

**COPING WITHOUT CHILDREN:
COMPARATIVE HISTORICAL AND
CROSS-CULTURAL PERSPECTIVES**

Working Paper Number WP104

**Philip Kreager, Oxford Institute of Ageing
and Somerville College**

May 2004
Oxford Institute of Ageing Working Papers
Editor: George W. Leeson
<http://www.ageing.ox.ac.uk>

Abstract:

Older generations are composed of a number of distinctive sub-populations which need much closer attention if the differential impacts of population ageing are to be accurately assessed. One such population is older people without children, a group commonly assumed to consist chiefly of small minorities of infertile couples. This paper draws on historical and contemporary population studies to show that there are many societies that have experienced levels of childlessness of 10 to 20 percent and higher, over long periods. These levels derive only in small part from infecundity; consideration is necessary of a range of demographic factors, including migration, marriage patterns, contraception and pathological sterility. The implications of *de facto* childlessness suggest that limited or nil access to children is likely to be considerably higher than levels of infertility indicate. Rather than a marginal social phenomenon, significant numbers of elderly without children appear to be a consequence of enduring social arrangements, adaptations characteristic of long-term population stability, and adjustments to major social and economic change. Despite the aggregate advantages which levels of childlessness may give to a society in the long term, it nonetheless tends to compound the social and economic disadvantages of older people, and carries important implications for their social exclusion and powerlessness. The range of adaptive strategies that people may employ in response to childlessness and its consequences is reviewed, together with the empirical and methodological needs for further study.

The topic of ageing in modern societies, like so many contemporary social issues, stakes its claim to our attention on grounds of real and potential personal impact. Yet it does so in part by placing the realities of later life in a wider and much more impersonal context. Ageing is no longer just 'what everyone knows' about the human condition of growing old: the physical deterioration and potential social and economic vulnerability that we, and family and friends around us, may normally expect to experience in advancing years. A primary function of demographic and related statistics is to insist that these perennial and apparently personal matters be considered as problems of scale. Ageing must be viewed in terms of the main demographic changes of the later twentieth century, changes which have seen fertility levels decline toward or below replacement in most of the world whilst life expectation has markedly improved. One principal outcome of these shifts has been a change in the balance of generations, usually expressed as a growing number of elderly dependents per persons at working age. A mixture of benefits and disadvantages may be envisaged to flow from these changes, but the balance of opinion has tended to be negative or at least to emphasize potentially worrying disadvantages accruing both to older and younger age groups. As Livi-Bacci (1982) put it, demographic trends have created a 'social vacuum' in which larger and larger older cohorts cease to have parental responsibility and to contribute to productive aspects of modern life, whilst sucking in ever greater amounts of public and private resources that younger generations are left to provide.

The use of demographic and other statistics to characterise generational differences is aimed not simply at the size of cohorts and their implications for national and private income streams. It

embraces a much wider set of variables, calling attention to diverging patterns of marriage, education, health, and economic and social mobility that typify different age groups. Influential statistical compendia, such as provided by the United Nations (2002) and the US Census Bureau (1992), use these variables to paint—in very broad-brush fashion—a picture of heightening concern. They point beyond the growing demographic imbalance of generations to differences in values and institutions that may impact strategically on older individuals and their children, giving them not only different but opposed values, opportunities, and constraints. The implications—expressed variously in terms of growing inequalities of income and healthcare, residential arrangements, reinforcement of class differentials and gender biases, social exclusion and loneliness—are traced in a growing body of historical, regional, and national syntheses (e.g., Hermalin 2002; Kertzer and Laslett 1995; Martin and Preston 1994). At base this approach can be recognised as a continuation of sociological themes of the kind laid down long ago by Durkheim: as the situations of generations diverge, so familial and wider social solidarity may be put under strain, with many traditional arrangements likely to break down.¹

Unfortunately, as we shall see, aggregate description of ageing also partakes of the limitations of this sociology. Quantitative description of population ageing is very suited to revealing the potential power of impersonal, aggregate trends and differentials to shape people's lives. But in so doing it predisposes us to see these lives as increasingly powerless and depersonalised. The very image of a 'social vacuum' captures this tendency very well. Inevitably, only some aggregate measures are employed, whilst others—more difficult to develop but which might give a more balanced picture—are set aside. We need to ask, in other words, whether prevailing aggregate measures, however useful they may be for describing age structural changes *en masse*, are sufficiently realistic to enable us to identify causes and consequences or to design policies to address them. The macro-picture is inevitably made up of many sub-populations with their own characteristics and problems not adequately represented when submerged in the whole.

This paper addresses a fundamental and general issue that arises in the nexus of generations and one that demonstrates the importance and difficulty of identifying such sub-populations: the

existence in all societies of elderly people without children. Few if any commentators would deny that the absence of children poses potential human and welfare problems for older people without them. For a number of reasons, however, this sub-population has proven difficult to incorporate into mainstream aggregate thinking about ageing and has in consequence been marginalized. On the one hand, the numbers and characteristics of childless elderly are difficult to estimate. Standard quantitative methodologies, as we shall see, tend to marginalize the issue by beginning from assumptions that encourage us to treat childless older people as an insignificant minority. Evidence to the contrary, that elderly without children are likely to have comprised significant sub-populations in several parts of the world and over long periods, is certainly available. In addition, levels of childlessness fluctuate over time, apparently as part of related adaptations of fertility and family systems to changing circumstances. But these macro-pictures are at best incomplete and tend to be located in specialist demographic literatures outside the study of population ageing, notably in the history of marriage and family systems and in the social biology of infertility. On the other hand, considerations necessary to identify and characterise childless elderly strike at several basic methodological premises on which conventional measures depend. Childlessness is not adequately measured by data on women reporting no children ever born if, for example, there are other factors—migration, mortality, marital instability—that effectively remove children from their lives. Understanding the situation of elderly without children requires us to question very closely and at least partly to rethink usual approaches in which population ageing is defined first in generational or cohort terms at a societal level, with attention turning only subsequently to social realities. Intergenerational relations at a local level are not simply micro-versions of macro-level trends and models.

The first part of this paper is thus, by necessity, an overview of what prevailing aggregate perspectives on population ageing have and have not been able to tell us about elderly people without children. The second part briefly reviews three alternative macro-pictures drawn from major chapters in modern demographic history: pre-industrial England; America during its fertility transition; and contemporary Sub-Saharan Africa. If space allowed, the current situation in Western Europe could be

added as an apt fourth macro-picture. Fortunately, a growing number of studies of this situation are available (Evandrou and Falkingham, in press; Prioux, 1993). The paths to childlessness are diverse and not incidental: they are integral to major long-term adaptations that characterise societies. We turn in the third part of this paper to the agenda that emerges from these pictures taking note of a number of recent studies that help to identify current research needs.

When we ask why older people have no children two sets of issues come to the fore. One has to do with factors that restrict childbearing. Here the blunt answer to the question ‘Where are the children?’ is that some older people had none. Discussion cannot stop there, however, because it is important to inquire into the several biological, cultural, and economic factors that in many societies have sustained nil childbearing. The second set of issues, which may be termed *de facto* childlessness, concern absent children: factors like migration, divorce, remarriage, enmity, and conflicting priorities that remove children permanently or over long periods from older people’s lives. The elderly without children, as we shall see, are a composite population entailing both sets of issues which have given rise to different patterns of adaptation in different periods and cultures.

Questioning the big picture

If we ask what makes population ageing specifically intergenerational, an obvious minimum answer is the presence of two generations, the first composed of cohorts aged sixty and above, and the second made up of their children.² Standard measures of ageing employed in compendia and syntheses (age dependency ratios, proportions over age sixty, measures of coresidence) all begin from this kind of assumption. Minimal definitions, of course, understate the complexity of the aggregate picture. Improvements in life expectation have multiplied the generations we need to consider. There will be two generations of elderly where those in their eighties and nineties have children reaching sixty years of age. Multiple generations of children and grandchildren follow those in their sixties. As Pool (2000) and Lutz and Sanderson (2000) remark, separating generations in this way is still insufficient for purposes of social and economic demography as it fails to tell us about the timing of major life events relative to both older and younger generations. Do elderly health crises, for example, tend to coincide

with phases in the life cycle of younger cohorts (childbearing, major career choices) such that the support each generation can give to the other is seriously reduced? Are all older and younger cohorts affected to the same degree by the co-occurrence of major life events? Even this critical perspective, should it prove open to quantitative analysis, would still leave unsubstantiated the reassuring assumption which the issue of childless elderly calls into question: Can we take for granted that there *are* members of the younger generation on whom older people are able to rely? More to the point than the issue of the varying size of generations is the assumption *that children are somehow distributed equitably*, so that all older people effectively have access to the support of reliable younger people.

Considered in aggregate this assumption may appear to pose no problems. Even a country in which fertility has declined below replacement will number its younger members in the thousands and millions. In the past total fertility was generally much higher. Births per woman in historical Europe rarely fell much below four and commonly averaged between four and six. The upper range of fertility in most of Asia and Africa during the colonial and post-colonial periods tended to be higher still, in some places reaching seven births per woman and more (Livi-Bacci 1992: 22f.). Levels of natural sterility are, in contrast, statistically modest, so that demographers by a long-established convention treat them as a constant affecting at most some three to six percent of couples (Pressat 1988: 214). As sterile couples do not pass on their infecundity to younger generations their limited recurrence in a population may be treated as distributed uniformly across the aggregate as a whole.

This simplified picture of sterility as modest and fertility as sufficient carries over into research and policy on contemporary needs of older people. If all that was at issue in the 'social vacuum' of ageing was couples physiologically unable to bear children, then the threat that ageing poses for social solidarity would scarcely attract so much attention. After all, some childless elderly live out their later lives without assistance. In most cases siblings and other kin exist who may be able to help when necessary. Social security systems in advanced economies can be expected to cope easily with the small remaining numbers of childless elderly involved. Childless elderly in advanced economies thus appear to conform to the familiar image of a small and abnormal social category, a minority of

potential welfare concern. Annexed to issues of caring for isolated and vulnerable sub-groups, they become one of the myriad objects of public health and welfare services, and more specifically of gerontology. The need for informed policies in this area has encouraged several thoughtful and important local studies (e.g., Johnson and Catalano 1981; Rubinstein et al. 1991; Wenger 2001). These contributions are unfortunately dwarfed by the growing mountain of research on generational impacts of ageing in which the pending retirement of baby boom cohorts on pensions and health care predominate. There is some danger, in short, that treating older people without access to children as a special minority case simply confirms their image as marginal. As we shall see, the elderly without children are of interest not simply because of the health and policy issues they may raise, but as a recurring and normal element of social organisation. This requires a comparative and long-term demographic perspective.

With the problem of identifying distinctive sub-populations of older people confined to the margins of population ageing, the way has been clear for a vast literature and extended debate to grow up around the actuarial implications of ageing as a national and global concern. Chiefly in the developed world, questions of equity across generations come down to developing fair mechanisms for redistributing waged income via taxation and investment, so that pension and health provision may be arranged for the older population as a whole (e.g., Disney and Whitehouse 2002; Keyfitz 1985). As noted earlier, the scale of pending pension imbalances taken *en masse* encourages fears of a ‘social vacuum’: if adequate public policies are not put in place, substantial increases in taxation will fall on younger generations and/or there will have to be major reductions in the scale of support for older generations—with all the attendant political and social recriminations that such policies are likely to entail. Put another way, the desirability in principle of providing pensions and healthcare for all appears to have run up against the reality that the state has limitations as a universal provider or at least that long-term planning remains difficult in the context of short-term political priorities. Of course, not all elderly and not all elderly without children are in need of public assistance. Treating the problem primarily in aggregate generational terms is bound to exaggerate levels of support required, because it

embraces many people not in need. The difficulty of attaining a just balance between public capacities and individual needs may in consequence appear more difficult than is likely to be the case. The real need is to identify those parts of the older population that face a serious lack of assistance and those that do not.

National level data remain, of course, the conventional basis of macro-economic planning. Large data sets carry greater statistical reliability, even if defining the problem in broad age-structural terms seems bound to exaggerate potential needs and thence heighten fears. Demographers and actuaries have, however, a long-established way of responding to more or less any possible population crises, which is to insist that moderate solutions are possible if policies can be guided by more refined technical analysis. Hence an array of technical and institutional adjustments dominates discussion: modifications of public pension schemes; development of private pension alternatives; retraining programmes; delays in retirement age; and further 'parametric' adjustments (Chand and Jaeger 1996). Of course, whether all such adjustments will be put in place, whether they can be established quickly enough, and whether they will succeed are open questions. What is clear nonetheless is that treatment of population ageing on a macro-scale lessens the apparent need for empirical research on distinctive sub-groups within older generations. From an actuarial point of view there is little need to distinguish groups like older people without children. For practical and analytical purposes they may be divided like all other older people into two blocks: those with sufficient access to commercial sector pensions and health care and those dependent on state assistance. In this way Western elders without children, like the Asian elderly described by Shaw (in press), simply become invisible.

As public pension and welfare provision remain modest in the developing world, the negative implications of age-structural imbalances appear to carry even greater force there. In the absence of public provision, family networks remain crucial to social welfare in poorer populations. Once again the question of whether and what access older people actually have to children tends to be treated in broad generational terms. The prevalence of joint and other complex family systems in much of Asia, their importance in parts of historical Europe, and the presence of elaborate kin networks in Sub-

Saharan Africa are generally assumed to indicate that elderly in these places have children with whom they reside, either their own or their siblings' (e.g., Hajnal 1982; Goody 1976; Kertzer 1995). Yet these reassuring assumptions deserve closer examination. More complex family systems undoubtedly have the capacity to provide older people with security where families hold property and other material advantages—assuming of course that generational authority or at least respect for age and kin ties is secure. The latter, however, is a sweeping and questionable assumption. The evidence for historical Europe (discussed below) suggests that many poor older people commonly depended on charity. Whether joint and other complex family systems in Asia actually secure the position of poor and propertyless older people and whether the support they do provide comes at the price of major losses of status, material well-being, and respect are issues highlighted some time ago by Cain (1981). More recently, as Vera-Sanso (in press) and Shaw (in press) show, this issue is still seriously neglected, and is one to which the situation of elderly without children is particularly relevant. The 'solution' which complex family systems are supposed to provide cannot of course apply to the major areas in the developing world characterised by small family systems without reliable extended networks. Recent studies of the implications of these systems for poor, childless elderly are explored in the nuclear family systems of Indonesia by Marianti (in press) and Schröder-Butterfill (in press).

Addressing the situation of childless elderly is complicated by the fact that there is no hard and fast line between their situation and the position of many older people who do have offspring. Having children, in other words, does not guarantee access to them or their support: there is a problem of *de facto* childlessness where offspring are absent or are unable or unprepared to maintain kin ties (Kreager and Schröder-Butterfill 2003). Indrizal (in press) and Vera-Sanso (in press) note that the impact of gender preferences is a further relevant factor, as in some societies only children of one or the other sex can be primary sources of support. Elderly Minangkabau in Sumatra are effectively childless without daughters, and in South Asia sons are crucial. As Vera-Sanso goes on to note, even then the support of sons may be so minimal and intermittent that parents often find themselves effectively childless. The large literature on transfers between households that has come to dominate

discussion of intergenerational relationships in economic and social demography, unfortunately fails to address these issues head-on. Its directed focus on hypothesised rationalities governing transfers between parents and children generally takes the presence and regular participation of the latter for granted. Elderly without children may simply be equated with numbers of women reporting no children ever born and hence excluded by definition from samples under analysis. The serious time constraints of survey collection generally preclude examination of transfers as an aspect of long-term relationships in family and community networks.³

Perhaps it is not surprising, then, that recent syntheses agree that prevailing household economic models are generally not well supported by evidence and that statistical associations between intergenerational transfers and differentials in income, education, residence, and other variables remain inconclusive (e.g., Folbre 1996; Haddad et al. 1997; Lillard and Willis 1997). Further and general criticisms have been addressed to this methodology (e.g., Deaton 1997; Murphy 1993), two of which without doubt apply to its applications to population ageing. One shortcoming, known as the ecological fallacy, arises from the widespread assumption that aggregate data can be used to explain choices at the local level. Such 'explanation' relies on an inferred rationality of individual and household strategies that remains empirically unsubstantiated. Second, analyses often depend on survey data in which family networks are reduced to dyadic exchanges between households: these households may additionally be treated largely as homogeneous social and economic units. The neglect of the way households are linked to each other over time and of conflicting interests within them in relation to such links mean that research captures only a few strands of the web of social and familial processes in which members of different generations participate. Instead, research has focussed for some time on the coresidence of elderly with their children. Echoing the stereotype that complex household forms cater well for their older members in Asia, the incidence of older individuals and couples living on their own is taken as a sign of vulnerability and even the breakdown of traditional arrangements. The inappropriateness of such assumptions for countries like Indonesia or India has already been remarked. This failure to take due account of the heterogeneity and

changeability of elderly residence has a bearing on the neglect of the elderly without children as a focus of research, owing to the problem of *de facto* childlessness. Separate elderly residence owes to a wide range of factors, and the incidence of elderly without children as *de facto* childless needs to be distinguished amongst this group.

On the one hand, independent residence may have little or no bearing on isolation and vulnerability: it may simply describe situations in which older people are net givers and/or receivers of support in networks with various kin and neighbours in other households. Or, as Vera-Sanso (in press) notes, separate residence may reflect other issues like privacy, the compounding of older generations that greater life expectancy now makes possible, and alternative domestic cycles. On the other hand, older people have long had good reason to prefer living separately in many societies both within and without Europe. Where residing with others entails loss of authority and influence (for example, a loss of control over economic management), coresidence may be avoided as it is synonymous with reduced income and respect. The opposite problem may also arise where the continuing economic and social viability of the older generation makes them an important source of income: the continuing reliance of coresident younger adults on parents becomes a burden in which excessive responsibility carries on to the very end of parent's lives (Hermalin et al. 1998; Schröder-Butterfill 2004). Nor can we assume that coresidence is necessarily with kin. In early modern north-western Europe, for instance, economic circumstances kept people from marriage and childbearing and left them as servants or recipients of charity in other people's households (Hajnal 1982). Elsewhere in Europe adults who remained unmarried and childless in a sibling's household commonly accepted a secondary status, which could for all practical purposes amount to permanent unpaid servanthood (e.g., Bourdieu 1962).

The implications of separate residence, in short, can only be interpreted with accuracy where there is detailed contextual evidence. Surveys cannot resolve the issue unless accompanied by sustained ethnography or social history able to relate changing household composition and networks of support to relations of status, prestige, and respect. Without these data the likelihood of ecological

fallacy, in which irrelevant motivations and strategies are imputed to some or all older people, is more or less inevitable.

The role of *de facto* childlessness here provides a crucial instance of why the need for accurate data reflecting social and familial processes is paramount. The presence or absence of children, say, at one or two or more points in time as recorded in surveys, needs to be put in the context of life histories that tell us about the quality and changeability of relationships over time. *De facto* childlessness may arise, for example, in consequence of divorce, remarriage, and consequent family conflict—factors that, by alienating generations, remove key support for the elderly even where surveys record regular contact with children and the presence of (what may be at best minimal) transfers. These sources of family disruption and their impact on transfers are often, of course, sensitive subjects which the standard formulae of survey questionnaires are not well-suited to reveal.⁴ *De facto* childlessness due to loss of children in the course of migration poses similar issues. Okely (in press) and Hionidou (in press) document the anguish which elderly experience either through the disregard which successful children show them, or through the inability of children to overcome the effects of distance on their ability to give support in times of crisis. Alternately, as Indrizal (in press) describes, children who return to the community may do so consequent on the failure of the economic objectives of their migration. Those children who remain in the same community as their parents may be the ones least capable of providing adequate assistance.

To summarise, the general neglect of older people without children as a demographic, social, and economic phenomenon, arises from a combination of four factors. First, the implicit tendency to treat childless elderly as an infertile minority has led to a limited range of other demographic factors (delays in marriage, celibacy, divorce, pathological infertility) being considered systematically. Second, characterisation as an isolated minority has marginalized them as an abnormal phenomenon of concern chiefly to special health and welfare policies, rather than a sub-population of general demographic and sociological importance. The elderly without children have not usually been seen as comprising a sub-population at all. Third, reduced to a disaggregated set of isolated and presumed

marginal people, older persons without children have not appeared to be overly problematic from a policy point of view. Either general public welfare and pension provision or extended family networks have mistakenly been assumed adequate. Finally, recourse to crude intergenerational indices, such as dependency ratios and measures of coresidence, has failed to capture the diverse circumstances of older people over time whilst leaving unchecked the tendency to project negative stereotypes of isolation and vulnerability onto them. Adherence to standard household units and survey schedules has meant that the functioning of family networks over time goes unexplored.

Alternative demographic perspectives

Only a little questioning is necessary to show that childless elderly are not inevitably a small and residual social category. The immense expansion of demographic and historical research on family and household systems that has taken place over the last half century has given rise to alternative macro-perspectives that need to be taken into account. Subjects like childlessness, widowhood, and old age have not been primary objects of this research. But understanding the causes and processes underlying aggregate patterns of reproduction, marriage, and family formation has for some time led population research into more searching cross-cultural analysis (e.g., Gillis et al. 1992; Lesthaeghe 1980; Watkins 1984) which increasingly calls on social history and anthropological demography for ideas and supporting evidence. In the course of this work, the incidence of childlessness, factors giving rise to it, and the means of dealing with a shortage of children have turned out to have a long and varied history.

An outline of three patterns described in this wider literature will suffice to show why older people without children deserve to be brought into the mainstream of research on population ageing. The following examples, whilst necessarily brief summaries of extensive literatures, underscore the general importance of the particular issue to which this paper is addressed, on two counts. The first is evident from the diversity of examples we are able to cite, drawn from early modern Europe, nineteenth-century America, and a varied set of twentieth century societies from the Caribbean to the Far East.⁵ Even though the demographic and social accounting available on these instances is incomplete, it makes clear beyond doubt that childlessness—and in consequence the existence of

elderly people without children—recurs as a significant social phenomenon, sometimes with marked fluctuations, over long periods. The existence of major social instances of childlessness would appear to have direct bearing on how contemporary ageing and childlessness should be considered. Second, the factors that leave people without access to children occupy potentially key locations in the dynamics of population change. The three examples discuss the integral role of childlessness in establishing observed levels of reproduction and their relation to the organisation of family life in the era leading up to and during the principal transformation of modern population history—the demographic transition. Rather than a residuum brought about by recent fertility declines and mortality improvements, childlessness and its potential impacts on the elderly have long been central to demographic systems.

North-western Europe to 1800: the case of England

Historical demography has for some time played an influential role in demythologising widely shared images of the family in past times. Perhaps the most widely held preconception to be displaced is the notion that large and extended families dominated Western Europe before the industrial era (Laslett 1972). The capacity to amass children and coresident kin was constrained by mutually reinforcing arrangements of marriage, residence, and migration. The general features of the marriage component of this system, although subject to local variation, have been known since Hajnal's (1965) classic summary. Restrictions on nuptiality delayed average marriage ages to around twenty-three for women and twenty-six for men, with 10 to 20 percent of the population never marrying. (The latter figures refer to both sexes, non-marriage amongst women being generally higher within this range than for men. In the discussion that follows, I shall refer to data on women as they are more consistently reported in the demographic literature.) In English parishes, for example, cohorts born 1610 to 1739 experienced female marriage ages that never fell below twenty-five (Wrigley et al. 1997: 134). Comparable figures for proportions never marrying in the period 1596 to 1641 varied in the range of 22 to 19 percent; in the century from 1641 the range fell to between 8 and 12 percent before rising again subsequently (Schofield 1985). Hajnal (1965: 102) remarked that by 1900 proportions not

marrying in sixteen European countries varied between 10 and 29 percent, while half of these countries (including Britain) had proportions in the range of 15 to 20 percent. Meanwhile, Adair (1991) and Laslett et al. (1980, both cited in Wrigley et al. 1997: 219) have shown that births outside wedlock remained less than 4 percent of overall fertility up to the mid-eighteenth century. Although illegitimacy ratios rose to near 7 percent in the mid-nineteenth century, they fell again to 4 percent in the period to which Hajnal's data on non-marriage refers. In short, his observation that 10 to 20 percent of women do not marry, therefore, may be taken as a reasonable first approximation of those who never had a chance to bear children.

Marriage delay is a further consideration. Human biology favours the fecundity of women between their late teens and age thirty. Postponing marriage significantly increases risks of childlessness. Using historical data on seven communities of Western European descent, Larsen and Mencken (1986) have shown that 9 percent of women marrying between the ages of twenty-five and twenty-nine were likely to remain childless. The figures rise progressively to 15.5, 29.6, and 63.6 percent for those marrying at ages thirty to thirty-four, thirty-five to thirty-nine, and forty to forty-four, respectively. These figures are broadly comparable to the representative sample of English parishes analysed by Wrigley et al. (1997: 411): nearly 8 percent of marriages to women aged twenty-five to twenty-nine, and 14 percent at ages thirty to thirty-four, were childless over the long period 1580 to 1837, with figures for ages thirty-five to thirty-nine and forty to forty-four rising to 24 percent and 69 percent, respectively. The English data, which refer to sterile marriages in which wives survive to age fifty, are of additional interest because they may be compared to data on fertility for wives who died before age fifty. The childlessness of the latter rises, for example in the thirty to thirty-four age at marriage group, to 20 percent. By implication, these numbers indicate significant proportions of childless widowers, although some surviving husbands doubtless succeeded in making later and fertile marriages.

Thus, in addition to levels of unmarried childlessness between 10 and 20 percent of the female population, there existed a similar range of variation due to the sterility of marriages delayed to ages

twenty-five to thirty-nine. The rough arithmetic implies a possible range from around one in five to perhaps more than one in three women without children at age forty, that is, at a stage of life when the vast majority of childbearing has ceased. Such sums constitute a *prima facie* argument, at least, for the existence of significant numbers of older people without children. Thane (2001: 136), citing demographic simulations, proposes comparable figures for the history of childless elderly.

A more precise accounting is, however, clearly desirable. It would need to include analysis of further factors that sometimes assisted couples to gain children (such as adoption) as well as major demographic forces working to increase childlessness and the absence of children (notably, high levels of infant mortality and migration). Adult mortality of childless persons would of course have had the opposite effect of removing childless adults before they reached old age. More quantitative detail would no doubt lead us to modify the order-of-magnitude figures just sketched.⁶ Yet a more important point arises from any such considerations. The effects of further factors could only modify to some degree the central position of the marriage system as an institution that during long periods kept many people from childbearing.

Marriage and family systems are, of course, not organised with the primary aim of keeping people from having children. Procreation is a central and positive value in all societies. High levels of childlessness, in other words, need to be understood as only one outcome of the systematic organisation of vital events in a given society: a system that ensures that most people *do* have children in conformity with cultural values and norms, whilst also tending (to a greater or lesser degree, depending on the marriage and family system and its adaptation to wider social changes) to the outcome that some *do not*. It is in the nature of demographic regimes as cultural systems that only some members of a society are able to make the marriages, build the families, and attain the material and social statuses they desire (Kreager 1986: 138f.). Many have to make do with considerably less than custom designates as ideal.

Three further questions arise, therefore, about childlessness in early modern Europe. First, was childlessness merely a by-product of early modern marriage and family systems which left an

unfortunate residuum of childless older people (in effect, the losers in the normal functioning of the demographic regime)? Or was the existence of considerable numbers of childless people in some sense necessary to the structure and continuity of this social and economic system, an integral adaptive mechanism of early modern society as a whole? Second, as numbers of childless older people were not constant can we understand fluctuations in their numbers as part of this adaptation? Finally, the question inevitably arises in the absence of modern state welfare provision of the potential vulnerability of this substantial sub-population without its own offspring. If the system consistently produced people in this situation, to what extent was this vulnerability normally recognised as a social problem and regular alternative mechanisms of support provided? Historical demography again has much to tell us about these issues.

The social and economic mechanisms underlying European marriage patterns were the subject of a second seminal paper by Hajnal (1982), subsequently extended and qualified by later research (see, for example, Goody 1996; Kertzer 1995; Reher 1998). In the seventeenth and eighteenth centuries, across a broad band of north-western and central Europe (the Low Countries, the British Isles, Scandinavia [less Finland], Iceland, northern France, Germany, and Austria), couples delayed marriage until they had the wherewithal to establish their own self-sufficient households. Young people did not, however, merely remain in the parental home until such an opening appeared. A rough estimate of those who left home may be gained from the sixty-odd local census lists compiled in England over the long period 1574 to 1831. These show that around 60 percent of all young persons aged fifteen to twenty-four became servants—usually employed in agriculture—in other people's households (Kusmaul 1981: 3). Setting up an independent household was for these young people no easy matter. It required savings, often painfully scraped together over ten or more years of service, or an inherited smallholding, a tenancy, or attainment of some other viable economic niche. The extent of delayed marriage can be seen, in effect, as an index of this difficulty and the considerable numbers non-marrying as evidence that many people did not, in the end, succeed in finding a niche. Wrigley and Schofield (1989: 417-430), tracking English marriage and reproductive trends over the long period

from the mid-sixteenth to the end of the eighteenth century, have shown persuasively that marriage and reproductive rates followed the broad upward and downward movement in real wages. They argue that, taken in aggregate, the rise and fall in ages at marriage and proportions non-marrying may be understood as a systematic response to economic fluctuations: bad times increased impediments to marriage, variously driving up the age at marriage or numbers never-marrying; in contrast, economic expansion signalled more marriage opportunities, albeit usually after some delay.

The adaptive properties of a marriage system which adjusts to levels of material well-being may be understood as carrying benefits to society as a whole: relatively moderate reproductive levels would have served to ease the pressure of numbers of young people on available livings, whilst making possible more secure living standards and thus assisting the improvement of longevity for those surviving to adulthood. Elaborating on this perspective, the English system has been envisaged as the micro-component of wider demographic homeostasis (Wrigley 1969: 113). With the benefit of hindsight the adaptability of early modern marriage and family arrangements was particularly opportune for a society about to embark, from the later eighteenth century, on a course of rapid industrialisation—as if the system was primed to provide a growing reserve of manpower whenever favourable circumstances arose. The later impact of declining age at marriage and declining non-marriage towards the end of the eighteenth century is estimated to have increased fertility by 20 and 17 percent, respectively (Wrigley and Schofield 1989: 265; Wrigley et al. 1997: 194).

Viewed in aggregate historical terms, then, childlessness was not an incidental but a crucial variable in early modern England and one, moreover, that has proven fruitful in helping to develop general models that enable us to understand the conditions that may have made major social transformations possible. Childlessness was produced as part of the functioning of interlocking institutions (marriage, internal migration of young workers, independent household formation). But it was not merely an outcome. The low reproductive levels to which it made a substantial contribution were essential to these institutions' normal functioning and continuity. Understanding childlessness as an integral component of a wider demographic regime is also important because it enables us to

understand the flexibility that may be built into such systems, a flexibility that operates by systematically disadvantaging certain sub-populations. The adjustments that people made can be followed in the alternative pathways by which this institutional complex appears to have adapted to changing economic circumstances. Adjustments to levels of non-marriage and delayed marriage were key.

Weir (1984) and Schofield (1985), remarking the long sixteenth to mid-eighteenth-century fluctuations in proportions married (cited above), have noted that different marriage patterns characterised different periods. For cohorts born up to the 1660s, the system was 'celibacy dominated', that is, driven by higher rates of non-marriage. The social constraints on household formation and the economics of declining wages were not so strict that the majority of people needed to delay marriage any more than was customary. However, the normal pattern of internal migration of young people into jobs before marriage was insufficient to enable a substantial minority (approximately 20 percent) to find the means to marry. For cohorts born around 1700, however, rates of non-marriage fell to half of this level. Those born after 1741, and hence coming into the marriage market in the economic and industrial upturn later in the eighteenth century, appear to have enjoyed better opportunities, as levels of non-marriage fell closer to 4 percent. Mean age at marriage also declined significantly in the latter half of the century, the two factors together sustaining the rise in fertility noted above. The fact that non-marriage declined earlier suggests that there may have been improvements in the circumstances of the poorest poor. Up to this time, as Weir hypothesises, labour patterns may well have created local sex ratio imbalances as men needed to remain on the land to find work whilst the availability of female employment was greater in urban areas. Such imbalances could have endured over several generations and appear only to have been corrected gradually as the eighteenth century proceeded.

All of these shifts carried important implications for levels of support available to older people. The considerable extent to which internal migration removed children from the community suggests that at least some parents, and probably the poorer among them, would have found all their children gone. The unreliability of filial support as an aspect of *de facto* childlessness is suggested by the

prevalence of 'retirement contracts' in many parts of Europe: legal documents which bound heirs to provide specific levels of subsistence and support to their parents (Berkner 1972; Reher 1998; Hionidou in press). Contemporary witnesses, like Daniel Defoe (cited in Thane 2001: 136), testify to the fecklessness of children as sources of support. Together with the impact of the marriage system on levels of reproduction, and the continuing impact of infant and child mortality on numbers of surviving offspring, the combined impact of migration and *de facto* childlessness suggest that many older people would have found that the numbers of children available to support them was limited. Such factors would have also worked to restrict the opportunities of poor people to build up enduring kin networks that might provide assistance in later life. These are issues that clearly deserve further research.

For example, in the rural English communities studied by Wall (1995: 88) over the period 1599-1796 (that is, including the period of rising fertility and economic improvement), those able to live with a child generally remained in the minority. Thus, 49 percent of men aged sixty-five and over lived with a child but only 37 percent of women; in urban areas the corresponding figures were 54 percent for men and between 37 and 46 percent for women. At first glance these figures might appear a simple consequence of the customary preference of younger and older people in this part of Europe to live in independent households. However, if this were the only matter at issue, we could still expect to find large numbers of older people living with their spouses. The figures for coresident spouses are, however, much lower than those for elders residing with a child. Only a quarter to a third of men in all areas were currently married and living with their wives; women were even less likely to be married, some 26 percent in rural areas, and 10 to 15 percent in urban areas resided with their husband. It seems possible that the higher figures for elders living with their children reflected a patchwork of arrangements improvised following one or the other parent's death.

The alternative living arrangements appear to have been as follows. Less than 5 percent of either sex lived with kin other than their children. Some simply lived alone: less than 5 percent of men in all areas, but 8 to 16 percent of women. Living alone would not, of course, preclude support received from children or others. Living alone might also be a consequence of never marrying. More

important than living alone was coresidence with non-kin (8-15 percent of all men but one third of all women), a composite group reflecting three factors: older people who continued a lifetime's work as unmarried servants, or who employed servants or kept lodgers; and the role of community organisations (Poor Law authorities) in placing elderly singletons in care in the homes of other poor members of the community. The existence of Poor Law institutions in England from the remarkably early date of 1601—that is, of community rather than kin-based welfare provision—has been widely remarked (e.g., Thomson 1991). Such arrangements appear to have been necessary in a part of the world in which complex family forms and extended kin support networks were not normative.

The isolated and poor elderly were among a number of vulnerable social groups explicitly recognised to require Poor Law support, and it is unfortunate that, as Wall's analysis does not include residents of these institutions, his figures understate the size of the older population in need of assistance. The exact numbers of elderly persons without children—reflecting the combined totals of those infecund, unmarried, and whose children were absent, feckless, incapable, or dead—will probably never be determined precisely. They would have made up some proportion of the several categories Wall was able to glean from local censuses. The existence of institutional arrangements for poor elderly over two centuries at the very least indicates wider contemporary awareness of the presence of older people lacking family-based intergenerational support.

Childlessness in the American fertility transition

The capacity of historical demography to question popular mythologies of family life is not confined to the idea that extended kin and large households were the norm in European history. The reader may have noticed the erosion of two further stereotypes in the course of the preceding discussion. The first is the idea that Western society came to be characterised by small family units in consequence of industrialisation and what is broadly termed 'modernisation'. Nuclear family organisation was evidently widespread in England by the sixteenth century, long before it became the first industrial nation. A second stereotype, namely that older people in the past could count on coresidence in later life in multiple family households, obviously collapses with the first. If space allowed, a wider picture

of early modern Europe as a whole might be explored in which a third defunct stereotype would also become evident, namely, that small family units are everywhere essentially nuclear in form. The affects of domestic cycles, mortality, and the departure of the young on the size of domestic groups in European history admitted other (e.g. stem family) arrangements, in which relatively small units were common, although the potential vulnerability of older people appears to have been a recurring issue across the region (Goody 1996; Reher 1998).

These fundamental shifts in our historical understanding of periods leading up to the nineteenth century have an important bearing on how we approach the remarkable demographic changes that subsequently embraced Europe, including its overseas populations, and which shaped the family systems and arrangements for the elderly to which we are now accustomed. Demographic research since 1945 has concentrated on the subject of fertility and mortality transition, a sea change in demographic behaviour which began in some areas of Europe as early as the later eighteenth century and became general between 1870 and 1940 (Chesnais 1992). Demographic transition is rightly regarded as having given modern economy and society the capacity to break decisively with earlier systems, such as described in the preceding section, in which the timing and incidence of marriage had been essential as primary checks on reproduction. A central problem in this literature is the means people used to effect rapid fertility declines, and much debate has come to surround the social biology of birth control—the so-called ‘stopping versus spacing’ debate (Friedlander et al. 1999: 508-511; Szreter 1996: 367-371). At first glance, this appears a rather technical argument, quite removed from the lives of older people. Its central focus is on how to measure the contributions to fertility change of variables like abortion and contraception relative to the influence of other factors such as marriage rates, breastfeeding, and coital frequency. Does fertility transition require a general social shift to contraception and abortion as ways of ensuring that no further children are born (‘stopping’), or do traditional ways of postponing procreation (‘spacing’) remain fundamental means of effecting reproductive preferences? The impression of irrelevance to the present topic, however, is misleading.

To understand population ageing we cannot focus only on what happens to age structures after rapid fertility decline. The ways in which past generations came to have fewer or no children are material to their subsequent behaviour and to that of generations following them. Factors which lead to reduced or nil childbearing, whether such outcomes were desired or not, are obviously relevant to understanding life-courses lived out in the absence of children. In short, the mechanisms that before 1800 gave rise to substantial numbers of elderly without children remain integral to understanding more recent demographic change in Western history. A brief digression is needed, however, to place the possible importance of childlessness in the context of the stopping versus spacing debate.

The measurement and interpretation of fertility transition, as developed from Henry (1961) to Coale and Trussell (1974) and Knodel and van de Walle (1979), gave primacy to the adoption of birth control as the spread of an essentially new form of behaviour. The diffusion of contraception (notably coitus interruptus) and abortion after 1870 is interpreted in this approach as an historically unprecedented emergence across whole societies of conscious strategies to stop having any further births. In this view, continuities between reproductive behaviour under the *ancien régime* and modern replacement level fertility are regarded as secondary, if they are seriously examined at all. On the one hand, initial analysis of historical populations before 1800 appeared to show that contraception was confined to relatively few places (Livi-Bacci 1986). On the other, following Notestein (1945), the interest of any continuation of older family values into the period of declining and low fertility was considered significant chiefly as a possible explanation for the differential timing and pace of declines, that is, as evidence of resistance to the spread of modern values and practices such as contraception, the effect of which was to make some declines slower or later than others. As Notestein wrote, ‘marriage habits and family organization are all focused toward maintaining high fertility. These change only gradually and in response to the strongest stimulation’ (1945: 39f.).

This abrupt dismissal of major continuities between factors restricting reproduction before, during, and after transition is now widely questioned (e.g., Friedlander et al. 1999; Morgan 1991; Santow 1995; Schneider and Schneider 1996; Szreter 1996). ‘Stopping’ appears to be only part of how

fertility was reduced after 1870. Two patterns are of particular note here. One is the re-emergence of significant levels of non-marriage. The second is the relevance of contraception and abortion to birth spacing. The spread of birth control, whilst undoubtedly marking a new public acceptability of techniques of marital fertility control, also occurred in important respects as a new means of carrying out older strategies of avoiding or postponing births considered inappropriate at particular times in the life-course or in certain circumstances. From a demographic point of view, postponement appears to have functioned as a factor leading to significant numbers of childless couples in a way analogous to the effects of marriage delay in the *ancien régime*. As we have seen, before 1800 marriage delay tended to increase the numbers of women whose marriage after the age of twenty-five left them unable to bear children. Postponement of childbearing within marriage appears to have had a similar impact as more and more married women only entered childbearing in their late twenties and thirties. The evidence for these two patterns is, very briefly, as follows.

Hajnal's classic paper of 1965 suggested that caution is necessary before accepting any sweeping view of transitional fertility behaviour as a radical and fundamentally innovative break from the past. His account begins not with the earlier seventeenth and eighteenth-century patterns but with the situation in 1900. In the later nineteenth century proportions not marrying in England had fallen from their early modern levels to around 4 percent at ages forty-five to forty-nine (Schofield 1985). But Hajnal found that by 1900 higher proportions of single women in this age group had again become widespread. Non-marriage varied between 10 and 29 percent of women aged forty-five to forty-nine in Western and Central European countries for 1900, with half of the countries falling in a range between 15 and 20 percent. This cohort would have passed through its reproductive years from 1870 onwards, just as the fertility transition became increasingly general. Hajnal's assessment of these figures as a reflection of long-established patterns is unequivocal: 'numbers remaining single at 45-49 may be taken to indicate the numbers who never marry at all' (1965: 102).

Childlessness in American marriages is likewise not a new theme (see, for instance, Lotka 1928). Morgan's excellent study (1991) brought new thinking to bear on this issue, in effect arguing

that the distinction between stopping and spacing might be better expressed in terms of ‘stopping’ and ‘postponing’. American trends in childlessness, and the demographic factors supporting them, echo three features of the early modern English situation described above, which show how the rise of contraceptive practice became part of long-term patterns of childlessness. The first is the presence of comparable levels of childlessness and of long-term fluctuations in childlessness that appear to have responded to changing economic circumstances. Cohorts of women aged forty-five and older experienced levels of childlessness that rose steadily from the 1840 birth cohort (15 percent) to between 21 and 25 percent in the 1910 cohort. The very high levels at the end of this period correspond with the economic depression of the 1930s, when the 1910 cohort was in its prime reproductive period. Second, as in early eighteenth-century England, the relative importance of non-marriage and childlessness within marriage altered over time, with the latter gradually becoming much more significant. Non-marriage and delayed marriage each accounted for roughly half of childlessness as it rose to 17 percent in the cohorts born up to 1860. Thereafter marital childlessness came to have a preponderant role, rising steadily to account for 20 percent of women by 1900, whilst non-marriage declined to 9 percent. Levels of childlessness due to each of these factors subsequently fell to 7 and 5 percent, respectively, as cohorts born around 1925 experienced the fertility of the post-second world war baby boom.

Third, as in Europe, there were significant regional variations in childlessness. The several American states varied in a range of 12 to 31 percent of ever-married women born in the 1891 to 1895 cohort. What made these levels of marital childlessness in the early twentieth-century different from previous history, in Morgan’s view, is that contraception, and not marriage delay, appears to have been a major factor. He deduces this by bringing together evidence of two kinds: parallel declines in childlessness and in the numbers of women having three or more children; and evidence that birth control was practiced by married women in the early years of their marriage. These trends were linked as follows. Delayed childbearing in marriage and the decline of larger family sizes are, of course, classic signs of the spread of contraceptive practice. Morgan argues that women in this era did not seek

to have no children, yet, as more and more of them practiced birth control at younger marriage ages, higher percentages of them fell into the trap of increased infertility. Childlessness increased as total fertility declined to replacement level because a growing proportion of married women delayed having children too long and wound up without them. As he notes, these patterns imply that current levels of childlessness in the United States and elsewhere in the West are not a new, post-transitional phenomena but the continuation of long-term customs of postponed reproduction (1991: 863).

Childlessness and infecundity in the developing world: the case of Sub-Saharan Africa

A third historical pattern of childlessness arises from infections that cause infertility. Evidence on the social and personal impacts of pathological sterility is unfortunately much less available than for subjects like non-marriage, marriage delay, or postponement of births. However, the generality of the pattern and its potential impact on older people, deserves note. The principal factor cited is usually gonorrhoea, leading to sterility in both sexes, although chlamydia which may result in pelvic inflammatory disease in women, genital tuberculosis, and complications arising from circumcision practices, may also play important roles. The demonstrable impact of pathological sterility on fertility is widely distributed in the world and dates in many places from the late nineteenth century and probably earlier. The principal regions affected include the Caribbean (Nag 1980), Sub-Saharan Africa (Frank 1983; Mammo and Morgan 1986), Indonesia (Hull and Tukiran 1976), Oceania (Rallu 1990), and Mongolia (Randall 1993), although this list could probably be extended if data were available. Significant health improvements have fortunately been effected in most of these areas, although coming too late for most current generations aged sixty and over, whose prime childbearing years finished before 1980. The situation has continued to be very serious in Sub-Saharan Africa (Larsen 1994), which will be taken as a case in point here. The significance of sexually-transmitted diseases (STDs) as a factor underlying childlessness in Indonesia is discussed by Kreager and Schröder-Butterfill (2003).

Frank's (1983) synthesis of data for seventeen Sub-Saharan African countries revealed thirteen states in which childlessness among women aged forty-five to forty-nine ranged between 8.7 and 32

percent and a further four states with levels between 4 and 7.7 percent. On average, childlessness affected 12 percent of women in this age group, of which only 3 percent Frank considers to have been naturally sterile. Because the impact of gonorrhoea on fecundity is gradual, and infections usually occur at some point subsequent to marriage, an even greater impact of pathological sterility tends to fall on women who have already begun childbearing. National fertility levels in Africa in the late 1970s varied between 4.1 and 8.1 births per woman, and Frank estimated that 60 percent of this variation was due to infertility. In view of considerable local and regional variations, however, Larsen (1994:446) argues that in some areas other factors than gonorrhoea may be major factors underlying variation, notably spousal separation, abstinence, and effects of circumcision. Levels of childlessness and the impact of pathological sterility are particularly impressive in view of the strong positive value of procreation in African cultures and traditional marriage arrangements that encouraged early marriage and average family sizes of six children per woman.

The factors which have until recently sustained high levels of fertility throughout tropical Africa are the subject of a large demographic literature, addressed especially to the social biology of fertility spacing and the value of children (see, for example, Caldwell and Caldwell 1987; Lesthaeghe 1989). Until recently remarkably little attention has been given to the fate of childless people, although the papers collected by Inhorn and van Balen (2002) mark an encouraging change of perspective, which provides an important complement to the necessarily brief and stylised account of the implications of infertility possible here. Sterility has long been seen as the worst misfortune that can befall a woman, and traditionally gives men the right to divorce. Masculine identity is also closely associated with a capacity to have many children, a value which can be enhanced considerably via polygyny. In most areas having only one or two offspring remains a mark against a person's reputation. As African agricultural systems traditionally depended largely on the labour of women and children, low fertility was for men a block to amassing material wealth via family labour as well as a sign of limited potency. For women, childlessness entailed not only social stigma but a life of labour unrelieved by the assistance of children's labour. Not only material wealth but the ability to participate

in social exchanges was lessened—and hence social status. Having no or few children makes dependency on others in old age very likely.

From a demographic point of view African marriage and family systems provide a radical contrast to the European patterns described in preceding sections, as they are in major respects extremely well designed to ensure that high fertility is maintained in a society as a whole. Three fertility-enhancing patterns have been noted. First, levels of non-marriage in tropical Africa have long been negligible. Second, almost all women married before the age of 20, and remarriage soon after the death of a spouse was all but obligatory. Third, breastfeeding practices of two years or more were backed up by mothers' sexual abstinence, these practices together being recognised as means of supporting the health of mothers and children (Bledsoe et al. 1994). The resultant spacing of births ensured that childbearing could be spread across women's childbearing years. Or, put another way, customary arrangements worked to ensure that a woman's prime reproductive years were devoted to childbearing. Given the immense social value of procreation, the 12 percent of woman without children constitute a seriously disadvantaged group.

These systems, however, also gave rise to a number of regular arrangements that could provide support to older people without children. Childless women could remarry via polygyny, giving them access to other women's children, whom it would be their shared responsibility to raise. Such arrangements could, however, be fraught with difficulty. Co-wives, for example, do not necessarily get along, and the sharing of children in such instances seems unlikely. Even where relations between wives are good there is no guarantee that children will in due course provide support for their mother's co-wife on a par with what they give their mother. Remarriage, where the woman remains infertile, does nothing in any case to remove the stigma of a woman's childlessness and may merely provide a man and his existing wife or wives with additional labour (a pattern that Shaw, also notes for South Asia (in press)). A second arrangement, particularly prevalent in West Africa (Goody 1976; Isiugo-Abanihe 1985), is the fostering of children to childless women. The extent to which fostering is subject to the same problems of unreliability as informal adoption elsewhere in the world (notably in

Indonesia, see Schröder-Butterfill (in press)) is, however, unclear. The options available to childless men receive very little attention in the literature.

At least in theory, high fertility coupled with fostering and access to children of co-wives' should ensure a distribution of children adequate to old-age provision. The situation of childless elderly has not, however, received sustained attention. The data cited in Frank's and Larsen's studies are drawn from surveys and would need corroborative ethnographic and life-course analysis to trace the outcomes of childlessness in later life. Moreover, the spread of STDs is clearly associated not only with remarkable levels of childlessness but also with factors associated with *de facto* childlessness, notably migration, marital instability, and conflict. Where a marriage is infertile the wife has traditionally been assumed responsible and the husband's remarriage enjoined.⁷ If one or both of these partners were infected, the chances for the spread of infertility are thus multiplied. Polygyny further increased the chances of the spread of disease to several women. The likelihood of a man being infected with gonorrhoea is arguably greater, as norms have allowed considerable levels of extra-marital sexuality to men, particularly during a wife's period of post-partum abstinence. With the growth of towns not only prostitution but alternative forms of plural marriage have increased, greatly exacerbating the potential not only for the spread of pathological sterility but of HIV/AIDS (Bledsoe and Pison 1994). The extent to which HIV/AIDS, the migration of young people to towns, and the displacement of populations as refugees from recurring warfare are creating populations of *de facto* childless elderly in several parts of Sub-Saharan Africa merits further consideration (see, for example, Powles 2002).

Unfortunately research on childless older people is at present too limited to form a detailed assessment of the situation, either in Africa or in most of the other parts of the world in which pathological sterility has had major impact. What can be said, at least, is that childlessness is a long-term pattern and a critical factor reducing fertility in many populations. Institutional responses are again evident, not only in fostering arrangements and the absorption of excess female labour via

polygyny, but also in the elaborate ritual systems addressed to infertility (Turner 1969: 10-43) and the control of adultery (Douglas 1996).

The emerging picture

To this point we have reviewed some limitations of conventional approaches that characterise population ageing in terms of broad generational imbalances; and we have outlined three historical patterns that provide a starting point for an alternative, or at least complementary, perspective. One principal shortcoming of prevailing generational approaches is that significant sub-populations making up older cohorts become all but invisible as a general social phenomenon. The three historical patterns indicate the potential importance of one such sub-population, namely, elderly people without children. The histories also underscore a second critical argument. Childlessness is an enduring social fact in many cultures. Recent and projected population ageing may be unprecedented, but we cannot simply assume that it erases or makes irrelevant existing norms and institutions. The long-term experience of cultures that have reduced childbearing in response to recurring demographic, health, and economic conditions, or that rely on patterns of migration and domestic arrangements that encourage *de facto* childlessness are cases in point. These norms and institutions will shape the responses that are made to growing proportions of elderly in coming decades.

To assess current and potential impacts of population ageing, we need a more careful examination of the composition of older age groups in society and how they have changed over time. As the implications of population ageing cannot be taken as uniform across society, the examination of intergenerational ties and sources of vulnerability are likely to be more fruitful where they can be related to specific sub-populations and existing institutions. The three historical cases show that the elderly without children are a useful population with which to explore such an approach. Seven observations may be made on the basis of these cases.

1. Many societies have experienced levels of childlessness of 10 to 20 percent or more over long periods.

2. Childlessness in these societies appears to be an integral part of adjustments that individuals, couples, and families make to prevailing social, economic, and health conditions. Fluctuations in levels of childlessness appear to reflect concerted responses to changing conditions and have served as important mechanisms both of long-term population stability (before demographic transition) and of reducing fertility levels (in the course of demographic transition).

3. The elderly without children are a composite population. Their childlessness arises not simply from natural causes but more importantly as an outcome of a diverse set of social practices. Defining the membership of this population requires examination of the main demographic processes of nuptiality, fertility, mortality, and migration over individual life-courses, as well as the functioning of family systems and institutions of social support. Successful childbearing is not a guarantee that children will be available in later life. Nil childbearing does not preclude access to the support of other people's children.

4. On the reproductive side of the question, three sets of fertility determinants have been shown to be fundamental: non-marriage and delayed marriage; contraception and abortion; and pathological sterility in conjunction with fluid sexual and marital relationships. The relative importance of these variables may differ radically between societies and appears to be bound up with local institutions and the alternative courses of action they permit. In the cases examined, they are clearly much more important for understanding variations and levels of childlessness than natural sterility.

5. Mortality influences the numbers of childless elderly in two ways. First, not all childless men and women survive into old age. The prevalence of social institutions in many societies to assist isolated older people, however, suggests that significant numbers of them have generally reached later life. Second, childlessness may be due to the death of all of a person's children. The latter appears to be potentially most significant where marital or contraceptive restrictions on fertility, just noted, are important. Where many or most children migrate and do not maintain ties to parents or otherwise absent themselves from continuing links to parents, the mortality of any remaining children may have a similar effect.

6. The main factors in addition to migration that may leave older people without children are divorce, remarriage, enmity, and conflicting priorities between family members. All such factors underlying *de facto* childlessness may be permanent or may endure for long periods. Differentials in *de facto* childlessness between societies and the extent to which it significantly increases the vulnerability of older people are largely unexplored in the literature. On the other hand, social institutions such as adoption, fostering, remarriage, and forms of charity and patronage may provide significant, if not preferable, options to having children. Estimates of the total population of childless older people in a society need to take account of all of these factors.

7. Childlessness, in sum, is an outcome of many events and processes over a person's life-course. Once we have an idea of the composition of the childless population in a given society we can begin to study older people without children in relation to the prevailing social and economic forces that, for example, have led them to delay marriage, postpone childbearing, or break off relations with spouses, families, and home communities. The differing family and community institutions that characterise different societies give rise to differing conceptions and levels of childlessness, and the extent to which older people are made vulnerable by the lack or absence of children is an empirical question that needs to be decided in each case.

Issues

On the basis of these observations, we can turn to some of the substantive and methodological issues that will need to be addressed when the incidence and processes sustaining childlessness in contemporary populations are actually investigated. Examples will be drawn from papers presented at a seminar on 'The Elderly Without Children', held in Oxford during Hilary Term, 2001, under the joint auspices of the Fertility and Reproduction Studies Group (Institute of Social and Cultural Anthropology) and the Oxford Institute of Ageing (Kreager and Schroeder-Butterfill, in press).

Four key implications of the macro-pictures sketched above required in-depth analysis. The first, and most general, is that the meaning of childlessness, and the several factors that give rise to it, vary considerably between cultures. The second is that there are several avenues available to overcoming

childlessness, the value and incidence of which are likewise subject to variation. The incidence of nil childbearing due to biological factors is but one, and often a quantitatively secondary, part of the issue. Above all, childlessness is a social category which reflects constraints on marriage, the role of migration, and the extent to which relationships with children and kin are or can be maintained. Even in parts of the world like Indonesia, where the biology of infertility has in the past acted as a major constraint on procreation, the incidence of nil and reduced childbearing due to pathological sterility and access to alternatives to having one's own children, are strongly shaped by these factors.

For convenience, current study of peoples' experience of childlessness and attempts to cope with it may be introduced in terms of the familiar contrast between joint and extended family systems and those that are nuclear and bilateral. Family norms in the former work to designate particular children as responsible for family continuity and for care and respect of the elderly. In practice, of course, norms are subject to negotiation, and there is ample scope for *de facto* childlessness. The desirability of designating particular children (usually siblings' children, if not one's own) commonly makes gender a major issue. The need is not just for children, but for particular kinds or categories of children. Different cultures, moreover, may have differing preferences regarding which categories of young people are most apt for support, or which alternatives to them are acceptable.

The extent to which Western preconceptions of family support are inapplicable is well-illustrated by the Minangkabau, a matrilineal population of Sumatra, discussed by Indrizal (in press). The Minangkabau are the fourth largest ethnic group in Indonesia, numbering approximately five million people. Renowned as traders and entrepreneurs, they have long had an established place in the wider Indonesian and South East Asian economy. Not having sisters and daughters poses insurmountable problems for older Minangkabau, whose social identity and prime responsibility lies in maintaining the matrilineal descent groups which are the principal units of this society. No amount of sons or recourse to adoption can fill this void. The social value of what Judith Okely (in press) calls the 'homeplace' is paramount for older Minangkabau, who are focussed on the need to maintain mother-

daughter coresidence in the ancestral home, the *rumah gadang*. Where there are no daughters or nieces in the female line, the descent group is extinguished.

That is not the only way that childlessness may arise, however. Established patterns of migration may mean that all young Minangkabau women in a family can insist on living their lives away from their home communities. Although elders may have sons residing locally to assist their basic material needs, and are thus not childless as the term is ordinarily understood in the West, older Minangkabau with no resident daughters or nieces see themselves as childless. Cherished ancestral property may henceforth be maintained only by much less desirable caretaker arrangements, with consequent loss of status. The potential spread of this problem strikes at the roots of Minangkabau culture: one in three elderly do not have children in the village. The situation of poor elderly Minangkabau without children can become even more precarious if they are not living in their home communities; even if they moved to their current community of residence many years previously, they may lack basic material support because as newcomers they are not considered eligible for community assistance.

In theory, the joint family systems of South Asian populations, may be said to pose the same problem from the patrilineal side: where daughter's responsibilities are given over to their spouse's family on marriage, the imperative is to have sons. As Vera-Sanso (in press) observes, in the context of rural Tamil Nadu, 'for the vast majority of people unable to work or fund themselves in old age, viable alternatives to a son's support do not exist'. This primacy of sons gives young men considerable discretion regarding levels of assistance. It is here that *de facto* childlessness arises as a more general phenomenon. Considerations of privacy and space, and of relative status among sons and fathers, commonly divide joint families. Sons, where they, their wives, and children move out of the parental home, are likely to be more independent. As Vera-Sanso shows, only intermittent and unreliable support, scarcely sufficient for elderly subsistence, may be the result. Affective ties between mothers and daughters can sometimes overcome patrilineal norms where there is residential propinquity. But in general, poor elderly are at the mercy of sons who adhere to the more general undervaluation of the

elderly that Vera-Sanso describes: their needs, even for subsistence, are treated as minimal and considered to arise only after those of the young are met. In such circumstances elderly parents are effectively childless, and their options are few: passive acceptance of life below the poverty line; the search for work, despite their seriously diminished capacity for physical labour; charity. Yet the elderly may still be expected to contribute to the wider family economy, understood as including labour and other assistance (for example, childcare) to their children.

These values and constraints are not confined to rural India. In the British Pakistani community studied by Shaw (in press), the vulnerability of elders to their sons' other priorities may, for example, mean that they are expected to free family capital by selling their home and moving into public housing. Elderly may resist such demands only at the risk of flouting social norms. The extended family to which these disadvantaged elderly belong thus maintains the surface image that sons and parents are meeting their normative responsibilities, whilst in practice a reasonably equitable level of reciprocity between parents and children is not a reality. The *de facto* childless elderly, with their loss of power, status, and a decent standard of living, become, as Shaw says, *invisible*.

Ethnography in which family relationships are examined over the life-course of successive generations thus makes possible an examination of the social processes by which family systems adapt over the long term. This kind of research is necessary if we are to understand what forces give rise to major historical patterns and shifts in them, such as traced in the European and American historical contexts, above. In addition, by giving more detailed attention to childlessness as a comparative issue affecting later life, a third and fourth set of implications emerge which help us to understand the primarily social rather than biological determination of elderly childlessness.

The third implication is already evident from the preceding discussion of extended family systems. A person's childlessness comes to be established as a social fact only gradually, and with it comes the growing likelihood of that person's social exclusion. Social exclusion, as it affects childless elderly, is not manifested solely or abruptly in later life. The process begins much earlier, for example, as the estrangement or departure of children impacts on parental participation in social networks and

rites de passage. The situation for those unable to bear children, or who find that divorce, separation, disease, or infant and child mortality leave them childless, is even more marked. The childless are sidelined from the central role which, as parents, they could expect to play in all of those relationships and events that make having children so central to ordinary social life: child care, education, marriage, finding and advancing in employment, exchange of labour and services, leisure activities. Not having a reliable network of personal support in later life, and the lesser social reputation that often accompanies relative isolation, are established incrementally over a person's life-course.

A fourth set of issues is closely bound up with gradual social exclusion: the experience of uncertainty that characterises the secondary status and loss of social esteem that accompany childlessness. In societies in which nuclear and bilateral family systems are the norm, parents expect to provide support to children, often well into adulthood, without seeking formal sanctions that ensure reciprocity. The closest we find to normative arrangements that designate a particular child's responsibilities to elderly parents are contracts that protect vulnerable parties in cases of conflicting interest. For instance, Hionidou (in press) describes inheritance practices in Greek island communities in which parents retain some rights to the product of property passed to children, or which secure the inheritance of an adopted child. The case of France (Okely, in press) also shows that the law may be necessary, notably to oblige children to meet costs of institutionalised parents where the children are themselves unprepared to provide care. As Okely makes clear, the personal contact that older people then have with their children tends to be minimal; Hionidou adds that where contracts designate a particular child as responsible, help from other children is unlikely. The common feeling of uncertainty - whether at least some children will be there to provide assistance if needed - is thus compounded by their absence most if not all of the time from older people's lives.

This compound of problems is a reminder that the phenomenon of *de facto* childlessness is a fixture of nuclear family systems. Old people may express their regret, but not shock or surprise, at their children's behaviour. Whilst social opprobrium may be conventionally expressed with regard to negligent children in extended family systems, (although, as noted, this appears not to ensure fair

practice in a wide range of South Asian populations), in nuclear family systems it appears to carry even less force.

Instead, a more positive gloss, which avoids implications of filial irresponsibility, is often given to how elderly cope with the uncertainty of family ties. It is argued that older people expect and prefer to be independent—whether or not they in fact have a choice. In nuclear family systems the principal source of assistance to which an elderly person may expect to turn is normally their spouse. A usual focus on potential vulnerability is consequently on elderly without a partner (the widowed, divorced, separated, never-married), or circumstances in which one or both partners experience infirmity or poverty that are beyond their ability to resolve. The point that being alone is the real worry is neatly underlined by a linguistic observation by Marianti in her study of widows in East Java (in press). In everyday Indonesian parlance, no terminological distinction is deemed necessary between widows and spouseless women, since the principal social fact is simply that they have no partner to turn to. Much of the ethnography of elderly childlessness comes down to coping strategies that single elderly, or individuals and couples anticipating their frailty, may be said to devise. Some elderly find alternative avenues to children. Other strategies take the current or permanent absence of children as a given and seek alternative sources of support. There is a large zone, nevertheless, of daily improvised problem-solving that only sometimes rises to the level of explicit strategising.

Elisabeth Schröder-Butterfill's study of Kidul, a rural community in East Java (2002; in press) reveals a range of adaptations to childlessness over the life-course, including adoption, remarriage, patronage, and reliance on charity. Adoption here is the preferred option, despite the uncertainty that prevails in Indonesian arrangements, because it answers most directly to the strong desire for children. As Schröder-Butterfill emphasises, adoption is neither primarily nor necessarily seen as a means to security in old age. In this respect, adoptive parents show considerable realism. A family is created by adopting others'—usually a relative's—children, often nieces or nephews. The nuclear family norms already noted apply to these arrangements, including parental acceptance that support given to adopted children creates no secure entitlement to their labour and services when they grow up. Adoptive

parents are in the same position as ordinary parents who may hope their children will assist them in later life, but risk *de facto* childlessness. Adopting children at least opens up the possibility of enjoying some of the wider advantages of procreation by helping to integrate childless people into social networks and providing opportunities to make links to kin and community more substantial. What makes adoption nevertheless highly uncertain, from the standpoint of *de facto* childlessness, is that it does not give exclusive control over child-related networks. The child's links to his or her biological parents are not normally severed, which often results in conflicting allegiances.

Adoption, as an explicit old-age security strategy in East Java, tends to occur rather later in a person's life, for example, following a physical and personal crisis or where age appears to make such crises imminent. In these cases, the person adopted is likely to be an adult member of the wider kindred and the arrangement entails inheritance of property in explicit exchange for the care it is hoped they will provide. This pattern is similar to that described by Hionidou (in press), aside from the age at which kin are adopted. In her Greek communities the future carer was adopted as a child, although apparently not so young that she or he could not be expected to assume heavier responsibilities when needed in just a few years time. Such a child was subject to strong moral and economic pressure to carry out her or his responsibilities, since the inheritance gained was likely to be a significant opportunity for them and their families. Other social controls, notably use of dowry and strict parental say over labour migration, suggest that Greek communities exercised much greater control over their children—or at least over young women—and could avoid *de facto* childlessness more readily than is the case in most predominantly nuclear family systems.

There are, however, good reasons why arranging the assistance of children and kin in later life is more commonly pursued in ways that are not so direct. Strict reciprocity is not a general feature of any family system (in practice, if not in family ideology), and it is unrealistic in the study of ageing and family systems to proceed as if it were. As in the extended family systems discussed above, the situation of elderly in nuclear families is often delicate because they have to cope with the reality of their inequality without exposing their vulnerability and the possible injustices of their own family to

public view. Schröder-Butterfill's research provides important insights into normative options that older people use to obtain support from non-nuclear kin where there is no recourse to the levers of strict and overt parental authority. Even within a kindred it is generally crucial to avoid giving or receiving assistance that could be more widely stigmatised as charity. Patronage in the East Javanese case she studied functions—like adoption—as a family idiom establishing long-term obligations between kin that combine moral and economic roles. Like adoption, patronage need not be arranged as an explicit strategy of old-age security. Service to a patron may, rather, evolve into family welfare as older clients are allowed to continue to rely on an income from their patron long after their years of service are really over. Or a younger patron may in effect adopt an older relative for his or her ostensible services, thereby disguising charity that would otherwise demean both parties.

Overt dependence on charity as an option of last resort is a theme which runs through all the ethnography discussed in this section: institutionalisation in hospices dreaded by the aged in Normandy (Okely); ending one's life as a pauper in a monastery on a Greek island (Hionidou); relying on the *ad hoc* support of neighbours in Indonesian towns and villages (Marianti); the assumption in Tamil Nadu that landless labourers struggling to meet their responsibilities to their wives and children are under no obligation to support parents if there are high-caste families from whom they may beg (Vera-Sanso); and the reliance of poor and illiterate South Asians in Britain on 'credit' in local shops (Shaw). All of these cases speak of the absence not merely of economic support but of an adequate range and depth of social ties. Wealth in itself is no solution. Marianti and Okely both provide poignant instances of elderly childless widows whose substantial property effectively isolates them. Residence in well-appointed retirement homes, as Okely describes in Normandy, ensures *de facto* childlessness: visits of children and kin are a rare occurrence. Nor can wealth secure female descendants for elderly Minangkabau (Indrizal).

Childlessness, however, compounds social and economic disadvantage and carries unmistakable implications for elderly social exclusion and powerlessness. The loss of mobility and the steady restriction of personal space typical of old age may prove insurmountable in the absence of

children, as Okely and Marianti show. The problems elderly have in gaining access to public health services in Britain, recounted by Shaw, is redoubled if they do not have children who are more likely to be fluent in English and familiar with Western medical institutions. In India, as Vera-Sanso notes, poor elderly without sons are among the few who qualify for non-contributory pensions, but to get them they must be fit enough to persevere against an unresponsive bureaucracy. Poor and vulnerable sub-populations, like the elderly without children, have little chance of accessing or influencing even well-intentioned public policy.

The arrangements they make for themselves, moreover, may be more easily undone where there are insufficient resources. The encroachment of commercial agriculture on simpler, menial jobs that enable elderly to continue in work, and the effects of labour movements on their networks of support, are not just features of the developing world, as in India and Indonesia, but of France and England in contemporary Europe. Schröder-Butterfill records the breakdown of nearly half of the adoption arrangements made by elderly in the two lowest economic strata in East Java, against only 15 percent in the two upper strata. At the extreme, there is the greater vulnerability of elderly on their own in situations of wider social breakdown. Hionidou suggests that age and the need for more youthful assistance imply the existence of major mortality differentials in the famine which affected Greek islands during the Second World War: younger adults and children could escape, but the elderly could only wait.

Getting the data

These examples underscore a general property of demographic regimes, noted above: only some members of a society make the marriages, build the families, and attain the material and social statuses that are deemed desirable in a given culture. Demographic differentials, in this case regarding levels and pathways to childlessness, are both means and ends of social differentiation. Where aggregate trends in childlessness characterise a significant proportion of a population, they are likely to indicate regular adaptations that families and communities make to wider social and economic circumstances.

The composite character of childless and *de facto* childless elderly populations, however, makes serious demands on data which can be met only by methodologies that enable life-course, and preferably longitudinal, data collection to be carried out, and which embrace the several demographic factors and the processes of social classification and differentiation that together constitute these populations. As we have seen, the elderly without children are effectively by-passed by broad generational approaches that simply infer motives and experience from uniform models of behaviour applied to aggregate cross-sectional data. The diverse composition of childless older populations and the fluctuations observed in their numbers over time constitute a recurring sociological phenomenon that makes such approaches unfruitful. There are several routes to childlessness in a given society and several alternative courses of action in response to it at different points in social space and time. The phenomenon can only be addressed if we begin by reconsidering the substantive ground and redesign our methods accordingly.

Maria Evandrou and Jane Falkingham (in press) helpfully brings our picture of childlessness as a recurring large-scale phenomenon in European societies up to the present. As they note, cohorts of English women born in the 1960s are expected to experience levels of childlessness of the order of 20 percent, and levels in a range of 15 to 23 percent have been found for 1950s cohorts in nine other states (Prioux 1993). These apparently maximum figures of course do not include the *de facto* childless, but it is nonetheless striking that these reported levels of childlessness of around one woman in five concur with past European experience in several periods since the sixteenth century and with data reported for other cultures, notably Indonesia (Indrizal, in press; Schröder-Butterfill, in press). The forces that have led to fluctuations in European childlessness in the later twentieth century are, regrettably, as difficult to discern from existing survey sources as they are from historical records in the past. The authors call attention to the currently stated preference of many English women to remain childless, whether in partnership or not, as marking a potentially major change from past times. They go on to show, however, that this trend is one part of a complex of four factors (widespread contraceptive use, later marriage, frequent divorce, population mobility), all of which make the

normative assumption that children are a reliable basis of family support more and more subject to doubt. Three of these factors are, of course, integral to the long-term history of European childlessness sketched above. The extent to which current childlessness is a new conscious choice, and how much it remains, as in the past, mediated by other life-course events (marriage, divorce, remarriage, migration, alternative social networks) is clearly an interesting question.⁸

A database adequate to providing an answer, as Evandrou and Falkingham note, will require development of new approaches. We need, for example, to be able to trace the effects of divorce on family networks and to monitor changing relations of support between households over long periods of time. The nature of the family systems in which shifting household arrangements are embedded is clearly crucial to understanding elderly outcomes, and approaches based primarily on households, or a predetermined selection of transfers between them, bypass the social processes we need to know about. The frustration inherent in sole reliance on current household survey methodologies is underlined by Evandrou and Falkingham's point that these sources 'tell us virtually nothing about relationships with non coresidential kin, despite the fact that the majority of care to older people living alone in Britain is necessarily provided by non-household members.'

The content of these relationships is evidently shaped not just by the issues to which surveys are commonly addressed (residential status, frequency of contact, types and amounts of support) but by their nature *as relationships*: multi-faceted yet often uncertain social ties that have histories. Reconsidering the substantive ground necessarily begins in examining and comparing these histories. Ethnography is the obvious and, indeed, unavoidable ground of such inquiry, since we need to examine the processes by which social identities like old age and childlessness are constructed in different societies and, more particularly, to observe how a range of outcomes for older people—from the secure to the vulnerable—arise from their several attempts to negotiate the often conflicting family norms and institutional arrangements characteristic of a given society. It is sobering in this respect that Okely and Hionidou, in surveying available research on ageing in their respective parts of Europe, find

no body of ethnographic research on which they can rely. Here, at least, work in the developing world has begun to show the way.

Notes

The author acknowledges the generous support of the Wellcome Trust, and comments by Elisabeth Schroeder-Butterfill and Penny Vera-Sanso.

1. Durkheim's treatment of social solidarity was not developed explicitly with reference to generational conflicts, but modernization theory has adopted this perspective (e.g., Cowgill and Holmes 1972; Cowgill, 1974). Historical syntheses, notably Kertzer (1995), now question the application of this framework to elderly residential arrangements.

2. In the absence of agreed cross-cultural definitions of old age and the impossibility of a uniform numerical specification which fits all social systems, 'age sixty and above' is used here merely to introduce a number of relevant issues. The moment we begin to examine the contexts in which elderly live, the need to specify more realistic groupings within such broad generational definitions becomes apparent. Elderly without children are an important instance. Caste and class distinctions provide a point of entry into further examples, as they often underlie disabilities arising from the physical impacts of different kinds of work. Disaggregating older populations in terms of distinctions normatively employed in daily life is evidently one critical step toward understanding which elderly people are most readily identified as 'old' in a given society, and what factors have given rise to forms of vulnerability characteristic of that society.

3. Lillard and Willis (1997) is an example of a searching and critical examination of hypothesised rationalities currently on offer in intergenerational research, which nonetheless takes for granted that children once born remain part of a household's decision-making calculus. Their analysis is confined to households with at least one eligible child. A second thoughtful study which is disappointing in this respect is the major comparative study of elderly well-being in Southeast Asia, edited by Hermalin (2002). Here childless elderly are confined to the very small numbers reporting no living children (p. 465). Multivariate analysis shows that their small households and social networks are statistically associated with social disadvantage, although it is recognised that this finding is to a large extent tautological (p. 496), since the absence of children is implicit in small networks which are indicative of social disadvantage. Elsewhere (p. 220) it is noted that the childless are nonetheless in receipt of other's money and material support although no details are given. The likelihood of disadvantage is thus confirmed but the identity and composition of this group remains vague. As several contributors to the present volume remark, informants commonly disguise actual and *de facto* childlessness; the extent to which survey informants in Hermalin's comparative study may have done so will remain unknown in the absence of parallel ethnography.

4. Prevalent patterns of divorce, it should perhaps be pointed out, are not necessarily confined to modern Europe. In some parts of the world, notably Southeast Asia (Jones 1994) and Sub-Saharan Africa (Bledsoe and Pison 1994), marriage instability has an established history that only recently shows signs of change, at least in the former case.

5. As the demographic, social, and economic constraints that encouraged childlessness have received more sustained attention in the historical literature on early modern England, a more detailed account will be given of the first of these patterns, followed by briefer treatment of the second and third.

6. A more detailed demographic picture, for example, on the reproductive side of the question, would need to examine whether secondary factors indeed had minor impact. We would need to ensure, for instance, that women who remained unmarried did not make up a statistically high proportion of those giving birth out of wedlock. Remarriage is another factor. Marriages subsequent to the death of spouses were commonly fertile and also contained the possibility of gaining stepchildren (assuming, of course, that these children would be supportive). From another point of view, the prevalence of a neolocal household formation pattern and the preference for separate residence characteristic of English populations does not preclude an important role for help from kin, whether resident or not. Kertzer (1995) is particularly emphatic that more complex households and stronger kin ties were a significant factor in parts of southern and central Europe and possibly also had a significant role to play in Europe's north and west; however, also see Hionidou (in press). Where mortality is concerned, the impact of adult, child, and infant mortality would, as remarked, have worked as countervailing forces tending to increase, and partly to decrease, levels of childlessness in older age groups. In some places childlessness due to non-marriage may have been associated with lessened longevity, a pattern which Vera-Sanso (in press) also remarks for South Asia. Should we understand ill health in such cases as a factor leading to non-marriage and infecundity; or did it arise subsequently where there were no children to provide adequate care for older persons? Turning to the effects of infant and child mortality, the trend over the seventeenth and eighteenth centuries for infant mortality fluctuated in England in a range of 150 to 210 per thousand births, reaching over 300 in urban areas (Landers 1993: 136; Wrigley et al. 1997: 225). Deaths to children aged one to four ranged between 80 and 130 per thousand. The combined effects took as many as one in every five English children in relatively healthy periods (e.g., 1620-1649) but could rise above one in three (e.g., in the 1680s) (Wrigley et al. 1997: 216). If these rates fell disproportionately on less fecund delayed marriages, they could have significantly increased childlessness. Once again, however, the impact of high infant mortality levels could have flowed in contrary directions. Where marriage delay (often reflecting conditions of poverty) resulted in only one or two births, the impact of high levels of infant and child mortality could have fallen heavily on those with modest abilities to keep their few children alive, leaving them with none. On the other hand, a common influence of high rates of infant mortality is to drive fertility up (where infant death cuts short the period of lactational infecundability, returning women much more quickly to risk of impregnation). Of course, risks of subsequent pregnancy cannot be assumed to exist for all women, for example, on account of medical complications. Altogether, assessing the impact of delayed marriage in terms of its final effects on childlessness requires calculation of net reproduction rates for these marriages, entailing not only age specific fertility and mortality schedules for successive marriage cohorts but their correction in light of evidence on all of the above-mentioned factors. Historical records unfortunately are unlikely to provide all the necessary detail.

7. Gerrits (2002) provides the mirror image of a matrilineal society in which men are assumed responsible for infertility, although the implications for the spread of STDs are no different.

8. Here the relation between decisions not to have children and the several factors that can turn postponement into childlessness clearly require probing (Morgan 1991).

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