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*Research Article*

### **Children's experiences of family disruption in Sweden: Differentials by parent education over three decades**

**Sheela Kennedy**

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## **Children's experiences of family disruption in Sweden: Differentials by parent education over three decades**

**Sheela Kennedy<sup>1</sup>**  
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### **Abstract**

This paper examines the living arrangements of Swedish children from 1970 through 1999 using the Level of Living Survey. Sweden, with low levels of economic inequality and a generous welfare state, provides an important context for studying socioeconomic differentials in family structure. We find that, although differences by parent education in non-marital childbearing are substantial and persistent, cohabiting childbearing is common even among highly educated Swedish parents. Educational differences in family instability were small during the 1970s, but increased over time as a result of rising union disruption among less-educated parents (secondary graduates or less). Children in more advantaged families experienced substantially less change in family structure and instability over the study period. Although cohabiting parents were more likely to separate than parents married at the child's birth, differences were greater for the less-educated. Data limitations precluded investigating these differences across time. We conclude that educational differences in children's living arrangements in Sweden have grown, but remain small in international comparisons.

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## **1. Introduction**

Since the 1960s, increases in cohabitation, divorce, and non-marital childbearing have dramatically altered the structure and stability of children's family lives. These changes in family life, collectively known as the Second Demographic Transition, have emerged in most affluent societies. The consequences have, however, not been distributed equally across the population. Rather, children whose parents are socioeconomically less advantaged have experienced higher rates of family instability and reduced opportunities for their parents and kin to provide a secure childhood environment (McLanahan 2004).

McLanahan argues that governments can do a great deal to minimize the unequal chances of children. She identifies wage inequality, child support enforcement, individual versus couple tax and welfare benefits, and gender equality in the family as arenas within which social policies could reduce inequalities in children's access to a stable, two-parent family. In almost every respect, such policies are already well-established in the Nordic welfare states. And, as McLanahan (2004) reports, socioeconomic differences in family stability appear to be smaller there than in the liberal welfare states.

The Nordic countries are also central to the debate about children's "diverging destinies" (McLanahan 2004) because of the unique role cohabitation plays in Nordic families. McLanahan's argument emphasizes the link between marriage and children's access to a stable family life. In the Nordic countries, however, the greater institutionalization of cohabitation means that cohabiting parents have similar responsibilities and rights as married parents, especially when they have shared biological children. These countries provide a context in which policies designed to support the socioeconomically disadvantaged, as well as parents of all economic means, are not differentiated with respect to legal marital status.

In this paper, we investigate trends in socioeconomic differentials in the family lives of Swedish children during the last quarter of the 20<sup>th</sup> century. Our study covers a period that includes a severe economic downturn and growth in socioeconomic inequality, as well as increasingly favorable benefits to parents and to the less-educated. Our analysis of the Swedish context provides an important comparison with the well-established situation in the United States, where economic disparities in children's family lives are on the increase (McLanahan 2004).

## **2. Children's experiences of the Second Demographic Transition**

A child's first experience of changing family patterns is the type of union into which he or she is born. In many affluent countries, dramatic increases have been observed in non-marital births. In the 1970s, non-marital childbearing exceeded 20% of births in only two European countries. By 2000, virtually all countries in Europe had exceeded this threshold; in several countries, including Sweden, more than half of all births were to unmarried parents (Kiernan 2001; Thomson 2005).

Almost all of the increase in non-marital childbearing in Europe is comprised of births to cohabiting couples (Andersson 2002; Ermisch 2001; Heuveline, Timberlake, and Furstenberg 2003; Le Goff 2002). The highest concentration of cohabiting births is found in Sweden, where only 5% of births are to women living alone, while 45% of children are born to cohabiting couples. Exceptions to the overall pattern are the United States and the former East Germany, where in the early 1990s more than one in six children were born to a lone mother, exceeding the percentage born to cohabiting couples (Andersson 2002). Even in the U.S., however, most of the increase in non-marital childbearing since the mid-1980s is comprised of increases in births to cohabiting parents (Bumpass and Lu 2000).

The Second Demographic Transition is also marked by increased chances of parental separation. Overall divorce rates have achieved a high plateau in some countries, while increasing steadily in those where divorce has been rare (Hoem 1997; Härkönen and Dronkers 2006; Raley and Bumpass 2003). Increasing rates of cohabiting births may accelerate these trends because cohabiting parents are more likely to separate than married parents (Andersson 2002; Heuveline et al. 2003).

The combination of non-union births, increasing births to cohabiting couples with relatively high dissolution rates, and increasing parental divorce means that children in most affluent countries are increasingly likely to live in a single-parent family at some time during childhood. By the early 1990s, the percentage of children in wealthy countries who ever resided in a single-parent family ranged from 9% in Italy to 50% in the United States, with Sweden in the middle, at about one-third (Andersson 2002).

## **3. Parental education, children's families, and "diverging destinies"**

McLanahan (2004) contends that these changes in children's family lives have been especially pronounced at the lower end of the socioeconomic spectrum, resulting in "diverging destinies," or growing disparities in children's access to parental time and money. Children born into advantaged households, she argues, are gaining resources as a result of their parents' delayed family formation and increases in mothers'

employment, including higher standards of living, low parental divorce rates, and increased father involvement. Children born into disadvantaged families, on the other hand, have experienced the more detrimental aspects of the Second Demographic Transition, including non-union childbearing and increasing rates of separation and divorce, which typically result in greater time spent in single-parent families, lower standards of living, and less father involvement.

Theoretical links between education and family formation and stability are, for the most part, based on economic returns to education. Although higher-earning adults are less financially constrained in their choice of living arrangements, the relative costs and benefits of different family structures vary by education and earnings potential, and may influence family formation. For example, Willis argues that poorly educated women have little to gain from marriage to their poorly educated male counterparts, and little to lose from motherhood in terms of occupational opportunity costs (Willis 1999; Willis and Haaga 1996). This should be particularly true as the earnings of male non-college graduates have stagnated or declined, while the earnings of similarly educated women have grown relative to the earnings of their potential partners (Ellwood and Jencks 2004; McLanahan 2004). In contrast, the widespread entrance of college-educated women into the labor force, combined with the growing returns on education, should increase the costs to the highly educated of early childbearing, especially to women; while also boosting the benefits of marriage, especially to men. These changes imply that early and unmarried childbearing should have increased among less-educated women and men, while the highly educated may be expected to have children at later ages and in marriage.

Low incomes, income loss, and unstable unemployment are also important sources of marital strain, conflict, and hostility between spouses (Conger et al. 1990; Liker and Elder Jr. 1983; Voydanoff 1990). Furthermore, education delays marriage entry, a strong predictor of marital stability (Booth and Edwards 1985; Teachman 1983). All of these observations are consistent with the findings that the less-educated are more likely to cohabit, and that cohabiting unions have higher dissolution rates than marital unions.

Because the theoretical links between education and stable two-parent families rely heavily on the economic returns to education, these connections should be most pronounced when parents bear the vast share of childrearing costs, and when the economic returns on education are highest. In both respects, the U.S.—the primary context for which these theories were developed—is an outlier among high-income countries. The U.S. is exceptional in the high degree of economic inequality and high rates of child poverty, resulting from low wages and low social expenditures (Heuveline and Weinshenker 2008; Smeeding 2005). While other affluent countries have responded to growing rates of single parenthood and maternal employment by providing substantial support to families of all economic means through parental leave,

family allowance, and child care policies, the U.S. has remained an outlier in the degree to which the costs of raising children are borne privately (Gauthier 1996; Gornick and Meyers 2003, 2004). U.S. aid to families is designed as a "safety net" only (Gornick and Meyers 2004); consequently, family policies are heavily means-tested, aimed primarily at single-parent families, and do little to reduce poverty rates even among targeted families (Gornick and Meyers 2004; Heuveline and Weinshenker 2008). In recent years, the U.S. has further differentiated itself from other affluent nations by implementing work requirements and instituting time limits for cash assistance to families, and by promoting marriage. In the U.S., children born to poorly educated parents are thus doubly disadvantaged: not only are they substantially more likely to live in a single-parent or cohabiting-parent family, but family structure differences in economic well-being are particularly large.

When the state provides a considerable share of childrearing costs, when income is more equally distributed, or when the rights and responsibilities of unmarried partners become institutionalized by the state, we might expect educational differences in family formation and stability to be smaller. When economic well-being is less strongly structured by marital status or household composition, decisions about whether to cohabit or marry, to have children or not to have children, or to remain together with or to separate from a partner, should be less tied to economic incentives or resources. In such situations, we may still find socioeconomic differentials in family stability. But they should be driven to a greater extent by non-economic differentials, such as differences in cognitive ability, emotional stability, life planning, partner choice, relationship management, and social support.

In some contexts, moreover, the resources associated with higher socioeconomic status may produce higher rates of lone motherhood, childbearing in cohabitation, and parental separation. Where such family behaviors are severely constrained by social institutions, including social norms, individual material resources enable parents, especially women, to raise children in non-traditional living arrangements. Higher education may also provide ideological support for non-normative behaviors (Surkyn and Lesthaeghe 2004).

Most of the evidence for socioeconomic differentials in family behavior cross-nationally is based on educational attainment. In several affluent countries where the Second Demographic Transition has taken hold — the United States, France, the United Kingdom, and Sweden — education is negatively associated with both non-union and cohabiting childbearing (Ermisch 2001; Kennedy and Bumpass 2008; Le Goff 2002; Oláh 2001). However, the extent of educational differentiation varies considerably across countries. Kennedy (2005) reported much lower concentrations of non-union and cohabiting childbearing among the least-educated in, for example, Norway and the former East Germany, than in the United States. In contexts in which cohabitation,

lone-parenthood, and divorce are uncommon, and women's employment opportunities are limited—as is the case, for example, in Italy and Spain, and in West Germany in the early 1990s—the association between education and lone motherhood or childbearing in cohabitation is only weakly negative, absent, or even positive (Kennedy 2005; Kiernan 2001; Konietzka and Kreyenfeld 2002).

Similarly, education is negatively associated with union dissolution when divorce entails relatively low costs in terms of legal fees, social disapproval, or reduced economic circumstances for either or both partners, as is the case in countries like the U.S. and Sweden (Blossfeld et al. 1995; Hoem 1997; Härkönen and Dronkers 2006; Oláh 2001). Where the legal, social, and economic costs of divorce are high, the relationship reverses, with more highly educated adults being more likely to dissolve their marriages (Blossfeld et al. 1995; Härkönen and Dronkers 2006).

Because economic, policy, and cultural environments influence the magnitude and direction of educational differentials, they may also affect whether differences in education will increase over time. Widening socioeconomic differentials in children's access to a stable two-parent family are most evident in the United States. Recent increases in non-union and cohabiting births are concentrated primarily among women without college degrees (Bumpass and Lu 2000; Kennedy and Bumpass 2008). Even among married couples, education is protective against union dissolution, and the educational advantage has been increasing (Martin 2006; Raley and Bumpass 2003).

In Sweden and in a large number of European countries, including those where there is no education-divorce gradient, or where the gradient has been positive, the association between education and divorce risks has also become increasingly negative (Hoem 1997; Härkönen and Dronkers 2006). Shifts in educational differentials for childbearing without a partner or in cohabitation have not yet been fully documented.

#### **4. The Swedish case**

Sweden is unique in the characteristics of its Second Demographic Transition, and is also the prototype of the generous Nordic welfare state. Cohabitation has for decades been at a higher level in Sweden than in any other country except Iceland; in recent years, more than half of all Swedish children were born to cohabiting couples (Andersson 2002; Heuveline et al. 2003; Thomson 2005). This apparent normalization of cohabiting partnerships is also reflected in relatively low levels of separation among cohabiting couples with children. Although children born to cohabiting parents are more likely to experience separation than children born to married parents, the difference is smaller in Sweden than in any other country for which we have data



(Andersson 2002; Heuveline et al. 2003).<sup>3</sup> As noted above, Sweden also has a very low rate of births to women living alone (5%), approaching that of countries like Spain and Italy, where the Second Demographic Transition is barely underway.

Sweden also exemplifies dimensions of the welfare state that, according to McLanahan (2004), should minimize socioeconomic differentials in children's access to a stable two-parent family. First, an extensive redistribution of income, combined with a compressed distribution of wages, places Sweden among the countries with the lowest levels of economic inequality. The ratio of income earned by the top 10% versus the bottom 10% is 5.45 in the U.S., or almost twice the ratio in Sweden (Smeeding 2005). Furthermore, differences between Sweden and the U.S. in income inequality are directly associated with differential tax and transfer policies (Smeeding 2005).

The Swedish welfare state also buttresses to a considerable degree the economic impact of parenthood, especially single parenthood. Taxes and transfers in Sweden largely alleviate the strong association between poverty and single parenthood found in most other affluent countries (Casper, McLanahan, and Garfinkel 1994; Christopher et al. 2002; Heuveline and Weinshenker 2008; Rainwater and Smeeding 2003). Working parents are supported by a generous parental leave policy, first introduced in the 1970s. Currently, all working parents are eligible for 16 months of parental leave after a child's birth, at 80% of pay (up to a cap) for the first 13 months. One month each is reserved for the mother and father, while the remaining months can be divided as the couple wishes (Gornick and Meyers 2003; Neyer and Andersson 2008; Oláh and Bernhardt 2008). All families receive direct payments for each minor child in the household, and highly subsidized public childcare is widely available (Gornick and Meyers 2003; Oláh and Bernhardt 2008; Oláh, Bernhardt, and Goldscheider 2002). Single parents do not receive special treatment, but benefit from obligatory child support payments by non-resident parents (guaranteed by the state in the case of non-payment), as well as means-tested childcare subsidies and housing allowances (Oláh 2001; Oláh et al. 2002). These are almost exactly the conditions identified by McLanahan (2004) as those that might produce "converging destinies" for children born to more or less advantaged parents.

Sweden's generous supports for childrearing were designed in large part to foster gender equality in access to the labor market (Oláh and Bernhardt 2008). Together with the low level of economic inequality, they produce one of the most gender-egalitarian divisions of household work (Batalova and Cohen 2002; Fuwa 2004). All of these conditions should foster the formation and maintenance of unions, regardless of whether the couples have higher or lower educational credentials. These same factors

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<sup>3</sup> For example, cohabiting parents in the U.S. are twice as likely to separate before their child reached age 15 as married parents, while cohabiting parents in France are three times more likely to separate than married parents. In contrast, the ratio falls to between 1.3 and 1.6 in Sweden (Andersson 2002; Heuveline et al. 2003; Manning, Smock, and Majumdar 2004).

should, however, also decrease the costs associated with the dissolution of a dysfunctional union.

Some evidence suggests that these favorable conditions for family stability and child well-being are eroding in the context of Europeanization and globalization. Overall, income inequality in Sweden increased from the 1980s through the 1990s (Brandolini and Smeeding 2007; Gustafsson and Palmer 2002), though by much less than in the United States (Smeeding 2005). Furthermore, educational levels have increased dramatically, with an increase in university enrollment of 75% from the mid-1980s through the 1990s (Statistics Sweden 2009).<sup>4</sup> In the course of these events, those who are better suited—economically, cognitively, emotionally, and socially—for stable family lives may have been selected out of the least-educated group. These developments would lead us to expect increasing educational differentials in family stability.

On the other hand, unemployment and sick-leave benefits have only recently been constrained, and then only to a small degree (Sjöberg 2008). And parental leave, which provides 80% of earnings (with a cap for the highest earners) for at least one year, has steadily been extended (Sundström and Duvander 2002). Thus, the economic resources available to the less-educated in Sweden continue to dwarf those available from the liberal welfare states, especially the U.S.

Only limited evidence is available on the implications of these changes for family stability. Hoem (1997) reported a decrease in divorce risks for mothers with post-gymnasium degrees, and an increase for women with pre-gymnasium degrees, beginning in the late 1970s and early 1980s. By 1990, a strong inverse relationship between education and divorce had been established. Because the beginnings of this shift preceded the dramatic increase in educational attainment and increasing economic inequality, it may be the result of factors other than the economic benefits of education for family life. We note that the only data we have on children's experience of family stability come from the period of economic retrenchment (and increasing education) of the early 1990s. What we aim to find out is whether the levels of stability in children's lives and the differentials by parental education were lower during the more economically robust periods of the 1970s and 1980s.

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<sup>4</sup> Gymnasium (secondary) education also increased slightly during this period (80% to 85%), and the two-year vocational gymnasium programs were extended to three years, to match the duration of the academic programs (Statistics Sweden 2009).

## **5. Data and research methods**

### **5.1 Data**

We use data from the 1991 and 2000 surveys of the Swedish Level of Living Survey (LNU) to investigate the association between parents' educational levels and children's experiences of family change. The LNU was first conducted in 1968, and was repeated in 1974, 1981, 1991, and 2000. The original sample was a 1/1000 sample of the Swedish population ages 15-75. Each subsequent wave aimed to create a new cross-section representative of the population at the time of the survey, while maintaining a longitudinal component. Thus, each survey retained respondents within the age range (adjusted to 18-75 in 1991), while adding random samples of younger cohorts and of immigrants who arrived in Sweden between surveys (Jonsson 2001; Swedish Institute for Social Research 2010).

Beginning in 1991, the LNU survey collected a number of life histories, including histories of births, partnerships, and educational attainment. Although the LNU sample size is not large, it has two advantages over the Swedish Fertility and Family Survey collected in 1992, from which Andersson (2002) produced the most recent estimates of children's family experiences. First, the LNU includes respondents beyond their childbearing years. Consequently, we can produce estimates of children's family experiences during the 1970s and 1980s. Second, we have data for eight years beyond the FFS, producing more current estimates for the 1990s—an important period of economic distress in Sweden. The deep 1991-95 recession lowered fertility, and could potentially have influenced other family behaviors (Andersson 2000).

Our unit of analysis is the child. To be included in the analysis, a respondent's child must have been under age 15 sometime during the period 1970-1999. Our estimates of children's family experiences are based on union and birth histories from responding parents who were interviewed in 2000, most of whom are part of the 1991-2000 panel. Although the 1991 survey collected respondent birth histories, they did not include information on whether children living outside of the household were children of the respondent's current partner, or of someone else. Nor did the questionnaire distinguish between biological and adopted children. Because the 2000 survey did not collect information about the month of birth for children older than 18 living outside of the household, we used the 1991 survey to identify the month for as many such children as we could. Union histories are constructed from interview and register data on marital status. For panel respondents, the complete union histories provided in 1991 were combined with the partial histories collected in 2000, when respondents were asked to report all their co-residential partnerships since 1990. By linking children's births to these union histories, we can determine whether or not a child was born into a union,

and, if so, whether a child experienced parental separation. We assume that, if the responding parent was in a union at the time of the child's birth, the union is between the child's biological parents.

The LNU questionnaire contained limited information on marriage histories, and no information on marriage dates. We must therefore base estimates of marital and non-marital births on annual data from the civil status register—the responding parent's civil status (never married, married, divorced, widowed) at the end of each year. This means that, if a marriage occurs in the same year as a child's birth, we do not know the ordering of events.<sup>5</sup> In addition, civil status data are available only for the period 1973-2000 for panel respondents, and for 1991-2000 for respondents added to the survey in 2000, and are available only for years individuals are resident in Sweden. If a respondent was already married in 1973 (or 1991 for new respondents), or if he or she married outside of Sweden (primarily foreign-born respondents who married prior to emigration), we do not know the first year of marriage. Finally, some delays may occur in updating the civil status register, so that marriages occurring at the end of the year may not be registered until the following year.

We address these problems in several ways. First, analyses of non-marital births are restricted to children born in 1974 and later for respondents in the 1991-2000 panel, and to children born in 1992 and later for respondents added to the survey in 2000. Of the latter group, about two-thirds were sufficiently young that their first marriage would not have occurred until 1992 or later. Second, we determine parent marital status at birth based on civil status in the child's birth year, and in the year prior. If a parent was married in both years, the birth is classified as a marital birth. If the marriage occurs in the same year as the child's birth, we randomly impute a month of marriage based on the decadal distribution of marriage months (Andersson 1998). From this, we allocate births to marital and cohabiting statuses.<sup>6</sup> In doing so, we assume that marriage timing is independent of birth timing when both events occur in the same year. As a result, we are likely to underestimate the proportion of marital births, particularly in earlier periods when legitimating pregnancies may have been more common. Finally, we restrict analyses to Swedish-born respondents. This restriction addresses the incomplete civil status data of many foreign-born respondents, as well as the limited data on education obtained outside of Sweden.

As noted above, education is a proxy not only for income, but also for the social and psychological resources available to better-educated parents. Although LNU links survey responses to annual income data, such data are not available for partnerships that were not intact at the time of the interview, and do not cover the earlier periods we

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<sup>5</sup> A register of the month and year of civil status changes (marriage, divorce, widowhood) exists in Sweden, but LNU investigators did not have permission to link these data to the survey responses.

<sup>6</sup> We are grateful to Gunnar Andersson for suggesting this approach and providing the necessary data.

study. Neither do we have continuous measures of other resources. Such data are rare in any setting. Parent education is measured by the highest degree attained prior to the first birth. We classified respondents into three levels: primary (did not complete gymnasium or secondary education), secondary (gymnasium or secondary degree, but no post-secondary education), and tertiary (any post-secondary education).

Unlike many other studies which focus only on reports made by mothers, our analyses include the children of male respondents. Klijzing and Cairns (2000) conclude from their analysis of pooled data from several Fertility and Family Surveys that men are poorer reporters of union and birth histories than women. But they show further that the absolute levels of error are extremely low in Sweden, so that the potential sex difference is very small. We therefore take advantage of the opportunity to double the sample size by including male as well as female respondents. It should be emphasized that the male and female respondents to the LNU are independently selected; they do not represent couples. Differences between the results based on men's and women's histories are usually small, and are documented in the text below. (Tables are available on request.)

Finally, as with any panel study, sample attrition is an important consideration. Overall, 17% of individuals who were age-eligible (75 and younger) for the 2000 interview were lost to follow-up between 1991 and 2000. Sample attrition rates are similar for men and women. The proportion of men lost to follow-up ranged from 14% of men with a post-secondary education, to 19% of men without a secondary degree. Differential attrition by education was larger among women, ranging from 11% to 23% for the same educational levels. Because family disruption is likely to reduce continued participation in the survey, we expect that our estimates of educational differentials will be biased somewhat downward by these differentials in attrition, i.e., that we will observe fewer disruptions among the less-educated than among the higher-educated. Whenever possible, we compare LNU-based estimates with other published data sources to gauge the robustness of our conclusions.

From the 3,500 Swedish-born respondents to the 2000 survey who reported at least one birth (1,662 men and 1,850 women), we generated 6,203 children,<sup>7</sup> of whom 3,666 were born during 1974-1999, and were therefore included in our analysis of parental marital status. When a respondent reports multiple children meeting these requirements, all are included in our analysis. Although these siblings share the same value of parent education, other characteristics will vary between siblings, including birth cohort, parent's marital status and prior union history, and parent's age at birth. We use STATA's robust cluster option to adjust for the clustering of siblings in families when estimating variance and statistical significance.

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<sup>7</sup> Approximately 1,000 children were excluded from our analysis because the responding parent was foreign-born.

## **5.2 Methods**

Our study follows the approach used by Andersson (2002) and Bumpass and Lu (2000) to analyze the living arrangements of children. We examine children's family structures at birth and subsequent family instability during childhood. First, we examine trends in childbearing to married, cohabiting, and lone parents during the periods 1974-1979, 1980-1989, and 1990-1999 by parent education. Educational differentials in non-union births are one component of children's experiences of lone-parenthood. Educational differentials in cohabiting versus marital births could translate into differential risks of parental separation.

The second part of our analysis examines the disruption of children's birth families during the 1970s, 1980s, and 1990s. Following Andersson (2002), we first present period (synthetic cohort) life table estimates of children's family disruption by ages one, three, nine, and 15 separately by parental education. For the 1990s, we also present life table estimates by parent's education and marital status at birth. As noted above, we cannot produce life table estimates of marital status differences for earlier periods because we observe marriage dates only for births in 1974 or later. Finally, we estimate proportional hazard models of the risk of parental separation in order to test McLanahan's (2004) hypothesis of children's "diverging destinies." Further analytic details are provided below.

## **6. Results**

### **6.1 Distribution of births to married, cohabiting, and lone parents**

Out-of-union births have remained uncommon in Sweden, making up just 3% of all births in each decade (Table 1). To put this in context, about 20% of births in the United States are to lone parents (Kennedy and Bumpass 2008; Mincieli et al. 2007). Our estimates are several points lower than Andersson's (2002) estimate for the 1990s, due in part to our inclusion of male respondents, who are slightly less likely to report children born outside of any union. It should be noted that, because the male and female respondents are not partnered with one another, observed differences do not represent disagreement between partners about the timing of a union or a child's birth. They may reflect a failure of some men to mention children with whom they have never lived, but the numbers are small, and could arise from men not knowing about a pregnancy and birth to a previous sexual partner.

**Table 1: Trends in the proportion of children born to married, cohabiting, and lone parents by parent education**

Parent education	1970s			1980s			1990s		
	Married	Cohabiting	Lone	Married	Cohabiting	Lone	Married	Cohabiting	Lone
Primary	0.50	0.45	0.05	0.40	0.56	0.04	0.35	0.59	0.06
Secondary	0.60	0.39	0.02	0.44	0.53	0.03	0.38	0.59	0.03
Tertiary	0.68	0.30	0.02	0.63	0.35	0.02	0.59	0.38	0.03
Total	0.58	0.39	0.03	0.47	0.50	0.03	0.43	0.54	0.03

In contrast to non-union births, births to cohabiting parents substantially increased over the three decades, from 39% in the 1970s to 54% in the 1990s. As was mentioned above, we do not have data on the month of marriage, and assign children born in the year of their parents' marriage to marital and non-marital births based on a randomly assigned marriage month. If marriages in the same year of a child's birth are clustered before the birth, our estimates of non-marital childbearing will be higher than if the respondent had reported the marriage month. Our exclusion of foreign-born respondents from the sample should also result in higher estimates than in official statistics for all births.

As expected, our estimates of non-marital births are consistently higher than those reported in official statistics: 42% versus 36% for the late 1970s, 53% versus a range of 40% to 47% for the 1980s, and 57% versus a range of 47% to 55% for the 1990s (Council of Europe 2003). Overall, however, our estimates show the same pattern as the official statistics, with the most dramatic increase in non-marital childbearing occurring between the 1970s and the 1980s.

Table 1 also shows educational differentials in union status at birth. Lone-parenthood is rare at all levels of education across all periods observed. In each decade, however, children of less-educated parents are substantially more likely to be born to cohabiting than married parents compared to children whose parents have more education. Although cohabiting births increased for all educational levels, the largest increases occurred among parents with a secondary degree. Because cohabiting unions are less stable than marriages, these differentials could produce an increase in educational differentials in parental separation over the three decades we observe.

## 6.2 Children's experience of family disruption

Our analysis of children's family stability begins with life table estimates of family disruption among children born to married or cohabiting parents. We calculate monthly

probabilities of parental separation by child age. We then construct a life table by calculating what would happen to a hypothetical cohort of children if they were exposed to these period transition probabilities throughout their childhood. Children are considered at risk of parental union disruption during a specific period as long as they are under age 15 and live with both parents. They are censored from the analysis at the point when they turn 15, or when the calendar period ends. Children's family histories are also censored when parental unions end through parental death or for unspecified reasons.<sup>8</sup> Because the LNU is a sample of adults ages 18-75, our estimates are less sensitive to the age-censoring problems found in surveys of reproductive-age adults (Bumpass and Lu 2000). Respondents to the 2000 survey were age 45 and younger in 1970. As a result, our estimates are based on women of reproductive ages even from the earliest period in our analysis. For men, who can become parents at older ages, our estimates may be based on a slightly younger sample than the population of fathers during that period. Nonetheless, in the LNU, age-censoring is likely a less important potential problem than are sample attrition and recall errors for studying family life in earlier periods (Hayford and Morgan 2008).

Table 2 shows the predicted cumulative experience of parental union disruption of children born to married or cohabiting parents by the exact ages one, three, nine, and 15. Because the predictions are based on the assumption that a child experiences the observed age-specific period-rates of parental union disruption throughout his or her childhood, decades here represent the period during which children were exposed to the risk of parental separation, and not any child's birth cohort.

**Table 2: Life table estimates of the cumulative proportion of children experiencing parental separation, 1970s-1990s**

Child age	1970s	1980s	1990s
1	0.01	0.02	0.02
3	0.05	0.05	0.07
9	0.13	0.15	0.19
15	0.21	0.20	0.27

*Note:* Analysis is restricted to children born to married or cohabiting parents.

Between the 1970s and the 1980s, little change occurs in the chances that a child born to cohabiting or married parents will experience the dissolution of his or her parents' union. During the 1990s, however, we find a significant increase in the

<sup>8</sup>Our approach differs slightly from that of Andersson (2002), who treats parental death as an event that precipitates single parenthood. Parental death is rare during the period under examination, and typically changes estimates of lone parenthood by less than one percentage point.



likelihood of parental separation; 27% of children were expected to experience parental separation in the 1990s, compared to 21% in the 1970s. Our estimates for the 1980s are lower than would be expected based on those reported by Andersson (2002) for the period 1987-93. The difference arises in part from the inclusion of male reports, and in part from rising rates of union disruption during the 1980s. The fact that our sample includes only Swedish-born parents would, on the other hand, push the estimate upward. If we focus on female respondents only, the proportion of children experiencing family disruption increased in each decade. Overall, if we include the 3% of children born out-of-union with those who experienced parental union disruption, we estimate that, during the 1990s, 30% of children spent some time in a lone-parent family by age 15.<sup>9</sup>

We present educational differentials in children's chances of experiencing parental separation in Table 3. We find that educational differentials first emerged in the 1980s and increased in the 1990s. Almost no change in parental separation occurs for children whose parents had tertiary schooling, while substantial increases are observed for children with less-educated parents. These differences are consistent with changes by education in the likelihood of a cohabiting birth, i.e., larger increases for children whose parents were less-educated. Combining non-union births and parental separation, we estimate that, in the 1990s, 23% of children born to a parent with post-secondary education, 31% of the children of secondary graduates, and 36% of the children of less-educated parents will live in a lone-parent family at some point by age 15. These estimates are virtually identical to those generated from the 1992 Swedish Fertility and Family Survey (McLanahan 2004), which increases our confidence in educational differentials for the earlier periods.

The results are also consistent with Hoem's (1997) analysis of parental divorce, in which educational differentials emerged around 1980 and became firmly established by 1990. It is important to note, however, that the magnitude of educational differences is quite small in comparison to estimates for the U.S. (McLanahan 2004). Nevertheless, in both countries, educational differences appear to be increasing with respect to children's risk of experiencing parental separation.

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<sup>9</sup> This estimate is calculated by adding together the 3.4% of children who were born to a lone parent and the 27.1% of the remaining children, those born into a union, who experienced parental separation by exact age 15:  $.034 + (.966 * .271) = .296$ . Jonsson (2001) finds that 30% of children born in the 1970s did not live with both biological parents through age 16; this estimate is based on direct reports from the children (as young adults), includes children born to a lone parent, and children later experiencing parental separation. This compares to Andersson's synthetic life-table estimate of 34% of children ever out of union by age 15 for the period 1987-93.

**Table 3: Life table estimates of the cumulative proportion of children experiencing parental separation, by parent education, 1970s-1990s**

Child age	1970s			1980s			1990s		
	Primary	Secondary	Tertiary	Primary	Secondary	Tertiary	Primary	Secondary	Tertiary
1	0.02	0.01	0.01	0.02	0.01	0.01	0.03	0.02	0.01
3	0.05	0.04	0.03	0.07	0.05	0.03	0.09	0.08	0.03
9	0.14	0.12	0.07	0.19	0.12	0.13	0.22	0.21	0.12
15	0.21	0.20	0.18	0.24	0.18	0.16	0.32	0.30	0.21

Note: Analysis is restricted to children born to married or cohabiting parents.

As discussed earlier, marriage data in the LNU are available only from 1973 (1991 for respondents who did not participate in the 1991 interview). Thus, we can observe parents' marital status at birth only for children who were *born* during the years 1974-1999. Consequently, period life table estimates of marital status differences in the probability of parental separation through age 15 are possible only in the 1990s. Although we cannot extend our analysis backwards, we are able to update the more recently available estimates from the late 1980s and early 1990s (Andersson 2002; Heuveline et al. 2003). In addition, we examine the relationship between parent's educational levels, marital status, and children's experiences of parental union disruption. These estimates are presented in Table 4.

**Table 4: Life table estimates of the cumulative proportion of children experiencing parental separation by parent's marital status at birth and education, 1990s**

Child age	Overall		Primary		Secondary		Tertiary	
	Unmarried	Married	Unmarried	Married	Unmarried	Married	Unmarried	Married
1	0.03	0.01	0.03	0.01	0.03	0.01	0.01	0.01
3	0.10	0.03	0.11	0.04	0.10	0.04	0.06	0.02
9	0.25	0.13	0.25	0.17	0.26	0.12	0.14	0.12
15	0.34	0.19	0.36	0.25	0.35	0.18	0.23	0.18

Note: Analysis is restricted to children ages 0-15 in the 1990s who were born to married or cohabiting parents.

We find that children born to cohabiting parents are 75% more likely to experience family dissolution than the children of married parents (34% versus 19%). This estimate is similar in magnitude to those estimated with FFS data, and contrasts with trends observed in the United States, where the dissolution rates of cohabiting parents are more than double those of married parents (Andersson 2002; Heuveline et al. 2003). Because we do not know with certainty whether births occurring in the same year as a marriage are marital or cohabiting births, these results suggest that there was little change up to 1999 in the relative stability of married and cohabiting families, leaving Sweden as the country with the smallest differences by marital status.

Table 4 also shows differences by parental marital status and education in the likelihood that a child will experience parental separation. Among children born to parents with post-secondary education, differences by parent marital status are relatively small. For less-educated parents, large differences are observed; a child born to a cohabiting parent without a secondary degree faces nearly a 50% increased chance of experiencing family dissolution by age 15 than if his or her parents are married, while the risk is nearly double for the children of secondary graduates. In other words, differences in education in parental separation are largely due to differences among cohabiting families, as well as educational differences in the proportion of children born to married or cohabiting parents. These results also suggest that selectivity of cohabiting parenthood is largest for the middle-education group, who demonstrate the marital separation risks of parents with post-secondary education, and the cohabitation separation risks of parents who did not complete secondary-level schooling.

To further examine the hypothesis of children's diverging destinies, we estimated a series of proportional hazard models predicting parental separation. In order to make full use of the marriage data, our analysis is restricted to children born to native-Swedish married or cohabiting parents between 1974 and 1999, and examines increased parental separation rates across birth cohorts (rather than periods). Children are censored at age 15, at the time of their parent's most recent interview, or if their parents' union ended as a result of parental death. We include controls for the parent's background that may underlie educational attainment, the union status of births, and/or the risk of parental separation: the parent's age at the child's birth, any prior union, the duration of the union in which the child was born, and the parent's experience of financial hardship and family discord during childhood. We also control for the child's sex and birth order, and the responding parent's sex.

The results of this analysis are shown in Table 5. The first model estimates the main effects of education and birth cohort.<sup>10</sup> We find a clear gradient in parental

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<sup>10</sup> We tested alternative specifications of birth cohort, and concluded that the simplest approach, a linear relationship, fit the data as well as non-linear specifications. The birth cohort variable is centered around 1974.

separation risks in this baseline model: as parental education increases, the likelihood that a child will experience the dissolution of their parents' union decreases. Parents with primary- and secondary-level education are 73% and 35% more likely to separate than parents with tertiary-level education. In this baseline model, we find that the hazard of parental separation increases by about 4% between each one-year birth cohort.

**Table 5: Hazard models predicting parental separation by age 15**

Variables	Model 1: Main Effects			Model 2: Interactions			Model 3: Cohabitation			Model 4: All controls		
	Hazard ratio	SE	p	Hazard ratio	SE	p	Hazard ratio	SE	p	Hazard ratio	SE	p
Birth cohort <sup>a</sup>	1.038	0.009	***	1.008	0.019		1.004	0.019		1.004	0.018	
Parent education												
Primary	1.725	0.161	***	1.298	0.280		1.172	0.280		0.986	0.279	
Secondary	1.351	0.151	*	0.778	0.285		0.723	0.286		0.643	0.285	
Tertiary [reference]												
Education interactions												
Primary*birth cohort				1.024	0.022		1.020	0.023		1.019	0.022	
Secondary*birth cohort				1.047	0.021	*	1.042	0.022	+	1.040	0.021	+
Birth in cohabiting union							2.068	0.098	***	1.737	0.119	***
Parity of birth										1.016	0.071	
Parent's union history												
Had prior union										1.931	0.145	***
Union duration										1.003	0.002	
Parent's age at birth										0.938	0.017	***
Parent's childhood												
Intact family										0.861	0.145	
Family conflict										1.491	0.152	***
Financial hardship										1.110	0.192	
Respondent is father										1.118	0.122	
Male child										0.930	0.082	
Number of observations		3,460			3,460			3,460			3,460	
Log pseudolikelihood		-4928.14			-4924.33			-4886.33			-4845.20	

Notes: \*\*\* p<.001, \*\* p<.01, \* p<.05. Analyses are restricted to children born in the years 1974-1999, and exclude children born to a lone parent. Children are the unit of analysis, and variance estimates adjust for the clustering of siblings within families. Parent characteristics refer to the responding parent, and we include a variable to distinguish mothers from fathers.

<sup>a</sup> Calculated as the number of years between a child's birth year and 1974.

Model 2 allows the relationship between education and parental separation to vary across birth cohorts. Model 2 provides a significantly better fit than Model 1, indicating that educational differentials are not the same across birth cohorts. The main effects of the education variables are the estimated educational differentials for the birth cohort of 1974. There is no longer a clear education gradient; parents with the lowest education levels have the highest separation hazard, while parents with secondary-level education

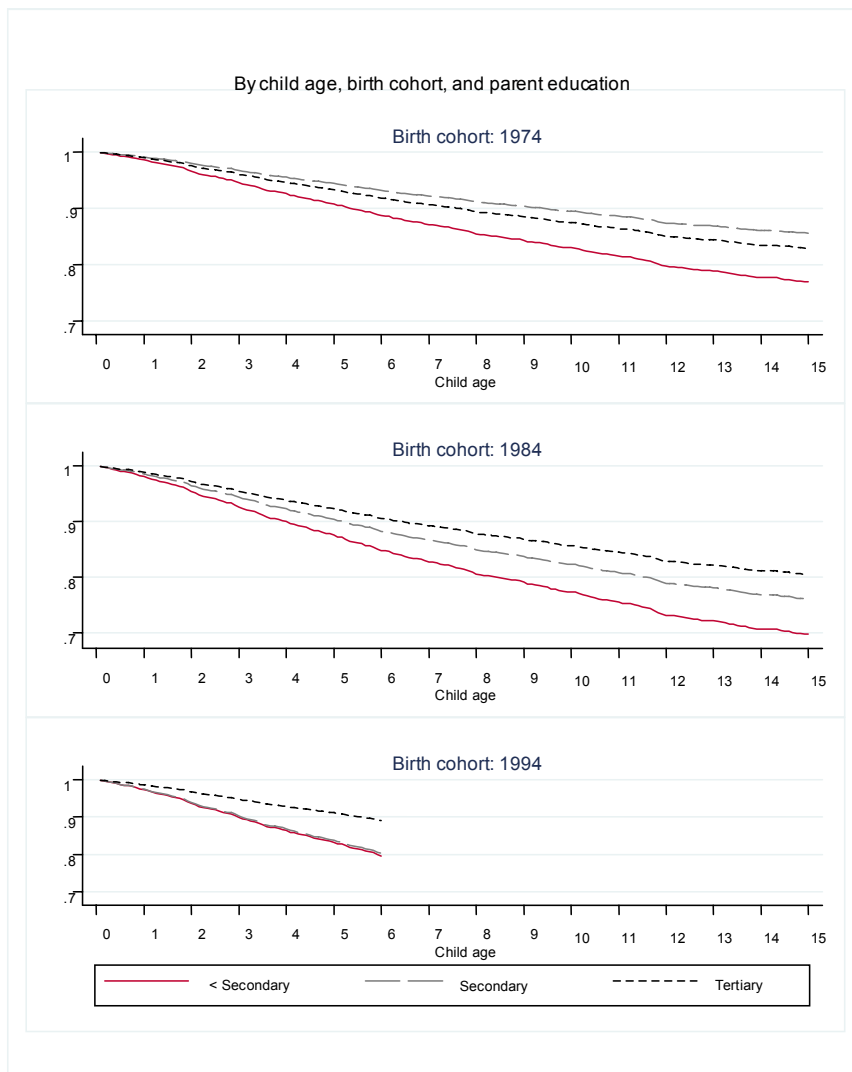
have the lowest separation hazard. These two coefficients are significantly different from each other, although neither group differs significantly from tertiary-educated parents.

The main effect of birth cohort in Model 2 can be interpreted as the increase in separation risks for the children of tertiary-educated parents. The increase in separation rates for the most educated families is small, or less than 1% per year, and not significantly different from zero. The interactions between education and birth cohort estimate the magnitude of any additional increases in union dissolution rates for less-educated parents. Both coefficients are positive (indicating larger increases in separation risks for less-educated parents), but only the difference between the secondary and tertiary levels is statistically significant.

Figure 1 illustrates this interaction, presenting age-specific predicted probabilities that a child will remain in an intact family by child birth cohort (1974, 1984, and 1994) and parent education. The top panel shows the results for children born in 1974: in this cohort, children of secondary-educated parents are the least likely to experience parental separation. Over time, however, these children experienced the greatest increases in parental separation rates. Consequently, family stability is clearly increasing with the parents' education for the 1984 cohort (middle panel). By the 1994 birth cohort, the probability of remaining in an intact family is highest when parents have tertiary education, while there are no differences predicted between parents with only primary or secondary schooling (bottom panel).

The third model adds the parents' marital status at birth, allowing us to test whether growing educational differences can be explained by the increase in cohabiting births. Children born to cohabiting parents are twice as likely to experience parental separation as children born to married parents. The interaction between secondary education and birth cohort is smaller, but remains significantly different from zero at the .06 level. Finally, we include the full set of control variables in Model 4. The interaction between secondary education and birth cohort is again slightly reduced.

**Figure 1: Predicted probability that a child will remain in an intact two-parent family**



Note: Survival probabilities are based on Model 2 in Table 5. Hazard models are restricted to children born in 1974-1999 to married or cohabiting parents.

The life table results indicate that educational differences in parental separation first appeared in the 1980s, as a result of increased levels of instability among more disadvantaged families that were matched in the 1990s by the families of secondary graduates. The results from the hazard models provide support for these findings, taking into account differences in the samples upon which the two sets of analyses are based. The life table estimates include all children between ages 0-14 during the 1970s, 1980s, and 1990s, while the hazard models include only children born after 1973, who make up less than 60% of life table sample. The life table analysis showed little educational variation in parental separation rates during the 1970s. Most of the children contributing person-years to the life table estimates for the 1970s are, however, excluded from the hazard models. The earliest birth cohorts included in the hazard models, children born in the mid-to-late-1970s, spent most of their childhood in the 1980s. For these early birth cohorts, the least-educated families had higher dissolution rates than other families. These findings are consistent with period educational differentials observed during the 1980s. Finally, among later birth cohorts and in the 1990s, increases in union dissolution were concentrated among parents with secondary degrees, eventually matching the levels of less-educated families. Introducing controls for family background diminishes the significance of these findings, but cannot completely explain these differences. Although our analysis provides evidence of growing educational differentials in family instability in Sweden, the magnitude of these differences is small, and does not increase monotonically across education levels.

## **7. Discussion**

McLanahan (2004) has argued that recent trends of increased non-marital childbearing and parental divorce have disproportionately affected children from lower socioeconomic backgrounds. Studies in the United States have documented large and growing socioeconomic differences in non-marital childbearing and children's experience of parental separation or divorce (Bumpass and Lu 2000). Sweden, a country that is almost the polar opposite of the U.S. in terms of welfare state policies, provides an important context in which to examine the “diverging destinies” of children.

Consistent with previous research, we document the dramatic increase between the mid-1970s and the 1990s in the proportion of children born to unmarried Swedish parents. Unlike the U.S., non-union childbearing has remained rare in Sweden. This is true for parents of all education levels, and consequently any disadvantage associated with out-of-union births is not differentially experienced in families of lower socioeconomic backgrounds. Of course, the fact that panel attrition is higher among

those with lower levels of education means that our estimates for the less-educated may be downwardly biased.

We do, however, find large and persistent educational differences in the likelihood that a child will be born to married versus cohabiting parents. In each decade, the children of better-educated parents were more likely to be born in marriage. The children of parents with post-secondary education were the only group who were born predominantly into marriage; yet even among these families, non-marital childbearing is common (41%). The largest decline in marital childbearing is observed among parents with a secondary degree, whose fertility patterns closely resemble those of less-educated parents by the 1990s.

The interpretation of the importance of educational differences, or even of the magnitude of non-marital childbearing among highly educated parents in Sweden, depends on the comparison group. If we begin with a picture of families in the United States, non-marital childbearing rates seem very high for highly educated Swedes. But if we begin with the stereotype of Swedish families, in which marriage and cohabitation are nearly indistinguishable, and everyone is equal, the fact that we find large differences by education in non-marital childbearing, and large differences in parental separation by marital status or education, seems remarkable. Our results suggest that, even in Sweden, the disadvantages for children of parents' lower educational levels may be compounded by increasing levels of family instability.

Of course, the biggest difference between the two countries is the overall level of non-union childbearing and parental separation. In the United States, nearly 20% of children are born to lone mothers, compared to 5% or less in Sweden (Andersson 2002). The differences in parental separation are smaller, but still notable: Andersson estimates that, in the early 1990s, 30% of Swedish children and 40% of American children who were born to cohabiting or married parents experienced parental union disruption by age 15. Furthermore, we find that educational differentials are much smaller in Sweden than in the U.S. In the 1970s, virtually no differences could be observed in parental separation risks. It was not until the 1980s—and especially in the context of the economic crisis of the 1990s, increasing globalization, and the expansion of secondary and tertiary education—that parents with lower levels of education began to experience greater family instability. Although children with poorly educated parents were the first to experience large increases in parental instability, children of parents with secondary degrees had caught up by the 1990s. Our multivariate hazard models confirm these findings: among children born in the early 1970s, parental separation rates were substantially higher only for the least-educated parents; by the early 1990s birth cohorts, the dissolution rates of parents with secondary degrees had increased to levels resembling those of parents with lower educational attainment, while parents with tertiary education were substantially less likely to separate.



The magnitude of the educational difference in single-parenthood is notable, with a 13-percentage-point difference in the chances that a child will ever reside in a single-parent family between the highest- and lowest-educated parents. This is, however, less than half the difference found in the United States (McLanahan 2004). It should also be noted that, in the 1990s, the children of the least-educated Swedish parents were only slightly more likely to be born to a lone parent, or to later experience parental separation, than children of the best-educated parents in the United States.

The educational differentials that have emerged in Sweden are concentrated among cohabiting parents. Although the better-educated are more likely to have children in marriage than the less-educated, among those who do marry before the birth of a child, education is more weakly associated with the risk of parental separation. This finding is consistent with the greater selectivity of couples into marriage in Sweden than in the United States. This selectivity appears to be strongest for parents with an intermediate educational level. On the other side of the coin, if Swedish parents are highly educated, it makes little difference whether they have children in cohabitation or marriage in terms of their likelihood of separation.

An important underlying feature of change in educational differentials in Sweden is the fact that the periods we observe are those in which educational enrollment and attainment have increased quite dramatically. In our sample, 40% of children born in the 1970s were born to mothers without a secondary degree. By the 1990s, this proportion had fallen to just 15% of mothers. In contrast, the proportion of mothers with a secondary education increased from 40% to 55% between these periods, while the proportion with tertiary education increased from 21% to 30%. What we see as decreasing stability among the least-educated could instead be interpreted as a shift of the most stable and capable parents into a higher-educated category. By the 1990s, the distribution of educational attainment in Sweden is much more similar to that of the United States, and therefore makes the comparison with the U.S. even more reliable than it would have been in earlier decades.

We conclude that McLanahan's hypothesis of diverging destinies for children is supported even in the most generous welfare regime in the world. But, we reiterate that, when compared to differences in the United States, the differences in Sweden are relatively small. Further, unlike the U.S. pattern of a strong education gradient, and, in particular, of large differences between the most- and least-advantaged families, by the 1990s in Sweden, we find large differences only between the most advantaged families and all other families. Thus, our findings suggest that social policies have the potential to minimize inequality in children's access to a stable family life.

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