

# Chapter 1

## Analyzing Childlessness

Michaela Kreyenfeld and Dirk Konietzka

### 1.1 Introduction

Increasing childlessness is only one of the many shifts in demographic behavior that have been occurring in Europe in recent decades, but in the public debate, it is probably the most ideologically charged of these developments. Some commenters have characterized increasing childlessness as an outgrowth of an individualistic and ego-centric society (Siegel 2013; The Guardian 2015), or have blamed childless women for the rapid aging of the population and for the looming decay of social security systems (Focus 2013; Last 2013). Meanwhile, commenters on the other side of this debate have called for a “childfree lifestyle” and have recommended “bypassing” parenthood (Mantel 2013; Walters 2012). From a feminist perspective, the decision to remain childless has been described as an expression of a self-determined life, as in previous generations a woman’s life had been constructed around the roles of wife and mother (Correll 2010; Gillespie 2003).

While this heated public debate has been simmering for years, scholarly research has provided a more neutral and fact-based assessment of the evolution and consequences of childlessness in contemporary societies. The key topics in this area of research are, among others, the social stratification of childlessness (Beaujouan et al. 2015; Koropecj-Cox and Call 2007; Wood 2016), the consequences of childless-

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M. Kreyenfeld (✉)  
Hertie School of Governance, Berlin, Germany

Max Planck Institute for Demographic Research, Rostock, Germany  
e-mail: [kreyenfeld@hertie-school.org](mailto:kreyenfeld@hertie-school.org)

D. Konietzka  
Department of Social Sciences, Braunschweig University of Technology,  
Braunschweig, Germany  
e-mail: [d.konietzka@tu-braunschweig.de](mailto:d.konietzka@tu-braunschweig.de)

ness for labor market outcomes (Budig et al. 2012; Correll et al. 2007; Gash 2009), health (Kendig et al. 2007), and old-age well-being (Dykstra and Wagner 2007; Huijts et al. 2013; Klaus and Schnettler 2016; Zhang and Hayward 2001). Because of data limitations, most past research focused on female childlessness. However, the analysis of “male childlessness” has recently advanced to become a key area of research, too (Gray et al. 2013; Keizer 2010; Keizer et al. 2010; Nisen et al. 2014; Schmitt and Winkelmann 2005). Many of the prior longitudinal studies on childlessness and the evolution of fertility desires had been conducted using data from the US (Thomson 1997). Meanwhile, Europe is catching up with the US, as large-scale panel data are now available for many European countries. These data enable researchers to study how fertility desires change across the life course, how they are influenced by the partnership situation, and how they are related to the other domains of the life course (Berrington and Pattaro 2014; Keizer et al. 2007; Kuhnt and Trappe 2015). Moreover, methodological and technical innovations have given rise to advances in the field. The longstanding interest in explaining the trajectories that lead to childlessness (Hagestad and Call 2007) can now be satisfied through the use of software packages, many of which now include sequence analysis techniques (Mynarska et al. 2013; Jalovaara and Fasang 2015). The biological limits of fertility and the scope of assisted reproduction in alleviating involuntary childlessness are also emerging as research topics (Sobotka et al. 2008; Velde et al. 2012).

This volume adds to the abovementioned research by presenting detailed country reports on long-term trends and socio-demographic differences in female and male childlessness. It also includes reports of results from recent European panel studies that map the evolution of fertility desires across the life course. Moreover, several of the chapters provide new evidence on the prevalence of assisted reproduction, and examine the consequences of childlessness for economic and psychological well-being. In this introductory chapter, we sketch the major conceptual issues that tend to arise in the analysis of childlessness (Sect. 1.2), and present a more detailed outline of the contents of this volume (Sect. 1.3).

## **1.2 Analyzing Childlessness – Issues and Conceptual Problems**

### ***1.2.1 Is Childlessness a (Post)Modern Phenomenon?***

Since the mid-twentieth century, many western European countries have seen radical changes in demographic behavior, including increasing shares of permanently childless women and men. It seems tempting to regard this development as a distinctly new and “post-modern” phenomenon. While previous generations were pressed into parenthood by the influence of social norms and religious doctrines—and by the lack of efficient birth control methods—the ability of current generations to “choose” whether to have children seems to be an achievement of post-modern life course conditions (Burkart 2007; Gillespie 2001; Mayer 2004). But is

“voluntary” childlessness really a new development? Can we actually draw a line between “voluntary” and “involuntary” childlessness? And how do current trends line up with long-term historical developments?

Historical demography tells us that in many European regions in the 19th and early 20th centuries, 20 % or more of women remained childless. Childlessness used to be an integral part of what Hajnal (1965) described as the “Western European marriage pattern.” A relatively high age at marriage was typical for the western European family system, in which young adults left the parental household to work as servants and maids in the households of their employers (Wall 1998: 45). During that time they were obliged to remain single and childless (Ehmer 2011: 29; Mitterauer 1990). A high prevalence of childlessness has also been observed for the North American family system, where “the single adult was a significant part of the American population in the nineteenth and early twentieth century” (Rindfuss et al. 1988: 61).

However, it is not only in pre-industrial times that we observe high levels of childlessness. There is also considerable evidence that a large share of the women who were born around 1900 remained childless. According to Morgan (1991: 782), 25 % of US women of these cohorts were permanently childless. Rowland (1998: 20) estimates for Australia that about 30 % of the women of the 1891–1906 cohorts had no children. Similar estimates are reported for European countries for female cohorts born at the beginning of the twentieth century (see also Berrington, Chap. 3; Burkimsher and Zeman, Chap. 6; Kreyenfeld and Konietzka, Chap. 5; or Sobotka, Chap. 2, in this volume). It is commonly argued that childlessness among these cohorts is related to the social and economic upheavals that followed the Great Depression of the 1920s (Rowland 1998). Although economic deprivation probably contributed to this development, other factors also played a role. For example, the heavily distorted sex ratios caused by World War II help to explain high levels of female childlessness among the cohorts born around 1920 (see Burkimsher and Zeman, Chap. 6, in this volume, who report childlessness by gender for these cohorts).

The following cohorts, born in the 1930s and 1940s, entered their reproductive ages in the 1950s and early 1960s, a period that has been retrospectively labeled the “Golden Age of Marriage” (Festy 1980). These cohorts married much earlier than the previous generations, and childlessness dropped to historically low levels: “Marriage had not been so close to universal nor taken at such an early age in Western Europe for at least two centuries” (Festy 1980: 311). The increase in marriage and fertility rates during the 1950s and the early 1960s is commonly explained by a revival of traditional family values after wartime. The scholars of that time were nevertheless puzzled by that development (Parsons 1955). Veevers (1973: 203) even spoke of a “paradoxical decline of rates of childlessness.”

Starting with the birth cohorts born around 1950, the prevalence of childlessness increased (again) in many parts of Europe, and particularly in West Germany, Austria, Switzerland, the Netherlands, and England/Wales (see Sobotka, Chap. 2, in this volume, for an overview see also Miettinen et al. 2015; OECD 2016). In other parts of Europe, and especially in southern and eastern European countries,

widespread permanent childlessness is a relatively recent phenomenon. In these countries the shares of women who remain childless have been increasing rapidly. In Italy, for example, childlessness skyrocketed to 20 % among the cohorts born around 1965 (Tanturri and Mencarini 2008). Meanwhile, in Belgium, France, and the Scandinavian countries, childlessness has remained comparatively low. An exceptional case is Finland: in the Nordic context, Finland has always had relatively high levels of childlessness. Recent data for Finland show that childlessness in that country is still rising; thus, it appears that the gap between Finland and the rest of the Nordic states is expanding (see Rotkirch and Miettinen, Chap. 7, in this volume).

In his broad overview of fertility trends in 28 European countries, Sobotka (Chap. 2, in this volume) concludes that because of the recent increase in childlessness in southern Europe and in the former state-socialist central and eastern European countries, childlessness is converging at high levels in Europe. From a global perspective, significant developments can be observed in Asian countries, and particularly in Japan, too, where childlessness has been increasing among recent birth cohorts (Frejka et al. 2010; Raymo et al. 2015). However, we also see some signs of a reversal of this trend, as childlessness appears to be gradually declining among the younger cohorts in a number of countries, including the UK (see Berrington, Chap. 3, in this volume). The US also had high levels of childlessness for decades, but recent evidence indicates that the trend is reversing in this country as well (see Frejka, Chap. 8, in this volume).

### *1.2.2 Childlessness Across the Life Course*

Research on childlessness has always faced challenges in formulating a clear definition of “permanent childlessness.” In qualitative studies, respondents who stated that they firmly reject parenthood were often categorized as childless, even if they were still of childbearing age at the time of the interview (Gillespie 2000: 228; Black und Scull 2005). But earlier quantitative studies also did not use any age limitations in the analysis of childlessness (De Jong and Sell 1977; Baum 1983). The conclusion from these investigations that “childlessness is temporary and that childbearing may occur later in life” (1977: 132) seemed self-evident. The studies that followed failed to use universal definitions of permanent childlessness. In principle, researchers have to wait until female cohorts have passed a certain age before drawing firm conclusions about the childlessness levels in these cohorts. However, the temptation to predict the childlessness levels of cohorts who are close to the end of their reproductive period is strong. The inability to imagine further increases in childbearing at later ages has led many researchers to use cut-off ages that are too low. As a consequence, these scholars overstated childlessness levels for the younger cohorts. The measurement of permanent childlessness among men is even more complicated, because a man’s reproductive period is less clearly defined than a

woman's. In addition, concerns have been raised about the collection of male fertility histories in social science surveys (Rendall et al. 1999).

In the literature, researchers commonly distinguish between “voluntary” and “involuntary” childlessness (Höpflinger 1991; Kelly 2009; Noordhuizen et al. 2010; Somers 1993; Veevers 1979; Wilcox and Mosher 1994). This distinction is often used to differentiate between biological and other reasons for childlessness, although many early studies also assigned unmarried women to the category of “involuntarily childless” (Veevers 1979: 3). Due to the strong relationship between age and fecundity, and because whether an individual has a child depends not only on his or her own reproductive capacity, but also on the ability of his or her partner to conceive or father a child, it is cumbersome to generate clear-cut estimates on “involuntary childlessness” at the individual level. Survey data can also be problematic because people do not necessarily know whether they are able to have children. The growing availability of assisted reproduction has softened the boundaries between “voluntary” and “involuntary” childlessness even further. Despite these caveats, it has been estimated that about five to 10 % of each cohort remain childless for biological reasons (Leridon 1992, see also Berrington, Chap. 3 and Trappe, Chap. 13, in this volume).

An issue that has been debated in the literature is the relationship between fertility postponement and childlessness. While some scholars have claimed that childlessness can be best understood as an unintended series of fertility postponements (Rindfuss et al. 1988; Morgan 1991), others have argued that childlessness is a clear and conscious lifestyle choice. In the feminist debate, efforts have been made to eliminate the term childlessness and to replace it with the term “childfree.” According to these scholars, the term “childless” has negative connotations because the suffix “less” implies that “something is lacking, deprived, unfortunate” (Underhill 1977: 307); whereas the term “childfree” implies that childlessness is a deliberate choice to not have children (Gillespie 2000; Hoffman and Levant 1985). The recent availability of large-scale panel data has made it easier to generate more solid evidence on the evolution of fertility desires across the life course (see Berrington, Chap. 3, in this volume).

### 1.3 Patterns, Causes, and Consequences of Childlessness

This book provides an overview of recent trends in childlessness in European countries and the US. In Chap. 2, Tomáš Sobotka assembles data from 28 European countries and describes long-term trends in childlessness. He critically evaluates the potential of the different types of data (censuses, social science surveys, vital statistics) that are commonly used to generate shares of childlessness. The paper shows elevated levels of childlessness for the cohorts born around 1900, and lower levels thereafter. In most countries, the 1940s cohorts had the lowest levels of childlessness ever recorded. In several of the western European countries, childlessness levels increased among the younger cohorts. The former socialist and southern

European countries are laggards in this development, but Sobotka observes some convergence, as childlessness also appears to be increasing in the CEE countries. Moreover, signs of a trend reversal have been reported. Switzerland and England/Wales were among the first countries where childlessness increased. For these countries, we see that childlessness is leveling off at values of around 20 %. These findings suggest that the increase in childlessness in contemporary societies may have limits. However, Sobotka cautions against projecting childlessness for the cohorts who are still of childbearing age.

Chapters 3, 4, 5, 6, and 7 in this volume contain country studies for major European countries. The first paper in this larger section is by Ann Berrington, who explores trends in childlessness in the UK. The UK has long had high levels of childlessness, but also relatively high cohort fertility rates. This pattern suggests that fertility behavior in this country is relatively polarized, with significant shares of people either remaining childless or having a large family. Berrington provides fresh evidence showing that the increase in childlessness rates has stopped, or may have even “gone into reverse” starting with the cohorts born in 1970. Using additional evidence from survey data, Berrington explores people’s stated reasons for remaining childless: while career planning is seldom given as a reason for remaining childless, “not having found the right partner” is often cited. Berrington also presents evidence on the evolution of fertility intentions across the life course. She shows that the share of people who categorically reject parenthood is low. However, there is a significant share of people who are still childless at age 42, despite having said they intend to have children at age 30. It seems likely that a large fraction of these people are “lulled” into childlessness through ongoing postponement.

In the following chapter, Katja Köppen, Magali Mazuy, and Laurent Toulemon investigate long-term trends in female and male childlessness in France. They examine how childlessness varies by level of education and occupation. Compared to the UK, levels of permanent childlessness are rather low in France. It is also shown that highly educated women are more likely to be childless than their less educated counterparts. By contrast, childlessness does not differ greatly by level of education or occupation among men. Less educated men are, however, slightly less likely to have children; a finding the authors attribute to the difficulties these men face in finding a partner. As in the study by Berrington for the UK, Köppen and her coauthors emphasize the role of partnership dynamics in permanent childlessness. While rates of childlessness are low among people who have ever entered a union, many of the men and women who have never entered a union remain childless at later ages.

In the next chapter, Kreyenfeld and Konietzka explore trends in childlessness in East and West Germany. West Germany was among the “vanguards” of childlessness in post-war Europe. Starting with the 1950s birth cohorts, childlessness increased continuously, reaching levels of more than 20 % for the female cohorts born around 1965. In state-socialist East Germany, childlessness remained low. For the recent East German birth cohorts who entered their reproductive ages after German unification, permanent childlessness has been increasing gradually; a trend that is comparable to the patterns found in other former state-socialist countries.

The most significant development is most likely the narrowing of the differences in childlessness levels by women's educational attainment among recent West German cohorts. An investigation based on survey data explores the typical pathways into childlessness for recent cohorts (1971–1973) of women and men. The findings of this analysis support the evidence from France and the UK that particularly for men, the lack of a partner often leads to childlessness at later ages.

Marion Burkimsher and Kryštof Zeman provide an overview of the development in childlessness in Austria and Switzerland. Together with (West) Germany, they are among the western European countries that report having high levels of childlessness and low cohort fertility rates. In Austria and Switzerland, childlessness increases strongly with level of female education. As the authors have access to data on long-term trends, they are also able to provide estimates on childlessness by level of education for the cohorts born around 1900. Very few of these women progressed to tertiary education, and if they did, they mostly remained childless. According to the authors, for these cohorts of women tertiary education was a “life calling similar to the calling to commit to a celibate life in the church.” For the subsequent cohorts in Austria and Switzerland, educational differences in childlessness levels have narrowed considerably. However, some differences in female childlessness by educational attainment remain: for example, for the cohorts born around 1960, about 35 % of the tertiary educated women have remained childless. Estimates of childlessness among men show only small differences by education. Again, less educated men are more likely to be childless than highly educated men.

Anna Rotkirch and Anneli Miettinen explore trends in childlessness in Finland. In the European context, Finland's childlessness patterns have long been seen as paradoxical. While the other Scandinavian countries—Norway, Sweden, Iceland, and Denmark—have regularly reported low levels of childlessness, Finland has historically had elevated levels of childlessness. The recent findings presented in this chapter provide further evidence of this trend, as the authors show that about 20 % of the women who are now reaching the end of their reproductive period have remained childless. Childlessness levels are highest among the least educated women and men, and have increased the most for this group in recent years. Thus, in Finland the educational patterns in childlessness are much more similar for men and women than in other European countries. However, the authors also show that in Finland the lack of a (marital) partner is strongly correlated with remaining childless. However, childlessness within unions has been increasing over time, too.

The following chapter by Tomáš Frejka is the only paper in this volume that goes beyond European borders to present evidence for the United States. The author shows that as in many European countries, in the US childlessness was elevated for the cohorts born around 1900. Black women of these cohorts were particularly likely to have remained childless. Frejka attributes the elevated childlessness levels among these women to their economic, social, and health-related disadvantages. Among the subsequent cohorts, childlessness dropped for all groups, and especially for the black population. Starting with the cohorts born in the 1940s, black women have been more likely to have children than white women. Among the cohorts born in the 1960s, childlessness has gradually declined, particularly for white women.



Within the context of this volume, this chapter provides important insights into long-term developments in childlessness in industrialized countries. It is important that we understand whether the trend reversal is unique to the US, or whether the patterns in the US indicate that childlessness is about to start declining in other “high childlessness countries” as well.

While the previous chapters provided long-term overviews, Chaps. 9, 10, 11, 12, 13 and 14 examine the determinants of childlessness in contemporary Europe. The contribution by Gerda Neyer, Jan Hoem, and Gunnar Andersson explores the association of education and childlessness in Austria and Sweden. While prior analyses often used broad categories to group different levels of education, these authors take a more nuanced view, and investigate how field of education relates to childlessness. While in Sweden childlessness does not greatly vary by level of education, it is possible to single out professions with very high levels of childlessness. For example, librarians and hotel and restaurant workers are particularly likely to be childless. Conversely, women who are educated in the field of health seldom remain childless. In Austria, we find a very strong educational gradient in childlessness. Among tertiary-educated women of the 1955–1959 cohorts, about 30 % have remained childless. In Austria, some heterogeneity has been found within the different educational groups. Among the highly educated social scientists, for example, childlessness is almost 40 %.

In their study, Hildegard Schaeper, Michael Grotheer, and Gesche Brandt take a dynamic perspective on the relationship between education and fertility. The data for this analysis come from the panel studies of higher education graduates conducted by the German Centre for Research on Higher Education and Science Studies (DZHW). The data contain detailed monthly employment histories of East and West German women who graduated from a university in Germany. The findings indicate that East Germans are more likely to have children during education, and that East German university graduates are significantly younger at first birth than their West German counterparts. However, Schaeper and her coauthors also report a convergence of behavior among the cohort who graduated from university in 2009. The multivariate analysis, which draws on event history modeling, shows that stable employment is generally seen as a prerequisite for family formation by highly educated women in Germany. However, there is also a group of women who have a first child despite being subject to “long periods of precarious employment and insecure occupational prospects.”

In the following study, Kuhnt, Kreyenfeld, and Trappe also applied a longitudinal perspective to the analysis of fertility in Germany. Using data from the first six waves of the German Family Panel, they explore how “fertility ideals” vary across the life course. Fertility ideals were operationalized by asking respondents to report their desired number of children “under ideal circumstances.” On average, people said they want to have about two children. However, the authors show that the desired number of children declines more rapidly with age for women than for men. The further multivariate analysis explored the factors that lead to a change in fertility ideals. The most important factor that is found to influence fertility ideals is the birth of a child; thus, people seem to adjust their fertility ideals as their family



grows. Interestingly, economic factors do not seem to have much influence on fertility ideals.

Laura Bernardi and Sylvia Keim present evidence from a qualitative study in East and West Germany. The sample was made up of women who were highly qualified and in full-time employment. At the time of the interview the women were still childless, but wanted to have children. They were asked to report on their attitudes toward having children and combining work and family life. The results show that East and West Germans have very different ideas about how they wish to organize their future family life. The typical “male breadwinner model” was more prevalent in the narratives of the West German respondents, whereas the East German women took it for granted that they would continue to work after becoming a parent. The chapter provides evidence that different perceptions of what constitutes parenthood and family life have persisted after German unification.

The contribution by Heike Trappe explores the prevalence of assisted reproductive technologies (ART) in Germany. The author notes that in 2012 about 14,000 children in Germany were born following the application of assisted reproduction technologies. While acknowledging that the use of assisted reproduction has increased over time in Germany, Trappe argues that the German legal context has inhibited the wider use of ART. She observes, for example, that some groups—including cohabiting couples, same-sex couples, and singles—do not have the same access to ART as married couples.

Patrick Präg and Melinda C. Mills complement the chapter by Trappe by providing a rich overview of the prevalence of ART and the related rules and regulations in Europe. They show that access to and the prevalence of assisted reproduction vary greatly across countries. The most liberal of the European countries are Denmark and Belgium, where the costs of couples and individuals undergoing ART are largely covered. The restrictions imposed in other European countries can be evaded by crossing borders and seeking out ART in more liberal countries. However, the authors raise concerns about social justice, as people with lower incomes may be unable to travel to access ART. Furthermore, they point out that the high levels of ART that are available in some countries of Europe demonstrate that ART can influence levels of total fertility.

The last three chapters of this volume address the psychological and economic consequences of childlessness for later life outcomes. Renske Keizer and Katya Ivanova investigate the consequences of having children for men and women in the Netherlands. Children seem to impact men’s life satisfaction indirectly. A deterioration in partnership quality seems to affect the well-being of childless men more strongly than that of men with children. It appears that having children buffers some of the adverse effects that being in a low-quality partnership can have on physical and mental ill health.

Tatjana Mika and Christin Czaplicki investigate the role of motherhood for old-age income in East and West Germany. Using linked survey and register data, they show that having children can greatly affect a woman’s lifetime employment profile. The differences in employment directly transfer into differences in old-age income. The authors of this study observe a significant motherhood penalty for

old-age income in West Germany, but not in East Germany. In Germany, women's pension are highly subsidized, as a woman automatically collects pension points for each birth. Although these transfers are rather generous, they are not sufficient to close the gap in old-age income between mothers and childless women.

Marco Albertini and Martin Kohli investigate how the elderly receive and give support within their social networks, and the extent to which they are engaged in charity work. The authors make distinctions between the elderly based on parental status. Their findings indicate that childless elderly people greatly contribute to the functioning of their social networks, and that—contrary to widely held stereotypes—they do not receive a disproportionate share of transfers. Instead, they are actively involved in charity work and in maintaining their social networks. By contrast, the people who have children, but have lost contact with them, are shown to be the most likely to be in need of support.

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