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# Childlessness and intergenerational transfers: what is at stake?

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***ABSTRACT***
In this introductory article for the special issue on *Childlessness and Intergenerational Transfers*, we first discuss the prior research literature and then overview the presented contributions. Up to now, childless older adults have been treated for the most part as both homogeneous and a problematic group. This does not do justice to the different pathways to childlessness: there are those who actively forgo having children, those who defer births so long that they involuntarily become childless, and those who are not fecund or lack a partner. It also neglects the changing social profile of the childless, *e.g.* the shift from less educated to more highly-educated women. Most importantly, it fails to recognise what childless older people give to others. The studies presented here aim to redress these two deficits in previous research. They examine how the consequences of childlessness are mediated by the pathways to and motivations for being childless and by factors such as gender, education and marital history, and they also examine what childless older adults provide to their families and to society at large. Such adults establish strong linkages with next-of-kin relatives, invest in non-family networks, and participate in voluntary and charitable activities, and broadly do so to a greater extent than older people with surviving children.

***KEY WORDS*** – childlessness, social participation, intergenerational transfers, social networks.

## Introduction

Over recent decades, the proportion of childless adults has substantially increased in most of the low-fertility societies of Europe. Studies of childlessness have concentrated on three questions: the motivations for not having children and, thus, for the recent increase in the prevalence of childlessness; the consequences of childlessness on individual life satisfaction, psychological and physical wellbeing; and the consequences for an individual's risk of social isolation and having insufficient informal support,

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particularly among older people. From the perspectives of public policy, childless people are usually seen as a problem group. In fact, in a context of decreasing fertility and population ageing, (voluntary) childlessness is often conceptualised as the negative outcome of specific institutional arrangements – as a product of family, labour market and welfare policies – that fail to promote among young adults the wish to have children or the means to raise them. Furthermore, considering the negative effects that the absence of children may have on social inclusion, policy makers are concerned about the consequences of a growing rate of childlessness among older people on the demands for public social care and health services.

Two other aspects of the phenomenon have received less attention. Firstly, childless people have often been studied as a homogeneous group, and following the usual practice when studying fertility, analyses have concentrated on women. As a consequence, research thus far has failed to take into sufficient account how the consequences of childlessness are mediated by the motivation for not having children, and by gender, marital history and other individual characteristics. The second neglected perspective is on what childless people provide to their families and to society at large by establishing strong linkages with next-of-kin relatives, investing in non-family networks, and participating in voluntary and charitable activities. The aim of this special issue of *Ageing & Society* is to begin to fill these gaps in the research and policy literature.

Childlessness has always existed but to a variable extent. In pre-modern Europe, it occurred not only (or mainly) for reasons of biological or medical infecundity, which according to current estimates affected close to five per cent of all couples (Leridon 2006), but also because some were unable to marry, either because individuals lacked the necessary economic resources or were confronted with a gender imbalance and a deficient supply of partners. In traditional strong family systems, remaining childless (and thus not being able to continue the lineage) was close to catastrophic, and in some cases had to be healed by socially arranged parenthood. In the neo-Confucian system of South Korea, for example, if an oldest son remained childless, his younger brothers were obliged to give him one of their sons to adopt (*see* Schröder-Butterfill and Marianti 2006 for this practice in Indonesia). Under modern Western conditions, this is unlikely to occur. In the low fertility societies of contemporary Europe, childlessness is becoming a (more or less) voluntary choice among an increasing proportion of the younger cohorts. Childlessness is now one of an increasing range of 'normal' arrangements of private life – a minimal version of the family that is socially accepted in spite of the current policy concerns about the problems of population decline and rising

intergenerational inequity. It is these concerns that on occasion frame childlessness as a scapegoat for the mentioned problems and other social ills.

Relating childlessness to intergenerational transfers may seem paradoxical. After all, childlessness implies that the direct intergenerational link is broken, but there can be indirect links. Most intergenerational family transfers are within the generational lineage and flow downwards, from the older to the younger generations (Kohli 2004). As a consequence, most of the large transfer studies have so far focused on exchanges between parents and children. The overall frequencies of transfers to and from other family members have been described but not analysed in detail. The same applies to exchanges with non-family friends or neighbours and with associations. For childless adults this will obviously not do, and all available transfer routes need to be mapped and analysed. In traditional family systems, childless adults usually made up for the lack of own children by passing to next-of-kin, such as nephews and nieces.

As a corollary, the focus on childlessness also requires the analysis of consumption and saving. Consumption is the alternative to *inter vivos* giving or leaving a bequest. The classical economic life cycle savings model assumes that people save when they are active in the paid labour force, and in retirement spend down all their assets until death. In perfect financial markets, an individual on the threshold of retirement could convert all their assets into annuities, so that they would leave nothing. In imperfect markets, what remains at death is 'accidentally' motivated: it only reflects one's uncertainty about the time of one's death. There is now broad evidence, from economics as well as sociology, that refutes many of the claims of the classical life cycle savings model's claims, but it might fit childless older people better than others of the same age.

An alternative to consumption and to giving to one's descendants is giving to public or semi-public welfare organisations or causes. The major beneficiary in this respect in Europe has traditionally been the church, but there have been other favoured institutional recipients (many linked to specific social milieus). Under modern conditions of (more or less) voluntary and thus individualised childlessness, giving to intermediate institutions may have increased. It may also itself become more individualised, *e.g.* through the choice or even creation of a specific foundation or trust. Creating a foundation has long been the privilege of the very rich, but there are signs of wider participation. Some donors involve themselves directly in the operations of their preferred beneficiary organisation. As many of these foundations address various needs of children and young adults, giving to them represents a specific form of intergenerational transfer. In this way, childless donors may be the pioneers of a new

(post-familial) civic culture by turning their energies to public instead of private concerns.

Drawing from this introduction, three hypotheses are presented that represent the three basic options that childless people have with regard to wealth accumulation and transfer – they can be mutually exclusive but are more likely to be combined in various ways:

H1: Childless elderly people consume more and save less than those with children, and so conform to the economic lifecycle savings model.
H2: In their transfer behaviour, childless elderly people replace their non-existent children with the next-in-line kin according to availability and possibly a preference order (*e.g.* nephews, nieces, brothers and sisters).
H3: Childless elderly people transfer more than those with children to the public or semi-public welfare associations of civil society, with an increasing tendency to make specific choices about which to benefit.

## The rise of childlessness

Demographers report increasing numbers of childless people in contemporary western societies, but there is no consensus about whether this trend will continue for many scholars hold that a marked further increase in childlessness is unlikely. The proportion of childless adults differs widely by country (and across available surveys). The prevalence is relatively high in West Germany, Austria and Finland (*e.g.* 24 per cent for the late-1950s and early-1960s birth cohorts of West German women), a little less high in England, Wales and the United States of America (USA), and very low in most Eastern European countries and in Japan (*e.g.* 5 per cent for the late-1950s and early-1960s birth cohorts of Bulgarian women as well as for both men and women in Japan). Southern and other Western European countries have intermediate prevalence levels (*e.g.* 12 per cent for the late-1950s and early-1960s birth cohorts of Spanish women) (Koropeckyj-Cox and Call 2007; Kreyenfeld and Konietzka 2007; Shkolnikov *et al.* 2004; Spielauer 2004).

The recent increase in the proportion of childless adults has come about mainly because of the postponement of childbearing and voluntary childlessness, and has generally been coupled with population ageing and decreasing overall fertility. The combination of these transformations explains the increasing concern of scholars and policy makers about both the low level of fertility among young adults and the future support and wellbeing of childless older people. In the mass media, these phenomena are often reported as totally new.

Current fertility rates are claimed to be the historically lowest, and childlessness to be at the highest ever level. This is not the case. Relatively high childlessness was experienced in western societies among those born between 1890 and 1920. As a result, in most countries the trend of childlessness by birth cohort was U-shaped during the first half of the 20th century (Rowland 2007). As with other dimensions of family formation, the high point of 'family-friendly' behaviour, and the lowest prevalence of childlessness, occurred during the 1950s and early 1960s (as a consequence of the relatively high marriage rates and fertility of the 1930s and early-1940s birth cohorts). The growth of childlessness since then marks in some ways a return to earlier levels. What may have changed, however, is the composition of the childless group, in terms of both motivations and social characteristics. As to the motivations not to have children, we need to distinguish three variants: (a) those who actively forgo having children, (b) those who defer births so long that they find themselves involuntarily childless, and (c) those who are involuntarily childless because they are unable to have children (not fecund) or lack a partner. As to social characteristics, the profile of the childless seems to have shifted from less-educated to more-educated women. Unfortunately we do not have extensive data on the changing characteristics and composition of childless people.

The U-shaped pattern means that the oldest extant cohorts have higher levels of childlessness than the 'young old' who formed their families at the high point of 20th-century familism. For the entire current older population, childlessness is therefore not (yet) a problem of great numerical or policy importance. With the later cohorts that are now approaching retirement – recognised as the 'baby boomers' in the USA and some European countries – this will quickly change. Childlessness among older people will rise over the next three decades as the cohorts with higher levels of childlessness enter old age. Dykstra and Hagestad (2007), using the data presented by Wachter (1997), predicted that by 2030 childlessness among Americans aged 70–85 years will reach 30 per cent. The crucial questions are then about the long run, or in other words about the evolution of childlessness among successive cohorts of older people.

Forecasting future trends in childlessness is far from straightforward, so it is not surprising that there is no consensus, although most foresee an increase. In West Germany, England and Wales, Austria, Italy, Finland and Ireland, the prevalence of childlessness may exceed 20 per cent in the birth cohorts of the mid-1960s, and in The Netherlands and Greece this level may be approached. Childlessness may also be increasing in several central East European countries, such as Hungary, the Czech Republic, Slovakia and Slovenia. Similar significant growth is predicted by many

authors for the USA (Frejka and Sardon 2003; Sardon 2002, 2003; United Nations Organisation 2003; *see also* DeOllos and Kapinus 2002). On the other hand, some studies predict a levelling of the trend, in both the USA and Europe. Thus, for example, Kohler and Ortega (2002) suggested that the most recent fertility patterns in Sweden, The Netherlands and Spain do not imply substantial increases in childlessness among younger cohorts. Nevertheless, it is likely that the postponement of motherhood is still spreading in most European societies, which markedly increases the risk of childlessness (González and Jurado-Guerrero 2006; Toulemon 1996).

## Social consequences of childlessness in old age

The social consequences of childlessness in old age are multiple and complex. They vary with the specific institutional setting and, at the individual level, with the motivation for childlessness. *How* someone ends up without children may be more important than not having a child *per se*. Forgoing children voluntarily, not being able to find a partner, not being fecund, surviving the death of one's children, or being socially childless because of early divorce involve different paths to childlessness and have different connotations and outcomes. Marital history and gender also mediate the consequences of childlessness on individuals, as do the usual cleavages of education, income and health.

Becoming a parent has commonly been considered as one of the main steps in the passage to adulthood: as a normal and 'natural' event of the lifecourse, a logical consequence of finding a partner and a benchmark of individual development (Heinz 1991; Neugarten and Datan 1973; Settersen and Hagestad 1996). It is, therefore, not surprising that much sociological research has found that a strong *social stigma* attaches to childlessness. In the context of the increasing legitimacy of new family forms, recent attitude surveys have demonstrated growing acceptance of the choice of remaining childlessness, but even now only a small minority of those who respond to these surveys declare that they wish to remain childless (Lesthaeghe 1995; Thornton and Young-DeMarco 2001). The stigma of childlessness is particularly strong among the older age groups and is applied more to women than men (Baru and Dhingra 2003; Dykstra and Hagestad 2007; Gillespie 2000, 2003; LaMastro 2001; Letherby 2002; Lisle 1996; Park 2002; Remennik 2000). The voluntarily childless are judged less favourably on the dimensions of likeability, and of being loving, devoted and emotionally mature, whereas the involuntarily childless are perceived as lonelier and less happy than other couples

(Callan 1985). The latter condition, moreover, in many cases causes deep distress (Connolly, Edelman and Cooke 1987; Monach 1993).

Despite the stigma which has attached to voluntary childlessness and the distress which may accompany involuntary childlessness, the empirical evidence does not support the idea that older people without children enjoy a lower level of *psychological wellbeing* than older parents. Partner history seems to be more influential; in other words, individual characteristics such as life satisfaction, mental health or acceptance of death are mediated less by parental status than by marital status (Keith 1983). It has even been found that parenthood may have detrimental effects on adults' psychological wellbeing and marital satisfaction (Callan 1987; Jeffries and Konnert 2002; Nomaguchi and Milkie 2003; Twenge, Campbell and Foster 2003).

Previous research has shown that people live longer when they have a surviving adult child. Evidence indicates that this 'child effect' on *life expectancy* is mediated by people's perception of the emotional and social support which is available to them in case of need. One explanation for parents' higher life expectancy may be the healthier behaviour that parenthood encourages. Indeed, as pointed out by Dykstra and Hagestad (2007), childless people are less likely than parents to be the target of informal social control; and there is less social pressure on them to adopt healthy behaviours such as limiting the consumption of alcohol, tobacco and drugs (Akerlof 1998; Umberson 1987). The negative effect on mortality seems also to extend to socially childless people. Weltoft, Burstrom and Rosen's (2004) comparisons of mortality levels among lone fathers (with or without child custody), among childless men (with or without partner), and among long-term cohabiting fathers found that the mortality risk was highest for lone childless men *and* lone non-custodial fathers. A caveat is required, however, for research on the 'marriage effect' or the 'divorce effect' has demonstrated how difficult it is to disentangle the 'bias' of differential selection into a family status – in our case, childlessness – from the 'true' effect of being exposed to this status.

Given that children bridge the generations within a family and provide connections with other families and social organisations, it is commonly assumed that childless people are more at risk of *social isolation* than parents. According to this view, childlessness does not sufficiently increase a person's propensity to social participation and to relations with next-of-kin or non-kin to compensate for the lack of children – although the findings on these associations are mixed. Pinquart (2003), for example, found that childlessness is one of the main explanatory factors of loneliness – as found by others (*e.g.* Choi 1994; O'Bryant 1985). Other researchers have found no relation between social isolation and childlessness, however, and have

shown that non-parents tend to adopt effective compensatory network-building strategies (Chappell and Badger 1989; Dykstra 1995; Kivett and Learner 1980; Rubinstein *et al.* 1991; Townsend 1957). It is not clear, therefore, that the absence of children leads to a higher risk of social isolation. The relationship between the two phenomena is more complex. As demonstrated by Bachrach (1980) and Wenger (2001), the effect of childlessness on social isolation is mediated by other individual characteristics, such as health status, social class, gender and marital status. On the other hand, the findings on social support are less equivocal. Childless older people, when in need of social support, are less able to receive it from their informal support network than those who were parents, and consequently they are more dependent on public-sector and private-market care services.

## The contributed papers

As already mentioned, previous research has been wanting in two respects: it has considered the childless as homogeneous, and it has conceptualised them as a problem group. Policy-oriented research has therefore tended to focus on the general consequences of childlessness on the demand for public health and social care services as well as on the institutional arrangements that might reduce the prevalence of childlessness. The aim of this special issue is to redress this double deficit. Firstly, we address the complexity of the social mechanisms that explain the consequences of childlessness for individuals by taking into account not only older people's parenthood status, but also their gender, marital history and motivations for having no child. Secondly, we conceptualise childless older people not as a social problem but as a societal resource, by focusing not on what people without children lack and need but on what they provide to their families, to the younger generations and to society at large.

In the first article, Clare Wenger (2009) uses data from the *Bangor Longitudinal Study of Ageing* to analyse the social, physical and psychological conditions of very old childless people living in rural Wales. The results clearly demonstrate the relevance of considering simultaneously a number of factors that influence the consequences of the absence of children. Gender and marital status turn out to be especially relevant factors. Furthermore, Wenger's analyses highlight the strong role of the social and financial capital accumulated early in life, especially in the form of the help and support provided by older childless people to others. Investing in social relations early in their lives prevents many childless people from

being socially isolated and from precipitate entry into residential care when getting old and frail. Wenger's analyses indicate that, on average, never-married or widowed childless people enter residential care or hospitals at a younger age than parents in large part because of a lack of informal social support. Her most striking finding, however, is that even though many of her respondents were childless by default rather than by choice, early in their lives they began to develop lifestyles that adapted to their situation by creating closer relations with next-of-kin and friendship networks. This strategy was apparently successful in preventing social isolation and, to a lesser extent, in delaying the need for formal care.

The article by Pearl Dykstra and Renske Keizer (2009) also deals with the complexity of the social factors and mechanisms that mediate the effect of childlessness on individual lives. The authors concentrate on an under-researched group, childless men. Examining the economic, psychological and social wellbeing of socially or biologically childless men, they address the question of whether the benefits of fatherhood – detected in previous research – are attributable to the status as such (*i.e.* being a father) and/or to the engagement in fathering activities (*i.e.* interactions with children). Generally speaking, they found more empirical support for the first of these two hypotheses. Their most striking finding is that parenthood made a difference for men's social networks and social participation: biologically childless men had poorer family relations and tended to contribute less to the community. This suggests that the rise of childlessness may eventually threaten men's generational linkages and their broader social integration.

The other three articles focus on the contributions of childless older people to their families, friends and society in terms of financial and social support, bequests and charitable donations. Older parents are most likely to give children (and grandchildren) the largest part of their time resources and financial capital, both as *inter vivos* transfers or as bequests (Kohli 2004). This raises the obvious question of how childless elderly people's giving of time and money differs from parents'. Frank Adloff (2009) links childlessness to another quickly developing research field: that on volunteerism and civic engagement. As pointed out above, one of the possible adaptive strategies for childless people with respect to their wealth is to substitute charitable giving for transfers to children. In so doing, they may become pioneers of a post-familial civic engagement. Adloff's results suggest that establishing foundations is an attractive option for childless people, both in order to perpetuate their family names and to organise their bequest, and that philanthropic behaviour strongly depends on institutional regimes, which opens a window of opportunity for policies in the face of increasing childlessness. Indeed, the optimisation of the

organisational, institutional and normative environment may foster people's charitable giving and civic engagement.

The paper by Michael Hurd (2009) uses data from the US *Health and Retirement Study* (HRS) to explore the patterns of financial transfers by childless older people. He found that childless people are more likely than parents to transfer money to people other than own children. Within the lineage, they were more likely to give to their own parents than those with children. In line with the findings for social support reported by Wenger, Hurd also shows that childless people tend to develop larger and more intensive financial support networks by providing substantial help to other relatives outside the generational lineage and to non-relatives. Hurd's findings on charitable giving are partly in line with Adloff's: in the USA childless people are not more likely than parents to donate to charities or voluntary organisations, but when they donate they are more generous. Overall, Hurd's results suggest that because childless people do not have a family connection through their children, they substitute giving to others to foster alternative social connections.

Finally, Marco Albertini and Martin Kohli (2009) examine the differences in patterns of support exchange between those without children and parents in Europe. Their empirical analyses – based on the *Survey of Health, Ageing and Retirement in Europe* – again highlight the relative weakness of childless older people's support networks. In line with Dykstra and Keizer's results, they find that people without children were less likely both to give and to receive social and financial support to and from others. The links with the younger generations of the childless were weaker than those of parents. On the other hand, differences between parents and non-parents – with the exception of the likelihood and amount of financial transfer giving – were relatively small. Moreover, the support networks of the childless were more diverse than parents', for they had stronger links with ascendants, lateral relatives and friends. It also emerged that childless older people in Europe invest a larger proportion of their time resources than parents into giving to the society in which they live through charities and voluntary work.

All the contributions to this special issue underline the complexity of the social mechanisms that mediate the individual and social consequences of childlessness. Among the relevant mediating factors, gender, marital history and motivation for childlessness stand out. Overall the papers confirm that childless older people tend to have weaker support networks, but they also demonstrate that childless people tend to develop early in their lives adaptive strategies that help to prevent social isolation and lack of support in old age. Moreover, they highlight the importance of a new perspective for the study of childlessness – one that focuses less on what childless older

people lack and need, and more on what they give to their family and to society. By this, the contributions identify the space for policies that aim to foster civic engagement and to foster and strengthen the intergenerational links of childless people.

## References


Adloff, F. 2009. What encourages charitable giving and philanthropy? *Ageing & Society*, **29**, 8, 1183–204.

Akerlof, G. A. 1998. Men without children. *Economic Journal*, **108**, 447, 571–83.

Albertini, M. and Kohli, M. 2009. Is the generational link broken? What childless people give. *Ageing & Society*, **29**, 8, xxx–xx.

Bachrach, C. A. 1980. Childlessness and social isolation among the elderly. *Journal of Marriage and the Family*, **42**, 3, 627–37.

Baru, A. and Dhingra, R. 2003. Social status of childless couples in three different ecological settings. *The Anthropologist*, **5**, 247–51.

Callan, V. J. 1985. Perceptions of parents, the voluntarily and involuntarily childless: a multidimensional scaling analysis. *Journal of Marriage and the Family*, **47**, 4, 1045–50.

Callan, V. J. 1987. The personal and marital adjustment of mothers and of voluntarily and involuntarily childless wives. *Journal of Marriage and the Family*, **49**, 4, 847–56.

Chappell, N. L. and Badger, M. 1989. Social isolation and well-being. *Journal of Gerontology: Social Sciences*, **44**, 5, S169–76.

Choi, N. G. 1994. Patterns and determinants of service utilization: comparisons of the childless elderly and elderly parents living with or apart from their children. *The Gerontologist*, **34**, 3, 353–62.

Connolly, K. J., Edelman, R. J. and Cooke, I. D. 1987. Distress and marital problems associated with infertility. *Journal of Reproductive and Infant Psychology*, **5**, 1, 49–57.

DeOllos, I. Y. and Kapinus, C. A. 2002. Aging childless individuals and couples: suggestions for new directions in research. *Sociological Inquiry*, **72**, 1, 72–80.

Dykstra, P. A. 1995. Loneliness among the never and formerly married: the importance of supportive friendships and a desire for independence. *Journal of Gerontology: Social Sciences*, **50B**, 5, S321–9.

Dykstra, P. A. and Hagestad, G. O. 2007. Roads less taken: developing a nuanced view of older adults without children. *Journal of Family Issues*, **28**, 10, 1275–310.

Dykstra, P. A. and Keizer, R. 2009. The well-being of childless men and fathers in mid-life. *Ageing & Society*, **29**, 8, 1225–40.

Frejka, T. and Sardon, J.-P. 2003. *Childbearing Prospects in Low-fertility Countries: A Cohort Analysis*. Kluwer, Dordrecht, The Netherlands.

Gillespie, R. 2000. When no means no: disbelief, disregard and deviance as discourses of voluntary childlessness. *Women's Studies International Forum*, **23**, 2, 223–34.

Gillespie, R. 2003. Childfree and feminine: understanding the gender identity of voluntarily childless women. *Gender and Society*, **17**, 1, 122–36.

González, M.-J. and Jurado-Guerrero, T. 2006. Remaining childless in affluent economies: a comparison of France, West Germany, Italy and Spain, 1994–2001. *European Journal of Population*, **22**, 4, 317–52.

Heinz, W. R. 1991. Status passages, social risks and the life course: a conceptual framework. In Heinz, W. R. (ed.), *Theoretical Advances in Life Course Research*. Deutscher Studien Verlag, Weinheim, Germany, 9–22.

Hurd, M. 2009. *Inter-vivos* giving by older people in the United States of America: who received financial gifts from the childless? *Ageing & Society*, **29**, 8, 1205–24.

Jeffries, S. and Konnert, C. 2002. Regret and psychological well-being among voluntarily and involuntarily childless women and mothers. *International Journal of Ageing and Human Development*, **54**, 2, 89–106.
Keith, P. M. 1983. A comparison of the resources of parents and childless men and women in very old age. *Family Relations*, **32**, 3, 403–9.
Kivett, V. R. and Learner, R. M. 1980. Perspectives on the childless rural elderly: a comparative analysis. *The Gerontologist*, **20**, 6, 708–16.
Kohler, H.-P. and Ortega, J. A. 2002. Tempo-adjusted period parity progression measures: assessing the implications of delayed childbearing for cohort fertility in Sweden, The Netherlands and Spain. *Demographic Research*, **6**, 145–90.
Kohli, M. 2004. Intergenerational transfers and inheritance: a comparative view. In Silverstein, M. (ed.), *Intergenerational Relations Across Time and Place*. Annual Review of Gerontology and Geriatrics 24, Springer Publishing Company, New York, 266–89.
Koropeckyj-Cox, T. and Call, V. R. A. 2007. Characteristics of older childless persons and parents: cross-national comparisons. *Journal of Family Issues*, **28**, 10, 1362–414.
Kreyenfeld, M. and Konietzka, D. 2007. Die Analyse von Kinderlosigkeit in Deutschland: Dimensionen – Daten – Probleme [The analysis of childlessness in Germany: dimensions – statistics – problems]. In Konietzka, D. and Kreyenfeld, M. (eds), *Ein Leben ohne Kinder: Kinderlosigkeit in Deutschland* [*Living Without Children: Childlessness in Germany*]. VS Verlag für Sozialwissenschaften, Wiesbaden, Germany, 11–41.
LaMastro, V. 2001. Childless by choice? Attributions and attitudes concerning family size. *Social Behavior and Personality*, **29**, 3, 231–43.
Leridon, H. 2006. Sterility: causes and treatment. In Caselli, G., Vallin, J. and Wunsch, G. (eds), *Demography: Analysis and Synthesis*. Volume 1, Elsevier, Amsterdam, 457–65.
Lesthaeghe, R. 1995. The second demographic transition: an interpretation. In Mason, J. and Jensen, A. M. (eds), *Gender and Family Change in Industrialised Countries*. Clarendon, Oxford, 17–62.
Letherby, G. 2002. Childless and bereft? Stereotypes and realities in relation to 'voluntary' and 'involuntary' childlessness and womanhood. *Sociological Inquiry*, **72**, 1, 7–20.
Lisle, L. 1996. *Without Child: Challenging the Stigma of Childlessness*. Ballantine, New York.
Monach, J. H. 1993. *Childless: No Choice. The Experience of Involuntary Childlessness*. Routledge, London.
Neugarten, B. L. and Datan, N. 1973. Sociological perspectives on the life cycle. In Baltes, P. B. and Schaie, K. W. (eds), *Life-span Developmental Psychology: Personality and Socialization*. Academic, Orlando, Florida, 53–69.
Nomaguchi, K. M. and Milkie, M. A. 2003. Costs and rewards of children: the effects of becoming parent on adults' lives. *Journal of Marriage and the Family*, **65**, 2, 356–74.
O'Bryant, S. L. 1985. Neighbors' support of older widows who live alone in their own homes. *The Gerontologist*, **25**, 3, 305–10.
Park, K. 2002. Stigma management among the voluntarily childless. *Sociological Perspectives*, **45**, 1, 21–45.
Pinquart, M. 2003. Loneliness in married, widowed, divorced and never-married older adults. *Journal of Social and Personal Relationships*, **20**, 1, 31–53.
Remennik, L. 2000. Childless in the land of imperative motherhood: stigma and coping among infertile Israeli women. *Sex Roles*, **43**, 11/12, 821–41.
Rowland, D. T. 2007. Historical trends in childlessness. *Journal of Family Issues*, **28**, 10, 1311–37.
Rubinstein, R. L., Alexander, B. L., Goodman, M. and Luborsky, M. 1991. Key relationships of never-married, childless older women: a cultural analysis. *Journal of Gerontology: Social Sciences*, **46**, 5, S270–7.
Sardon, J.-P. 2002. Evolution démographique récente des pays développés [Recent demographic evolution in developed countries]. *Population*, **57**, 1, 123–70.

Sardon, J.-P. 2003. Childlessness. In Demeny, P. and McNicoll, G. (eds), *Encyclopedia of Population*. Macmillan, New York, 128–30.
Schröder-Butterfill, E. and Marianti, R. 2006. A framework for understanding old-age vulnerabilities. *Ageing & Society*, **26**, 1, 9–35.
Settersen, R. A. Jr and Hagestad, G. O. 1996. What's the latest? Cultural age deadlines for family transitions. *The Gerontologist*, **36**, 2, 178–88.
Shkolnikov, V. M., Andreev, E., Houle, M. R. and Vaupel, J. W. 2004. *The Concentration of Reproduction in Cohorts of US and European Women*. Working Paper 27, Max Planck Institute for Demographic Research, Rostock, Germany.
Spielauer, M. 2004. *Childlessness and the Concentration of Reproduction in Austria*. Working Paper 28, Max Planck Institute for Demographic Research, Rostock, Germany.
Thornton, A. and Young-DeMarco, L. 2001. Four decades of trends in attitudes towards family issues in the United States: the 1960s through the 1990s. *Journal of Marriage and the Family*, **63**, 4, 1009–37.
Toulemon, L. 1996. La cohabitation hors mariage s'installe dans la durée [Cohabitation outside marriage is here to stay]. *Population*, **51**, 3, 675–715.
Townsend, P. 1957. *The Family Life of Old People*. Routledge and Kegan Paul, London.
Twenge, J. M., Campbell, K. W. and Foster, C. A. 2003. Parenthood and marital satisfaction: a meta-analytic review. *Journal of Marriage and Family*, **65**, 3, 574–83.
Umberson, D. 1987. Family status and health behaviors: social control as a dimension of social integration. *Journal of Health and Social Behavior*, **28**, 3, 306–19.
United Nations Organisation (UNO) 2003. *Partnership and Reproductive Behaviour in Low-fertility Countries*. Report ESA/P/WP 177, Population Division, Department of Economic and Social Affairs, UNO, New York.
Wachter, K. W. 1997. Kinship resources for the elderly. *Philosophical Transactions of the Royal Society of London*, **B352**, 1811–7.
Weltoft, G. R., Burstrom, B. and Rosen, M. 2004. Premature mortality among lone fathers and childless men. *Social Science and Medicine*, **59**, 7, 1449–59.
Wenger, C. G. 2001. Ageing without children: rural Wales. *Journal of Cross-Cultural Gerontology*, **16**, 1, 79–109.
Wenger, C. G. 2009. Childlessness at the end of life: evidence from rural Wales. *Ageing & Society*, **29**, 8, 1241–57.

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