might become househusbands: that they might undergo a reversal of traditional roles. Rather, the suggestion is that fathers could be expected to provide

a similar level of care as provided by a mother, who was equally as active in the labour market as the father. Clearly, this model is not plausible if both parents are working long hours. As a normative idea, this model assumes the level of care a parent could reasonably provide within the context of working a reduced or flexible hours working week, with the partner doing the same, whilst they are having access to affordable, high quality childcare.

State intervention notwithstanding, increased female labour market participation makes new childcare strategies necessary (Wallace, 2002). However, patterns of female labour market participation vary widely across Western Europe, particularly in regard to hours worked (Daly, 2002). Part-time employment (under 30 hours per week) is very important for mothers in the Netherlands, Germany, the UK, Ireland, Austria and Belgium. In contrast, fewer than 10% of mothers of children under 12 work part time in Finland, Greece, Portugal and Spain (Lewis et al., 2008). Summarizing broadly, Lewis et al. (2008) present three empirically observed national parental household employment patterns. The first consists of those countries where dual full-time working is the most usual arrangement and there are few single-earner couples. Countries include: Denmark, Finland and Sweden. The second group consists of those countries that polarize between dual full-time earning and single earner families, with few part-time mothers. Countries in this group include Spain, Greece and Portugal, although Portugal has higher rates of dual full-time earner couples. The third group consists of countries where households with one full-time earner and one part-time earner are prevalent, with other models also present. Countries in this group include the Netherlands, Germany and the UK.

Finally, the extent to which parents and grandchildren have moved away from their grandparents is likely to vary across countries. Geographical proximity is theoretically expected to increase the likelihood of informal grandparental childcare provision and this is found to be empirically borne out (Hank and Buber, 2007; Bradshaw et al., 2008). However, the perception of distance can also be culturally specific. Living 'nearby' in France could mean the same distance as travelling to the next region in the Netherlands. Furthermore, a certain number of grandparents may also be commuting to care, although given the paucity of literature, this does not appear to have been empirically explored, thus presenting an area for further investigation.

Measurement of Grandparental Time

The parental role can be thought of as being comprised of two elements: caring and providing. Resources devoted to children can then be understood as either financial resources or as care resources. Grandparental roles can be thought of similarly. Inter-generational financial resources can be measured in monetary terms through the use of family expenditure and other household studies, but care resources are more difficult to take into account. One way to assess a grandparent's involvement with care is to consider the quantity of time that they spend looking after their grandchildren. Grandparental time is defined as the amount of time spent by a grandparent looking

after their grandchild(ren). Grand-maternal time refers to grandmothers and grand-paternal time to grandfathers.

Little is known about the impact of the time spent by (non-resident) grandparents on children's development, but some outcomes do appear to be distinct as compared to children cared for by formal providers (Hansen and Hawkes, 2009). Grand-parental time measurement, however, provides insight beyond child outcomes. It is also a starting point for explaining socio-economic differences between the adults involved. Whilst it may not say much about the quality of the childcare, it can nevertheless be taken as an indicator of the intensity of involvement and thus inform macro-economic accounting and individual-level opportunity cost calculations.

But how do studies go about measuring the allocation of time? One of the characteristics of data on time allocation is that valid measurements are both difficult and costly to obtain. Most time use data have to be based on self reported estimates, which are prone to bias. There is always the possibility that a respondent replies with what they consider to be an appropriate answer rather than with a true account. Or, as Budig and Folbre (2004, p. 52) comment, "cultural norms as well as social expectations affect the ways people perceive their own activities". Research has shown that husbands and wives will disagree in their perceptions of household shared contributions to childcare and housework (Lee, 2005).

The most accurate way to record time use within a grandparental household would be ludicrously intrusive; it would be to directly observe, perhaps using cameras or a tagging device. Direct observation would also be likely to affect respondent behaviour. As such, information on time use is typically collected either using time sampling, with time diaries, or with retrospective survey questions (Gershuny, 2004). Time diaries are generally the method of choice for time use researchers, administered to a sample of individuals in a population and organised in such a way as to provide a probability sample of all types of days and of the different seasons of the year. Time diaries are usually retrospective, asking respondents for a detailed breakdown of the previous day, with responses coded according to a standard list of activities (Juster and Stafford, 1991). More commonplace than time diaries are retrospective survey questions about typical time use as part of a larger, more general survey. As such, grandparents are directly asked how much time they spend on certain activities such as grandparental childcare and housework. The validity and reliability of data collected in time diary form is generally considered to be superior (Juster and Stafford, 1991). However, there are many strong arguments for using retrospective survey questions. Often, these questions are part of a nationally representative, possibly longitudinal, annual household survey, rich in other socio-economic information about the respondents. These studies are often well resourced, particularly in terms of experienced research teams and are well documented. Estimates are generally reported in terms of hours per week or hours per day, although occasionally hours per year are the unit of measurement.

Sometimes the boundary between what constitutes childcare and other forms of unpaid work is blurred, for example, doing laundry and preparing family meals. Even when it is the sole activity under consideration, childcare can be classified as active, (also referred to as primary) or passive (also referred to as secondary).

Active childcare estimates capture only the time that grandparents report being solely involved in caring for children. Passive childcare estimates include time that the grandparent spends with children whilst simultaneously engaged in other activities. Most data on grandparental care are not yet at such a stage as to offer a differentiation between active and passive estimates.

There are currently two potential perspectives on grandparental time: time as reported by the grandparents themselves, possibly in comparison with other persons of a similar life stage but perhaps without grandchildren; and time as reported from the perspective of the grandchildren, most probably mediated by the middle generation. Ideally, cross-generational data are required to fully understand the intra-extended-family household dynamics of care.

Data from the perspective of grandparents can be collected as part of a general household survey, but such surveys are likely to suffer from small samples of grandparents, particularly those who are primary informal child carers. The European Community Household Panel (ECHP) which covers the period 1994–2001 for 15 countries (although not all countries for every survey year), provides some information on the time respondents report spending looking after children on a weekly basis. This variable has been used to consider how much time parents spend looking after children (e.g. Smith and Williams, 2007). The ECHP provides childcare information for co-resident grandparents but the numbers are negligibly small in most countries (Table 9.1). Common to all household surveys however, it does not pick up on family members living outside the household. This is not the ideal vehicle then for exploring the majority of grandparental childcare activities. There are plans to address this in the new UK Household Longitudinal Study. Time Use studies are another general population source of data on grandparental care. The Multinational Time Use Study provides data from highly comparable national surveys all drawing on a diary as the mode of data collection and has been used to generate estimates for time spent looking after grandchildren (Gauthier and Smeeding, 2003).

Other surveys do not aim to achieve coverage of the general population, but rather take the older person (often defined as over 50 years) as their focus. This includes the Survey of Health, Ageing and Retirement in Europe (SHARE), which collects harmonised data for a range of countries, namely Austria, Belgium, Denmark, France, Greece, Germany, Italy, the Netherlands, Sweden, Switzerland and Spain. Israel, the Czech Republic, Poland, Slovenia and Ireland join in later waves of data collection. There is also the English Longitudinal Study of Ageing (ELSA), which has many questions in common with SHARE and also the U.S. Health and Retirement Study (HRS). There is not currently a study of ageing for Scotland. A problem of collecting time use information from older adults only for the purposes of grandparent research is that younger grandparents will be missed out. Cross-sectional data may also be collected from the perspective of the older person. An example is the British Social Attitudes 1998 module on the role of grandparents (Dench and Ogg, 2002).

Birth cohort studies provide information on grandparental care, from the perspective of the child, as mediated by the parent. Currently, in the European arena,

such studies are limited in number. These are the Millennium Cohort Study and Growing up in Scotland. A third cohort study, Growing up in France will also soon be available (from 2010). The birth cohort studies follow a child from birth or early childhood via the primary carer. In 98% of cases the primary carer is defined as the mother, as a product of the survey design, which aims to collect information about pregnancy and breastfeeding. The mother is asked about proximity to and involvement of grandparents. Birth cohort studies from a medical perspective have been carried out in Denmark, Norway and the Netherlands. There is also the Lifeways Cross-Generation Cohort Study in Ireland, but this is on a much smaller scale than the British cohort studies and so cannot be considered as representative of the general population. All of the studies mentioned above are longitudinal. The European Social Survey offers a cross-sectional cross-national overview of grandparental childcare from the perspective of the mother in 2004/5.

The case where a grandparent steps in as a surrogate parent would appear to be a small subset of grandparents, only 1–2% in the case of small children and infants. Birth cohort studies would identify such a grandparent in this case as ‘primary caregiver’ and time spent by the grandparent might be better thought of as a special form of parental time. Studies where the focus is on the older person are less likely to distinguish between these two forms of care. As such, the data sources described in the previous section are not the best source of information on this form of grandparental care.

This discussion highlights that the measurement of parental time is a complex activity, and that there are various approaches to procuring secondary data on grandparental childcare. We now move to a discussion of the current estimates of grandparental time.

Review of Estimates of Grandparental Time

Grandparents who provide informal care on a regular basis for their grandchildren are of central interest in this review. However, general estimates, across the forms of grandparental childcare, are also presented in so far as they are available. From the grandchild’s perspective from the cohort studies, information on grandparental time is collected in a variety of formats. A typical question is:

How often, on average, would the child actually see his/her grandparent(s)?

- *Every day or almost every day*
- *At least once a week*
- *At least once a month*
- *At least once every three months*
- *Less often than that*
- *Never*

(Adapted from Growing up in Scotland (GUS) main stage questionnaire, 2005).

More detailed information comes through the following set of questions on a cohort study. Again this example is taken from Growing up in Scotland, but similar questions are also asked in the Millennium Cohort Study.

Grandparents sometimes help out in practical ways with bringing up children. Can you tell me how often, if at all, any of your child's grandparents, help out in the following ways?

- ... look after your child for an hour or more during the day*
- ... babysit for your child during the evening*
- ... have your child to stay overnight*
- ... take your child on outings or daytrips without you (or your partner)*

Again, the response options for this question would typically be:

- Every day or almost every day*
- At least once a week*
- At least once a month*
- At least once every three months*
- Less often than that*
- Never*

Using these questions as the source of information, reports from the Growing up in Scotland and the Millennium Cohort Study find that the child's grandparents are a key source of support. In Scotland, the vast majority (over 94%) of all cohort children were in regular contact (at least once every three months) with all or some of their grandparents (Bradshaw et al., 2008, p. 9). Almost half the children in the GUS samples saw their grandparents daily or almost daily (Anderson et al., 2007). Around four out of five (80%) parents in both the baby (aged approximately 10 months at the time of first interview) and toddler (aged approximately 34 months at the time of first interview) cohorts in the study, said that the child's grandparents looked after the child for an hour or more during the day at least occasionally, including one-fifth where this was a daily or almost daily occurrence. Between 18–19% of cohort children were looked after by their grandparents during the evening at least once a week, and 13% stayed with their grandparents overnight at least once a week (Bradshaw et al., 2008). Twenty-nine per cent of lone parents said that a child's grandparent and/or grandparents looked after the child during the day on a daily or almost daily basis compared with 17% of couple families.

More detailed hourly time use information comes through the following set of questions in cohort studies. Again, this example is taken from GUS, but virtually identical questions are also asked in the Millennium Cohort Study (MCS).

Do you currently get help with childcare for your child on a regular basis from any of the providers or people listed on the card?

The child's grandparent(s)
Another relative
Private crèche or nursery
Childminder
Local authority playgroup or pre-school
Local authority crèche or nursery
Community/Voluntary playgroup or pre-school
Private playgroup or pre-school
My ex-spouse or partner
The child(ren)'s older brother or sister
A friend or neighbour
Daily nanny who came to our house
Live-in nanny
Babysitter who came to our house
Workplace crèche or nursery
Family centre
Nursery class attached to primary school
Child-carer (provided via childcare agency)
Other childcare provider (PLEASE SPECIFY)

For roughly how many hours would your child be in their care in an average week?:

The results from the GUS question above tell us that 34.5% of mothers were depending on grandparents as their primary childcare provider when their child was at 10 months (Table 9.2). The most common type of childcare provider used across the samples was a grandparent. Around two-thirds of baby families and half of toddler families using childcare report some arrangement with the child's grandparents (Anderson et al., 2007). The rate of use of grandparents for informal childcare is highest in the most deprived neighbourhoods. In contrast, there is a significantly lower use of nurseries, playgroups and childminders in these areas.

On average, those babies cared for by a grandparent were cared for 16 hours per week (standard deviation 13 hours). This estimate is similar to research by Age Concern that grandparents who provide childcare do so for an average of 15.9 hours a week (Age Concern, 2004). This is very similar to reports from the MCS on childcare use by working mothers when the children are aged 9 months, which estimates that informal grandparent care (most frequently the maternal grandmother) accounts for 35.3% of childcare (Hansen and Hawkes, 2009). Gray (2005) uses data from the UK Time Use Survey 2000 to calculate weekly hours of grandparent childcare by mother's employment status and occupational group. This analysis was confined to mothers of one child under 12 years old. Within occupational groups, differences by employment status (not employed, part-time, full-time) again confirmed the greater importance of grandparent childcare for lower-income mothers. The average weekly hours of grandparent care averaged across all occupations for all mothers of one child under 12 was 6.01 hours.

Table 9.2 Primary childcare provider at ten months in Scotland, 2005

Type of provider	N	Percent
Not using childcare	2,107	40.39
<i>Grandparents</i>	1,799	34.48
Private crèche or nursery	571	10.94
Childminder	279	5.35
Another relative	166	3.18
Local authority crèche or nursery	79	1.51
A friend or neighbour	64	1.22
My ex-spouse or partner	30	0.58
Local authority playgroup or pre-school	18	0.35
Daily nanny who came to our house	16	0.31
Workplace crèche or nursery	15	0.28
Private playgroup or pre-school	12	0.23
The child's older brother or sister	10	0.20
Family centre	7	0.14
Community/voluntary playgroup	7	0.13
Babysitter who came to our house	4	0.07
Live-in nanny	4	0.07
Child-carer via agency	3	0.05
Nursery class attached to school	1	0.02
Other childcare provider	21	0.40
Total	5,217 (5,213 here due to rounding after weighting)	100 (99.9 due to rounding)

Source: GUS: Sweep 1 Birth Cohort (weighted); author's calculations.

Similarly, on a cross-national scale, the European Social Survey 2004/5 asks the question:

Thinking about the youngest child in the household, I would like to ask you about his/her usual childcare, not counting lessons in school. By childcare I mean care carried out by anyone other than yourself or your current husband/wife/partner.

Using this card, what is the main type of childcare that the youngest child receives?

The range of response options is similar to those outlined by the GUS question example above. Again, one of the responses is 'the child's grandparent(s)'. The responses from this survey are reported in Lewis et al. (2008) for 13 European countries. They find that between 6.2 to 61.7%, depending on the country, of mothers in paid work, with a child aged 0–6 are having their main type of childcare provided by grandparents (Fig. 9.1). This range of cross-national variation suggests that parental employment patterns and state intervention into childcare provision, among other factors, heavily influence the demand for grandparental childcare.

Where the principal respondent is the older person themselves, thus from the grandparent's perspective, a common question in surveys is to ask:

Do you look after grandchildren?

(Adapted from SHARE, first year of data collection)

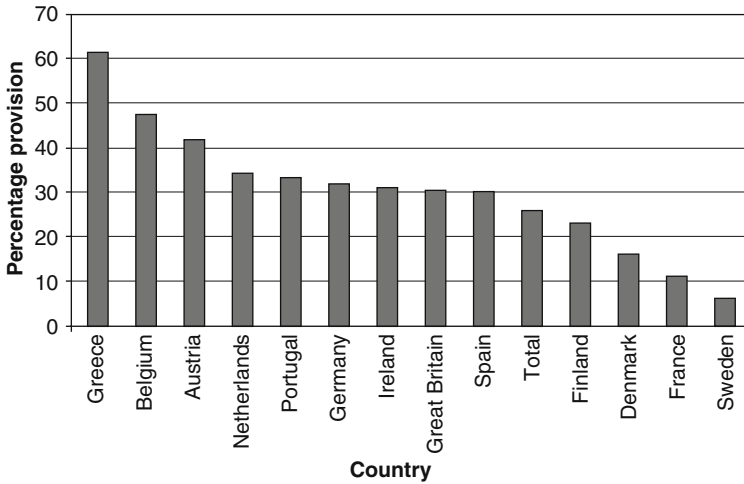


Fig. 9.1 Childcare provided by grandparents by country (Sources: ESS and calculations of Lewis et al., 2008)

From this question, it is found that many grandparents across Europe look after their grandchildren; grandfathers and grandmothers alike (Table 9.3). The prevalence of grandparental childcare by this measure varies across countries and across ages, with peaks between 60–65 years. Women are more likely to care for grandchildren than men (Table 6.3). In particular, younger grandparents display noticeable gender differences in the patterns of caring for grandchildren, with grandmothers taking the lion share (Croda and Gonzalez-Chapela, 2005 – not shown in table).

Hours spent looking after grandchildren are obtained by asking, firstly, how frequent these activities are, and then the number of usual hours spent on the activity in a given period of time. On average, Europeans over fifty years of age devote

Table 9.3 Prevalence of caring for grandchildren by gender and country

	SE	DK	DE	NL	FR	CH	AT	IT	ES	GR
Grandmothers	34.7 (1.5)	39.8 (1.8)	24.7 (1.3)	34.9 (1.5)	35.0 (1.7)	21.5 (1.9)	26.9 (1.3)	25.7 (1.9)	27.1 (1.7)	25.7 (1.4)
Grandfathers	24.4 (1.4)	31.1 (1.8)	20.7 (1.2)	32.0 (1.5)	28.9 (1.8)	17.3 (1.8)	24.7 (1.5)	18.8 (1.7)	20.5 (1.7)	18.7 (1.4)
All grandparents	30.0 (1.1)	35.8 (1.3)	22.9 (0.9)	33.6 (1.1)	32.2 (1.3)	19.5 (1.3)	25.9 (1.3)	22.7 (1.0)	24.3 (1.2)	22.5 (1.0)

Sample of all older persons is 17,629 un-weighted observations using Version 0 release of SHARE data. All figures are weighted. Figures refer to whole population of older persons having grandchildren. Standard errors are in parentheses.

Source: Adapted from Croda and Gonzalez-Chapela (2005, Table 5A.17).

half an hour a day to looking after grandchildren. A clear geographical gradient is observed for the amount of time devoted to looking after grandchildren: the average amount increases as we move south (Croda and Gonzalez-Chapela, 2005). Data from the Multinational Time Use Study, between 1987 and 1992, have also been used to calculate average grandparental time. For nine countries, Austria, Canada, Finland, Germany, Italy, the Netherlands, Sweden, the United Kingdom, and the United States, time devoted to childcare has been found to be very small, around 0.1 to 0.2 hours per day, tending to be slightly higher for women than for men, and for younger (in this case aged 45–54) rather than older women (Gauthier and Smeeding, 2003). This result may be likely to be partly related to the mode of data collection. Childcare may be performed on an irregular basis and so it may be that diary surveys, which typically cover only one randomly selected day, are not best suited to capture a non-daily activity. It may also be the result of an averaging effect across a heterogeneous population.

To the contrary, the 1998 British Social Attitudes (BSA) study asked all sample members some broad questions about the role of grandparents and discovered a remarkable level of homogeneity across the sample. “Manifestly, there is a grand-parenting culture which is shared by the majority of people in British society” (Dench and Ogg, 2002, p. 13). In the BSA study 35% of grandparents reported often spending the day and overnight (38%) with their grandchildren without the parents. Only 28% had not spent such a day within the past year (Dench and Ogg, 2002, p. 22). Grandparents with grandchildren under the age of 12 were also asked about their role in childcare. Twenty-two per cent reported helping with daytime childcare on a weekly basis or more. Fifty-three per cent helped with daytime childcare at least weekly. Forty-two per cent helped with evening childcare at least monthly. Eighteen per cent took a grandchild to school or nursery at least monthly.

In summary, the available data on grandparental care from the perspective of the older person can be disappointingly lacking in detail and fail to highlight the intense activity identified by studies from the perspective of the grandchild or parent. Whilst there is a degree of harmonisation across some studies, cross-survey comparison may be beleaguered by variations in question wording and sample nature. However, a picture of grandparental care is beginning to be built up. Many grandparents have regular contact with their grandchildren, but this does not necessarily equate to substantial amounts of grandparental childcare time. However, a large minority are heavily involved as the main informal childcare providers, most often in relation to enabling the labour market participation of the mothers.

Conclusion

A review of current literature confirms that in most West European countries, grandparents are a very important source of childcare. Whilst some grandparents are not involved in grandparental care a substantial minority do provide considerable amounts of early-years childcare provision. Cross-national variation in the extent to

which grandparents are involved in such informal childcare provision suggests that there is much that governments can do should their aim be to aid grandparents and parents.

Despite the current emphasis of EU-level policy on enhancing the formal provision of childcare to facilitate the labour market activation of mothers as part of the EU-Lisbon strategy, there is very little evidence of the care activation of fathers. Partly as a consequence, the role of grandparents in providing informal childcare thus remains important in all but the Nordic countries (Lewis et al., 2008). Evidence from the birth cohort studies and the UK Time Use study suggests that reliance on grandparental help may also be a function of the social class of the parents. This suggests that formal private childcare provision may, in effect, price certain mothers out of the market, forcing them to find alternative sources of childcare.

That grandparents are a very important source of childcare is potentially in contradiction with EU policy on 'active ageing' (EC, 2002). The amount of hours spent looking after grandchildren are such that if it were not provided by grandparents but rather bought in the marketplace, the economic value of this activity would be considerable (Croda and Gonzalez-Chapela, 2005). Furthermore, if grandparents increasingly engage with the labour market, then the demand for childcare provision would most likely further outstrip supply. As such, the role of grandparents as care providers warrants more recognition in policy development.

It is important to move away from the stereotypical grandparent image of a very old, inactive person. Many grandparents will themselves be juggling employment and family commitments. Others may just have settled into what they hope will be an active retirement involving leisure pursuits, travel and volunteering work. There is much heterogeneity amongst the population of grandparents, which remains largely unexplored. Studies of ageing fail to capture data on younger grandparents. Birth cohort studies fail to capture contextual information about the grandparents. More reflection is called for as to how best to obtain data on grandparental activity across the population.

Grandparental time spent on childcare is gendered. Grandmothers are more likely than grandfathers to be providing informal childcare provision. When grandparents provide childcare, this has implications for their financial circumstances as well as for their economic planning for later life. Further work is needed to estimate the financial costs to the older person of grandparental childcare. It is likely that the lifetime disadvantage with regard to earnings of informal care is compounded if women are involved in childcare not once, but twice, and possibly thrice over the life course.

For both theoretical and policy reasons, it is important to deepen our understanding of this population of grandparental carers and the contribution they make to informal childcare. Many grandparents may be willing to provide care for their grandchildren, but this willingness is unlikely to be open-ended. Furthermore, it may not be sustainable (Dench et al., 1999). More research is called for into the informal care provision by grandparents for grandchildren and implications of this activity for all involved.

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Chapter 10

Internal Migration and Inter-household Relationships

Oliver Duke-Williams

Introduction

Internal migration is an important agent of population change within the United Kingdom; it can alter the characteristics of some areas – the balance of different sorts of people who live there – quite significantly over a short period of time. Like migration, commuting behaviour also causes massive changes to the population of an area on a temporary (usually daily) basis. Both these agents of change, migration and commuting, are closely linked. Change in usual residential location inevitably means a change in commuting patterns for those migrants in employment; people may commute to a new job – possibly by a different mode of transport – or they may make a commute over a different, possibly longer, route to the same workplace.

Although we associate migration with flows of people, most research has tended to consider flows of individuals. A relatively little explored aspect of migration is the groups of people who move together, sometimes in groups, most frequently as a household or a family. Moreover, whilst many people move to a new house or flat in which they are the only occupants, others move into households in which some people are already living. There is clearly a relationship between group size (and, perhaps, group behaviour) and household type and the various life stages of the people in those households. A single person must, by definition, move on their own, although he or she may move to form a new relationship in a multi-person household. Young children are likely to move as a part of a family group with their parent/s, whilst older children may move out of the parental household on their own. Indeed, mobility is a key driver in household changes, as people move and create new households.

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Much research has focused on the phenomenon of young people leaving home (Buck and Scott, 1993; Clark and Mulder, 2000; Ermisch, 1999), a process which is notable for being highly variable in nature in different countries (Aassve et al., 2002). A sub-group of these migrants are students who leave home as individuals to live together in large groups in halls of residence or with small groups in private households (Duke-Williams, forthcoming). Interest has also focused on shifting attitudes towards and age-specific propensities of marriage and cohabitation (Berrington and Diamond, 2000), and the role of separation and divorce in residential mobility (Grundy, 1992). A further avenue for research has been the mobility of the elderly (Glaser and Grundy, 1998).

In this chapter, groups of migrants who move together are considered in terms of the general spatial mobility patterns, and the motivations for migration expressed by persons in different groups and in different types of household. The census data are used to study overall mobility patterns for groups of different sizes and types. A feature of migration data from the 2001 Census was the disaggregation by group type and size, resulting in outputs that were often hard to interpret. One reason for studying differences between groups is to determine whether a disaggregation of this sort is always necessary.

The chapter commences by outlining two data sources that are used in the analysis: the 2001 Census Special Migration Statistics (SMS) and the British Household Panel Study (BHPS). Data from the 2001 Census are then used to examine movement patterns by migrants in groups of different sizes and to consider whether there is anything distinctive in the difference between wholly moving households (where all persons in a household are migrants and had the address one year before the census) and migrants in other groups. A series of connectivity indices are produced for migrants in groups of different sizes and of different types, for both origin and destination specific flows. Correlation coefficients are then examined in order to investigate the similarity in connectivity levels for all districts for different groups. Connectivity indices are used as a simple metric for comparing overall levels of migration in a system. They have the advantage that no populations at risk (PAR) are required to produce a summary statistic. This is significant, because the PAR for group level migration are unclear: who is at risk of becoming a singleton migrant? All people? People who live on their own? There is no clear answer.

Having examined patterns at the group level, the focus is then changed to the household level. Data from the BHPS – a panel study – are used to compare expectations of migration with actual behaviour in two ways. Firstly, the actual process of migration is considered: where people expressed some degree of desire to migrate, did they actually do so in the following year? Secondly, for those people that did migrate, what were their reasons for doing so? This analysis is disaggregated on a household type basis: one might expect people in different household types to have different reasons for moving, but is this actually the case? Finally, a comparison is made of spatial and social mobility. Recording of social class of migrants allows a determination to be made of the degree to which migrant's social status changes around the same time that they move.

Data Sources

Data from the 2001 Census interaction data sets have been used to explore some general patterns of the way that people move around the country. The 2001 Census interaction data continued a series of similar data from earlier censuses, but are collectively larger and more complex than those that preceded them (Rees et al., 2002; Cole et al., 2002). Three sets were produced – the Special Migration Statistics (SMS), the Special Workplace Statistics (SWS) and the Special Travel Statistics (STS) – at three spatial scales. Whereas the SMS provide UK-wide spatial coverage, the other two sets are spatially constrained. The STS were generated for residences in Scotland only, while the SWS were produced for residences elsewhere in the UK. The STS are effectively a superset of the SWS for flows with destinations in Scotland, in that they include both journeys from home to work (as do the SWS) and journeys from home to a place of study for full-time students (including school children).

The interaction or origin-destination data were produced at three spatial scales referred to as levels. Level 1 refers to the local authority districts across Great Britain – an amalgam of different types of local government authorities in England, Wales and Scotland – together with parliamentary constituencies in Northern Ireland. Level 2 involves ward level data and contains an amalgamation of census area statistics (CAS) wards in England, Wales and Northern Ireland, and standard table (ST) wards in Scotland. The combinations of component geographies used in these two levels are distinct to the interaction data, and are respectively referred to as ‘interaction data districts’ and ‘interaction data wards’. Level 3 spatial units are output areas, a new geography created for the outputs of the 2001 Census (Martin, 2002). The set of areas used for the interaction data are equivalent to those areas used for other census outputs.

Across all three sets of interaction data, results are presented in a variable number of cross-aggregated tables. The number of tables available, and the numbers of categories used in component variables varies with spatial scale: at level 1 there are more tables, with finer classifications used and at level 2, there are fewer tables with coarser classifications (Stillwell and Duke-Williams, 2007). For both SMS and the SWS/STS, there is only a single table available at level 3, the finest spatial scale: an age by sex table in the case of the SMS and a mode of travel table in the case of the SWS and STS.

In contrast to the 2001 Census, the BHPS can be used to explore connections between household structure and migration events. The BHPS is a panel study that commenced in 1991 and has been updated with annual survey waves since then. As a panel study, it follows the same groups of individuals over time. A distinct feature of the BHPS is that it is household based, with all adult members of survey households being interviewed, and children aged 11+ also completing a short interview. The survey is a multi-purpose study with core and additional elements covering many areas including social attitudes, employment and income, housing and tenure, health, relationship histories, and individual and household demographics. The survey also includes questions on residential mobility, which are explored in this chapter.

The initial panel consisted of over 5,000 households containing over 10,000 individuals, and this panel has grown over time through the inclusion of additional samples in Scotland, Wales and Northern Ireland. The panel accumulates new members as a result of mobility: when a sample member moves to a new household, the members of that household also become sample members. However, mobility is also a major cause of sample attrition, as panel members cannot always be traced; other losses include refusal to be interviewed. By wave 13, the total number of persons interviewed had fallen to 8,655 (Lynn, 2006).

General Patterns of Migration

The 2001 Census interaction data provide useful information about migration and commuting within the UK. They have particular strengths over sample studies in that they include the whole population. This is of particular significance with a phenomenon such as migration, because ‘migrants’ are a relatively small sub-set of the whole population: about 10% of the UK population were internal migrants by the Census definition in the period 2000–2001. Persons are defined as migrants by the 2001 Census if they have changed their usual residence in the year prior to the Census. The propensity to migrate varies with various socio-demographic characteristics (Champion, 2005), the most notable of which is age. Figure 10.1 shows the numbers of internal migrants in the UK per 1,000 persons, by quinary age groups. The distribution is a typical one for migration, with the highest rates being found amongst young adults. Rates are also relatively high for the elderly, and for

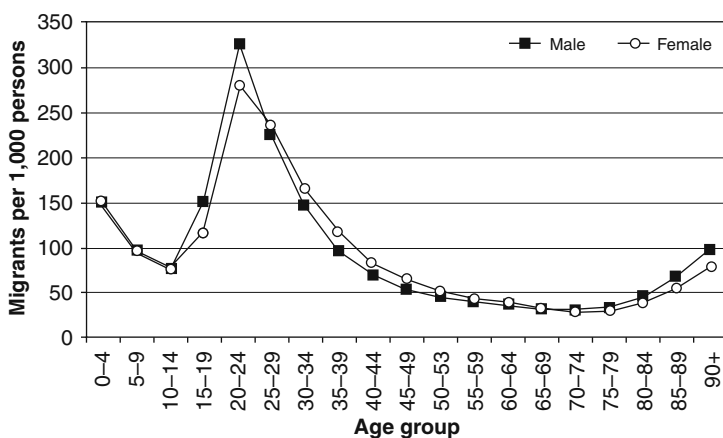


Fig. 10.1 Internal migration rates by age, UK, 2000–2001
(Source: 2001 Census SMS I; author’s calculations.)

young children. Another characteristic of migration illustrated in Fig. 10.1 is that unlike many other social phenomena, overall migration propensities in countries like the UK exhibit little gender difference. Further analysis of age and gender variations in the 12 months before the 2001 Census is available in Dennett and Stillwell (forthcoming).

The term ‘migration’ covers a variety of types of mobility, from persons moving on their own to groups of several persons moving together. In censuses prior to the 2001 Census, a distinction was drawn between ‘wholly moving households’ and ‘other groups of migrants’. The term wholly moving household refers to a household in which all persons were migrants and all had the same usual residence one year prior to the census; the definition encompasses persons who have moved as singletons. The term does not necessarily mean that all persons who were in the original household moved – it may be the case that one or more persons remained in that household, and this might particularly be the case with singletons when, for example, a young adult has moved out of their parental home and into their own accommodation. It might be possible to identify truly ‘wholly moving’ cases (that is, where all persons in the original household have moved together) using original census data, but such analysis would be complicated and expensive, and probably prone to error.

Table 10.1 illustrates the changes observed in the number of wholly moving households in Great Britain in the 1991 and 2001 Censuses. The number of wholly moving households, and the number of migrants contained within them both increased when the two censuses are compared. This apparent increase should be understood in the context of changes in both the census base population, and the handling of migrants from an unstated origin. The 2001 Census included students at their term-time residence rather than at their parental residence, as was the case in 1991; this may have affected either their household residency status, or their membership of wholly moving households. In addition, as part of the 2001 Census processing, migrants’ origins that were missing or not fully stated were imputed, whereas in the 1991 SMS, they were tabulated separately. No migrants

Table 10.1 Numbers of wholly moving households and migrants in Great Britain, 1990–1991 and 2000–2001

	1990–1991	2000–2001
Number of migrants in households	4,463,974	5,670,422
Number of wholly moving households	1,366,115	1,665,469
Migrants in wholly moving households	3,085,854	3,451,938
Mean number of migrants per wholly moving household	2.3	2.1
% of migrants in households	69	61

Sources: 1991 Census SMS Set 2, Table 2; 1991 Census SMSGAPS Table 6; 2001 Census SMS Level 1, Table 6.

with unstated origins were coded as being in 'wholly moving households' in 1991, whereas migrants in 2001 with imputed origins could have been coded as being in wholly moving households.

Table 10.1 also shows the mean number of migrants in each wholly moving household, and the percentage of all migrants in households who were classified as being in wholly moving households. Despite the apparent increase in the number of migrants in wholly moving households between 1991 and 2001, the mean number of migrants per group had fallen, as had the percentage of all migrants that were in wholly moving households. It is possible that the decrease in mean group size is a result of significant numbers of migrants with imputed origins being coded as single person wholly moving households. However, the distribution of group sizes was not published for 1991 data, so this explanation remains speculative. The decrease in the proportion of migrants who were in wholly moving households may be related to improved capture of data relating to students, and the growth in the period of the numbers of students living in shared households.

The 2001 Census processing introduced an additional way of classifying groups of migrants: that of the *moving group*. A moving group is a group of persons who were migrants and had the same usual residence one year prior to the census. A wholly moving household, using the previous definition, is thus one example of a type of moving group. However, the classification also includes non-wholly moving groups; these include the cases where:

- one or more persons in the household is a migrant but not all household members are; and
- all persons in the household are migrants but do not all have the same usual residence one year prior to the census.

Identification of moving groups at the time of census processing was exhaustive: that is, all migrants in households were allocated to a moving group. Table 10.2 shows the national distribution of migrants in households (as opposed to communal establishments) according to their group status. The 'one person' counts are the same for groups and for migrants for both wholly moving households and other moving groups. There were approximately 5.8 million persons within the UK in 2000–2001 migrating in 3.5 million moving groups, of which 48% were wholly moving households and 52% were 'other moving groups'. A very high proportion of those persons moving in other moving groups were in fact individual movers (85%) compared to 42% of wholly moving households.

Amongst the 3.5 million persons migrating in wholly moving households, over half involved three or more persons moving together, with 28.3% in two person households and one fifth as single persons. In contrast, over two thirds of migrants in other moving groups were single persons, with similar numbers split between two person and three or more person groups.

Table 10.2 Groups and migrants within the UK, 2000–2001

	Number of persons			
	1 person	2 persons	3+ persons	All
	Wholly moving households			
Groups	719,379	500,461	486,356	1,706,196
Migrants	719,379	1,000,922	1,821,914	3,542,215
	Other moving groups			
Groups	1,545,286	178,041	104,753	1,828,080
Migrants	1,545,286	356,082	367,029	2,268,397

Source: 2001 Census SMS level 1, Table 6.

Migration Connectivity

The results shown in Tables 10.1 and 10.2 indicated that whilst the majority of migrants are in wholly moving households, there are a very significant number who are in sub-household size groups. Table 10.1 suggested that the proportion in wholly moving households may have fallen between 1991 and 2001, although changes to the population base and the way in which migrants with an unstated origin were processed mean that this interpretation must be cautious. An obvious question arises: do migrants in different sorts of groups (both in terms of size, and in terms of whether the group formed a wholly moving household or not) have different mobility patterns? If they do, then the distinction offered in the 2001 Census between different sorts of groups is a useful and important one; if they do not then disaggregation by group type and size is an unnecessary complication of the output tables that would serve only to confuse users.

In order to compare the characteristics of migrants at a national scale in different groups, connectivity indices (Bell et al., 2002) were constructed for wholly moving groups, and for other groups which did not form a wholly moving household. Index values were calculated for all groups at the district level. A connectivity index is a simple measure that shows the extent to which any one place is connected to other places through migration. If the index for any location is equal to 1.0, then that place is connected to all other places in the universe of interest (that is, it has a non-zero observed flow to or from all other locations); if the index has a value of 0.0 then that location is connected to no other places. Separate sets of indices were constructed from an origin perspective and from a destination perspective. A high origin-specific index means that the location sends migrants to a large number of other locations, and a high destination-specific index indicates that the location receives migrants from a large number of other locations. The index value is dependent on the spatial scale for which it is constructed: the coarser the geography, the higher the index values will be. However, given a fixed geographic scale, it provides a simple mechanism for comparing flow characteristics.

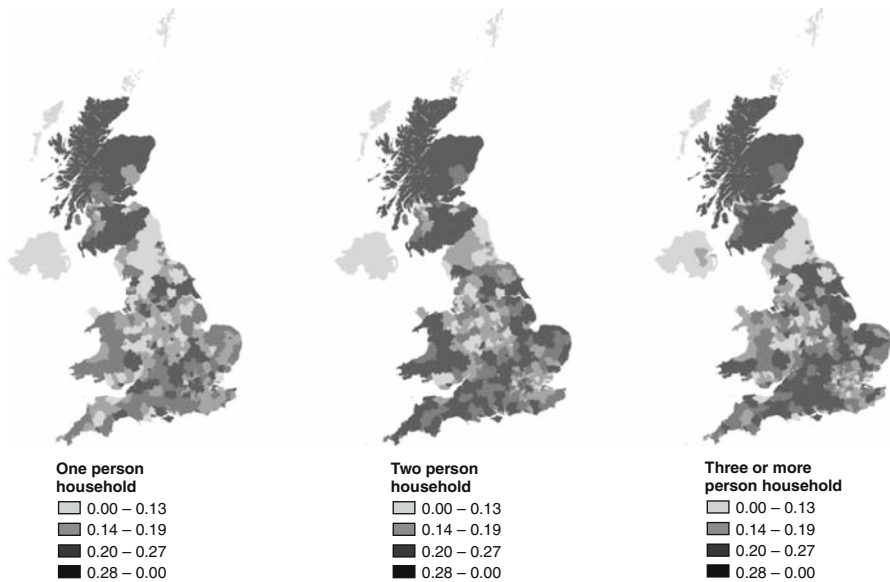


Fig. 10.2 Migration destination connectivity index values for wholly moving households; 2000–2001 (a) Single person households (b) Two person households (c) Three or more person households

(Source: Author's analysis based on census data.)

Figure 10.2 shows the values of the destination-specific connectivity index for wholly moving households consisting of (a) one person, (b) two people and (c) three or more persons. The shading scheme is different for each map, and in each case is based on result quartiles: the darkest shaded areas are the 25% of districts with the highest destination-specific connectivity values. In absolute terms, there is a steady decline in connectivity as the group size increases: connectivities are higher for single person households than for two person households, and in turn, connectivities are higher for two person households than for three person households. Two features are apparent in this set of maps. Firstly, districts in Scotland have high connectivity values, and secondly, the spatial pattern elsewhere is variable.

The high levels for Scottish Council Areas are in part an artefact of the statistical disclosure control methods applied to the interaction (and other census) data, although some Scottish destinations are popular of course and thus well connected to other locations. The data were subject to a statistical disclosure control method termed SCAM, the small cell adjustment methodology (Duke-Williams and Stillwell, 2007). Small values (the definition of small was not disclosed by the census agencies but was widely understood to be the values 1 and 2) in the original data were modified to become either value 0 or 3. However, this procedure was not followed in Scotland, including those parts of the SMS that related to destinations in Scotland. Thus, a significant number of small flows (which might otherwise

have been changed to 0) remained present in the data relating to Scotland, with the result that more distinct flows were observed in the published data for Scottish destinations.

The patterns of destination connectivity outside Scotland are not affected in this way, and are thus of more direct interest. The maps shown in Fig. 10.2 show a shifting pattern of destination preference given group size. A good example of this is for London and the surrounding area – this has high connectivity values for single person households: people who were living on their own at the time of the 2001 Census, and had been migrants in the preceding year, had moved there from a wide range of origin districts. This is less marked for two person households, and there is a low connectivity ‘hole’ around London for wholly moving households of three or more persons. This finding indicates that people in larger wholly moving households moved to the London area from a limited set of origins; it does not necessarily indicate a difference in the absolute numbers of households or persons involved. Another visual effect that is clear on the map is that the darkest shaded areas appear to take up more space for the larger groups. This is because the areas in the highest connectivity quartile are larger less urban districts. The inverse of this is less immediately visually obvious: that for single person households, those districts with the highest connectivity index values tend to be small urban districts.

In order to determine the extent to which flow patterns differed by group size, by wholly or partly moving status, and by origin or destination specificity, correlation coefficients were calculated for various sets of migration connectivity indices. A high coefficient indicates that the pairs of connectivity indices are similar: that each zone under consideration dispatches (or receives) migrants from a similar number of areas. Thus, if the connectivity indices have a high correlation, those areas in the first group that are highly connected are also highly connected in the second group, whilst those areas that are poorly connected in the first group are also poorly connected in the second group. It does not necessarily mean that each pair of areas being compared are connected to the same partner areas.

Table 10.3 shows the correlation coefficients for each pair of origin-specific migration connectivity indices. Comparisons are made for all groups (i.e., one person against two persons, one person against three plus persons and two persons versus three plus persons) within the wholly and partly moving sets, and for each same-size group where wholly and partly moving groups are compared. Comparisons within each ‘family’ (‘wholly moving households’ or ‘other groups’) explore the effect of group size on behaviour, accounting for any wholly or partly moving differences; comparisons between these families explore the effect of wholly versus partly moving status whilst accounting for group size. The correlations for the origin-specific values are lowest (suggesting different patterns of movement) within the sets of ‘other groups’ – those who did not form wholly moving households. This suggests a difference in origin connectivity for these ‘other groups’: areas that are highly connected (that is, distribute migrants to a large number of destinations) for single persons, are not necessarily highly connected for larger groups. This difference is most marked when single person groups are compared with groups of three

Table 10.3 Comparison of correlation coefficients for origin-specific values

		Wholly moving households			Other groups		
		1	2	3+	1	2	3+
Wholly moving households	1 person	–	0.94	0.88	0.94	–	–
	2 persons	–	–	0.93	–	0.90	–
	3+ persons	–	–	–	–	–	0.87
Other groups	1 person	–	–	–	–	0.87	0.74
	2 persons	–	–	–	–	–	0.88
	3+ persons	–	–	–	–	–	–

Source: Author's analysis based on census data.

or more persons. The indices are more strongly correlated for wholly moving households: areas that are strongly connected for single persons also tend to be strongly connected for larger groups.

Equivalent results are shown for destination-specific connectivity indices in Table 10.4. Almost all coefficient values are lower for the destination-specific index comparisons than for the equivalent comparisons amongst origin-specific values. This suggests greater variation by group size and by wholly/partly moving status when migration is viewed from the destination perspective – areas that are strongly connected as destinations (that is, they receive migrants from many other districts) are not necessarily strongly connected if the group size or type changes. This is most marked for the comparison of wholly moving households, in particular for single person households in comparison to households of three or more persons.

The final set of correlation coefficients are shown in Table 10.5. These show the comparisons of origin versus destination-specific values for fixed group size and group type. The coefficient values decrease with group size for both group types, indicating that the larger the group size, the greater the difference in origin and destination-specific patterns. Given that the origin-specific values have a strong within-type correlation, this suggests that destination choice is more selective as group size increases.

Table 10.4 Comparison of correlation coefficients for destination specific values

		Wholly moving households			Other groups		
		1	2	3+	1	2	3+
Wholly moving households	1 person	–	0.74	0.64	0.90	–	–
	2 persons	–	–	0.86	–	0.67	–
	3+ persons	–	–	–	–	–	0.73
Other groups	1 person	–	–	–	–	0.88	0.70
	2 persons	–	–	–	–	–	0.81
	3+ persons	–	–	–	–	–	–

Source: Author's analysis based on census data.

Table 10.5 Comparison of correlation coefficients for origin and destination specific values

		Destination-specific					
		Wholly moving households			Other groups		
Origin-specific		1	2	3+	1	2	3+
Wholly moving households	1 person	0.86	–	–	–	–	–
	2 persons		0.58	–	–	–	–
	3+ persons			0.52	–	–	–
Other groups	1 person				0.93	–	–
	2 persons					0.87	–
	3+ persons						0.69

Source: Author's analysis based on census data.

The importance of these correlation coefficients lies in the degree to which they indicate that connectivity patterns are not correlated when two migrant populations are compared. If two populations (either different group sizes, or different group types) have a high correlation, it suggests that their mobility patterns are similar, and the more similar they are, the less need there might be for separating results by group type. However, where the correlation is low, the results suggest that there are differences (in connectivity at least) by group type or size. Tables 10.3 and 10.4 explored this issue. Coefficients were lower for destination-specific indices than for origin-specific indices, indicating that group size was important when considered from this perspective. Table 10.5 summarised differences when origin and destination-specific indices were compared. Correlation coefficients were lower for wholly moving households and also decreased as group size increased. These results indicate that out-migration is not a reliable indicator of in-migration, and further that this becomes more true for larger groups of migrants.

Reasons for Moving

The previous section of this chapter used the 2001 SMS to examine differences in migration behaviour by group size, group type and origin/destination perspective. Whilst the census data are spatially detailed and refer to a large sub-population, they are limited with respect to migration analysis in that they do not offer any direct information about people's status prior to migration, or for the reasons that they might have had for migrating. In order to investigate these aspects, the BHPS data were used.

The BHPS consists of numerous waves of data. Due to sample attrition, the sample size has tended to fall with each wave. Waves J and K (the tenth and eleventh waves) were selected for analysis despite this attritional aspect, because they roughly match the transition period over which the census identified migration. Wave J was collected in the period 2000–2001, and wave K collected a year later.

An initial comparison of data in wave J with results from the 2001 Census allows the general characteristics of the data sets to be compared. Figure 10.3 shows the age

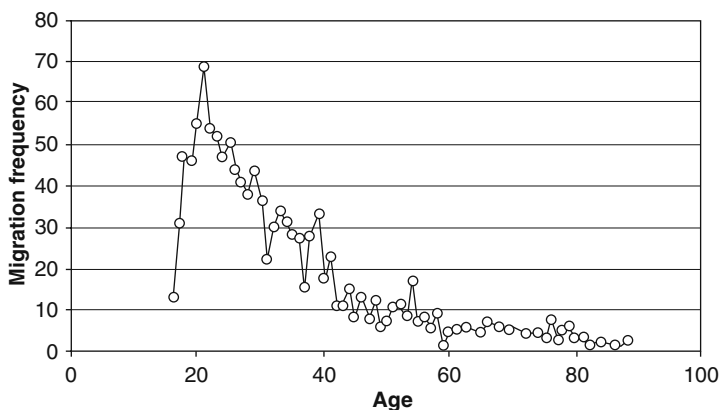


Fig. 10.3 Age profile of BHPS migrants
(Source: BHPS wave J; author's calculations.)

profile of migrants recorded in the BHPS, identified as movers within the past 12 months at the time of interview. Owing to the nature of the BHPS sample, children are not included in this graph and, for other age groups, the data show a similar distribution to those of migrants observed in the 2001 Census (Fig. 10.1) but for individual ages rather than quinary age groups. The data for wave J show interesting variations within quinary age groups but, although they include the region of former residence for migrants as well as the region of current residence, they are too limited to generate a usable migration matrix which might be compared to the equivalent matrix from the census data.

One interesting aspect of the BHPS data is that all persons – not just recent migrants – are asked about the date at which they moved to their current residence. The results of this question are shown in Fig. 10.4 for (a) all migrants in the data set and (b) those migrants who moved to their present residence in the last 30 years. Figure 10.4a is dominated by a large spike of recent migrants, and thus in Fig. 10.4b the number of migrants is shown using a logarithmic scale in order to make trends more visible. The graphs are dominated by recent moves. This is to be expected, as the question refers only to the most recent change of residence; those who have changed residence have probably done so recently, although this observation does not indicate when any other moves had previously been made.

The dominance of recent migration events means that comparisons of migration behaviour between the BHPS and the 2001 Census have a reasonable degree of validity: both data sets are focused on recent migrants.

Expectation of Moving

The BHPS survey includes two prospective questions about mobility: respondents are asked whether they would prefer to move away from their current residence,

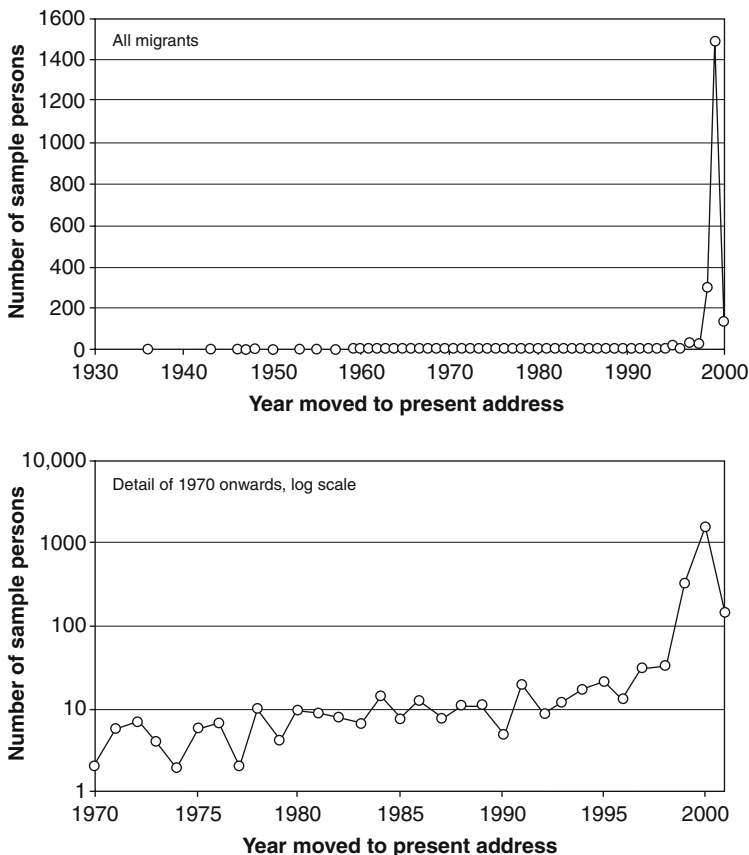


Fig. 10.4 Year moved to present address by BHPS migrants (a) All migrants (b) detail 1970 onwards, log scale
 (Source: BHPS wave J; author’s calculations.)

and also whether they expect to move within the next 12 months. Table 10.6 shows the separate and joint responses for these two questions. Of all persons with a valid answer, 33% indicated that they would prefer to move house. However, there are obvious constraints to mobility including occupational, domestic and social ties as well as financial considerations which mean that a general desire does not necessarily mean that a person really intends to move. Of the same respondents, 14% said that they expected to move within the next 12 months. The main part of Table 10.6 shows the expectations of persons with different preferences: of all those who preferred to move, 64% did not in fact expect to move. There was closer correlation, as might be expected, for non-movers: of those who preferred to stay where they were, 91% did not expect to move within the next 12 months.

Preference for a move varies by many characteristics, including age and household type. Table 10.7 summarises the proportions of persons expressing a preference for moving by gender and household type, for four age groups. In each row,

Table 10.6 Preference for and expectation of moving

Prefer to move?	Expect to move			Total (100%)
	Don't know (4%)	Yes (14%)	No (82%)	
Don't know (1%)	19%	18%	63%	191
Stay here (66%)	2%	6%	91%	9,915
Prefer to move (33%)	8%	29%	64%	4,975
Total	641	2,073	13,367	15,081

Source: BHPS wave J; author's calculations.

Table 10.7 Preference for moving

Prefer to stay	Age group				
	All ages	16–24 %	25–44 %	45–64 %	65+ %
<i>By gender</i>					
Male	7,177	57	54	66	78
Females	8,426	54	58	69	79
<i>By household type</i>					
Single non-elderly*	1,085	55	50	62	67
Single elderly*	1,237	–	–	75	84
Couple: no children	4,406	53	–	73	79
Couple with dependent children	4,563	60	60	70	90
Couple with non-dependent children	1,839	57	56	71	82
Lone parent with dependent children	795	53	52	57	64
Lone parent with non-dependent children	536	66	50	69	85
2+ unrelated adults	356	58	54	52	80
Other households	262	47	50	68	72

* - 'Elderly' is gender-specific retirement age. A small number of persons are mis-coded as elderly when aged 64, and as non-elderly when aged 65.

Source: BHPS wave J; author's calculations.

the table shows the percentage of persons in that category (male, female, *et cetera*) of that age group, who indicated a preference to stay. All persons in all households are included in this comparison. An 'all ages' base is shown for each category, indicating that the numbers of persons in each age group vary by category. In all cases, the strongest preference for staying is found amongst the oldest age group, and in most cases the lowest preference for staying is found in the age group 25–44. The highest preference for staying across all ages is found for persons in a couple family with dependent children.

Realisation of Expectation

The results described above were obtained by studying a single wave of the BHPS data. By linking more than one wave of panel data, it is possible to study changes

Table 10.8 BHPS: Individual mover status at wave K by preference expressed at wave J

Preference	Individual mover within GB status		Total
	Non-mover (%)	Mover (%)	
Don't know	86	14	164
Stay here	95	5	9,068
Prefer to move	82	18	4,395
Total	91	9	13,627

Source: BHPS waves K and J; author's calculations.

that occur in the lives of respondents. The BHPS includes both prospective questions about migration – described above – and retrospective questions: did people move, and if so why did they do so, *et cetera*. This combination permits the investigation of the extent to which intentions of migration are realised in practice. In order to examine this issue, wave K was joined to wave J through the available linking variables. The resulting records were a subset: those persons present in wave J who were also present in wave K.

Having linked the data, the observed responses for migration preference and expectation at wave J were cross-tabulated with the individual move status of the same individuals when interviewed at wave K. Table 10.8 shows the actual migration behaviour of individuals in the 12 months before being interviewed for wave K, given the preferences that they expressed a year earlier in wave J. The results are broadly similar to the cross-tabulation of preference versus expectation for wave J in isolation. Of those who preferred to move, 82% were in fact non-movers. When wave J was considered in isolation, 64% of those who preferred to move did not expect to move. Of those persons who preferred to stay where they were, 95% were non-movers in practice: this closely matches the figure of 91% in wave J for those who preferred to stay where they were, and did not expect to move.

It might be assumed that those who said that they expected to move were more likely to do so. Table 10.9 shows the actual migration behaviour of individuals in wave K, given the expectation of doing so that they expressed a year earlier in wave J. Those who did not expect to move overwhelmingly did not: 97% were non-movers. Of those who said that they did expect to move, only 47% actually were movers. This is a much larger translation from expectation to realisation than was the case for those that simply had a preference for moving, but indicates that simple expectation of movement is not a hugely reliable indicator of actual behaviour.

It is possible that the comparison of mover status for those that expected to move will under-estimate the true conversion of expectation to realisation of migration, due to unforeseen delays in the process of moving – problems in selling or buying a property, or the need to wait for a tenancy agreement to expire. In order to examine whether there was a deferred conversion from expectation to realisation, a third wave – wave L – was further linked to the combined data set, and the mover status for persons at wave L were considered in the context of expectations expressed at wave J. Table 10.10 shows the results of this comparison. Of those who stated in

Table 10.9 BHPS: Individual mover status at wave K by expectation expressed at wave J

Expectation	Individual mover status		Total
	Non-mover (%)	Mover within GB (%)	
Don't know	86	14	561
Yes	53	47	1,679
No	97	3	11,387
Total	91	9	13,627

Source: BHPS waves K and J; author's calculations.

Table 10.10 BHPS: Individual mover status at wave L by expectation expressed at wave J

Expectation	Individual mover status		Total
	Non-mover (%)	Mover within GB (%)	
Don't know	84	16	385
Yes	73	27	696
No	95	5	9,101
Total	93	7	10,182

Source: BHPS waves K and L; author's calculations.

wave J that they expected to move within the next 12 months, 27% moved in the period between waves K and L, roughly 12–24 months after the initial interview.

Some of these people may also have moved in the period between waves J and K: a three way comparison was not done due to the overall limited numbers of persons involved. Assuming that a majority of the movers between K and L had *not* also been movers between J and K, it appears that there was a limited degree of deferred realisation of the initial expectation, although probably enough at least to state that a majority of those who expected to move had completed a move within the two years following wave J.

Reasons for Moving

As well as including questions about intentions to move and actual moves, the BHPS survey also includes both prospective and retrospective questions about reasons for moving. Those individuals who stated that they would like to move are routed to additional questions about the reasons for this, and those individuals who indicate that they have moved are similarly routed to questions asking about the reasons for the move. Through linking successive waves of data, it was possible to compare stated reasons for moving (for those that did move) for two different groups: those who expected to move and did so, and those who did not expect to move, but in practice did so. The second group will include people who were in some way forced into moving for some unexpected reasons. An initial question in the survey routing asked whether people moved for employment reasons; for those who answered 'no'

Table 10.11 Stated reasons for moving, by household type

Household type	Most commonly stated reason	% within h'hold type	H'hold type base
Single: non-elderly	Move to college	17	160
Single: elderly	Health reasons	22	37
Couple: no children	Move in with partner	20	340
Couple with dependent children	Larger accommodation	28	364
Couple with non-dependent children	Smaller accommodation	15	41
Lone parent with dependent children	Split from partner	25	55
Lone parent with non-dependent children	Split from partner	20	20
2+ Unrelated adults	Evicted, repossession	23	73
Other households	Other	22	23

Source: BHPS wave K; author's calculations.

supplementary questions were asked about other reasons. Moves for employment reasons were low for both groups: 20% of those who had expected to move identified the reason as employment related, whilst 10% of those who had not expected to move cited employment reasons. A wide variety of reasons were given including relationship formation and relationship breakdown, and moves to either larger or smaller accommodation. There is no obvious pattern to the set of reasons stated if they are considered simply as set ranked on the basis of how often they were identified.

One reason for this is that reasons for moving depend strongly on life stage, and changing occupational and social issues related to life stage. Table 10.11 shows the most commonly cited reason for moving given by individuals in wave K, disaggregated by household type. The results are perhaps surprisingly stereotypical, although the degree to which any particular reason dominates varies by household type. The table only shows the most commonly cited reason: in some cases other reasons were cited almost as frequently; for example for the household type 'lone parent with non-dependent children', eviction and moving in with family were as common as 'split from partner'

It is striking that the most commonly stated reasons fit an assumed model of life-stage: for a couple with no children, the most commonly stated reason for migration in the past year was to move in with a partner – presumably a new relationship formation with the current partner. Couples with dependent children stated that they have moved in order to gain larger accommodation – presumably as a result of a growing family, whilst couples with older (non-dependent) children stated that they moved to smaller accommodation. For lone parents – whether with dependent or non-dependent children, the most commonly stated reason was due to a split from a previous partner. Somewhat neatly, for 'Other households', the most commonly stated reason was 'other'.

Change in Circumstance

A drawback with using census data for migration analysis is that it is a cross-sectional snapshot, whilst migration is a process enacted over time. Furthermore, migration is often associated with significant changes in circumstance: a change in occupation or family structure for example. As a panel study, the BHPS is very useful for examining changes that have occurred over the same transitional time frame as used to identify migration events. Table 10.12 shows net changes in proportions of persons in different Registrar General's social class groups between the two waves analysed. The table is split into two groups: those who had moved in the 12 months preceding wave K, and those who had not.

The proportionate changes for the movers are larger than for the non-movers, although in some cases this may be an artefact of the smaller numbers involved in the migrant group. The overall figures suggest that migration is linked to upward social mobility: the highest two groups grew in size, whilst others had a net decrease. Closer examination of this apparent effect can be seen by constructing a social class transition matrix.

Table 10.13 shows the net changes between social classes for individuals in waves J and K of the BHPS. Thus, there was a net shift of three persons from managerial and technical occupations to professional occupations. The largest net change is from skill non-manual to managerial and technical.

Table 10.12 Change in Registrar General social class between BHPS waves J and K, by mover status

Social class	Movers			Non-movers		
	Wave J	Wave K	Change (%)	Wave J	Wave K	Change (%)
Professional occupations	46	50	9	351	345	-2
Managerial & technical occupations	233	252	8	2,137	2,200	3
Skilled non-manual	177	170	-4	1,636	1,630	0
Skilled manual	146	137	-6	1,358	1,329	-2
Partly skilled occupations	110	105	-5	958	947	-1
Unskilled occupations	26	25	-4	295	285	-3
Armed forces	1	0	-100	7	6	-14

Source: BHPS waves J and K; author's calculations.

Conclusion

The research described in this chapter has explored different aspects of group related migration. If an indicator such as the index of migration connectivity is mapped for different group types and sizes, there appear to be differences in the patterns shown, although the extent of these differences does vary. These differences were made more clear in the set of comparisons of correlation coefficients between different

Table 10.13 Net transitions between social classes by movers between BHPS waves J and K

Movers	Professional occupations	Managerial & technical occupations	Skilled non-manual	Skilled manual	Partly skilled occupations	Unskilled occupations	Armed forces
Professional occupations	0						
Managerial & technical occupations	3	0					
Skilled non-manual	0	17	0				
Skilled manual	0	6	6	0			
Partly skilled occupations	1	-2	2	1	0		
Unskilled occupations	0	1	2	1	-3	0	
Armed forces	0	0	0	0	0	0	0

Source: BHPS waves K and J; author's calculations.

observations. For origin-specific connectivities, migrants moving as wholly moving households were closely correlated regardless of group size, whereas migrants moving in other groups were less closely correlated – suggesting that these ‘other’ groups are more diverse. The same was not true when destination-specific connectivities were compared: results were slightly less closely correlated for wholly moving groups than for other groups. However, the most significant observation is that all destination-specific sets of comparisons exhibited lower correlation coefficients than was the case for the origin-specific comparisons. The relationships between origin and destination-specific correlations was most marked, with a clear decline in correlation as group size increases. Thus, for single-person groups, areas sent migrants to and received them from a similar number of areas, but as group size increased, this became less common.

The census data were useful in establishing the existence of patterns based on group size and type, but due to the nature of the census they do not indicate anything about the reasons for migration. The BHPS data were useful in this regard. There were clear links in the results between household type, acting as a proxy for life stage, and the most commonly cited reason for migrating for persons in each household type. Indeed, the relationship was so stereotypical that Table 10.10 could easily be re-arranged in chronological order, with parallel paths through couple or single parent status. Through being a panel study, individuals' circumstances could be compared before and after a migration had occurred. The analysis showed changes in social class that were associated with migration. It is not easy to establish a causal link for such changes – Do they come about following, and because of, a migration? Do they happen first and cause a migration? – and any causal relationship is likely to vary between groups. A further aspect of census data (or any similar retrospective transitional data) is that by its nature it only gathers data on successfully completed

migration events. The BHPS data allowed investigation into cases in which people expressed a wish to migrate, but did not in fact do so. The research demonstrated and quantified differences in the expectation and subsequent realisation of migration. Further work in this area – assessing those who did not migrate – may be useful in investigation of the constraints on migration.

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Chapter 11

Exploring Dimensions of School Change During Primary Education in England

Joan Wilson

Introduction

Schools contribute to both cognitive development and the formation of non-cognitive attributes in children. Cognitive ability concerns the knowledge procurement process and involves the capacity to engage in thought and reason and to exercise perception, judgement and awareness. Cognitive skills derive largely from family influences and are enhanced by exposure to learning in education institutions (see Heckman, 2000; Dearden et al., 2004). Observable measures of schooling outcomes such as standardised tests capture both innate and acquired cognitive ability (Postlewaite and Silverman, 2006).

That part of child cognitive development linked to education depends on the types of schools available in the locality and the accessibility of these schools by different households. School accessibility in an area varies according to whether institutions are centrally funded by the government (state schools) or require the payment of fees (independent or private schools). The focus of this chapter is on the state school system, where entry depends on the satisfaction of school admissions criteria and overall intake is constrained by the pupil capacity limits faced by each school. Excess demand for places necessitates additional joining conditions, the most significant of which involves the proximity of a pupil's residence to the school. At the household level, travel costs and school quality considerations, amongst other factors, result in preferences for entry into some local schools above others. Minimisation of travel costs implies attendance at schools that are geographically close to the home, or that can fit into the travel-to-work patterns of employed household members. For pupils within households the quality of the school attended shapes cognitive learning and affects the life course, since education outcomes are carried through to the labour market (see Adnett and Davies, 2002). Differences in classroom teaching methods,

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teacher quality, available subjects, the gender composition and social mix of pupils all vary from school to school and affect overall school quality.

Non-cognitive, or life-skills – such as self-assurance, motivation, interpersonal attributes and general emotional intellect (Carneiro et al., 2006; Heckman and Rubinstein, 2001) – are a function of internal home experiences, schooling, and the external neighbourhood surroundings to which a child is exposed. At home, parent-child interactions instil the family norms, values, attitudes and behavioural responses that impact on child non-cognitive development. Within the school these skills relate to the nature of friendships and peer group communications that the child engages in – both inside the classroom and when interacting with other year groups – in addition to the overall ethos of the school. Outside of the school, residential location affects notions of opportunities that exist beyond educational years through the amount of social capital and adult role model influences that are present in the home surroundings, impacting on child academic aspirations and persistence (see Glaeser, 2001). Research has revealed that life skills acquired by individuals are advantageous not only to the individuals themselves but also to society as a whole, since they encourage the formation of socialisation attributes and can reduce deviant behaviour, like involvement in crime, or minimise individual exposure to risk factors, such as unemployment or teenage motherhood (Carneiro et al., 2006).

In general the intertwined cognitive and non-cognitive facets of child progress react to and depend upon the local provisions of services relating to schooling, housing and other community inputs. Changes to these spatial dimensions can produce differences in the life chances of children by affecting both their cognitive and non-cognitive development. In terms of schooling, spatial change may involve attendance at a different school whilst remaining in the current residential location, or may relate to a change of school occurring together with a move of home. To date there has been limited research examining the varied aspects of moves between schools. These seem necessary to understand if consideration is made for the importance of schools to child development.

In this chapter features of school moves excluding and involving home moves will be described and assessed for one cohort of pupils as they progress through the primary years of schooling that encompass Key Stage 1 (aged 6/7) to Key Stage 2 (aged 10/11) National Curriculum examinations. The empirical source of reference for this analysis is the National Pupil Database (NPD), which comprises of an annual collection of administrative records on all state school pupils in all phases of education throughout England since the academic year 2001/2002. The aims of this research are: (i) to establish a means for defining ‘pure’ pupil mobility, in which pupils change schools without moving home; (ii) to estimate the extent of school moves made according to the definition(s) employed, and (iii) to assess the relation between school switches and residential change, referred to throughout as ‘school-home moves.’

The section that follows, “Literature on Mobility”, introduces evidence on the common way of classifying and measuring pupil mobility identified in the literature and on the amount of school moves witnessed according to this method. Much of the literature uses a composite approach in which no distinction is made between

school change that does and does not involve a move of home. In the section entitled “Mobility and Government Education Policy”, recent government initiatives in the education sector are described. These have involved an attempt to widen the scope of education institutions that pupils can access from the *current* home location. At the same time, performance indicators on the academic standards of schools have been made publicly available, promoting the notion of parents ‘choosing’ a school for their child to attend. All of these schemes have the potential to break the link between school and home mobility, suggesting the need to separate out the components to the composite measure of school change referred to in the literature.

In the “Primary Schools in England and Admissions Policies” section, a discussion of the primary school set-up in England is presented as a precursor to the empirical focus. For pupils in LEA-governed state primary schools, the operation of school choice is counteracted by so-called ‘over-subscription criteria’ that are employed in the event of applications to a school exceeding available places. These criteria can serve to reinstate the school-home connection theoretically forged apart by school choice, implying the importance of understanding the extent to which school changes involve home moves and how their amount compares to isolated school shifts.

The section “Mobility in the National Pupil Database” details both the structure of the NPD and the Key Stage 1–2 cohort of primary school pupils attending state schools in England, who make up the empirical source of reference for this chapter. Section “Measuring Mobility in the KS1-2 Cohort” describes the means for measuring dimensions of school mobility in this cohort and establishes the sample size under analysis. This is followed by the “Estimating School Moves and Home Moves” section, where such estimates are presented according to both the composite measure, and to measures that divide school change only from combined school-home moves. This empirical section highlights the loss of valuable detail on mobility patterns that is brought about when only a composite indicator of school moves is estimated. The richness of the NPD data source allows for assessment of the extent to which pupils enter over-subscribed schools and how this relates to both the kind of school move that they make and the type of state school that they enter; evidence on these aspects is also included in the empirical part. Finally, the section “Limitations of the Analysis” acknowledges the limitations of the analytical work and the “Conclusions and Further Work” section concludes with a discussion of the wider implications of this work as well as areas for further research.

Literature on Mobility

The movement of pupils between schools has been discussed in literature concerned with the sociology of education and the management of schools as early as the 1960s (see for example, Plowden, 1967, and Douglas, 1964). In England, the first large-scale study of the nature and causes of school change was undertaken by Dobson and Henthorne (1999). Their project involved the collation of general Local

Education Authority (LEA) statistics on pupil mobility in schools, for which they attained details from 130 out of 150 of the surveyed authorities. The authors identified four main causes of school change: international migration, internal migration, individual movement and institutional movement. Both international and internal migration are driven mainly by household employment factors, while individual movement relates to changes in family circumstances which necessitate children moving between homes. Of direct relevance to the focus of this chapter is institutional movement, which involves children changing schools by choice, or transferring between differing school types, such as special and mainstream schools.

Though their analysis addresses mobility at the LEA-level, Dobson and Henthorne (1999) also provide a general definition of mobility at the level of the individual pupil. This is stated as “a child joining or leaving a school at a point other than the normal age at which children start or finish their education at that school – *whether or not this involves a move of home*” (p. 5, original emphasis). Thus, pupils who switch schools at times other than when transferring from primary to secondary school, for example, are included in the measure. This definition of school movers is applied in many studies that assess mobility, especially those concerned with the impact of school change on own-pupil educational attainment (see for example Blane, 1985; Strand, 2002; Burgess et al., 2006). If one considers the potential for this relationship to differ according to the form of mobility involved then the use of such a general definition could be problematic. In this respect isolated school changes, isolated home changes, or combined moves may exert varying effects on attainment rather than having an overall clear-cut consequence.

To date there has been little research undertaken that differentiates between school moves of various kinds, primarily due to a lack of available data that provides detailed coverage of moves and information on their nature. Previously co-authored work (Machin et al., 2006) has utilised the National Pupil Database (NPD) – a state-school-level Census of pupils on roll in January of each academic year – to address mobility patterns, where an allowance is made for differing mover types. School moves across two waves of the Pupil-Level Annual School Census (PLASC) component dataset to the NPD are studied, as is residential mobility behaviour associated with in-school children, from the stance of whether there are coincident changes of home residence occurring in line with pupil mobility. Table 11.1 details school moves that involve a change of residence for pupils moving schools between 2001/2002 (the first wave, or year, of PLASC) and 2002/2003. Moves of school attended are identified by changes to the code of the school recorded in the PLASC data between the two years, and refer only to those non-compulsory school changes rather than expected school shifts, as per Dobson and Henthorne (1999). Residential moves reflect home postcode changes over the same period.

In the analysis of mobility patterns across all stages of education, the national dataset used in this paper revealed that just over 900,000 school children switched schools across the two PLASC years, equal to roughly 16% of the total of almost 5.9 million pupils sampled. Of these, just over a quarter of a million, or 4.4% of school changes were made at non-standard time points during the academic year. It was found that non-compulsory school changes occur most often in the transition

Table 11.1 Proportion of school movers moving home by year group and key stage (KS)

Year group	Total school movers (1)	Residential movers (2)	Proportion residential (3)
1–2	40,897	27,387	0.670
2–3	30,681	20,527	0.669
KS 1 average			0.669
3–4	39,606	25,188	0.636
4–5	37,007	22,948	0.620
5–6	32,577	20,984	0.644
6–7	8,808	2,365	0.269
KS 2 average			0.606
7–8	20,894	11,706	0.560
8–9	20,555	10,688	0.520
9–10	17,225	9,042	0.525
KS 3 average			0.536
10–11	8,815	4,274	0.485

School movers are pupils moving school other than at compulsory times. The remaining non-compulsory movers between years 6–7 (when the move to secondary school occurs) reflect pupils attending middle school who leave later than year 6. Column (1) shows total year group numbers when both the REE school code and the home postcode are available for both academic years for the pupil.

Source: Adapted from Machin et al. (2006, p. 264, Table 4).

from school Year 1 (aged 5/6 in 2001/02) to school Year 2 (aged 6/7 in 2002/03) at a rate of 7.3%, and that, overall, mobility was considered to be more prevalent in the primary school stage of education. Table 11.1 shows that more than half of those pupils switching schools also changed residence in almost all year group transitions (except for between years 6 and 7 and years 10 and 11). Residential transfers were higher in the primary school years, particularly in the years leading up to and including the Key Stage 1 examinations (taken at the end of year 3, aged 6/7), at an average of 70% for the two year groups involved (column (3)).

This evidence suggests that the school changing process is complex and analysis of mobility patterns warrants consideration of the different forms moving can take. In the section that follows, this point will be further highlighted in reference to recent developments in government education policy, which have acted to affect the nature of school moves made.

Mobility and Government Education Policy

School admissions systems can be broadly categorised into two main approaches to schooling provision, namely community-school models and parental-choice models. In a community-based model, schools serve only local community pupils and admission is determined purely by residential location, typically within the limits of

a defined geographical 'catchment' area that comprises of pupils inhabiting homes of close proximity to the school concerned. In the choice-based model admissions are weighted towards parental preferences, so that parents are given more freedom and input over the education exposure of their children. This model of education provision incorporates a wider local area and is not restricted to place allocation in schools nearby the home (Gibbons et al., 2006).

In recent decades, the UK government has enacted reforms pushing state school education provision towards the choice mode as opposed to the more traditionally featuring community system, resulting in the current existence of a hybrid education service. A 'quasi-market' for the provision of education based on school choice was first introduced through the 1988 Education Reform Act. Justifications for this policy shift lie in the perceived merits of incentive mechanisms existing in a competitive market place characterised by parental choice and the ability of these devices to drive up standards in education. The application of parental choice and school competition to the state school system has featured the formation of market-based incentive mechanisms in school enrolment and school performance. In terms of enrolment, school funding is linked to the number of pupils on roll at the school. At the institution-level, league tables of performance have been supplied to the public since 1996 (1994) for primary (secondary) schools, providing accountability information on the academic achievement of schools in standardised tests relative to both nationally defined education targets and to other schools in the local area. Taken together, these two changes mean that parents are enticed into 'shopping around' for a local education supplier most satisfying the preferences and pedagogic needs of their children and schools, in order to maximise their revenue funding, are encouraged to actively engage in market-like competition for pupils as a result of the policy reforms (Tiebout, 1956).

Theoretically one would expect that more transparency in the relative academic performance of local schools and a greater parental freedom to choose amongst a wider range of differing education providers within the same local area would affect spatial mobility that relates to schooling, as parents attempt to take advantage of opportunities for improving the learning circumstances of their children. Under effective policy, localised changes in the school attended should be feasible without such moves necessitating changes of home. More specifically, the emphasis on parental choice in education provision put forward by recent government policy represents an attempt to sever the link between where a child lives and the range of schools that s/he is eligible to attend, a situation imposed by the historical prevalence of education provision under the community-school model. Instead school choice aims to forge a link between the demand for and the supply of local education services, by offering more school alternatives *conditional* on pre-existing family residential location (Gibbons and Silva, 2006a). Then it is conceivable to suggest that such initiatives may have introduced or strengthened an element of spatial activity in which pupils change schools whilst remaining in the same place of residence, namely 'pure' pupil mobility.

To date empirical evidence on 'pure' school moves is limited, since the common way of assessing pupil mobility in the literature has thus far failed to distinguish between school moves *only* and those that involve changes of home. Given that

government policy has targeted disconnection of the home-school link, evidence on the distinct amount of moves of each type appears important. Hence the empirical section that follows will incorporate the redefinition and re-measurement of school shifts, dividing them up between ‘pure’ pupil mobility and ‘school-home moves.’ One cohort of Key Stage 1 to Key Stage 2 pupils aged between 6 and 11 and engaged in the state Primary school phase of education in England will be extracted from the NPD for this purpose. Prior to the presentation of empirical findings, the following section provides a brief description of the structure of Primary schooling, before going on to address why this education stage is of particularly high relevance to the mobility discussion.

Primary Schools in England and Admissions Policies

Primary schools in the state or ‘maintained’ schools sector in England are organised into one of four categories – Community, Foundation, Voluntary-aided (VA), and Voluntary-controlled (VC) – where variation reflects structural differences in governance, ownership, and pupil admissions policies, as summarised in Table 11.2. The Table shows that Community schools represent the predominant form of state-provided primary schooling in England, catering for close to 60% of all primary-age pupils. VA and VC schools supply education services to nearly 24% and almost 15% of primary-age pupils respectively, with Foundation schools accounting for the remainder (just above 2%).

In terms of *governance*, the governing body (or board of school governors) of a primary school is responsible for the overall management of the school – that is it “sets the strategic direction of the school, draws up school policies, sets targets and monitors performance” (Gibbons and Silva, 2006b, p. 8) – whilst responsibility for daily school management falls on the leadership group. In all state primary schools, pupil funding (which is based on pupil enrolment numbers and characteristics) is channelled from central government to each school through the LEA. VA and VC schools are commonly attached to a ‘Foundation’, comprising of a charitable (including faith) or a business organisation. Foundation schools themselves, on the other hand, tend to operate with local organisations on a partnership basis. Overall *ownership* of school assets (the land and buildings) can belong to the LEA or to the school governors and the principal employer of staff to the school also varies along these dimensions.

Where *pupil admissions* are concerned, across all primary school types the initial coordination of admissions applications is in the domain of the LEA. In the first instance, LEAs are required to allocate pupils to schools on the basis of stated parental preference, as appearing in the admissions application form. For Community and VC schools so-called ‘over-subscription criteria’ are laid out by the LEA, to be used when there are more applications to the school than places available. In Foundation and VA schools there is greater flexibility over pupil entrance decisions, since the governing body has more freedom to set the admissions and over-subscription rules. However, the majority representation of the ‘Foundation’,

Table 11.2 Characteristics of state primary schools in England

Type	No. of schools, 2005/06 (% of total)	Faith	Governors (approximately)	Admissions authority and employer	Assets owned by
Community	8,176 (59.67%)	Secular	Parents >30%, Staff <30%, LEA 20%, Community 20%	LEA	LEA
Foundation	285 (2.08%)	Mostly Secular, some C. of E.	Parents >30%, Staff <30%, Foundation/Partnership <25%, LEA <20%, Community 10%	Governors	Foundation or Governors
Voluntary-aided	3,218 (23.48%)	Mostly C. of E. or Catholic, some other faith, some secular	Foundation >50%, Parents >30%, LEA <10%, Staff <30%	Governors	Foundation
Voluntary-controlled	2,024 (14.77%)	Mostly C. of E., some other faith, some secular	Parents >30%, Staff <30%, Foundation <25%, LEA <20%, Community 10%	LEA	LEA
Total	13,703				

The number of schools (and percentage of total) is based on the Key Stage 1 and 2 cohort data used in the empirical section and includes only those pupils with a full set of mobility indicators. On average Community schools are the dominant institution type in England, accounting for about 65% of all Primary schools.

Source: Adapted from Gibbons and Silva (2006b, p. 36, Table 1).

as opposed to the LEA, on the board of school governors in VA schools implies that only in these schools can admissions practices truly deviate from those applied in LEA-run institutions (Gibbons and Silva, 2006b).

The main reason for addressing school and home moves undertaken by pupils attending state-sector Primary schools in particular relates to both the education sector changes introduced by the 1988 Education Reform Act and to the admissions criteria adopted in the event of place over-subscription in Primary schools, adhered to above. As discussed in the previous section on “Mobility and Government Education Policy”, since 1988 government policy has favoured a quasi-market method of education provision, in which parents are encouraged to be actively involved in the schooling choices for their children. Theoretically, the radius of parental choice of schools is meant to encompass a wider field than that which the traditional allocation of pupils to localised schools would allow, and this field should be attainable from the current residential setting. At the same time schools are encouraged to attract a high number of pupils, since pupil quantity determines school sustainability by being directly related to total school funding. This suggests that in the short-run schools in high demand will be over-subscribed.

LEAs and schools are required to organise their admissions policies in line with the current Department for Children, Schools and Families (DCSF) School Admissions Code of Practice, which is legally binding under the School Standards and Framework Act of 1998 (Gibbons et al., 2006). This Code also sets out the criteria to be employed when over-subscription to a school occurs. Although policies vary by LEA, for local authority-governed Community schools, specifications usually involve a higher chance of school entry for cases where (i) the child is of Special Educational Needs (ii) the child has siblings attending the same school, or (iii) the household to which the child belongs resides in the school ‘catchment area’, an area of close geographical proximity to the school (Gibbons et al., 2006). All over-subscription criteria are required to be both non-discriminatory and transparent, where transparency means that those LEAs in charge of school admissions make their criteria publicly available to parents, thus serving to open up school and LEA intake procedures. For VA schools that are not controlled by the Local Authority, more weight is given to religious affiliation or an expression of faith by the pupil, rather than to the satisfaction of criteria such as residential proximity to the VA school, when there is excess demand for school places. This is in keeping with the faith-based ethos of VA schools. Indeed it has been found that travelling distances to VA schools generally exhibit longer area ranges than for other school types (Gibbons et al., 2006), suggesting a more tenuous link of the school-home distance. As Table 11.2 highlights, the vast majority of Primary school pupils in England are educated in Community schools, for whom the LEA is the admissions authority. This means that for most pupils the over-subscription rules (i) to (iii) stated above are of greater relevance.

Taken together, the concepts of school choice and admissions over-subscription criteria applied to LEA-governed schools invoke a situation characterised by two main features. Firstly, all schools that are perceived as being of good quality on the basis of their attainment performance are likely to appear desirable to parents.

If this holds, then this will result in an excess demand for places in such schools and the application of the over-subscription criteria. Secondly, the publication of these criteria gives parents a chance to influence place allocation for their child in the over-subscribed school, if they are able to satisfy one or more of these conditions of entry. The most significant condition for the concept of mobility is that of catchment area occupancy. In respect of the geographical coverage of catchment areas, the School Admissions Code states that “admission authorities **should** provide a map of the areas, and indicate how far parents within those areas have succeeded in getting places in the past, and whether that is likely to be a guide for the future” (Department for Education and Skills, 2007, p. 53, original emphasis). Thus parents are sufficiently informed of the catchment area space and whether living within this space helps in ensuring place allocation to an over-subscribed school. If pupils inhabit homes that exceed these catchment boundary limits, some households may be prepared to engage in residential mobility to within the boundary walls in order to ensure compliance with this clause. This is likely to be a more important aspect of spatial activity at the primary school stage in particular, because parents will wish to maximise the quality of the school attended so as to secure optimal future returns to schooling and at the same time they will want to minimise travel-to-school distances for their children in order to allay safety fears. Thus they will have a stronger interest in relocating if this enhances the potential for place allocation of their children in good schools nearby to the home. What this all amounts to is a suggestion that the attempt by the parental-choice model of schooling provision to undo the link between residential setting and the school attended is counteracted by the over-subscription criteria of LEA-controlled schools at the primary school stage. Hence while ‘pure’ pupil mobility may be enhanced by parental choice provisions, over-subscription rules imply a significant ‘school-home moves’ connection. In respect of establishing some knowledge on the success or otherwise of the quasi-market in education, it is therefore valuable to accurately define and measure mobility patterns that relate to school moves exclusive of home moves and combined school-home changes during the primary school years in particular. In section that follows the empirical source of analysis to be used for this purpose is laid out.

Mobility in the National Pupil Database

Definition and measurement of school and residential mobility will utilise a cohort of Key Stage 1 to Key Stage 2 Primary school pupils contained in the National Pupil Database (NPD), which itself is made up of two data sources: (i) the Pupil-Level Annual School Census (PLASC) and (ii) National Curriculum Key Stage test scores of attainment. In this section the origins and content of the NPD are explained, as well as the exact structure of the cohort to be assessed.

Describing the PLASC Dataset Component of the NPD

PLASC is a unique national pupil-level administrative Census which has traditionally derived information on the whole school roll in January of each academic year. Data collection encompasses all pupils across the education spectrum of the maintained schools sector in England only, a situation that is enforced by the legally binding status of the Census, in which schools are statutorily required to provide Census information under Section 537A of the Education Act 1996 (Harland and Stillwell, 2007). Records are supplied electronically by the school and transferred to central government (the DCSF) via each LEA. Legal enforcement of the administrative records provision and their centralised collection reflects the use of the collated statistics on pupil numbers and pupil characteristics to determine the amount of funding to be allocated to each school (Gibbons and Telhaj, 2007). PLASC collection first began in January 2001 to include pupils on roll for the academic year 2001/2002. Since 2006 (2007) a tri-annual procedure for administrative data collection was introduced into secondary (primary) schools, known as the School Census and featuring data collection points on the third Thursday of the months of May and September in addition to the usual (third Thursday of the month of) January record (Harland and Stillwell, 2007). At the time of writing there are five waves (academic years) of PLASC data available for the annual January school roll only, yielding some 8 million pupil observations per wave, the latest being that for the school year 2005/2006 (based on data collected in January 2006). These waves can be linked together by means of a unique, anonymous, pupil identifier, to give a five-year longitudinal source of PLASC information in which pupils can be tracked as they transfer from one year group to another within the state school education system.

PLASC contains data on individual pupil characteristics and the social background of each pupil. Important to the measurement and analysis of mobility, each wave of PLASC includes information on the date at which the pupil entered the school, an identifier for the school attended by the pupil, and a record of the home postcode of the pupil, all on an anonymous basis.

Describing the Key Stage Dataset Component of the NPD

The National Curriculum was established through the 1988 Education Reform Act and provides a standard form and content of subjects to be taught across schools for all pupils from the age of 5–16. It was in place in all primary and secondary schools between the academic years of 1989/90 and 1996/97. The Curriculum divides schooling years into blocks, with each block representing a ‘Key Stage’ (KS). Curriculum comprehension is tested through national attainment examinations taken at the end of each Key Stage. Formal introduction to the Key Stages begins at the age of 5/6 (KS1) and comprises of two school years of instruction,

leading to KS1 examinations at the age of 6/7. The KS2 phase of learning spans four school years and final exams are sat for when the child is aged 10/11. After a further three academic years, which include a transfer from the primary to the secondary schooling phase (at around the age of 11), KS3 exams are taken at the age of 13/14. These are followed by the end-of-compulsory-schooling General Certificate of Secondary Education (GCSE) exams two school years later when pupils are aged 15/16 (KS4). The publication of school average test scores in some of the Key Stages (usually KS2 and KS4 results are published in the form of 'league tables' appearing in local newspapers and on the internet) enables the public and, in particular parents, to compare the relative performance of individual local schools to other schools within the local area and to nationally set government targets of achievement at each Key Stage.

Information on test score outcomes for each pupil at the end of each KS is available in the NPD since the academic year 1997/98 for KS1 and KS3, 1995/96 for KS2, and 2001/2002 for KS4. As a unique anonymous pupil identifier is included in both PLASC and in each of the Key Stage records of the NPD this allows for one-to-one matching of the files, such that background variables can be aligned with attainment scores. For the analytical details presented in this chapter, the test score information of pupils is only used to determine the exact cohort members in the sample of interest.

Key Stage 1 to Key Stage 2 Cohort Coverage

In this chapter, one cohort of pupils contained within the NPD are studied as they move between national KS1 and KS2 exams during state primary education in England, where the exact form of this longitudinal sample is shown in Table 11.3.

This cohort started their KS1 phase of education in the academic year 2000/2001 at the age of 5/6 and subsequently sat for their KS1 exams in English Reading, English Writing and Mathematics two school years later in the summer of 2002. Their KS2 phase of learning began in the school year 2002/2003 and spanned 4 academic years of instruction, leading to KS2 examinations in English, Mathematics and Science being taken in the summer of 2006. Table 11.4 details the number of pupil-level observations for this particular cohort.

Table 11.3 The structure of the KS1 to KS2 cohort

School year group	2	3	4	5	6
Age	6/7	7/8	8/9	9/10	10/11
Key Stage	1				2
Key Stage exam year	2002				2006
PLASC academic year	2001/02	2002/03	2003/04	2004/05	2005/06

Table 11.4 Number of pupil-level observations in the KS1 to KS2 cohort

Status	Number of pupils
In KS1, <i>not</i> KS2 (1)	23,599
In KS2, <i>not</i> KS1 (2)	23,908
In KS1 through KS2 (3)	552,892
Total (4)	600,399

Source: National Pupil Database (NPD).

A total of 552,892 pupils can be traced across all years of the KS1 to KS2 phases of education. PLASC records existing from the academic year 2001/2002–2005/2006 inclusive are matched to this sample of pupils, henceforth known as the ‘KS1-2’ cohort, using the anonymous pupil identifier available in all KS and PLASC files. Every PLASC wave contains variables that can be used to assess individual mobility patterns between the two Key Stages. For those cohort members appearing in the sample in only a single KS, their mobility patterns cannot be observed throughout the entire KS1-2 window. Observations on this group of pupils are dropped from the sample of interest (a loss of 47,507 pupils in total, rows (1) and (2) of Table 11.4).

Measuring Mobility in the KS1-2 Cohort

Three indicators are available to use in PLASC that allow for the measurement of pupil and residential mobility among the KS1-2 cohort. Two of these indicators can be applied in order to quantify school switches for individual pupils, these being the date at which the pupil entered the school and the unique school code. The third indicator, the home postcode of the pupil, enables evaluation of residential moves. The exact measurement approach taken in each case is dealt with here. Beginning with school moves, the methods are referred to as follows:

- ‘Date of school entry approach’ – this takes academic year-on-year changes to the recorded date of entry into the school provided in the administrative data as indicative of a school change by the pupil, so that pupil mobility = 1 if *date of school entry in year $t+1$ for pupil i \neq date of school entry in year t for pupil i*
- ‘School code change approach’ – this takes changes in the recorded identifier for the school, the school code, from one academic year to the next as indicative of a pupil move, so that pupil mobility = 1 if *school code in year $t+1$ for pupil i \neq school code in year t for pupil i*

Three key issues must be raised in respect of school mobility measured by both of these approaches. Firstly, only those school moves taking place at *non-standard* points during the Key Stage 1–2 phases are counted here. For this cohort, this means that the following moves are *not* counted under pupil mobility:

- transfers from Infant School (covering the age ranges 5–7 or 5–8) to Junior School (age ranges 7–11 or 8–11);
- transfers from First School (age ranges 5–7 or 5–8) to Junior School (age ranges 7–11 or 8–11);
- transfers from First school (age ranges 5–8, 5–9, or 5–10) to Middle School (age ranges 8–11, 9–12, 10–13, or 10–14).

Secondly, an intention of the analysis is to isolate ‘pure’ school moves, in which the only dimension of the environment that is changing for the pupil is the school. In this respect the term ‘pure’ pupil mobility is used to refer to *a change of school that does not involve any move of home* in this analysis. Thirdly, in addition to pure school shifts, pupils can also make school changes that do involve moves of home. The unique advantage of the PLASC data source is that it allows for estimation of the extent of combined school and home moves. In the text the term ‘school-home moves’ will be used to address those non-standard changes of school that occur together with a change of home.

Turning now to the actual estimation of home moves, a count of home changes between the Key Stages can be made by comparison of PLASC records on pupil home postcode from one academic year to the next, so that:

- Home mobility = 1 if *home postcode of the pupil in year t+1 for pupil i* ≠ *home postcode of the pupil in year t for pupil i*

Though this forms the only method for measuring home mobility using PLASC, it does present an accurate method when consideration is made for the geographical proximity of postcodes: a postcode ordinarily covers at most 10 adjacent housing units, allowing for precision in determining residential location and changes to it (Gibbons and Telhaj, 2007).

Counting Mobility in the KSI-2 Cohort

Utilising the information contained in PLASC and the Key Stage data, Table 11.5 details the cumulative number of school moves and home moves that can be observed and the order in which these moves appear in the data.

Tables 11.5 and 11.4 both reveal that there are a total of seven observations on the school code, as compared with five observations on both the date of school entry and the home postcode. This is a consequence of the Key Stage data collection phase occurring at a different time point in the academic year relative to PLASC data collection and the exclusion of any administrative information on the pupil from the Key Stage files, other than the code of the school attended by the pupil when taking their Key Stage tests. Thus pupil mobility measured according to the school-code approach can be counted for a maximum of six times across the sample period. This compares with a maximum count of four pupil moves using the date of school entry approach and likewise when measuring residential mobility.

Table 11.5 Cumulative number of school and home moves in the KS1-2 cohort

Data file	Data collection time	Cumulative school moves: school code					Cumulative school/home moves: date of school entry and home postcode				
PLASC 2001/2002	January 2002	1					1				
Key Stage 1	Summer 2002		1								
PLASC 2002/2003	January 2003			2				1			
PLASC 2003/2004	January 2004				3				2		
PLASC 2004/2005	January 2005					4				3	
PLASC 2005/2006	January 2006						5	6			4
Key Stage 2	Summer 2006										

Source: Author’s analysis of the National Pupil Database (NPD).

In order to establish comparable measures of school moves based on the school code method and the date of school entry method, all seven observations on the school code cannot be fully exploited here. In fact, comparability requires that the Key Stage information be used at most to determine the Key Stage cohort of interest and otherwise the two school mobility estimates and home mobility will be based on the five PLASC waves. Therefore no more than four school moves and residential changes by the individual pupil can be observed. The under use of the school code data may change in the future when the provision of tri-annual PLASC data (and in particular that collection taking place in May) presents the opportunity for the closer alignment of PLASC and Key Stage data collection points.

Accuracy of the mobility estimates requires that all pupils have an observation on the school code, the date of school entry, and the home postcode in every PLASC wave. That is, the amount of mobility to be derived here is to be based on a sample of pupils with a ‘full’ set of mobility variables. Without this restriction on the sample, mobility that cannot be accounted for may occur amongst pupils with missing observations on some mobility indicators, affecting measured moves. This issue is discussed further in the section entitled “Limitations of the Analysis”. For the KS1-2 cohort, a ‘full’ set of observations are attained prior to any imputations to the data and Table 11.6 below shows how this full set is altered following the imputations procedure. Detailed information on imputations and corrections to the data is excluded from this chapter and is available from the author on request. To gauge the extent of sample loss, the size of the KS1-2 cohort is also provided here.

Table 11.6 shows that a total of 13,505 pupil observations dropped out in the process of merging the PLASC data to the KS1-2 cohort and in defining a sample size containing a full set of mobility indicators based on the original contents of

Table 11.6 Sample sizes of the KS1-2 cohort with a full set of mobility indicators

Sample type	Number of pupils	KS1-2 cohort sample change (number of pupils)
KS1-2 cohort	552,892	
Initial full sample*	539,387	-13,505
Imputations	6,850	+6,850
New full sample*	546,237	-6,655

Source: Author's analysis of the National Pupil Database (NPD).

*The 'full' sample in each case is defined as that where the KS1-2 cohort member has an observation on their school code, date of school entry, and home postcode in every PLASC wave. The initial full sample uses the original number of observations on these indicators, prior to any imputations or corrections. The new full sample indicates the number of additional pupil observations that are obtained following imputations. Details on imputations and corrections made to the data are available from the author on request. Only the imputations made (not the corrections) affect the full sample size.

the PLASC files. Imputations that were made to both the school and home mobility indicators involved replacing a missing observation with that from the following PLASC year when observations on an individual pupil in adjacent PLASC years to the missing year were the same (except for in tail-end sample cases, where imputation used either the previous (if missing in 2005/06) or the following (if missing in 2001/02) year observation instead). Following imputations, pupil numbers in the full sample rise by 6,850, giving an overall full sample size of 546,237 pupil-level observations in each of the 5 waves of PLASC and resulting in a net loss of just 6,655 pupils (1.2% of the KS1-2 cohort). It should be noted here that one might expect these imputations to lead to a marginal underestimation of mobility amounts, if the reason for the data to be missing relates to the pupil becoming untraceable for a temporary period as a result of moving. The imputations process applied to the data actually resulted in only a small sample size increase of approximately 1.3% from the initial full amount. Also, analysis carried out on the original sample (not shown in this chapter) revealed very similar empirical findings.

Estimating School Moves and Home Moves

It was noted in the section "Literature on Mobility" that a general definition of school moves is given by those occurring when a child enters or exits a school at a non-standard time point, whether or not each school change involves a move of home (Dobson and Henthorne, 1999). However, under sections "Mobility and Government Education Policy" and "Primary Schools in England and Admissions Policies" it was highlighted that such a composite indicator of mobility may be inadequate when consideration is made for both recent advances in government education policy and over-subscription rules applying in LEA-governed schools, both of which suggest the importance of distinguishing between mover types. The aim of this empirical section is to separate out and measure the amount of 'pure' pupil

mobility versus ‘school-home moves’ made by the KS1-2 cohort of pupils in the NPD, as well as to discuss the implications of these results.

Composite Measures of Pupil Mobility

In Table 11.7, two composite measures of pupil mobility in the KS1-2 cohort are estimated. These both conform to the general definition of pupil mobility referred to above. The purpose of estimating school moves by this method is to facilitate comparison of the findings with those gained under definitions that allow for separation of mobility forms.

Table 11.7 shows the number of pupils making one or more school change (that may also involve a move of home) as they transit across the school years of the KS1-2 phase of education. Composite measures of pupil mobility are presented that do (columns 1 and 5) and do not (columns 3 and 7) include those compulsory school moves that pupils have to make as part of their schooling process. These measures are estimated utilising both the date of school entry method (columns 1–4) and the school code approach (columns 5–8), as described in the section “Measuring Mobility in the KS1-2 Cohort”. In comparing figures attained under the inclusion of all school moves against those concerned with non-standard changes, it can be seen that most compulsory school moves take place between school years 2 and 3 (when pupils are aged 6/7 and 7/8 respectively). The majority of these necessary school moves include transfers from Infant to Junior school, yet they also comprise of changes from First School to Junior school and First school to Middle school (as outlined in the aforementioned section).

In order to establish a set of non-standard school changes, two techniques are applied to the dataset so as to determine and net out required transfers. Firstly, the postcode of each school attended by the pupil is matched to the data on an annual basis using records on educational establishments as contained in the DCSF provided ‘Edubase’ dataset. Where the postcode of the school attended by the pupil remains the same between one academic year and the next, but the recorded date of school entry or the school code changes over the same years for that pupil (depending on the approach used to measure composite pupil mobility), this is taken as an indication of a compulsory school shift. The assumption here is that if the schools are on the same site (as is often the case with Infant and Junior schools, for example), then the school move represents an expected change. Secondly, compulsory school changes are removed by assessing the mobility measure itself at the school level. Where all the pupils attending a certain school in one year move out of that school in the following year, this is considered to be a necessary school move.

Extracting evidence on all required school changes from the measures reduces the total amount of composite pupil mobility from 231,213 to 96,941 pupil observations under the date of school entry approach, and from 237,058 to 96,776 pupil observations with the school code method. Out of the full sample of 546,237 pupils, around 18% make non-standard school moves, and this is true by both the date of school entry and the school code methods for estimating composite school change.

Table 11.7 Composite measures of pupil mobility across KS1 to KS2 year group transitions

Year group transitions	All moves (date of entry) (1)	% of total sample (2)	Non-standard moves (date of entry) (3)	% of total sample (4)	All moves (school code) (5)	% of total sample (6)	Non-standard moves (school code) (7)	% of total sample (8)
2-3	117,266	21.47	24,377	4.46	120,168	22.00	24,184	4.43
2-3; 3-4	11,042	2.02	2,861	0.52	11,225	2.05	3,059	0.56
2-3; 3-4; 4-5	1,704	0.31	515	0.09	2,026	0.37	525	0.10
2-3; 3-4; 4-5; 5-6	444	0.08	181	0.03	535	0.10	182	0.03
2-3; 3-4; 5-6	1,124	0.21	425	0.08	1,334	0.24	431	0.08
2-3; 4-5	10,148	1.86	2,286	0.42	10,176	1.86	2,274	0.42
2-3; 4-5; 5-6	1,115	0.20	357	0.07	1,206	0.22	359	0.07
2-3; 5-6	8,034	1.47	1,500	0.27	7,332	1.34	1,550	0.28
3-4	24,428	4.47	22,789	4.17	25,125	4.60	22,512	4.12
3-4; 4-5	3,579	0.66	2,489	0.46	3,844	0.70	2,488	0.46
3-4; 4-5; 5-6	490	0.09	462	0.08	551	0.10	467	0.09
3-4; 5-6	1,999	0.37	1,808	0.33	2,181	0.40	1,799	0.33
4-5	35,053	6.42	20,404	3.74	35,488	6.50	20,265	3.71
4-5; 5-6	2,191	0.40	1,856	0.34	2,436	0.45	1,867	0.34
5-6	12,596	2.31	14,631	2.68	13,431	2.46	14,814	2.71
Total	231,213	42.33	96,941	17.75	237,058	43.40	96,776	17.72

Source: Author's analysis of the PLASC data.

The total sample size is 546,237 pupil-level observations in each of the five PLASC waves, from 2001/2002 to 2005/2006 inclusive (see Table 11.6).

In fact, Table 11.7 reveals a striking similarity between school mover estimates pertaining to the two different approaches, a situation which gives confidence in the estimation procedure and suggests a robustness of the results to differing ways of measuring pupil moves of school. It is worthwhile to point out at this stage that only those school moves estimates derived under the date of school entry method will be taken forward from here on. The reasons for this relate both to the similarity of findings under the two measures and to the further analytical possibilities provided by the date of school entry variable relative to the school code indicator. PLASC records on the date at which the pupil entered the school specify the month of joining and evaluation based on the use of this information will form an important extension of future research (see Wilson, work-in-progress).

Across all year group transitions, school (and possibly home) moves are most prevalent between school years 2 and 3, at 4.46% of the full sample, even after correcting for compulsory transfers (column 4). Apart from this transition period, composite mobility is also high between school years 3–4 (4.17%), 4–5 (3.74%) and 5–6 (2.68%). In terms of the number of school moves each individual pupil makes, the composite measure shows that it is most common for pupils to change schools just once. As the move count rises, the number of pupils making multiple moves falls. Between 0.27% and 0.52% of pupils make two school moves in the full sample (two school moves account for 2.34% of the full sample overall), and the percentage of pupils making three school moves is at most 0.09% of the full cohort (0.32% of the full sample overall), where the later pupils move between school years 2–3; 3–4 and 4–5 (ages 6/7–9/10). Only 181 pupils (0.03%) change aspects of their environment across *every* year group transition between KS1 and KS2. In terms of school move sequences, most multiple moves involve schooling interruptions that are made continuously, with only 0.27% of the full sample making moves that include a gap of 2 school years (those in the transition category 2–3; 5–6).

Estimating ‘Pure’ Pupil Mobility and ‘School-Home Moves’

Table 11.8 presents the first step in analysis aimed at rooting out differences in school move estimates according to whether or not separation of mover types is accounted for. Here ‘pure’ pupil mobility is compared with ‘school-home moves’, both defined in the “Measuring Mobility in the KS1-2 Cohort” section. In all cases school moves are determined under the date of school entry approach and are exclusive of compulsory school transfers of the types mentioned earlier.

A consistent pattern emerging from these results is one in which there is a dominance of conjunctional school-home moves over and above pure pupil mobility across all year group transitions featuring mobility and irrespective of the number of school moves made. At the aggregate level, school changes that include residential change are more than 1.5 times higher among this KS1-2 cohort compared with school moves only: 11.3% of the full sample engage in school-home moves (column 4), while 7.3% make isolated school changes (column 2). In line with the findings of the composite pupil mobility measure shown in Table 11.7 (columns 3 and 4),

Table 11.8 'Pure' pupil mobility and 'school-home moves' across KS1 to KS2 year group transitions

Year group transitions	'Pure' pupil mobility (1)	% of full sample (2)	'School-home moves' (3)	% of full sample (4)	'New' composite school mobility (5)
2-3	11,425	2.09	15,229	2.79	26,654
2-3; 3-4	513	0.09	1,656	0.30	2,169
2-3; 3-4; 4-5	18	0.00	334	0.06	352
2-3; 3-4; 4-5; 5-6	3	0.00	124	0.02	127
2-3; 3-4; 5-6	23	0.00	240	0.04	263
2-3; 4-5	513	0.09	1,155	0.21	1,668
2-3; 4-5; 5-6	16	0.00	195	0.04	211
2-3; 5-6	223	0.04	835	0.15	1,058
3-4	9,946	1.82	15,181	2.78	25,127
3-4; 4-5	311	0.06	1,510	0.28	1,821
3-4; 4-5; 5-6	16	0.00	311	0.06	327
3-4; 5-6	256	0.05	1,088	0.20	1,344
4-5	9,509	1.74	13,047	2.39	22,556
4-5; 5-6	219	0.04	1,269	0.23	1,488
5-6	6,934	1.27	9,468	1.73	16,402
Total	39,925	7.31	61,642	11.28	101,567

Source: Author's analysis of the PLASC data.

School moves are measured according to the date of school entry approach and are based on non-standard school changes only.

changers tend to make at most one school or school-home move, while pupil numbers are decreasing in the number of any kind of moves made. However, whereas school moves under the composite estimates of Table 11.7 were found to be higher during the transition between school years 2-3, here this holds true more for pupils making school moves only. For those making school-home moves once between school years 2-3, years 3-4 and years 4-5, their percentages of the full sample are quite similar, at 2.79%, 2.78% and 2.39% respectively.

The 'new' composite measure included in Table 11.8, column (5) does not appear, at first glance, to be comparable with that appearing earlier in Table 11.7, column (3) (the 'old' composite measure), and this is actually the case. The new composite version is the sum of pure pupil mobility (column 1) and school-home moves (column 3). Estimation of the old composite measure is based on the general pupil mobility definition identified in the literature. This old version does not distinguish between school movers of different types, whereas the new measure enforces this distinction. This is exactly where the reason for the discrepancy between the two estimates lies. Taking, for example, a pupil included in the mover category '2-3; 5-6', under the old composite measure no details are known about whether each of

these moves are pure school moves, school-home moves, or one of each. Defining mover types separately, it may be established that the '2-3' portion of this move represents pure pupil mobility, while the '5-6' segment is a school-home move. Then mover type separation would result in a re-classification of the school moves of this pupil, such that their multiple move status is recorded once under the pure pupil mobility column (1) and again under the school-move column (3), but these counts on the pupil would be tabulated in different rows ('2-3' on the one hand, versus '5-6' on the other). So mover type separation enables multiple moves to be accounted for, but a composite sum total of the different types of moves is counterintuitive because there is a double-counting of pupils who make multiple moves of differing dimensions. The difference between the total number of school movers under the old and new composite measure reflects this. What this implies is that there is an inaccuracy in the count of pupils categorised as making multiple moves according to the old composite measure precisely because an individual pupil may not always make school moves of one particular type. However, this information is lost in the grouping together of mobile pupils as is done under the general definition of pupil mobility, suggesting that estimation based on a separation of mover types is much more informative in the case where a pupil changes schools more than once and under multiple move dimensions.

Considering Entry to Over-subscribed Schools

It was explained in the section called "Primary Schools in England and Admissions Policies" that LEA-governed Community and Voluntary-controlled schools characterised by applications for places that exceed school capacity adopt over-subscription criteria in order to rank potential entrants. One such procedure for prioritising entry relates to catchment area occupancy, in which pupils inhabiting homes of close geographical proximity to the school will rank higher on the school waiting list. It was suggested that this aspect of the admissions procedure distorts the notion of school choice, since it reduces the potential for schooling access to be less dependent on residential location. In Table 11.8 above a distinction was made between school movers only versus school-home movers, and it was noted that there is more school change involving a move of home than there is pure pupil mobility in the cohort under assessment. This finding implies that the link between the school attended and the home setting still matters when it comes to schooling choices. However, whether this holds true may be illustrated to some extent by the successfulness or otherwise of pure school movers in gaining entry to over-subscribed LEA-governed schools relative to school-home movers.

In Table 11.9, findings from a first attempt at evaluating the capacity for school movers of the differing forms to move to over-subscribed schools are presented. For simplicity, the analysis focuses only on those pupils moving either to over-subscribed Community or VA schools and on those changers making only one move of school, or school-home. Multiple movers may change the type of school that they attend in each move made (e.g., a pupil moving schools three times may switch

Table 11.9 Entry to over-subscribed schools

Panel A: 'Pure' school movers					
Year group transitions	'Pure' pupil mobility	% entering over-subscribed Community school	% of which coming from an under-subscribed school	% entering over-subscribed VA school	% of which coming from an under-subscribed school
	(1)	(2)	(3)	(4)	(5)
2-3	11,425	22.24	42.98	7.51	41.38
3-4	9,946	24.80	48.48	8.28	51.82
4-5	9,509	23.50	60.58	8.48	61.41
5-6	6,934	20.20	63.60	8.74	61.06
Total	37,814	-	-	-	-
Panel B: 'School-home movers'					
	(1)	(2)	(3)	(4)	(5)
Year group transitions	'School-home moves'	% entering over-subscribed Community school	% of which coming from an under-subscribed school	% entering over-subscribed VA school	% of which coming from an under-subscribed school
2-3	15,229	27.82	48.15	6.52	46.32
3-4	15,181	25.47	50.59	6.03	48.63
4-5	13,047	24.04	55.04	6.01	52.42
5-6	9,468	22.31	60.04	6.12	51.12
Total	52,925	-	-	-	-

Source: Author's analysis of the PLASC data.

Movements from an under-subscribed school (columns 3 and 5) can refer to any of the four school types (Community, Foundation, VA or VC). Pupils making one 'pure' school move account for 94.71% of all pure school movers. Across all school-home movers, pupils moving once account for 85.86% of the total (see Table 11.8).

from a Community, to a VA, back to a Community school). This complicates matters since over-subscription rules vary for more autonomously governed VA schools compared with Community schools. In fact, as discussed in the section on "Primary Schools in England and Admissions Policies", VA schools are more likely to place emphasis on factors such as religious commitment rather than catchment area satisfaction when ranking excess pupil numbers, suggesting less of a geographical closeness between the school attended and the home location for pupils in VA schools.

An over-subscribed school is classified as such in the sample if the ratio of the total number of pupils in the school to school capacity exceeds one, where annual pupil roll and school capacity measures are obtained from the Edubase data source as referred to earlier. These ratios are based on averaged annual pupil numbers and school capacity figures over the five sample waves (i.e. 2001/02–2005/06 inclusive),

so as to minimise the margin for error in the over-subscribed schools indicator that might occur were it calculated using annual ratios only.

The findings of Table 11.9 show that pupils making one school-home move are *consistently marginally more likely* than pupils making one pure school move to enter an over-subscribed Community school (column (1) of panels A and B respectively). This suggests that the link between the school attended and residential location is important in the Primary school stage, and may be reinforced by the catchment area criteria of filled-to-capacity LEA-governed schools. On the other hand, some families do appear to gain access to over-subscribed Community schools from their current place of residence, as evidenced by the pure pupil mobility figures. A further point to note is that though school home-moves to over-subscribed Community schools feature more in this sample, the strength of the relative difference between the percentage of pupils entering an over-subscribed Community school having made a school-home move versus a school only move falls as pupils progress along the KS1-2 track.

Interestingly, the estimates of Table 11.9 reveal a regular pattern in each of the year group shifts for pupils moving to over-subscribed VA schools: pupils making one pure school move are *consistently significantly more likely* than those making one school-home move to enter an over-subscribed VA school. This evidence is in support of a more tenuous link existing between school and home proximity among pupils in VA schools, given the tendency of these schools to adopt over-subscription criteria related to their ethos.

It must be emphasised that these findings should be interpreted with caution. The observation that pure school movers are gaining access to Community schools operating above full potential could simply be because their home setting already conforms to the catchment area clause. Indeed, for some pupils, the current home location may be contained within the catchment area of several Primary schools, particularly in areas with a higher density of Primary education providers, such that catchment areas of different schools overlap the same home. In this case, one cannot infer that the pure school move was attributable to the possibilities allowed by school choice settings; rather it is just a reflection of extensive local education services. At the same time, the assertion that the link between the school and the home is reinforced by LEA-governed schools' catchment area rules is questionable without evidence on the reasons for the move of school and home. If the school and home move occurred as a result of upward employment mobility, for example, then access to a higher quality school (presumed to be so where a school is over-subscribed) may be more an outcome of the job-related move, rather than the consequence of a calculated move of home done so as to ensure access to a preferred school. All of these points indicate the need for more substantive information on the nature of school and school-home moves before any firm conclusions can be drawn about the effectiveness or otherwise of school choice policies.

Taking into account these pitfalls, columns (3) and (5), panel A and B of Table 11.9, show an attempt to infer the extent to which school only and school-home changes might relate to the quasi-market for schools. Estimation considers whether the school move made to either a Community or to a VA school with an excess demand for places involves pupils coming from a school (of any type) with spare

capacity. Taking care again to avoid reading too much into the findings, they indicate that school only movers are more likely than school-home movers to make school changes motivated by school choice policies in the transition years 4–5 and 5–6, among those entering filled-to-capacity Community schools (column (3) compared across panels A and B). The opposite is true for school only movers changing the school attended across transition years 2–3 and 3–4. Meanwhile, for joiners of over-subscribed VA schools who previously attended a school with spare places, those making a school only move seem to exploit school choice opportunities earlier on, from the transition year 3–4 (column (5) compared across panels A and B). In line with earlier findings, this evidence reinforces the assertion that catchment area occupancy is of less relevance as a criterion for ranking pupils when VA schools are over-subscribed. Overall, it would appear from the estimates in Table 11.9, that some school moves are rationalised by an interest in exploiting performance differences between local schools, and that such school moves are able to take place without necessitating a home change.

The findings from this empirical section show that there is much to be gained from the detailed review of mobility patterns where movers of differing types are separated. However, as mentioned above, there are shortcomings to the analysis that necessitate caution when interpreting findings. The general applicability of the estimates is also restricted to the scope of coverage of the NPD and, in the section that follows, the nature of limitations imposed on analysis that utilises this dataset are addressed.

Limitations of the Analysis

The focus of this work has been to look at mobility for one cohort of pupils as they progress through state-provided schooling at the Primary stage of education, given that recent government initiatives pertaining to the education sector involve state-schools only. The PLASC dataset is an ideal form of secondary data to use in this respect. However, there are limitations in the coverage of the PLASC data which matter for the analysis of mobility patterns. One caveat is that only migration taking place within England features in the KS1-2 cohort sample. Complete patterns of moves among international migrants (including refugees and asylum seekers), and among those pupils moving from elsewhere within the UK who enter a school in England for a certain length of time, cannot be established. At best only one KS test outcome may exist for such pupils. For schools in the cities and metropolitan areas of England this type of pupil entry and exit will make up a large proportion of their school joiner-leaver activity. Then all mobility measures will be understated by that amount of movement that reflects cross-country migration, and this shortfall of the data can produce a non-trivial flattening of regional variation. Secondly, where households opt out of state provided education and buy into the schooling provisions of the private fee-charging sector and for those moving in the opposite direction, residential and school changes assessed using PLASC will be understated by the omission of independent school pupils in the data. Thirdly, children who are schooled at home and who may or may not be instructed in line with the requirements of the

National Curriculum will not feature in the data since they will not be enrolled in a publicly-provided learning institution. In the dataset all of these exclusions from PLASC – international migrants, independent school pupils, and home-tutored children – are likely to form those observations where there is attrition at some point in the sample presence, as detailed in Table 11.4 and Table 11.6.

In terms of the methods for estimating the amount of mobility presented in this work, in all approaches there is no means for assessing multiple *within academic year* pupil moves, since the administrative data on the school roll used here is collected only once per year. Provision of tri-annual PLASC data represents a major step forward for future projects concerning mobility. However, the fact that PLASC is able to provide a longitudinal panel of observations on the same pupil as they move through the schooling years does mean that multiple year-on-year moves of both school and home can be considered. It should be emphasised that this kind of cohort analysis of moving activity in general, and also of mobility of different types, has not been feasible on such a large scale prior to the introduction of PLASC: thus the dataset acts a significant resource for researchers.

Finally, in the sample used here there is the potential for some moves to be taking place towards the end of the KS2 phase of education that cannot be observed in the data, leading to the underestimation of total moves over the entire KS1-2 phase. In particular mobility taking place between January 2006 (when PLASC 2005/2006 is collected) and the summer of 2006 (when KS2 tests are taken) is unaccounted for in the data (see Table 11.5). However, this is a very small window of missing data of at most 6 months, assuming that pupils take their KS2 tests in July at the very latest. Of greater concern is the likelihood that much moving activity actually takes place outside of the entire KS1-2 cohort sample frame. Indeed, the evidence presented in Table 11.1 revealed combined school-home mobility to be at its highest during the school year 1–2 transition. Then, if this holds true in the current sample, such moves cannot presently be observed. This means that the analysis will omit important early years moving behaviour that is likely to be of direct relevance to the moving patterns witnessed in this sample. As the longitudinal nature of the PLASC dataset widens in the future, this will increase the breadth of detail on mobility for older KS1-2 cohorts than that sampled here and for other cohorts of pupils who can be tracked across KS test years.

Conclusions and Further Work

Changes to government education policy since the late 1980s and the operation of state primary school admission systems have both had the potential to alter the nature of school moves that pupils may undertake in differing ways. On the one hand school choice has aimed to expand the capability of pupils to access a wider amount of schools from the same local area. On the other hand school popularity has required some form of admissions procedure to be put in place to allow for the ranking of pupil entry to schools operating above full capacity. It has been suggested here that a catchment area occupancy rule has served to maintain the link between where

a child lives and the range of schools they can attend, limiting the market place for schooling that education reforms aimed to develop. Whilst the empirical analysis undertaken here does not provide concrete evidence on whether this admissions rule has impacted on the link between the home and the school, evidence from other research proposes this to be the case. In particular, recent analysis of house prices and school quality in the UK has shown that parents of primary school-age children are relocating to a residence within the catchment area of a high-performing local primary school in an attempt to secure a place for their child in the establishment, often paying significant house price premia in order to do so. Estimates suggest that a 10% point rise in the number of pupils achieving Level 4 national target grades in their end of KS2 tests adds around a 3% property price premium to houses in London and the surrounding Metropolitan areas (Gibbons and Machin, 2006).

Evidence arising from this work does partially indicate that a portion of moves across state primary schools may reflect the exploitation of differentials in school quality. One direction of research currently underway involves studying the exact relation between pupil-level moves of school and school quality (as measured by performance tables) for the KS1-2 cohort addressed here (see Wilson, work-in-progress). The intentions of this undertaking are to determine the extent to which pupils who change only their school and pupils for whom this is combined with a home move are able to make education quality gains and to ascertain how these angles relate to the background characteristics of moving pupils. This process of analysis will serve to enrich and potentially reinforce the preliminary findings on the general effectiveness of school choice policies presented here.

One dimension of mobility that has received scant attention so far, largely due to the under-provision of data that can be directly applied to the issue, is that of the extent of 'home mobility' that pupils engage in. A natural extension of the work presented here, where the differing types of school moves have been assessed, is to apply the same concepts to residential change. Then where this analysis has focused on 'pure' pupil mobility and 'school-home moves', evidence can be extended to provide details on the amount of 'pure' home mobility and 'home-school moves' that pupils undergo. Gaining some understanding of the extent of home change that occurs amongst school age pupils is important to establish, given the tendency for research to focus more heavily on the notion of school moves of any kind affecting education progression (see Wilson, work-in-progress, for further details):

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