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Social Background and Becoming a Parent in Sweden: A Register-Based Study of the Effect of Social Background on Childbearing in Sweden

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Abstract In this study, I introduce three measures of social background, namely occupational class, social status, and parental education, into fertility research. The objective is to examine whether these dimensions of social background affect entry into parenthood even after controlling for several potential pathways. I estimate event history models on first birth rates using data, which include all Swedes born in 1960. The results show that each of the three dimensions of social background has a clear bivariate association with the risk of becoming a parent, both for men and for women. Parental education has the strongest effect of class and status background, and the latter two do not affect the entry into fatherhood when the effects of all dimensions of social background are estimated simultaneously. Much of the remaining association between social background and fertility persists when controlling for own educational history, mother's age at first birth, and father's mean incomes. The results also show that higher social background leads to postponement of childbearing but that it has no effect on the final likelihood of ever become a parent. The influence of social background on fertility is stronger for women than for men.

Keywords Social background · Stratification · Intergenerational transmission of fertility · Class reproduction

1 Introduction

Social background affects several family demographic processes, such as family formation (Bernhardt and Hoem 1985; Axinn and Thornton 1992; Aarskaug Wiik 2009), partner selection (Kalmijn 1998; Blackwell 2000), and marital disruption

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(Hoem and Hoem 1992; Lyngstad 2004, 2006). Although research into social background effects on family demographic behaviors has enriched our understanding of the predictors of these behaviors by highlighting how they are shaped by intergenerational processes, this research often remains limited in the range of social background dimensions considered.

This study contributes to this literature with research into how parental social class, status, and education affect the entry into parenthood in Sweden. The specific contributions stem from two sources. The first is consideration of multiple measures of social background. Recent stratification research has increasingly recognized that different measures of social position (own or parents') may capture different dimensions (such as economic or cultural) of the stratification order (e.g., Chan and Goldthorpe 2007) and have independent influences on own and children's outcomes (e.g., Elo 2009; Torssander and Erikson 2010). The lack of a multidimensional perspective into social background in family demography can limit our understanding of the mechanisms underlying these intergenerational processes.

The second contribution is to consider the entire reproductive age span. Many of the previous studies have focused on early childbearing, and this focus has been motivated by the higher rates of school dropout and other socioeconomic outcomes, which often follow parenthood at an early age (Furstenberg et al. 1987; Hoffman 1998). Young parents often have not fully completed their transition to adulthood, which makes a focus on parents' socioeconomic position a natural starting point. However, influence of social background may extend beyond the teenage and early adulthood years, and there are good reasons to analyze these till the other end of the reproductive years. While technology is pushing the biological limit of childbearing further, these treatments are not fully without risk of the health of both mother and child (Cnattingius and Stephansson 2002; Leridon 2004; Huang et al. 2008). Postponement of first births may also lead to lower ultimate fertility and eventual childlessness (Bongaarts and Feeney 1998; Kohler and Philipov 2001). On the other hand, the postponement of childbearing can be beneficial for one's educational and occupational careers (Härkönen and Bihagen 2011) as well as for parenting qualities (Martin 2004). If potentially (dis)advantageous family demographic behaviors are shaped by the family of origin, they can affect the intergenerational reproduction of (dis)advantage (McLanahan and Percheski 2008).

I use Swedish population register data from the entire 1960 birth cohort, which I follow until 2007. I apply event history techniques to analyze the importance of social class, status, and education on the rate of entry into parenthood. In the next section, I first describe findings from previous research, before presenting the theoretical framework. This is followed by a description of the data and methods, after which I present the results. The paper ends with a discussion of the findings.

2 Previous Research

The literature on intergenerational effects on fertility can be divided into two major parts: studies on the intergenerational transmission of fertility quantum and timing and research in socioeconomic background effects on fertility. A substantial

literature shows positive correlations between the number of siblings and completed fertility (Johnson and Stokes 1976; Zimmer and Fulton 1980; Anderton et al. 1987; Pullum and Wolf 1991; Axinn et al. 1994; Hardy et al. 1998; Murphy and Wang 2001; Murphy and Knudsen 2002; Dahlberg 2013). Other studies—mainly from the USA and UK—describe how early childbearing is transmitted across generations. Most studies show that having a teenage parent affects the timing of entry into parenthood across generations, both for women and for men (McCue Horwitz et al. 1991; Kahn and Anderson 1992; Manlove 1997; Barber 2001; Stanfors and Scott 2013). Fewer studies (Barber 2000; Steenhof and Liefbroer 2008; Rijken and Liefbroer 2009, Dahlberg 2013) have examined intergenerational patterns of the timing of becoming a parent beyond the teenage years.

The research on socioeconomic background and fertility largely focused on the effects of social mobility—that is, the difference between parental and offspring socioeconomic position—on family size and birth spacing [see Bean and Swicegood (1979) for a somewhat dated but very thorough review]. Another line of research has analyzed the predictors of teenage parenthood and identified socioeconomic disadvantage as a particular risk factor (Abrahamse et al. 1988; Zill and Nord 1994; Moore et al. 1995). There has been less research on the overall effects of social background (that is, regardless of social mobility from parental to filial positions) on the timing of entry into parenthood beyond the teenage years.

Two American studies showed strong effects of parental education on the timing of parenthood. Michael and Tuma (1985) found that parental education postpones childbearing for White men and women, and for Black men, whereas Barber (2001) reported that mother's education affected both the sons' and the daughters' rates of premarital birth. In a study from the Netherlands, Rijken and Liefbroer (2009) used several measures of social background. They showed that the higher the parents' education and father's job status, the more likely their child is to postpone parenthood. However, neither Barber (2001) nor Rijken and Liefbroer (2009) controlled for the index person's own education attainment. Because educational enrollment is a very important determinant for the timing of parenthood (e.g., Hoem 2000; Andersson 2000), and educational attainment itself is predicted by social background (e.g., Breen and Jonsson 2005; Breen et al. 2009), these results do not tell the extent to which the background effects operate independently of own education.

Three European studies have considered the impact of social background on fertility while controlling for the index person's own education. Kolk (2014) found that some of the observed intergenerational continuity in fertility could be explained by continuities in education across generations. Bernhardt (1989) found that even after controlling for own education, women with a working class background in the 1953 Stockholm birth cohort had a 50 % higher probability of becoming a mother before age thirty, compared to women hailing from an upper middle class background. Lappegård and Rønsen (2005) found a similar difference, in this case using parental education as the measure of social background. Both of these studies used only one indicator of social background and focused only on women. Furthermore, Bernhardt's (1989) data were limited to women up until the age of thirty.

Summing up, although previous research has paid some attention to social background as a predictor of the timing of parenthood, previous research lacks a comprehensive view of how different dimensions of social background affect fertility timing across the reproductive ages of men and women. This limits our understanding of which aspects of social background matter, the mechanisms through which it matters, how it matters across the life course, and whether its influence is the same for men as for women.

3 Social Background and Fertility: Theoretical Perspectives

A central question in stratification research concerns how the characteristics of the parental generation shape outcomes in the filial generation (Breen and Rottman 1995; Breen and Goldthorpe 2001), and similar questions feature in life course demography and epidemiology. In most studies, measures of socioeconomic position and social background have been used interchangeably, and discussion of the theoretical grounds for treating social background in one way rather than another has been limited. However, in recent years sociological and epidemiological studies have questioned this interchangeability and argued that more precise measures of social background are needed for a better understanding of the mechanisms by which social background influences outcomes in adult life (Chan and Goldthorpe 2004, 2007; Geyer et al. 2006; Bukodi and Goldthorpe 2012; Goldthorpe 2012; Torssander and Erikson 2009, 2010; Buis 2012). Even though dimensions of social background are related, they reflect its different aspects. Therefore, different dimensions of social background can affect filial outcomes through different mechanisms and operate independently of one another. Choice of only one indicator risks underestimating the importance of social background (Bukodi and Goldthorpe 2012) and limits understanding of the ways in which social background functions. In the following, I first discuss class, status, and education as separate dimensions of social background and then discuss the pathways through which they can shape the timing of parenthood.

Occupational class refers to inequality that arises from social relations in the labor market and in production units (Goldthorpe 2007). Classes are often distinguished according to occupational features such as employment conditions, distinctions between manual and non-manual work, degree of occupational security, and promotion opportunities (Erikson et al. 1979; Erikson and Goldthorpe 1992). The effect of class is mainly expressed in economic inequalities and differences in life chances stemming from these inequalities. Class is not only associated with economic advantage and disadvantage in individuals' current income, but also in income security and income prospects (Erikson and Jonsson 1996; Goldthorpe and McKnight 2006).

In the Weberian tradition (Weber 1968), class and status are related but separate dimensions of social stratification. Whereas class deals with the economic aspects of stratification, status captures its lifestyle and sociocultural aspects and has thus been considered a more "qualitative" measure of social stratification (Chan 2010). Status is generally defined as referring to inequality arising from differences in prestige

and popularity in society and reflects one's degree of "social honor" (Chan and Goldthorpe 2004). For instance, a poet can possess immense influence on society, but often with little economic value. Although lifestyle differences captured by social status could be seen as a horizontal dimension of stratification, they are generally treated as vertically aligned to reflect differences in how these lifestyles are valued in society.

While class captures economic differences and variation in life chances, and status captures differences in attitudes and lifestyles, education expresses cultural differences as well as inequalities in the ability to embrace and use knowledge. Children of highly educated parents are more likely to grow up in an environment where reading and acquiring knowledge are seen as normal activity and where the value of education is emphasized (Bourdieu 1984). Highly educated parents are also more able to help their children in school work (Stevenson and Baker 1987) and know how to navigate the educational system (Lucas 2001). Children of highly educated parents can likewise have knowledge of ways to navigate other life course decisions.

One pathway through which each of these dimensions of social background can affect entry into parenthood is education, which is highly correlated with social background (Jonsson and Erikson 1997a, b). Educational level and enrollment is one of the most influential variables that affect the timing of entry into parenthood (Kravdal 1994; Skirbekk et al. 2004; Sobotka 2006; Andersson et al. 2009). The effect of educational enrollment on the risk of becoming a parent is undoubtedly negative (Hoem 1986; Blossfeld and Huinink 1991; Hoem 2000; Andersson 2000; Andersson et al. 2009; Thalberg 2011), and longer time in education is thus one pathway through which social background can influence entry into parenthood. A negative correlation between education and fertility is often reported, but once educational level is treated as a time-varying variable, the relationship between educational level and the risk of becoming a parent is not always negative (Blossfeld and Huinink 1991; Hank 2002). Although each of the dimensions of social background is expected to influence educational choices, their effects can vary (Buis 2012). Therefore, controlling for educational careers can explain the social background effects to varying degrees.

Social background can additionally affect entry into parenthood independently of education. Parents' economic resources, captured by occupational class, can promote entry into parenthood by providing assurance of economic security and of the parents' ability to provide financial assistance. Occupational class background may, however, also postpone the entry into parenthood. Parents' economic resources can reduce the motivation for leaving home early or forming a new household due to economic reasons (cf. Axinn and Thornton 1992) and thus delay childbearing. Children from wealthier and higher class backgrounds (and their parents) can have higher occupational aspirations (Easterlin 1973, 1975) and particularly, wish to reach at least the occupational position of their parents (Breen and Goldthorpe 1997). As an indication of this, children from higher class backgrounds tend to progress in the careers for a longer time (Manzoni et al. 2014). Childbearing can thus be postponed until a more secure career position has been reached. To the extent that this expected postponement is related to economic

resources, controlling for parental incomes and wealth can explain a part of this effect.

Social status is expected to operate primarily through socialization, that is, the intergenerational harmonization of individuals' beliefs, preferences, and behaviors with that of their cultural surroundings. This translates into intergenerational continuity in life course choices. Parents can aim to influence their adult children's life course decisions directly so as to align with those deemed appropriate within the status group. Previous research has shown, for example, that parents' attitudes have a direct effect on their adult children's family demographic behaviors, net of the children's own attitudes (Axinn and Thornton 1993; Barber 2000). Higher status lifestyles often require investments in economic and career stability, but also in cultural activities (cf. Bourdieu 1984). Because higher status lifestyles put more emphasis on (high-brow) cultural considerations, they are less family-oriented (Hoem and Hoem 1992). For these reasons, a higher social status background is expected to lead to lower rates of entry into parenthood. Part of this effect may be captured by controlling for the parents' age at entry into parenthood, to the extent that it reflects a family-oriented culture.

Finally, highly educated parents should not only be better strategically navigating their children through the education system, they can also have a better understanding of when it is appropriate, in relation to education and career-building phases of life, to enter parenthood. Highly educated parents should be better in implementing this knowledge in their children's lives (Hoover-Dempsey and Sander 1995, Davis-Kean 2005). Children to highly educated parents tend to themselves have higher aspirations both in terms of educational attainment and occupational career, which leads to postponement of parenthood (Johnson 2002). Another possibility is that less educated parents hold less liberal values of family formation and thus are less supportive of a child's decision to postpone parenthood (cf. Hoem and Hoem 1992). As the age for first-time parents in Sweden gradually has increased since the mid-1970s (Andersson, 2004), it is possible that it is the least educated parents that show least understanding of this cultural change.

4 Data and Method

Data on the 1960 birth cohort were extracted from the Swedish population register, which covers the whole Swedish population and its vital events with a very high degree of accuracy. The data used in this study include all individuals born in 1960 and who lived in Sweden at the age of fifteen and for whom there is information on at least one biological or adoptive parent. A total of 97,652 individuals met these criteria. Although the population register is very close of being complete even for cohorts born before 1960, it is from this birth cohort and onward that the Swedish population register can be regard as complete. In addition, the 1960 birth cohort has at the end of the registers (currently, December 31, 2007) lived long enough (47 years) so that the entire reproductive age span can be studied (especially for women). Furthermore, the educational histories in the Swedish register data are essentially complete from the first half of the 1980s onward. This means that our

data on educational levels and enrollment have a high degree of accuracy for the reproductive ages of the 1960 birth cohort. When choosing to study only one birth cohort, there is also no need to adjust for period effects. The overall importance of the family of origin on the propensity to become a parent has not changed significantly in recent decades (Dahlberg 2013), suggesting that these results can be generalizable to other cohorts as well.

The data were organized into longitudinal histories containing information on all first childbearing and educational histories, the latter from 1980 onward. The educational histories thus particularly capture changes in post-secondary enrollment and attainment and correspond to the ages at which most of the cohort members begin their childbearing. Additional information on dates of emigration and death is provided to censor the observations at appropriate points in time. The basic time variable is age of the index person. Cases are included regardless of whether they ever get a child or not. The age is given in months since the respondent's fifteenth birthday, and the respondents are followed from age fifteen to an onset of first pregnancy (first birth minus 9 months), until possible emigration, death, or age 47.

The main independent variables are the parents' education, parents' class, and parents' status. *Parents' education* is measured as the highest level of education in 1975 when the index persons were 15 years old, using five categories; (1) Compulsory school, (2) Upper secondary school, 2 years or shorter, (3) Upper secondary school, 3 years or more, (4) College/university, <3 years, and (5) College/university, 3 years or more. *Parents' class* is coded according to the EGP class schema (Erikson and Goldthorpe 1992), using parents' occupation specified in the 1975 census. Seven levels are distinguished: (1) Upper service class (including self-employed professionals) (highest), (2) Lower service class, (3) Routine non-manual, (4) Self-employed, (5) Farmers and fishermen, (6) Skilled workers, and (7) Unskilled workers (lowest). *Parents' status* is determined by the parents' occupation in 1975. The status scale builds on the assumption that those with similar lifestyles and resources tend to interact more with one another, both in terms of friendship and marriage (Prandy 1998, 1999; Prandy and Lambert 2003). A scale capturing the social closeness of individuals in different occupations therefore works as a measure of social status. The status scale is based on a cross-tabulation of the wife's and the husband's occupations (or the occupations of cohabiting partners) in the 1990 Swedish census. This scale is applied to the parents' occupations in the 1975 census. The range of the scale is set from 1 to 999, where a high value corresponds to a higher status (Prandy 1999; Torssander and Erikson 2010). Parents' status is divided into quintile groups to make them comparable to the other measurements. The first quintile group includes the 20 % with the lowest status.

The highest level of both parents' education and status is used to determine parents' education and status. When parents' class is measured, information on whether the mother worked full-time or part-time is used to determine which parent's occupation the measurement should be based on (Erikson 1984). If the mother of the index person was working only part-time, the index person's father's

occupation is used to determine the class even if the mother's class was higher than the father's class.

Education of the index person is measured both as educational attainment and as educational enrollment. Both variables are time-varying. *Educational enrollment* is included as a binary measurement indicating: (0) not in education and (1) in education. *Educational attainment* is measured as the highest level of completed education, using the same five categories as when measuring parents' education. I included the index person's *father's average annual income* between ages 48 and 52 (adjusted for inflation) as a measure of economic resources. These ages are chosen because they correspond fairly well to the ages in which income differences best approximate differences in lifelong earnings (Böhlmark and Lindquist 2006). The register data used in this study contain complete information on annual income from 1968 onward, which for the vast majority prevents from measuring income at a younger age. Father's income is divided into quintile groups. The index person's *mother's age at first birth* is included as quintile groups. *Proximity to parents* is measured as: (0) living in same dwelling, (1) within 20 km, (2) 20–99 km, (3) 100–249 km, or (4) more than 249 km. If the parents do not live together, the distance between the index person and the parent who is living closest is used. A shorter distance between child and parents may affect the decision to become a parent in two ways; directly by increasing the probability for assistance with the grandchild in case of need and indirectly by possibly mediating the intergenerational effects of social background. The index person's own *income* is included as quintile groups. Both *income* and *proximity to parents* are time-varying. For descriptive statistics of the non-time-varying variable and index person's final education, see Table 1.

I applied event history techniques to model the transition to the first birth by estimating proportional hazard (intensity regression) models (e.g., Hoem 1993), where the intensity to enter parenthood for individual i is given by the formula

$$\mu_i(t) = \mu_0(t) \exp\{\Sigma \beta_j x_{ij}\} \quad (1)$$

where $\mu_0(t)$ is the baseline intensity of the model, representing the piecewise constant effect of time since the fifteenth birthday as 1-year duration intervals (15–47). I estimated a total of eight, stepwise, models, separately for women and for men. The first three estimate the bivariate associations between the social background indicators and the risk of entry into parenthood, whereas the fourth includes them in the same model to assess whether they have effects independently of one another. The fifth model adds the mother's age at first birth, the sixth includes the father's average incomes, the seventh model adds the time-varying variables educational attainment and enrollment, and the eighth and final model adds the time-varying variables income and proximity to parents.

One important reason to study the 1960 birth cohort is that this cohort has lived long enough so that the entire reproductive age span can be studied. If the event history analyses show that social background has a significant net effect on the propensity to become a parent, it is highly relevant to answering the question whether social background affects the event timing (the event occurs sooner/later)

Table 1 Descriptive statistics

Variable	Percent (%)
Parents' education	
Compulsory school <9 years (ref.)	48.51
Upper secondary school ≤2 years	23.34
Upper secondary school >2	11.80
College/university <3 years	5.23
College/university ≥3 years	10.16
Postgraduate education	0.98
Parents' EGP	
Upper service class	10.46
Lower service class	19.70
Routine non-manual	13.42
Self-employed	6.92
Farmers, fishermen	5.54
Skilled workers	19.95
Unskilled workers	24.02
Parents' status	
Mean	494.5
SD	149.9
Mothers' age at first birth	
Mean	26.6
SD	5.67
Fathers' mean income (SEK) age 48–52[a]	
Mean	232,244
SD	155,052
Index persons' education (at age 47)	
Compulsory school <9 years (ref.)	28.75
Upper secondary school ≤2 years	35.95
Upper secondary school >2	9.93
College/university <3 years	12.64
College/university ≥3 years	10.39
Total number of individuals	97,731
Number of first births 1975–2007	77,556

[a] 1 SEK = 0.12 €

or the overall probability of the ultimate event occurrence (Bongaarts and Feeney 1998). I therefore also applied logistic regression analysis on the propensity to have become a parent at age 47. This analysis included all dimensions of social background and all non-time-varying variables, and the index person educational attainment at age 47. Comparable alternatives would either be to perform a computation of the survival function at the end of the time interval studied (Bernardi 2001) or to analyze whether including an interaction between covariates and duration significantly improves the model.

5 Results

Table 2 shows the correlations (Spearman's *rho*) between parents' education, class, and status. The correlations do not change significantly when they are calculated separately for men and for women. All three measurements of social background correlate positively, although the strength of the correlations varies. Parental class and status, both based on occupation, show the strongest correlation, whereas parents' education shows the weakest correlation with the other two measures of social background. These correlations are somewhat lower than the correlations between the index person's own socioeconomic indicators (Torssander and Erikson 2010). The reason is that the two sources of social background information, from both the mother and the father, are combined to create measures of social background.

Figures 1 and 2 show the hazards and survival curves, respectively, of entry into motherhood and fatherhood by the highest educational level of the parents. This background measure was chosen for this descriptive analysis as it precedes both

Table 2 Spearman's rank order correlations between parents education, class, and status

Variable	Percent (%)		
	Parents' education	Parents' EGP	Parents' status
Parents' education	1.00		
Parents' EGP	0.50	1.00	
Parents' status	0.48	0.72	1.00

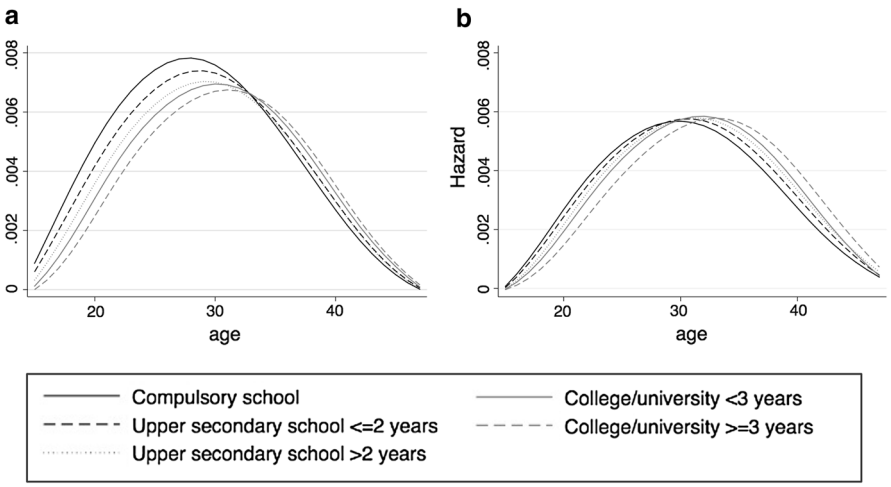

Fig. 1 **a** (left) Hazard of becoming a mother by parent's education. **b** (right) Hazard of becoming a father by parent's education

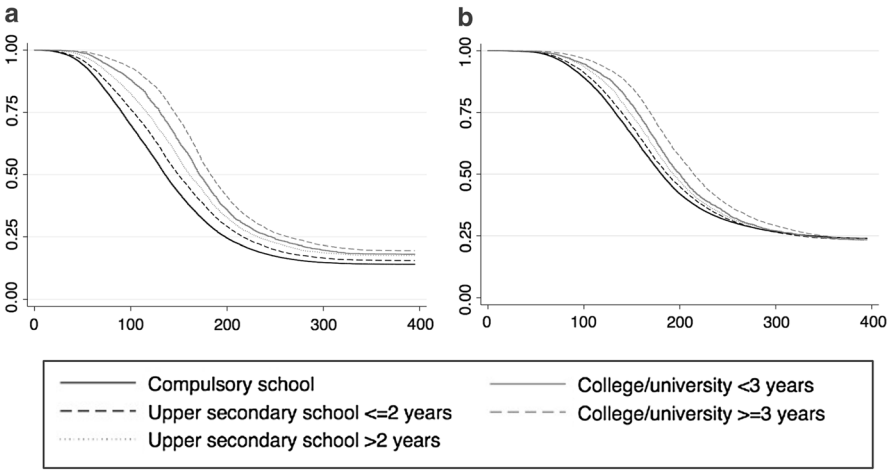

Fig. 2 **a** (left) Survival curve. Entry into motherhood by parents education. **b** (right) Survival curve. Entry into fatherhood by parents education

occupational class and status. However, the findings in terms of these two other measures are very similar. The figures show that men and women whose parents have higher levels of education enter parenthood at a later age. Half of the men with parents with the lowest level of education have become fathers by age 30; half of the women with similarly educated parents have become mothers by age 26. The corresponding figures for men and women with high university-educated parents are 33 and 30, respectively. Women with highly educated parents have a lower risk of becoming a parent than women with less educated parents until age 30, after which their rate of entering parenthood remains higher until the end of the reproductive age. For men, this crossover has fully happened by age 32. For men, parental education has a pure postponement effect as can be seen in Fig. 2, but childlessness is 5 % points more common among women with university-educated parents compared to women whose parents have the least education. This is interesting, given that childlessness is the highest among women who themselves have low education (Andersson et al. 2009).

Tables 3 and 4 show the main results from the event history models, both for women and for men, respectively. I estimated seven models, separately for men and women. Model 1 through 3 included one measure of social background at a time. In Model 4, all three measures of social background were included simultaneously to illustrate which of the background measurement matters most, net of the others. In Models 5, through 7 the three intermediate variables were included stepwise, as described above. In the eighth and final model, the two time-varying covariate Proximity to parents and Income were included. All results are reported as relative risks in relation to a reference category. Given the large data set used in the analysis, most results are highly significant. Thus, finding meaningful patterns in any observed differences in relative risks is important before drawing any conclusions about effects of social background on becoming a parent.

Table 3 Relative risk of becoming a mother for the first time by parents education, parents class, parents status, mothers age at first birth, fathers mean income, educational history, income and proximity to parents

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Parents' education								
Compulsory school (ref.)	1			1	1	1	1	1
Upper secondary school ≤2 years	0.876***			0.907***	0.906***	0.910***	0.924***	0.935***
Upper secondary school >2	0.778***			0.840***	0.844***	0.857***	0.885***	0.910***
College/university <3 years	0.714***			0.790***	0.814***	0.827***	0.862***	0.887***
College/university ≥3 years	0.641***			0.720***	0.747***	0.765***	0.827***	0.866***
Parents' EGP								
Unskilled workers (ref.)		1		1		1	1	1
Skilled workers		0.968*		0.963*	0.966**	0.961**	0.970*	0.986
Farmers, fishermen		0.865***		0.888***	0.926***	0.907***	0.920***	0.973
Self-employed		0.896***		0.928**	0.936**	0.925***	0.944***	0.959
Routine non-manual		0.825***		0.890***	0.900***	0.904***	0.925***	0.950**
Lower service class		0.754***		0.891***	0.900***	0.913***	0.931**	0.938**
Upper service class		0.675***		0.886***	0.902***	0.952**	0.952*	0.968*
Parents' status								
1 Lowest quintile group			1	1	1	1	1	1
2			0.953**	0.982	0.981	0.986	0.970	0.980
3			0.875***	0.959*	0.962*	0.969	0.978	0.982
4			0.804***	0.938**	0.941**	0.955*	0.965	0.972
5 Highest quintile group			0.703***	0.907***	0.910***	0.921**	0.935**	0.948*
Mothers' age at first birth								
1 Lowest quintile group					1	1	1	1
2					0.887***	0.889***	0.899***	0.932***
3					0.859***	0.859***	0.868***	0.908***

Table 3 continued

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
4					0.804***	0.805***	0.818***	0.857***
5 Highest quintile group					0.743***	0.747***	0.760***	0.812***
Fathers' mean income								
1 Lowest quintile group						1	1	1
2						1.007	1.008	1.005
3						0.985	0.990	0.991
4						0.948**	0.955**	0.963*
5 Highest quintile group						0.913***	0.928***	0.958*
Education								
Compulsory school (ref.)							1	1
Upper secondary school ≤2 years							1.050***	0.993
Upper secondary school >2 years							0.783***	0.810***
College/university <3 years							1.311***	1.270***
College/university ≥3 years							1.472***	1.556***
Enrolled in education								
No (ref.)							1	1
Yes							0.280***	0.313***
Income								
1 Lowest quintile group								1
2								1.644***
3								1.403***
4								0.997
5 Highest quintile group								0.814***

Table 3 continued

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Proximity to parents								
Same dwelling (ref.)								1
Within 20 km								5.121***
Between 20 to 100 km								5.311***
Between 100 to 250 km								4.769***
More than 250 km								4.752***
Number of events	40,065	40,065	40,065	40,065	40,065	40,065	40,065	40,065
Number of observations	47,743	47,743	47,743	47,743	47,743	47,743	47,743	47,743

* Indicates a p value of <5 %, ** indicates p value of <1 %, and *** indicates statistically significance with the probability of a random effect lower than 1 per thousand (0.000)

Table 4 Relative risk of becoming a father for the first time by parents education, parents class, parents status, mothers age at first birth, fathers mean income, educational history, income and proximity to parents

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Parents' education								
Compulsory school (ref.)	1			1	1	1	1	1
Upper secondary school ≤2 years	0.969***			0.975	0.976	0.973*	0.976	0.961**
Upper secondary school >2	0.927***			0.932***	0.938**	0.936**	0.940**	0.943**
College/university <3 years	0.891***			0.898***	0.922**	0.922**	0.928**	0.948*
College/university ≥3 years	0.811***			0.824***	0.848***	0.851***	0.859***	0.902***
Parents' EGP								
Unskilled workers (ref.)		1		1		1	1	1
Skilled workers		1.000		0.992	0.994	0.987	0.987	0.992
Farmers, fishermen		0.922**		0.936*	0.965	0.958	0.951	1.200***
Self-employed		0.997		1.004	1.014	1.010	1.007	1.023
Routine non-manual		0.946**		0.972	0.977	0.975	0.978	0.966
Lower service class		0.939***		1.006	1.012	1.005	1.003	0.996
Upper service class		0.856***		0.965	0.977	0.957	0.974	0.980
Parents' status								
1 Lowest quintile group			1	1	1	1	1	1
2			1.016	1.022	1.021	1.020	1.017	1.005
3			0.952**	0.982	0.984	0.981	0.984	0.962
4			0.945**	0.983	0.985	0.983	0.984	0.978
5 Highest quintile group			0.898***	0.995	0.999	0.997	1.003	1.004
Mothers' age at first birth								
1 Lowest quintile group					1	1	1	1
2					0.930***	0.930***	0.930***	0.945**
3					0.900***	0.901***	0.902***	0.932***

Table 4 continued

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
4					0.860***	0.860***	0.858***	0.897***
5 Highest quintile group					0.787***	0.790***	0.792***	0.853***
Fathers' mean income								
1 Lowest quintile group						1	1	1
2						0.954*	0.952*	0.922**
3						0.997	0.994	0.936
4						1.008	1.005	0.939
5 Highest quintile group						0.975	0.975	0.911**
Education								
Compulsory school (ref.)							1	1
Upper secondary school ≤2 years							1.040**	0.977
Upper secondary school >2 years							0.902***	0.857***
College/university <3 years							1.099***	0.945**
College/university ≥3 years							1.378***	1.141***
Enrolled in education								
No (ref.)							1	1
Yes							0.524***	0.713***
Income								
1 Lowest quintile group								1
2								1.444***
3								1.596***
4								1.708***
5 Highest quintile group								1.842***

Table 4 continued

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Proximity to parents								
Same dwelling (ref.)								1
Within 20 km								4.402***
Between 20 and 100 km								4.787***
Between 100 and 250 km								4.131***
More than 250 km								4.115***
Number of events	37,491	37,491	37,491	37,491	37,491	37,491	37,491	37,491
Number of observations	49,920	49,920	49,920	49,920	49,920	49,920	49,920	49,920

* Indicates a p value of <5 %, ** indicates p value of <1 %, and *** indicates statistically significance with the probability of a random effect lower than 1 per thousand (0.000)

The results from Models 1 through 3, where only one measure of social background was included at a time, show that each dimension of social background has an inverse association with the risk of becoming a parent. Parental education appears to have a steady gradient-like effect across the distribution (also, see Figs. 1, 2). For women, each increase in parents' educational level reduces the risk of becoming a mother by almost 10 %. For men, every increase in the parents' education results in an approximately 5 % decrease in the risk of becoming a father. When postgraduate studies were included as a sixth and highest level of education, also this level of education further reduced the risks of becoming a parent with about 10 % for women and 5 % for men (not shown in the Tables).

The results from Model 2 show that higher occupational class background reduces the risk of entry into parenthood. Class should not be understood solely as a hierarchical classification, and therefore, the interpretation of these patterns should be made with some caution. In part, farmers and the self-employed are difficult to place in a hierarchical order. However, the relative risk of becoming a mother is gradually reduced for the three highest categories: routine non-manual, lower service class, and upper service class in comparison with the reference category. For men, there is no difference between men whose parents were unskilled or skilled workers, or self-employed. The magnitude of parents' class is much weaker for men than for women.

The results from Model 3 show that having parents of higher status is associated with a lower risk of becoming a parent. For women, we see a clear gradient-like pattern where higher status reduces the propensity to become a mother by about 5–10 % points for each quintile group increase. For men, the impact of parents' status seems to be less, but still significantly lower for the three highest quintile groups compared to the reference category.

The influence of each measurement of social background decreases when all three measurements are included simultaneously (Model 4). This is of no surprise given that the three dimensions of social background are positively correlated with one another (see Table 2) and thus to some extent measure the same general social standing. Controlling for parental education, the parents' class and status no longer significantly predict men's propensity to enter parenthood. For women, the negative effect of parental status is reduced when controlling for parental education and class. A conclusion is that for men parental education is the only relevant dimension of social background which predicts entry into parenthood. Having university-educated parents reduces the rate of entry into fatherhood by 18 %, compared to having parents with the lowest educational level. Parental education has a stronger negative influence on women's than on men's entry into parenthood. However, parents' occupational class and social status exert additional influence on women's propensity to enter parenthood.

As mentioned in the theoretical section, social background can affect fertility indirectly, through the age at which the mother had her first child, economic resources, and educational careers and attainment. I added these intermediate variables stepwise in Models 5 through 7. Model 5 added the index person's mother's age at first birth. Not surprisingly, it has an inverse effect on the index person's entry rate into parenthood, but it changes the effects of the social

background variables only marginally. Model 6 added the father's mean income. For men, father's mean income did not predict the rate of entry into fatherhood. Women whose fathers belonged to the two highest income quintiles had a lower rate of entering motherhood than those whose fathers belonged to the other income groups. However, this intermediate variable does not explain much of the impact of any of the social background dimensions. It does explain a small part of the importance of parental status and of an upper service class background for women. The effect of having self-employed or farmer parents, compared to having working class parents, actually increases, reflecting the often low regular incomes in these occupations.

Model 7 added the index person's own educational history. Enrollment in education has a strong negative effect on the propensity to become a parent. The risk of motherhood declines by more than 70 %, and the risk of fatherhood is about 50 % lower when being enrolled in education. Educational attainment has surprisingly a stronger effect on women's parenthood, although the pattern of the effects is similar for both genders. Apart from longer (>2 years) upper secondary education—which decreases the rate of entry into parenthood—every step up the educational ladder is associated with a higher relative risk of becoming a parent once having finished education.

The effect of parents' educational attainment on entry into parenthood decreases slightly, but consistently, when controlling for the index person's own educational history. Parental education, however, continues to have an independent and negative effect, and it remains stronger for women than for men. Women with university-educated parents have a 17 %, and men with university-educated parents have a 14 % lower rate of entering parenthood compared to women and men whose parents have the lowest level of education, respectively.

The last variable to be included was the two time-varying covariate proximity to parents and index person's own income (Model 8). It should not be a surprise that living in the same dwelling as the parents, which is a very strong predictor of living in the same household as the parents, shows a very strong negative impact on the propensity to become a parent. However, the differences between the other categories of proximity to parents are relatively small, and the conclusion is that it is primarily of importance to move out of the parental home that matters. Moving out of the parental home is obviously a strong predictor of shifting from an educational phase of life to an occupational phase. A change that for many also is strongly associated with entry into parenthood. For men, income shows a clear positive impact on fertility, while for women the association between income and fertility shows an inverted U-shape. The influence of social background is not affected in any important ways by the inclusion of these two variables. The importance of being enrolled in education is reduced both for women and for men when proximity to parents and index person's own income are included. Since income tends to be low while being enrolled in education, stepping out of the lowest income quintile is probably, in many cases, the same as moving from an educational phase of life to a more stable, occupational phase.

Almost all of the remaining effects of parents' status were reduced in the final model. Only women whose parents belonged to the highest status quintile had a

smaller risk of becoming mothers compared to the reference category. For occupational class, most of the effects were reduced in the final model. For women, the negative effect of parent's occupational class was much reduced by the inclusion of the index person's own income, and the negative effect remains only for routine non-manual and the two service classes. Sons to farmers and fishermen show a significantly higher risk of becoming a parent when their own income and proximity to the parents were included, indicating that there is a fertility behavior transmitted across generations in farmer/fisher families that deviates from the other groups.

In general, the effect of social background seems to be stronger for women than men. Parental education is the only significant predictor of entry into fatherhood, whereas parental occupational class and belonging to the highest status quintile affect entry into motherhood. I also tested the relationships between gender, social background, and entry into parenthood by including interaction terms between gender and social background (instead of separate models), and the likelihood ratio test of these models shows statistically significant differences between men and women.

Is the negative association between social background and the propensity to become a parent completely or partly due to the postponement of childbearing, or does social background also affect the ultimate likelihood to ever become a parent? Table 5 shows the results of the logistic regression of been a parent at the age of 47. The non-time-varying variables are included in the same manner as in the event history analysis. The index person's own education is included as a non-time-varying variable measuring educational attainment at age 47. People who were censored in the event history analysis due to migration or death have been excluded from the logistic analysis. For both men and women, the first birth risk after age 47 is extremely low, and the results would almost certainly been unchanged even if it had been possible to study the 1960 birth cohort at older ages.

The results in Table 5 clearly show that social background has no impact on the final likelihood of becoming a parent. Almost none of the categories, no matter what measure of social background, show any meaningful deviation from the reference categories. This implies that the negative association between social background and the propensity to become a parent, seen in Table 3 and 4, is entirety a postponement effect and that social background does not directly affect the ultimate likelihood to ever enter parenthood. The descriptive results (Figs. 1, 2) indicated that there was some variations in the final probability of ever becoming a mother due to social background, while the final likelihood of becoming the father did not seem to be influenced by social background. Thus, for women, the difference in the probability of ever becoming parents, indicated in the descriptive results, can entirely be explained by the intermediate variables included in this study.

6 Discussion and Conclusion

In this paper, I have introduced three different measures of social background—class, status, and education—into fertility research. The purpose of the study was to examine whether these have independent effects on entry into parenthood and

Table 5 Odds ratio of becoming a mother/father at age 47 by parents education, parents class, parents status, mothers age at first birth, fathers mean income, educational attainment

	Women	Men
Parents' education		
Compulsory school (ref.)	1	1
Upper secondary school ≤2 years	0.937	0.999
Upper secondary school >2	0.874*	0.967
College/university <3 years	0.917	0.965
College/university ≥3 years	0.918	0.943
Parents' EGP		
Unskilled workers (ref.)	1	1
Skilled workers	0.954	0.994
Farmers, fishermen	1.211**	1.107
Self-employed	1.003	1.099*
Routine non-manual	1.004	1.050
Lower service class	0.940	1.060
Upper service class	0.968	1.030
Parents' status		
1 Lowest quintile group	1	1
2	0.994	1.005
3	1.013	1.011
4	1.040	1.044
5 Highest quintile group	1.012	1.105*
Mothers' age at first birth		
1 Lowest quintile group	1	1
2	0.920*	0.949
3	0.898**	0.900***
4	0.846***	0.868***
5 Highest quintile group	0.740***	0.755***
Fathers' mean income		
1 Lowest quintile group	1	1
2	1.065	0.950
3	1.125*	1.064
4	1.056	1.131**
5 Highest quintile group	1.103	1.136
Education		
Compulsory school (ref.)	1	1
Upper secondary school ≤2 years	1.054	1.150***
Upper secondary school >2 years	0.761*	1.138**
College/university <3 years	0.754***	1.050
College/university ≥3 years	0.424***	0.921*
Number of observations	47,355	48,838

* Indicates a p value of <5 %, ** indicates p value of <1 %, and *** indicates statistically significance with the probability of a random effect lower than 1 per thousand (0.000)

whether these effects remain after controlling for potential sociodemographic pathways. In the main analysis, I estimated the effect of social background on first births using piecewise constant exponential models. The results showed that each of the three variables of social background, introduced separately, has a clear negative association with the risk of becoming a parent, both for men and for women. When all three measurements of social background are included simultaneously, parents' education has the most robust influence on fertility: Children of highly educated parents had lower rates of entry into parenthood. The descriptive results pointed primarily to a postponement effect: Children to highly educated parents begin childbearing later in life. Although parental education was associated with somewhat higher childlessness among women in the descriptive analysis, this could be completely explained by the mediating variables. The direct effect of parental education was to postpone rather than forego childbearing. The other two dimensions have no influence on entry into fatherhood, but remained significant predictors of entry into motherhood: Women hailing from higher class or status families postpone their fertility.

Among the three pathways that were tested in this paper, the index persons' educational histories and index persons' mothers' age at first birth explained a part of the effect of social background on fertility, whereas the father's income was of limited significance and had no effect on the entry into fatherhood. Own incomes and proximity to parents explained, additionally, a small part of the class background effect. Even after the intervening variables were introduced, parental education had a significant negative effect on entry into parenthood. Class background had significant effects for women, whereas social status did not.

What can the results tell about the mechanisms through which social background affects entry into parenthood? Two key findings should direct our discussion. First, parental education appeared as the most robust predictor of entry into parenthood, and second, social background has a stronger effect for women. Regarding the effects of parental education, I hypothesized that it reflects information on how to navigate life course decisions and their sequencing, but it can also reflect cultural factors and specifically, weaker preferences for family life. Three reasons cast doubt on the second explanation, even though it has been suggested in related research (Hoem and Hoem 1992; Lyngstad 2006). First, social status did not have a direct effect unlike one would have expected were the cultural explanation correct. Second, although the mother's age at first birth explains a part of the social background effect, its explanatory power was limited. And third, the analysis showed that the direct effect of education was to postpone, not forego childbearing, what one could have expected in the presence of weak preferences for family life.

Another explanation is that children from higher social backgrounds have higher occupational aspirations and better information on how to reach these goals. This is supported also by the significant direct effect of occupational class background for women. Previous research has shown how higher class background predicts longer occupational career progression as those from such backgrounds aim to reach at least the position of their parents (Härkönen and Bihagen 2011; Manzoni et al. 2014). An educational level which for someone from a low social background adds up to upward mobility can for someone from a higher class background mean the

starting point of a career, which needs to be built. This can specifically be the case in an environment of educational expansion, where social reproduction in the upper strata is not possible through education alone. Parents can actively push their children to climb the career ladder. This can then translate into a postponement of family formation once a preferred career stage is reached.

That women are more affected than men by their social background is in line with previous research, showing that women are on average more affected by their family of origin (Booth and Edwards 1990; Amato and Keith 1991; Amato 1996; Dahlberg 2013). One possibility is that parents' influences over their children decline as the child grows older and since women, on average, are younger than men when enter parenthood, they are also more responsive to family background (Rossi and Rossi 1990). Another explanation refers to women's role as kinkeepers and thus their stronger susceptibility to parental influence (Aronson 1992). Childbearing disrupts women's more than men's careers, and it may therefore be that women from higher social backgrounds postpone fertility longer so as to reach their occupational position they aspire. The negative effect of father's (high) incomes on women's, but not on men's, entry into parenthood can point to a similar pathway. This study was not able to control for educational field of the index person. Previous studies (Hoem et al. 2006a, b) have shown that next to educational attainment, educational field can also be important for the onset of fertility.

The relatively weak effect of father's income is an interesting finding in its own right. One explanation why economic background does not have a strong impact on fertility in Sweden could be that Swedish income inequalities are low (Yaish and Andersen 2012) and that Sweden has one of the most generous parental leave systems (Korpi 2000). Also, student loans in Sweden are, in an international comparison, generously subsidized (Johnstone 1986) and higher educations are free of charge (Vossensteyn 2009). These are things that could reduce a possible impact of parental economic differences on offspring's fertility. The effect of the highest incomes on women's, but not men's fertility, can also reflect women's greater likelihood to receive financial help (e.g., Attias-Donfut et al. 2005), which grants them a degree of financial independence and leeway in family formation. When the index person's own educational histories are included in the analysis, the influence of parents' education is reduced. Thus, the social biased recruitment to higher education explains only a part of the effect of parents' education on children's propensity to become parents.

Family behavior can be a part of the intergenerational reproduction of social inequalities. The net effect of socioeconomic background, especially for women, may work against intergenerational social mobility if women from higher social backgrounds continue career progression longer by postponing childbearing. On the other hand, although the results do not show any deviation in the final likelihood to end up childless, a postponement of entering into parenthood can nevertheless affect the probability of achieving the desired final family size. The fact that the results show that the negative relationship between social background and fertility entirely is a postponement can strengthen the suggestion that the intergenerational transmission of fertility is part of a reproduction of classes across generations. If the effect of social background and fertility also would be reducing the likelihood to

ever become a parent, it would undermine the same assumption. Even though parents from higher classes influence their children to have higher occupational and educational aspirations, it is unlikely that they would want for their children to jeopardize ever becoming a parent.

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References

Aarskaug Wiik, K. (2009). 'You'd Better Wait!'—socioeconomic background and timing of first marriage versus first cohabitation. *European Sociological Review, 25*, 139–153.

Abrahamse, A. F., Morrison, P. A., & Waite, L. J. (1988). *Beyond stereotypes: Who becomes a single teenage mother?* Santa Monica, CA: RAND Corporation.

Amato, P. R. (1996). Explaining the intergenerational transmission of divorce. *Journal of Marriage and the Family, 58*(3), 628–640.

Amato, P. R., & Keith, B. (1991). Parental divorce and adult well-being: A meta-analysis. *Journal of Marriage and the Family, 53*(1), 43–58.

Andersson, G. (2000). The impact on labor force participation on childbearing behavior: Pro-cyclical fertility in Sweden during the 1980s and the 1990s. *European Journal of Population, 15*(1), 1–24.

Andersson, G. (2004). Childbearing developments in Denmark, Norway, and Sweden from the 1970s to the 1990s: A comparison. *Demographic Research, 3*, 155–176.

Andersson, G., Rønsen, M., Knudsen, L., Lappegård, T., Neyer, G., Skrede, K., et al. (2009). Cohort fertility patterns in the nordic countries. *Demographic Research, 20*, 313–352.

Anderton, D. L., Tsuya, N. O., Bean, L. L., & Mineau, D. G. P. (1987). Intergenerational transmission of relative fertility and life course patterns. *Demography, 24*, 467–480.

Aronson, J. (1992). Women's sense of responsibility for the care of old people: "But who else is going to do it?". *Gender & Society, 6*, 8–29.

Attias-Donfut, C., Ogg, J., & Wolff, F. C. (2005). European patterns of intergenerational financial and time transfers. *European Journal of Ageing, 2*(3), 161–173.

Axinn, W., Clarkberg, M. E., & Thornton, A. (1994). Family influences on family size preferences. *Demography, 31*, 65–79.

Axinn, W., & Thornton, A. (1992). The influence of parental resources on the timing of the transition to marriage. *Social Science Research, 21*, 261–281.

Axinn, W., & Thornton, A. (1993). Mothers, children, and cohabitation: The intergenerational effects of attitudes and behavior. *American Sociological Review, 58*, 233–246.

Barber, J. (2000). Intergenerational influences on the entry into parenthood: Mothers' preferences for family and nonfamily behavior. *Social Forces, 79*, 319–348.

Barber, J. (2001). The intergenerational transmission of age at first birth among married and unmarried men and women. *Social Science Research, 30*, 219–247.

Bean, F. D., & Swicegood, C. G. (1979). Intergenerational occupational mobility and fertility: A reassessment. *American Sociological Review, 44*, 608–619.

Bernardi, F. (2001). Is it a timing or a probability effect? Four simulations and an application of transition rate models to the analysis of unemployment exit. *Quality & Quantity, 35*(3), 231–252.

Bernhardt, E. (1989). Social background, education and childbearing before 30: The experience of the Stockholm Metropolitan birth cohort. Stockholm University: Department of Sociology, Project Metropolitan Research Report No 28.

Bernhardt, E., & Hoem, B. (1985). Cohabitation and social background: Trends observed for Swedish women born between 1936 and 1960. *European Journal of Population, 1*, 375–395.

Blackwell, D. (2000). Marital homogamy in the United States: The influences of individual and paternal education. *Social Science Research, 27*, 159–188.

Blossfeld, H. P., & Huinink, J. (1991). Human capital investments or norms of role transition? How women's schooling and career affect the process of family formation. *American Journal of Sociology, 97*, 143–168.

Böhlmark, A., & Lindquist, M. J. (2006). Life-cycle variations in the association between current and lifetime income: Replication and extension for Sweden. *Journal of Labor Economics, 24*(4), 879–900.

Bongaarts, J., & Feeney, G. (1998). On the quantum and tempo of fertility. *Population and Development Review, 24*, 271–291.

Booth, A., & Edwards, J. N. (1990). Transmission of marital and family quality over the generations: The effect of parental divorce. *Journal of Divorce, 13*(2), 41–58.

Bourdieu, P. (1984). *Distinction: A social critique of the judgement of taste*. London: Routledge.

Breen, R., & Goldthorpe, J. H. (1997). Explaining educational differentials towards a formal rational action theory. *Rationality and Society, 9*(3), 275–305.

Breen, R., & Goldthorpe, J. H. (2001). Class, mobility and merit: The experience of two British birth cohorts. *European Sociological Review, 17*, 81–101.

Breen, R., & Jonsson, J. O. (2005). Inequality of opportunity in comparative perspective: Recent research on educational attainment and social mobility. *Annual Review of Sociology, 31*, 223–243.

Breen, R., Luijkx, R., Müller, W., & Pollak, R. (2009). Nonpersistent inequality in educational attainment: Evidence from eight European countries. *American Journal of Sociology, 114*, 1475–1521.

Breen, R., & Rottman, D. B. (1995). *Class stratification: A comparative perspective*. New York: Harvester Wheatsheaf.

Buis, M. L. (2012). The composition of family background: The influence of the economic and cultural resources of both parents on the offspring's educational attainment in the Netherlands between 1939 and 1991. *European Sociological Review, 29*(3), 593–602.

Bukodi, E., & Goldthorpe, J. H. (2012). Causes, classes and cases. *Longitudinal and Life Course Studies, 3*, 292–296.

Chan, T. W. (2010). The social status scale: Its construction and properties. In T. W. Chan (Ed.), *Social status and cultural consumption* (pp. 28–56). Cambridge: Cambridge University Press.

Chan, T. W., & Goldthorpe, J. H. (2004). Is there a status order in contemporary British society? Evidence from the occupational structure of friendship. *European Sociological Review, 20*, 383–401.

Chan, T. W., & Goldthorpe, J. H. (2007). Class and status: The conceptual distinction and its empirical relevance. *American Sociological Review, 72*, 512–532.

Cnattingius, S., & Stephansson, O. (2002). The epidemiology of stillbirth. *Seminars in Perinatology, 26*, 25–30.

Dahlberg, J. (2013). Family influence in fertility: A longitudinal analysis of sibling correlations in first birth risk and completed fertility among Swedish men and women. *Demographic Research, 29*(9), 233–246.

Davis-Kean, P. E. (2005). The influence of parent education and family income on child achievement: The indirect role of parental expectations and the home environment. *Journal of Family Psychology, 19*(2), 294–304.

Easterlin, R. A. (1973). Does money buy happiness? *The Public Interest, 30*, 3–10.

Easterlin, R. A. (1975). An economic framework for fertility analysis. *Studies in Family Planning, 6*(3), 54–63.

Elo, I. T. (2009). Social class differentials in health and mortality: Patterns and explanations in comparative perspective. *Annual Review of Sociology, 35*, 553–572.

Erikson, R. (1984). Social class of men, women and families. *Sociology, 18*, 500–514.

Erikson, R., & Goldthorpe, J. H. (1992). Individual or family? Results from two approaches to class assignment. *Acta Sociologica, 35*, 95–105.

Erikson, R., Goldthorpe, J. H., & Portocarero, L. (1979). Intergenerational class mobility in three western European societies: England, France and Sweden. *British Journal of Sociology, 33*, 1–34.

Erikson, R., & Jonsson, J. O. (1996). *Can education be equalized? The Swedish case in comparative perspective*. Boulder, CO: Westview Press.

Furstenberg, F. F., Brooks-Gunn, J., & Morgan, S. P. (1987). *Adolescent mothers in later life*. Cambridge: Cambridge University Press.

Geyer, S., Hemström, Ö., Peter, R., & Vågerö, D. (2006). Education, income, and occupational class cannot be used interchangeably in social epidemiology. Empirical evidence against a common practice. *Journal of Epidemiology and Community Health, 60*, 804–810.

Goldthorpe, J. H. (2007). *On sociology* (2nd ed.). Stanford, CA: Stanford University Press.

Goldthorpe, J. H. (2012). Back to class and status: Or why a sociological view of social inequality should be reasserted. *Revista Espanola de Investigaciones Sociologicas, 137*(1), 201–215.

Goldthorpe, J. H., & McKnight, A. (2006). The economic basis of social class. In S. Morgan, D. B. Grusky, & G. S. Fields (Eds.), *Mobility and inequality: Frontiers of research from sociology and economics* (pp. 109–136). Stanford, CA: Stanford University Press.

Hank, K. (2002). Regional social contexts and individual fertility decisions: A multilevel analysis of first and second births in western Germany. *European Journal of Population, 18*, 281–299.

Hardy, J. B., Astone, N. M., Brooks-Gunn, J., Shapiro, S., & Miller, T. L. (1998). Like mother, like child: Intergenerational patterns of age at first birth and associations with childhood and adolescent characteristics and adult outcomes in the second generation. *Developmental Psychology, 34*, 1220–1232.

Härkönen, J., & Bihagen, E. (2011). Occupational attainment and career progression in Sweden. *European Societies, 13*, 451–479.

Hoem, J. M. (1986). The impact of education on modern family-union initiation. *European Journal of Population Revue Européenne de Démographie, 2*(2), 113–133.

Hoem, J. M. (1993). Classical demographic methods of analysis and modern event-history techniques. In *IUSSP: 22nd International population conference, Montreal, Canada*, *3*, 281–291.

Hoem, B. (2000). Entry into motherhood in Sweden: The influence of economic factors on the rise and fall in fertility, 1986–1997. *Demographic Research, 2*(4), 1–28.

Hoem, B., & Hoem, J. (1992). The disruption of marital and non- marital unions in contemporary Sweden. In J. Trussell, R. Hankinson, & J. Tilton (Eds.), *Demographic applications of event history analysis* (pp. 61–93). Oxford: Clarendon Press.

Hoem, J. M., Neyer, G., & Andersson, G. (2006a). Education and childlessness: The relationship between educational field, educational level, and childlessness among Swedish women born in 1955–59. *Demographic Research, 14*(15), 331–380.

Hoem, J. M., Neyer, G., & Andersson, G. (2006b). Educational attainment and ultimate fertility among Swedish women born in 1955–59. *Demographic Research, 14*(16), 381–404.

Hoffman, S. D. (1998). Teenage childbearing is not so bad after all… or is it? *A Review of the New Literature, Family Planning Perspectives, 30*, 236–240.

Hoover-Dempsey, K. V., & Sander, H. M. (1995). Parental involvement in children's education: Why does it make a difference. *Teachers College Record, 97*(2), 310–331.

Horwitz, S. M. C., Klerman, L. V., Kuo, H. S., & Jekel, J. F. (1991). Intergenerational transmission of school-age parenthood. *Family Planning Perspectives*, 23, 168–172, 177.

Huang, L., Sauve, R., Birkett, N., Fergusson, D., & van Walraven, C. (2008). Maternal age and risk of stillbirth: A systematic review. *Canadian Medical Association Journal, 147*, 435–443.

Johnson, M. K. (2002). Social origins, adolescent experiences, and work value trajectories during the transition to adulthood. *Social Forces, 80*, 1307–1341.

Johnson, N. E., & Stokes, C. S. (1976). Family size in successive generations: The effects of birth order, intergenerational change in lifestyle, and familial satisfaction. *Demography, 13*, 175–187.

Johnstone, D. B. (1986). *Sharing the costs of higher education: Student financial assistance in the United Kingdom, the Federal Republic of Germany, France, Sweden, and the United States*. New York: Institution College Board Publications.

Jonsson, J. O., & Erikson, R. (1997a). Klasstruktur och social rörlighet under 1900-talet. In J. Vogel, L. Häll (Eds.), *Välfärd och ojämlikhet i 20-årsperspektiv 1975–1995. Rapport 91 i serien Levnadsförhållanden* (pp. 491–511). Stockholm: Statistiska centralbyrån.

Jonsson, J. O., & Erikson, R. (1997b). Social snedrekrytering i svensk skola. In J. Vogel, L. Häll (Eds.), *Välfärd och ojämlikhet i 20-årsperspektiv 1975–1995. Rapport 91 i serien Levnadsförhållanden* (pp. 513–527). Stockholm: Statistiska centralbyrån.

Kahn, J. R., & Anderson, K. E. (1992). Intergenerational Patterns of teenage fertility. *Demography, 29*, 39–57.

Kalmijn, M. (1998). Intermarriage and homogamy: Causes, patterns, trends. *Annual Review of Sociology, 24*, 395–421.

Kohler, H. P., & Philipov, D. (2001). Variance effects in the Bongaarts–Feeney formula. *Demography, 38*, 1–16.

Kolk, M. (2014). Understanding transmission of fertility across multiple generations: Socialization or socioeconomics? *Research in Social Stratification and Mobility, 35*, 89–103.
Korpi, W. (2000). Faces of inequality: Gender, class and patterns of inequalities in different types of welfare states. *Social Politics, 7*, 127–191.
Kravdal, Ø. (1994). The importance of economic activity, economic potential and economic resources for the timing of first births in Norway. *Population Studies, 48*, 249–267.
Lappegård, T., & Rønsen, M. (2005). The multifaceted impact of education on entry into motherhood. *European Journal of Population, 21*, 31–49.
Leridon, H. (2004). Can assisted reproduction technology compensate for the natural decline in fertility with age? A model assessment. *Human Reproduction, 19*, 1549–1554.
Lucas, S. R. (2001). Effectively maintained inequality: Education transitions, track mobility, and social background effects. *American Journal of Sociology, 106*(6), 1642–1690.
Lyngstad, T. H. (2004). The impact of parents' and spouses' education on divorce rates in Norway. *Demographic Research, 10*, 122–142.
Lyngstad, T. H. (2006). Why do couples with highly educated parents have higher divorce rates? *European Sociological Review, 22*, 49–60.
Manlove, J. (1997). Early motherhood in an intergenerational perspective: The experiences of a British cohort. *Journal of Marriage and Family, 59*, 263–279.
Manzoni, A., Härkönen, J., & Mayer, K. U. (2014). Moving on? A growth-curve analysis of occupational attainment and career progression patterns in West Germany. *Social Forces, 92*(4), 1285–1312.
Martin, S. P. (2004). Women's education and family timing: Outcomes and trends associated with age at marriage and first birth. In K. Neckerman (Ed.), *Social inequality*. Russell Sage: New York.
McLanahan, S., & Percheski, C. (2008). Family structure and the reproduction of inequalities. *Annual Review of Sociology, 34*, 257–276.
Michael, R. T., & Brandon Tuma, N. (1985). Entry into marriage and parenthood by young men and women: The influence of family background. *Demography, 22*(4), 515–544.
Moore, K. A., Miller, B. C., Glei, D., & Morrison, D. R. (1995). *Early sex, contraception, and childbearing: A review of recent research*. Washington, DC: Child Trends.
Murphy, M., & Knudsen, L. B. (2002). The intergenerational transmission of fertility in contemporary Denmark: The effects of number of siblings (full and half), birth order, and whether male or female. *Population Studies, 56*, 235–248.
Murphy, M., & Wang, D. (2001). Family-level continuities in childbearing in low-fertility societies. *European Journal of Population, 17*, 75–96.
Prandy, K. (1998). Class and continuity in social reproduction: An empirical investigation. *The Sociological Review, 46*, 340–364.
Prandy, K. (1999). Class, stratification and inequalities in health: A comparison of the registrar-general's social classes and the Cambridge scale. *Sociology of Health & Illness, 21*, 466–484.
Prandy, K., & Lambert, P. (2003). Marriage, social distance and the social space: An alternative derivation and validation of the Cambridge scale. *Sociology, 37*, 397–411.
Pullum, T. W., & Wolf, D. A. (1991). Correlations between frequencies of kin. *Demography, 28*, 391–409.
Rijken, A. J., & Liefbroer, A. C. (2009). Influences of the family of origin on the timing and quantum of fertility in the Netherlands. *Population Studies, 63*, 71–85.
Rossi, P. P. H., & Rossi, A. S. (1990). *Of human bonding: Parent–child relations across the life course*. New York: de Gruyter.
Skirbekk, V., Kohler, H.-P., & Prskawetz, A. (2004). Birth month, school graduation and the timing of births and marriages. *Demography, 41*, 547–568.
Sobotka, T. (2006). In pursuit of higher education, do we postpone parenthood too long? *Gender Medicine, 3*(183–186), 29.
Stanfors, M., & Scott, K. (2013). Intergenerational transmission of young motherhood. Evidence from Sweden, 1986–2009. *The History of the Family, 18*(2), 187–208.
Steenhof, L., & Liefbroer, A. C. (2008). Intergenerational transmission of age at first birth in the Netherlands for birth cohorts born between 1935 and 1984: Evidence from municipal registers. *Population Studies, 62*, 69–84.
Stevenson, D. L., & Baker, D. P. (1987). The family-school relation and the child's school performance. *Child Development, 58*, 1348–1357.
Thalberg, S. (2011). Does money matter? Childbearing behaviour of Swedish students in the 1980s and 1990s. *Finnish Yearbook of Population Research, 46*, 5–19.

Torssander, J., & Erikson, R. (2009). Marital partner and mortality: The effects of the social positions of both spouses. *Journal of Epidemiology and Community Health, 63*(12), 992–998.
Torssander, J., & Erikson, R. (2010). Stratification and mortality: A comparison of education, class, status, and income. *European Sociological Review, 26*, 465–474.
Vossensteyn, H. (2009). Challenges in student financing: State financial support to students—A worldwide perspective. *Higher Education in Europe, 34*(2), 171–187.
Weber, M. (1922/1968). *Economy and society*. Berkeley, CA: University of California Press.
Yaish, M., & Andersen, R. (2012). Explaining cross-national variation in social mobility: The role of economic and political context. *Social Science Research, 41*, 527–538.
Zill, N., & Nord, C. (1994). *Running in place: How American families are faring in a changing economy and an individualistic society*. Washington, DC: Child Trends.
Zimmer, B. G., & Fulton, J. (1980). Size of family, life chances, and reproductive behavior. *Journal of Marriage and the Family, 42*, 657–670.