Intergenerational Transmission of Divorce in Sweden, 1905–2015

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Abstract

Many studies demonstrate an intergenerational transmission of divorce (ITD). Most research is, however, limited to modern periods (i.e., more recent decades) and little is known about whether this relationship is deeply rooted or whether it has changed over time. Explanations, including sociodemographic and interpersonal factors, have been offered as links between parental divorce and offspring's marriage stability. We use individual-level longitudinal data to estimate the ITD among first marriages in Sweden in 1905–2015. We investigate the association between parental divorce and own divorce during the transition from a low to a high divorce regime. Controlling for demographic and socioeconomic characteristics, we find stability in ITD over time, and see that divorce risks are highest when either the wife or both spouses have experienced parental divorce. The transmission has been stronger and more stable for women than for men over time. Results from a period spanning more than a century indicate that ITD is part of the transition from low to high divorce rates and highlight the role of female independence in this process.

Keywords: divorce, intergenerational transmission, Sweden, longitudinal data, survival analysis

It is well established that the experience of parental divorce when growing up is related to various adverse outcomes later in life, including own divorce (Amato 1996, 2000; Bumpass et al. 1991; Gähler et al. 2009; Kiernan & Cherlin 1999; McLanahan & Bumpass 1988; Wolfinger 2005). Intergenerational transmission of divorce (ITD) is found across country contexts (Bumpass et al. 1991; Diekmann & Schmidheiny 2004, 2013; Dronkers & Härkönen 2008; Lyngstad & Engelhardt 2009; McLanahan & Bumpass 1988) and seems to persist over time (Li & Wu 2008; Wolfinger 2011). Although ITD has attracted the attention of social scientists since the 1930s, few studies have applied a longer historical perspective to this. Because research is limited to shorter periods, primarily covering recent decades, it is an open question as to whether the link between parental and own divorce is deeply rooted or whether it has changed over time. Over time, divorce has become more common, and the stigma associated with divorce has weakened. Modernization of society has meant that the welfare state compensates for the lack of economic resources and social support – in some countries more than others. Thus, there are fewer negative consequences for children of divorce now than in the past, but it is unclear how ITD is impacted across time. This justifies further study using a longer time perspective to understand the association between parental and own divorce during the transition from a low to a high divorce regime.

We investigate the relationship between parental divorce and the individual's own divorce risk in Sweden over the course of almost a century when the country transitioned from a low to a high divorce regime. We use individual-level longitudinal data for first marriages contracted between 1905 and 2004 and observe them until 2015. While previous studies have shown that this association exists in present-day Sweden (Diekmann & Schmidheiny 2013; Salvatore et al. 2018), we are able to build on the research literature more generally by studying three important aspects of ITD.

One is the long-term dimension, which we address by asking whether the transmission has changed over time, and if so whether it has increased or decreased. Our study is unique in that we can investigate the ITD across the divorce transition. Another important aspect of our investigation is the gender dimension and whether the relationship between parental divorce and offspring divorce is similar or different according to gender. Depending on the mechanism behind ITD, it could be either stronger or weaker for women compared with that for men. Some studies have found that the relationship is stronger where the woman in a marriage has experienced parental divorce (Amato 1996; Amato & Cheadle 2005), while

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other studies have found no gender difference (Wolfinger 2005). This ambiguous finding may be context-specific or even data-driven. The importance of gender may be affected by gender roles changing over time (in particular, female independence) and by more extensive welfare state policies supporting single mothers and children, but no previous study has looked further into this by focusing on the development over time. The third aspect of our investigation is the age at which the individual experienced parental divorce. Although there is good reason to expect an age-contingent transmission effect, evidence for this is mixed (Furstenberg & Kiernan 2001; Kiernan & Cherlin 1999). We cover a long period, estimate the separate effects of parental divorce by gender, and consider age in the correlation between parental and offspring divorce net of controls that measure the characteristics of both parents and children.

Explanations for the intergenerational transmission of divorce
The association between parental divorce and own divorce is well established, and researchers have offered several explanations for the ITD, suggesting different mechanisms at play (see Amato 1996; Wolfinger 2005 for reviews). The association is partly due to selection, in that parents and children share common traits that make them more likely to divorce. These traits can be both genetic and social, though it is hard to disentangle the two (D'Onofrio et al. 2007). Among the potential causal mechanisms behind ITD are factors related to father absence and the economic disadvantages associated with growing up with a single mother or in a stepfamily; more liberal attitudes to union dissolution due to socialization; and lower levels of relationship commitment and trust in others.

Regarding father absence and socioeconomic disadvantage, parental divorce has often been associated with growing up with fewer economic resources, especially in single-mother households, which in turn leads to poorer socioeconomic outcomes as an adult (Gähler & Palmtag 2015; Mueller & Pope 1977). Children of divorced parents may also receive less attention and fewer time investments from their parents (and stepparents) when growing up, which impacts their educational performance and social skills negatively. To the extent that parental divorce can be seen as a shock, it may impact the child's human capital negatively as well (Björklund et al. 2010), induce stress (Amato 2000), and set off life course transitions such as leaving home, early partnering and childbearing – all associated with divorce. Previous research has established that the transmission of divorce is partly explained by socioeconomic outcomes because parental divorce is related to lower educational attainment

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which increases the risk of divorce (Amato 1996; Gähler et al. 2009; McLanahan & Bumpass 1989), though the importance of father absence *per se* has been questioned (Wolfinger 2005).[1]

An alternative explanation, which is backed up by most empirical research, suggests parental divorce may taint attitudes towards family formation and divorce. Those who have experienced parental divorce as a child may be less optimistic regarding relationship success or more accepting of divorce compared to those from intact parental marriages. They may have a less idealized view of marriage, see divorce as a viable solution to relationship issues, and feel less pressure to stay in an unsatisfying marriage (Cunningham & Thornton 2006; Kapinus 2004). That said, experiencing parental divorce may negatively affect the trust in others, with long-term consequences for relationship quality (Hayashi & Strickland 1998). Research shows that parental divorce is associated with interpersonal behavior that increases the risk of divorce, such as anger or an inability to communicate well in relationships (Amato 1996; Whitton et al. 2008).

In the second half of the twentieth century, divorce rates in Sweden (and other Western countries) increased to high levels, and, as divorce has become more common and accepted, there is reason to believe that its impact on individuals' lives and the way individuals think about divorce has also changed. Wolfinger (1999, 2005) suggests that this normalization and de-stigmatization should lead to a reduction in ITD, where general acceptance of divorce implies less stigma. This reduces the negative impact of parental divorce, thus weakening the association between parental and offspring divorce. The idea is that, if divorce becomes accepted behavior and more people can leave a malfunctioning and unhappy marriage, the consequences of divorce for both parents and their children become less severe. The experience of parental divorce would then be less traumatic and have fewer psychological effects.

Moreover, divorce has increased alongside a general awareness of the needs and well-being of children of divorce. In Sweden and other countries, efforts have been made during recent decades to improve the living conditions of alternative family types, especially for single-mother families. While one explanation of ITD is that children often end up living with a single mother who has fewer economic resources, maternal employment has increased during

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[1] Children who have lost their father due to an unexpected death do not experience higher risks of divorce, which would otherwise be the case if father absence *per se* was important.

the 20th century alongside social policy programs with the aim of bringing level the life chances of children from different socioeconomic backgrounds. Such policy initiatives and the expansion of the Swedish welfare state during the second half of the 20th century should have diminished the economic impacts of parental divorce. Hence, we would expect that ITD has decreased over time, as those who experienced parental divorce as a child grow up with (much) the same chances as those from intact families.

Previous research on trends in ITD provides mixed results. Wolfinger (1999, 2011) found decreasing divorce risks over time for children of divorced parents, while other studies found stability in ITD across marriage cohorts (Li & Wu 2008; Teachman 2002). This research is mainly based on data for the US, and those studies using data on European countries (Diekmann & Schmidheiny 2013; Dronkers & Härkönen 2008) performed no formal tests on changes in trends. Based on the above and the fact that Sweden is often seen as a forerunner in demographic change, we expected ITD to abate over time, due to the decreasing stigma of divorce and societal efforts to alleviate the socioeconomic consequences of parental divorce for the individual.

Other than a decreasing ITD over time, there are hypotheses regarding how age and gender impact the transmission. There are reasons to expect that ITD may depend on the age of the child at the time of the parents' divorce. The causal link may be dependent on age in that lack of resources may impact a younger child more than an older child because they spend more time with a single mother or in a stepfamily context (Furstenberg & Kiernan 2001). As for emotional development, trust in others, and relationship commitment, it could be that the conflict between parents before and during their divorce results in a negative environment for the children's development, which would affect younger children more as they are more dependent on their parents. Kiernan & Cherlin (1999) found a negative age gradient for men but not for women; but they compared those aged 0–19 and 20–33 at the time of parents' divorce, and these do not indicate differences during childhood. Wolfinger (2005) argues that any age-dependent differences are merely a byproduct of experiencing multiple family transitions (i.e., parental divorce), and a younger child is more likely to experience more than one such transition. However, Lyngstad and Engelhardt (2009) found that, for Norwegian marriages 1980–2004, younger children were themselves more likely to divorce in adulthood and that controlling for multiple family transitions did not affect this association. Thus, we

expect that the experience of parental divorce at a younger age increases the association because of exposure to the negative consequences of divorce.

In recent decades, parental behavior after divorce has changed (Gähler & Palmtag 2015). Joint custody has become more common and has been normative since 1998, and divorced parents, especially fathers, spend more time with their children after divorce. This, combined with efforts to improve the well-being of children of divorced parents, means that we would expect any differences based on age at parental divorce to decrease over time as parents and society become more aware of the negative consequences of divorce for children and try to mediate them in different ways.

Another inconsistent finding is whether gender matters for the transmission of divorce. Previous research shows that divorce risks are highest when both spouses are children of divorce, which could be due to a tendency for children of divorce to partner (Wolfinger 2003). However, there is mixed evidence for differences in ITD between men and women (Amato 1996; Amato & Cheadle 2005; Lyngstad & Engelhardt 2009; Wolfinger 2005). One possible explanation for why women would be more sensitive is that parental divorce affects a child's commitment to marriage, and in the case of women this is combined with the fact that it is usually they who take the initiative in the divorce process (Lyngstad & Engelhardt 2009), or they who contribute more to the emotional upkeep, meaning the association would be stronger for them than for men (Wolfinger 2005). It might also be that women whose mothers left an unsatisfactory marriage are more inclined to divorce because they have seen that divorce is possible despite downsides and stigma associated with it (Kapinus 2004). The assumption is that daughters take after their mothers and see their mothers as role models more than sons do.

A stronger association for women may also be part of a historical development whereby increasing female labor force participation and economic independence have made it possible for them to leave an unsatisfactory marriage and live independently thereafter (Ross & Sawhill 1975; Ruggles 1997). A working mother – who is better equipped to leave an unsatisfactory marriage – might inspire a daughter to both work and divorce. In Sweden, as in many other countries, labor force participation among married women (including mothers) has become normative, which means that later cohorts might not have been inspired in the same way as earlier cohorts by an economically independent working mother. Thus, we expect the transmission to be strongest when both husband and wife are children of divorce,

and we also expect the transmission to be stronger for women compared to men. If there is a stronger transmission for women, we would then expect this to decrease over time as divorce becomes more common and the stigma attached lessens.

Data and methods

Data

We use data from the Scanian Economic-Demographic Database (SEDD). These data consist of individual-level longitudinal information from five rural and semi-urban parishes and a port town, Landskrona, in southern Sweden (see Bengtsson et al. 2021 for details). The parishes included are not a representative sample of Sweden statistically, but the area is not atypical and reflects conditions shared by most rural and semi-urban areas in the period studied.

Information is provided from continuous population registers (a household-based register where information at the individual level is continuously updated), with information on demographic events, including migration to and from households for all individuals in the selected parishes. From 1968 onwards, individual-level information covering the entire country is available in various administrative registers at Statistics Sweden and has been linked to the historical data using unique personal identifiers introduced in 1947. Data from these registers have been linked to the historical sample, which has allowed an extension of the database along several dimensions.

First, individuals who ever lived in the area prior to 1968 and who were still alive in that year were followed until 2015, or until death or emigration, regardless of their geographic location in Sweden. In addition, parents, grandparents, children, grandchildren, and siblings of individuals belonging to the original population in Scania were added to the database if they were alive and living in Sweden sometime after 1967. All individuals added to the sample population were similarly followed until 2015, death, or emigration from Sweden. Importantly, this means that we can follow the individuals observed in the study area all over Sweden in adulthood after 1968 without any biases related to internal migration. Individuals emigrating from Sweden are censored. This linkage between historical and contemporary data allows us to follow generations of marriages and divorces from 1905 until 2015.

Sample

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Our analytical sample consists of Swedish-born individuals in their first marriages contracted between 1905 and 2004, given that we also have information on the parents' marital histories. We followed these individuals until time of divorce, death of either spouse, or, for those born prior to 1947, outmigration from the SEDD area. We did not include individuals with an illogical marital history in the sample. The sample includes 44,197 women and 43,152 men. For some analyses, we explored a restricted sample, where we only included individuals in marriages for which we have full information on all variables and the marital histories of both spouses' parents. This reduced sample size and limited us to include individuals who married in 1975 and onwards but allowed for analysis of differences in ITD depending on which spouse had experienced parental divorce. We use first marriages only for both ego and the parents because the mechanisms leading to higher-order divorce can differ from those leading to first divorce (Poortman & Lyngstad 2007).

Variables

Our dependent variable is divorce in year t, provided that the individual was married in year $t-1$. While some marriages may end in separation without a legal divorce, we used only official divorce as the measurement for union dissolution in our analysis. We included individuals who were 0–20 years old at the time of their parents' divorce, because the explanations for ITD concern social and economic consequences for children that impact on their future adult lives. Parental divorce was measured in two ways. First, we included a dummy variable indicating whether the individual's parents had divorced, and second, we used a categorical variable to indicate whether the parents divorced before the individual turned 14 or was 14–20 years old. The age cutoff is chosen based on the individual being a pre-teen or a young adult. We chose to include individuals up to 20 because 21 was the age of majority in Sweden until 1969, then 20. It is 18 since 1974. In one set of analysis, we used a categorical variable indicating whether the wife, the husband, or both spouses had experienced parental divorce.

We used the individual's marriage cohort as a measure of historical time. Previous research used marriage cohort, birth cohort, or survey year for this purpose that generally render consistent and similar results (Wolfinger 2011). The following marriage cohorts are included as dummy variables: 1905–1964, 1965–1974, 1975–1984, 1985–1994, and 1995–2004. The first cohort is very inclusive because divorce was a rare event before 1970 and it was extremely rare to experience both parental divorce and own divorce in the period preceding the shift from a low to a high divorce society.

Some of the proposed consequences of parental divorce are also known determinants of divorce risks. There is a well-established negative socioeconomic status (SES) gradient in divorce risk. However, research shows that the experience of parental divorce is associated with adverse socioeconomic outcomes in adulthood, in which case the transmission of divorce can be explained by socioeconomic conditions rather than factors inherent to divorce (see Lyngstad & Jalovaara 2010 for a review). While ITD is shown to exist even when controlling for parental and own SES (Wolfinger 2005), it is included in the analysis to account for any mediating effects.

Similarly, age at marriage is a correlate of both parental and own divorce. The consistent finding that lower ages at marriage are positively associated with divorce risks is often explained by unstable employment or less time in the marriage market, leading to unsatisfactory matches. It has also been shown that children of divorced parents marry at a younger age, where possible explanations include escaping an unhappy home environment and the economic consequences of parental divorce leading to fewer opportunities and making marriage a more attractive alternative (Thornton 1991). We constructed a categorical variable based on age at marriage and it is included in the analysis as a potentially important mediator of the transmission of divorce.

Previous research has also shown that children of divorce are more likely to be only children (Wolfinger 2005), and while divorce could potentially limit the number of siblings by affecting duration of the parents' marriage, having siblings may also act as a buffer to the consequences of parental divorce (Kempton et al. 1991). The stress of experiencing divorce may be reduced by there being someone close to the individual who is dealing with the same thing. Thus, we include a dummy indicating if the individual is an only child.[2]

The following controls are used in our analysis of ITD: own SES, father's SES, age at marriage, whether the individual is an only child or has siblings, and urbanicity of place of residence. Socioeconomic status is measured by occupation. Own SES is included as a time-varying variable in the model, while father's SES is measured as his highest recorded SES. Occupations are coded into HISCO and HISCLASS, which makes it possible to compare

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[2] We estimated models controlling for number of siblings and sibship position but this did not change the results or interpretations.

occupational groups over longer periods of time. The HISCLASS scheme is considered a good proxy for SES when using historical and contemporary data (van Leeuwen & Maas 2011).[3] The measure on urbanicity is based on the *Sveriges Kommuner och Regioner* (SKR[4]) definition of municipality types in 1988 (SKL 2010), ranging from large city with high population density to agricultural municipality with low population density. Eight categories were aggregated into four. The variable is included to control for unobserved differences in attitudes regarding divorce, as previous research has shown that there are large differences in divorce rates between urban and rural residence across the divorce transition that are mainly explained by attitudes and norms. Moreover, we included a covariate for the presence of a child under the age of seven in ego's marriage to account for variation in the dependent variable, because having a young child has been shown to reduce the likelihood of divorce and could be associated with marital commitment. Summary statistics for variables included in the analysis are presented in Table 1.

[Table 1 about here]

Analytical strategy

To model trends and differences in ITD, we used survival models to estimate the risk of divorce dependent on having experienced parental divorce or not for five different marriage cohorts. First, we estimated Kaplan-Meier survival rates for marriages in each cohort. Estimations were performed separately for men and women, except when using a variable indicating which spouse had experienced parental divorce. These models do not include controls but show differences in the time-to-divorce and the proportion of marriages that were dissolved. Second, to model trends in ITD we used Cox proportional hazard rates models to estimate the risk of divorce while accounting for time under risk, in the form:

$$\lambda(t) = \lambda_0(t) \times exp\ (\beta_1 ParentalDivorce + \beta_2 MarriageCohort +$$
$$\beta_3 (ParentalDivorce \times MarriageCohort) + \beta \mathbf{X}) \qquad (1)$$

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[3] We used HISCLASS-6 as a proxy for both own and father's SES. The HISCLASS scheme is a social class scheme based on HISCO (van Leeuwen, Maas & Miles 2002), which is a standardization of occupations across historical time and countries. HISCLASS-6 is an aggregation of occupations into comparable socioeconomic groups. The groups are 1) higher professionals, 2) lower professionals, 3) skilled workers, 4) lower-skilled workers, 5) unskilled workers, and 6) farmers. In addition, we included a seventh category for undefined occupations in our analysis on women as this may refer to unpaid household production.
[4] Previously called *Svenska Kommunförbundet och Landstingsförbundet (SKL)*.

where $\lambda(t)$ denotes the risk of divorce at marital duration t, $\lambda_0(t)$ denotes the baseline hazard, *ParentalDivorce* denotes a dummy variable for having experienced parental divorce, *MarriageCohort* denotes ego's marriage cohort, and **X** denotes a vector of control variables and covariates.

Cox models assume that the hazard is proportional over time. Violations of this assumption might lead to problems with interpretation of the estimates as there can be differences in the associations across analysis time. In the present study, there was a weak violation of the proportionality assumption after 25 years of marriage in all models. Therefore, observations were censored after 25 years but this is not a problem because few divorces occur after that point (smoothed hazard estimates used to graphically assess the assumption are shown in Appendix Figure A1). The assumption was, however, violated in models for men when investigating age at parental divorce. Specifying different analysis time does not, however, indicate any different results or interpretation.

Situating intergenerational transmission of divorce in Sweden, 1905–2015

The present study covers marriage cohorts at risk of divorce across the full scope of the divorce transition from a low to a high divorce regime in Sweden. Sweden was a frontrunner in terms of divorce law reform and making divorce generally accessible to broader layers of the population (see Sandström & Garðarsdóttir (2018) for a historical account of divorce in Sweden and the other Nordic countries). Bilateral no-fault divorce was introduced as early as 1915, and another divorce law reform introduced unilateral no-fault divorce in 1974.[5] Still, divorce rates were already increasing prior to the reform in 1974. This may be an indication that the social stigma attached, and economic conditions made divorce inaccessible for most marriages in the early 20th century but that this changed prior to 1974. The long-term trend in divorce indicates that, while divorce became increasingly common, it was still rare up until the early 1970s, making individual and parental divorce for the early marriage cohort in our study a very rare phenomenon.

The period that we study featured comprehensive socioeconomic change with implications for marriage and divorce. Of note, improved living standards and gender equality, which are two explanations for the rise in divorce, made divorce more common across social classes

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[5] Previous legal contexts required spouses to prove a cause for divorce, such as adultery, alcoholism, or mistreatment. With no-fault divorce, the spouses could divorce due to irreparable differences.

(Sandström & Stanfors 2020). While improved living conditions through real wage growth and state support through transfers and services made it easier for all men and women to divorce when they found themselves in a dysfunctional or loveless marriage, these conditions also mediated some of the consequences of divorce, not least for children. In this respect, perhaps the most important factor that transformed family lives was increased female independence. Over the 20th century, female labor force participation steadily increased in Sweden (and elsewhere), most notably among married women (Stanfors & Goldscheider 2017). Married women's gainful employment increased from 4 to 56 percent between 1920 and 1970. The increase was even stronger among women with children under 16 in the household. After 1970, married women's labor force participation continued to rise to well over 80 percent. Again, the increase was stronger among mothers. The general increase in female labor force participation reflects a change in women's jobs, a high demand for (female) labor and an improving wage ratio compared to men. The increase in the employment of married women, particularly mothers, also reflects that family responsibilities became more compatible with paid work through shorter working hours but also through the development of leave schemes and daycare facilities after 1970.

Results

To investigate the components of ITD and its development over time, we used survival models to analyze how the risk of divorce varied with time at risk dependent on parents' marital history for five broad marriage cohorts.[6] Figure 1 plots the Kaplan-Meier survival estimates in each of the five marriage cohorts for A) men, B) women, and C) both spouses with regard to whether their parents' divorced or not.[7] The analysis of both spouses' experience of parental divorce does not include cohorts 1905–1964 and 1965–1974 because the combination of own divorce and parental divorce was very rare.

Figure 1 shows that parental divorce is associated with both higher likelihood of divorce and earlier divorce for both men and women across marriage cohorts. ITD existed across the divorce transition from low to high divorce rates, though it was unusual for individuals

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[6] The Kaplan-Meier survival estimates by marriage cohort for men and women are shown in Appendix Figure A2.

[7] Figure A3 in the Appendix shows that there is little or no difference in the risk of divorce over analysis time for men and women. This is expected because every divorce involves both husband and wife. However, the sample exploited is not restricted to linked spouses. The fact that we see no differences indicates that samples of men and women are similar.

belonging to marriage cohorts 1905–1964 to experience parental and own divorce, which can be attributed higher economic and legal barriers to divorce. Survival rates for men and women are similar but the differences between those who experienced parental divorce and those who did not are larger for women than for men.

[Figure 1 about here]

Figure 1 shows that the ITD existed for the 1905–1964 cohort but was weaker compared to other cohorts. This proposes that the ITD is not an altogether modern phenomenon and that it was important for individuals in the low divorce regime. Regarding a change in the ITD, the survival curves in Figure 1 indicate that the transmission was strongest (i.e., we find the largest difference between those who experienced parental divorce and those who did not) for the 1965–1974 marriage cohort, implying that the ITD was most prominent for those who married as divorce was increasing in Sweden. These differences decrease across the three later cohort for both men and women, but more clearly for men. As suggested by previous research, convergence is mainly due to that those who experienced parental divorce become more like those from intact families and less likely to divorce themselves. This is shown in Figure 1 (panels A and B) where the survival curves for *parental divorce* become more like those for *no parental divorce*. It is important to note that the decreased likelihood of divorce for both *no parental divorce* and *parental divorce* in the last marriage cohort (1995–2004) may be affected by shorter follow-up time as they are only observed until 2015. Still, marriage duration is considered in the model and the smaller difference between the two survival curves indicates that the transmission is weakening across marriage cohorts. This supports a weakening of the ITD whereby consequences of parental divorce are reduced rather than a tendency that divorce becomes more likely among those from intact families. We also find support for a stronger transmission among women than among men (for which the decrease is more distinct.

It is surprising to see that the transmission was weaker for the 1905–1964 marriage cohort than for the following cohorts. It should perhaps be seen as an indication of the rarity of divorce rather than weaker ITD in the past. This cohort spans a long period when divorce was slowly increasing but it was still rare due to social stigma as well as economic and legal barriers. Individuals who married 1905–1965 not only had to overcome these barriers to get a divorce and their parents faced even more difficulties if they wanted to divorce.

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To investigate gender differences further, panel C in Figure 1 presents survival estimates based on each spouses' experience of parental divorce. We used the restricted sample of individuals for whom we have complete marital histories for the parents of both spouses. In line with expectations, the ITD was strongest if both spouses had experienced parental divorce. Except for the 1975–1984 marriage cohort, where all three configurations of spouses' experience of parental divorce were associated with higher but similar divorce risks, there is support for a stronger transmission in marriages where only the wife had experienced parental divorce. These marriages had higher divorce risks compared to marriages where only the husband had experienced parental divorce. This is in line with mothers signaling and transferring norms of female independence and the possibility to leave an unhappy marriage to their daughters, though the pattern is not there for the 1975–1984 marriage cohort. It follows our previous finding that the ITD may have grown weaker for men compared to women across marriage cohorts.

We also investigated if it mattered how old an individual was at the time of their parents' divorce for the strength and trend in the ITD. Our expectation was that the experience of parental divorce at a younger age should lead to more severe consequences and a stronger ITD compared to individuals who were older (but under 21). Moreover, we proposed that these differences should decline over time as parents and society have become more aware of how divorce may affect children and more efforts have been made to support children of divorce. We estimated and compared survival rates for individuals who were 0–13 and 14–20 years old at the time of their parents' divorce. Results can be found in Appendix Figures A4.

Contrary to what we expected, survival curves indicate similar patterns, irrespective of gender, with a somewhat stronger transmission for individuals who were 14-20 years old at the time of their parents' divorce and married before 1975. For those who married after 1975, however, the transmission was stronger among those who experienced parental divorce before the age of 14. Except for this shift, there is no evidence of a weakening transmission for either age group. This does not necessarily imply that the consequences have become more severe or that the transmission has grown stronger for those who were younger at the time of their parents' divorce, but rather that the ITD has become weaker for those who were older when their parents divorced. An interesting finding that we did not expect, though is in line with our other findings, is that the difference in ITD depending on age is larger for women than for men among those who married after 1975.

Multivariate analysis

Findings so far indicate that there was a slight decrease in the ITD across marriage cohorts, but survival curves do not control for any relevant sociodemographic characteristics that may explain parts of the ITD. To further investigate if there is a trend in the ITD, we used Cox models with interactions. These models included variables for individual being an only child, individual's and father's SES, individual's age at marriage, having a preschooler (i.e., a child under seven years), and urbanicity of place of residence. In models using marriage cohort as control variable rather than an interaction, the associated increase in risk due to having experienced parental divorce is 44 and 64 percent for men and women respectively, which implies that even when controlling for the main proposed sociodemographic mechanisms, there is still a strong transmission of divorce from parents to their children.[8] Table 2 presents interaction effects as relative hazard ratios, net of other factors, separately for men and women. For ease of interpretation and comparison, Figure 2 plots the hazard ratios from Table 2. The reference category is individuals who did not experience parental divorce and who belong to marriage cohort 1975–1984.

Results in Table 2 and Figure 2 provides no or little support for the hypothesis of a weakening ITD across marriage cohorts. For both men and women, in all cohorts, there is evidence for a strong transmission as individuals who experienced parental divorce face higher divorce risks compared to those who did not. While the difference in divorce risk decreases over time, our results shows that any convergence in divorce risks across cohorts is mainly due to increasing divorce risks for those who did not experience parental divorce. Contrary to our expectation that the ITD should become weaker over time, it is stable while divorce becomes more common in general. This does not imply that the consequences for children experiencing parental divorce have remained the same, but rather that the strength of the transmission of divorce from parents to their children has remained stable. Still, the results support our previous finding that the ITD was important even when divorce was uncommon. When we control for socioeconomic and demographic characteristics, there is no evidence of a decline in the ITD.

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[8] Full regression output is presented in Appendix Tables A1-3. In uncontrolled models (not shown), the associated increase in divorce risk was 60 and 82 percent for men and women, respectively. Controlling for individual characteristics reduced the transmission effect by about 25 percent.

If we compare our results for men and women, there are slight differences. For women, there is no indication of a decreasing ITD in Figure 2. While differences are small for men, there is an indication of a weakening transmission between those who married in 1965–1974 and those who married in 1985–1994 but the trend does not continue for men who married after 1995. This may point to difference between men and women in the strength of the transmission and that it is a modern feature of the ITD rather than a historic one. As we do not find any decline in the transmission for women but an indication of a negative (non-significant) trend for men, findings of a decline may be due to sample characteristics or model specification where sex is controlled for but not analyzed separately.

[Table 2 about here]

[Figure 2 about here]

Figure 3 displays relative hazard ratios from the interaction model that investigates differences in the ITD depending on the individual's age at the time of parental divorce (exact estimates are shown in Appendix Table A4). Like earlier, there is no support for a decreasing trend in the ITD but there is a shift in the divorce risks between having experienced parental divorce at a younger or at an older age. For those who married before 1975, the transmission was stronger for individuals who were 14–20 years old compared those who were 0–13 years old at the time of their parents' divorce. For those who married after 1975, the ITD was stronger for individuals who were 0–13 when their parents divorced. This supports our expectation that the transmission is stronger if children are younger rather than older when they experience parental divorce, but only for those married after 1975, when divorce had become a more common phenomenon. It important to note that these results are more pronounced for women and limited for men. Like what we found in our first model using only experience of parental divorce, there is no indication that the ITD has become weaker across marriage cohorts. Instead, the transmission was stable while divorce became more common.

[Figure 3 about here]

We also investigated whether it mattered for ITD which spouse had experienced parental divorce. We used both a model without interactions to investigate differences in the transmission and a model with interactions to establish trends. The models were based on the restricted sample with information on both spouses' experience. Results from models without and with interactions are presented in Table 3 and Figure 4, respectively (full model estimates can be found in Appendix Tables A3 and A4). In line with previous research, we found that

divorce risks are highest, and the ITD strongest for marriages where both wife and husband experienced parental divorce. We find that when both spouses were children of divorce, the divorce risk increased by 93 percent compared to marriages where none of the spouse had experienced parental divorce.

In line with our previous results, we also find that that the ITD is stronger for couples where only the wife had experienced parental divorce as a child, compared to couples where only the husband had such experience. The transmission size is around 71 percent increase in divorce risk for wives and 26 percent for husbands. Post-estimation tests show that there is no significant difference in the hazard ratio when both spouses' and when only the wife experienced parental divorce.

[Table 3 about here]

This difference between men and women is further supported by results presented in Figure 4, which depicts trends in divorce risks. Contrary to our expectation of a decreasing transmission over time for women, it remained stable across marriage cohorts. Instead, there is an indication of a decrease in transmission for men. While the results do not support expectations based on previous research, they are in line with our previous findings from separate models on men and women. The transmission seems to be more stable for women compared to men across cohorts, though the decline in the transmission for men is modest. The results lend further support to our finding that differences between men and women in the ITD seems to a modern feature. While the ITD seems to have been relatively stable over time, there may be differences over time in how parental divorce affects men and women that have been neglected before.

[Figure 4 about here]

Based on our findings there is no evidence for a trend in the ITD. All models indicate stability rather than change over time, which confirms previous findings from the US of no trend in the ITD (Li & Wu 2008; Teachman 2002) and that age at parental divorce is not an important factor for the strength in the transmission (Wolfinger 2005). However, the results for differences according to gender, especially those using both spouses' experience, reveal that there are important gender aspects that need to explore further to understand the transmission.

Sensitivity analysis - parental divorce, marriage, and marriage timing

So far, this study has focused on change over time in the transmission, and consequently the stability in the ITD is only relevant for those who get married. There are reasons to expect that the experience of parental divorce makes individuals less inclined to marry (Cunningham & Thornton 2006; Kapinus 2004). If the experience of parental divorce makes individuals less likely to marry, then our analysis may not be fully justified (and even more so if this has changed with the rise of non-married cohabitation since the 1970s as an alternative to marriage). Unfortunately, we are not able to study other unions than formal marriage, but we investigate differences in the likelihood of marriage and marriage timing.

Delayed marriage or not marrying may reflect negative feelings regarding commitment and such are expected to be more common among those who experienced parental divorce as children. On the other hand, the experience of parental divorce may spur a wish to leave the parental home and (early) marriage may be a way out (Wolfinger 2005). Research on union formation among children of divorce has, however, produced ambiguous results, as studies have found parental divorce to be associated with earlier marriage but a lower likelihood of getting married (Wolfinger 2005), delayed marriage (South 2001), or no association (Amato & Booth 1997).

To investigate differences in the likelihood of getting married and whether this has changed over time between those who experienced parental divorce as a child and those who grew up in intact families, we used logistic regression in an event history design to estimate predicted probabilities of marriage. For this purpose, we analyzed everyone at risk of marriage in six birth cohorts, 1870–1989 (results shown in Appendix Figure A5). These birth cohorts largely correspond to the marriage cohorts used in the main analysis. Results regarding marriage are similar for men and women. There is a negative trend over time in the probability of marriage across birth cohorts for both those who experienced parental divorce and those who grew up in intact families. There was a significant difference according to experience of divorce in the earliest birth cohorts (1870–1939 and 1940–1949) for which the experience of parental divorce was associated with a higher likelihood of getting married. These differences are only minor for those born after 1950. When it comes to marriage timing, there was a general increase in age at marriage over time. However, we find that experience of parental divorce was associated with earlier marriage for all except the last marriage cohort (1990–2005). This is evident from Kaplan-Meier survival curves shown in Appendix Figure A6. In summary, we do not find any significant differences in the likelihood of getting married but, in line with

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previous research, children of divorce were more likely to marry earlier, implying that our models of the ITD should be robust if we control for age at marriage.

Conclusion

As divorce has become increasingly common, the number of individuals who experienced parental divorce when growing up also increased. Research has shown that the experience of parental divorce is associated with adverse outcomes in adulthood, and it is well-established that parental divorce increases an individual's divorce risks (Wolfinger 2005). There is reason to believe that the strength of the transmission of divorce from parents to children changed over time. We investigated if this was the case exploiting longitudinal data from Sweden, 1905–2015, with a particular interest in gender differences and differences regarding age at parental divorce.

We expected the ITD to decrease over time due to for example less stigma associated with divorce as divorce became more common and societal efforts that considerably improved the conditions for children affected by parental divorce. Contrary to our expectations and previous research (Wolfinger 1999, 2011), we did not find evidence of a decline in the ITD. There was convergence over time in divorce risks between those who experienced parental divorce and those who did not, but this was rather due to increasing divorce risks for the latter group than to a weakening transmission of divorce. We found that the transmission of divorce was stable for both men and women, which is in line with Li & Wu (2008) and Teachman (2002), who found stability in the ITD over time in the US. It thus seems as though society at large and the conditions for marriage and divorce changed tremendously over the last century, the ITD did not. This stability over time implies that the transmission of divorce is not driven by negative consequences for children of divorce feeding into their own marriages and generating future divorce.

We explored two aspects of the ITD that has received attention in previous research yet produced mixed results, namely differences in the strength of the transmission depending on an individual's age at the time of parental divorce and gender (Amato 1996; Amato & Cheadle 2005; Bumpass et al. 1991; Wolfinger 2005). Regarding age, our results provide further support for stability rather than for change over time, as we found no differences in the ITD when comparing men who were 0–13 years old with those who were 14–20 at the time of their parents' divorce. For women, there is an indication that the transmission was stronger for

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those who were younger but only for those who married after 1975, which implies that differences may have developed rather than disappeared over time. We expected that experiencing parental divorce at a younger age would lead to a stronger ITD as younger children face prolonged exposure to any potential negative consequences, but our results do not show that a child's age at the time of parents' divorce is important for the transmission.

We do, however, find gender differences. First, in our separate analyses of men and women, there is a weak negative trend in the ITD for men but not for women. There are also minor differences in the ITD depending on age at the time of parents' divorce for women but not for men. Second, and more importantly, while we confirm that divorce risks were highest when both spouses had experienced parental divorce, the transmission was equally strong when only the wife (as opposed to only the husband) had experienced parental divorce. From the main explanations of the ITD, it is not clear that there should be a difference between men and women, but our results could support a role model hypothesis where the experience of having seen a mother leave an unsatisfactory marriage makes divorce more accessible or seen as a viable option for daughters than for sons. There is no reason to expect different (adverse) socioeconomic consequences depending on gender, and similarly, if the transmission occurred via interpersonal behavior. As previous research on attitudes after own divorce and after parents' divorce shows that women are more likely to take after their mothers (Kapinus 2004), and our results show that there is a stronger transmission for women than for men, we suggest that the ITD is partly related to female independence.

Contrary to what we expected, differences between men and women became more pronounced over time. There was a negative trend in divorce risks if only the husband experienced parental divorce, while in cases where only the wife had experienced parental divorce, we found stability. Previous studies have not investigated such differences over time, but this may explain why they have produced mixed results on gender. Unfortunately, we cannot rule out any explanation or mechanism using our analysis but only point to the differences we find. Our investigation suggests a gender dimension that needs to be explored further, as our results show that it is an integral part of the ITD, at least in Sweden, and that it may have changed over time.

This study only deals with formal marriage and formal divorce. Given the rise in non-marital cohabitation, future research into ITD and its development over time should try to broaden the

scope to include separation among non-married cohabiting couples. If cohabitating partnerships are like marriage but easier to break up, including such unions could help show if ITD is related to marriage (or union) instability or other factors. Many studies demonstrate an ITD, yet our findings show that the transmission may be more complex than a simple transfer of negative characteristics that make people more likely to divorce. From a period spanning more than a century in Sweden, which is commonly seen as a demographic forerunner, our results show that the ITD did not really change across the transition from low to high divorce rates. There are, however, gender differences to note that highlight the role of female independence in this process. Finally, it is worth noting that the stability in ITD that we document in this study is similar for other types of intergenerational transmission. By extending the time period, we show that this is not a recent phenomenon. Our results provide a historical lense to a demographic process that quite commonly is discussed as a present-day problem, if not so much in Sweden today.

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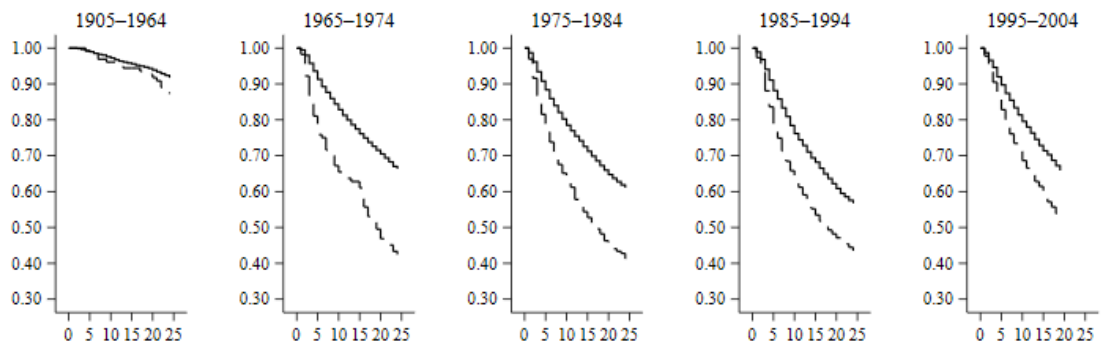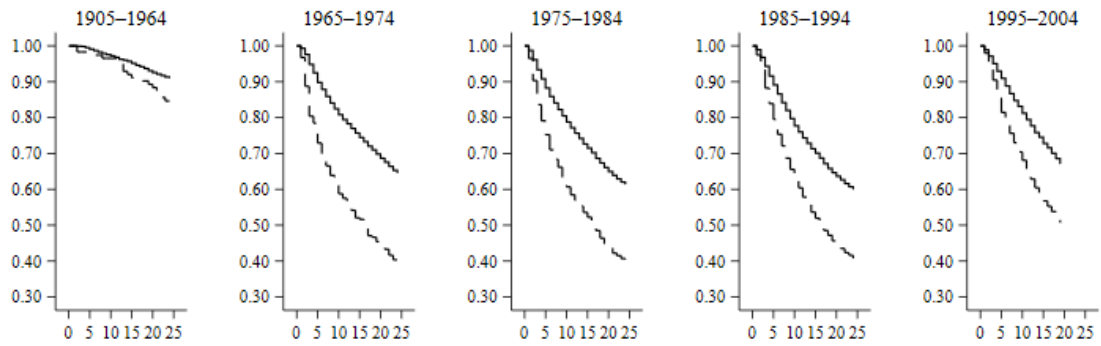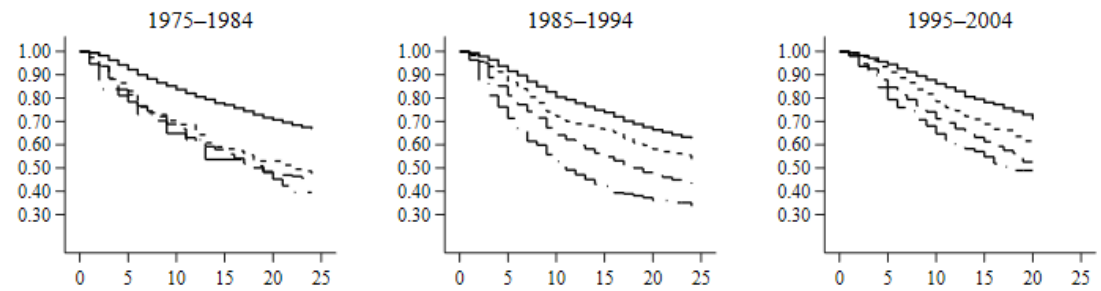
Figure 1. Kaplan-Meier survival estimates showing differences in risk of divorce dependent on having experienced parental divorce or not for A) men and B) women in five marriage cohorts, 1905–2015, and C) both spouses' experience in three marriage cohorts, 1975–2015.
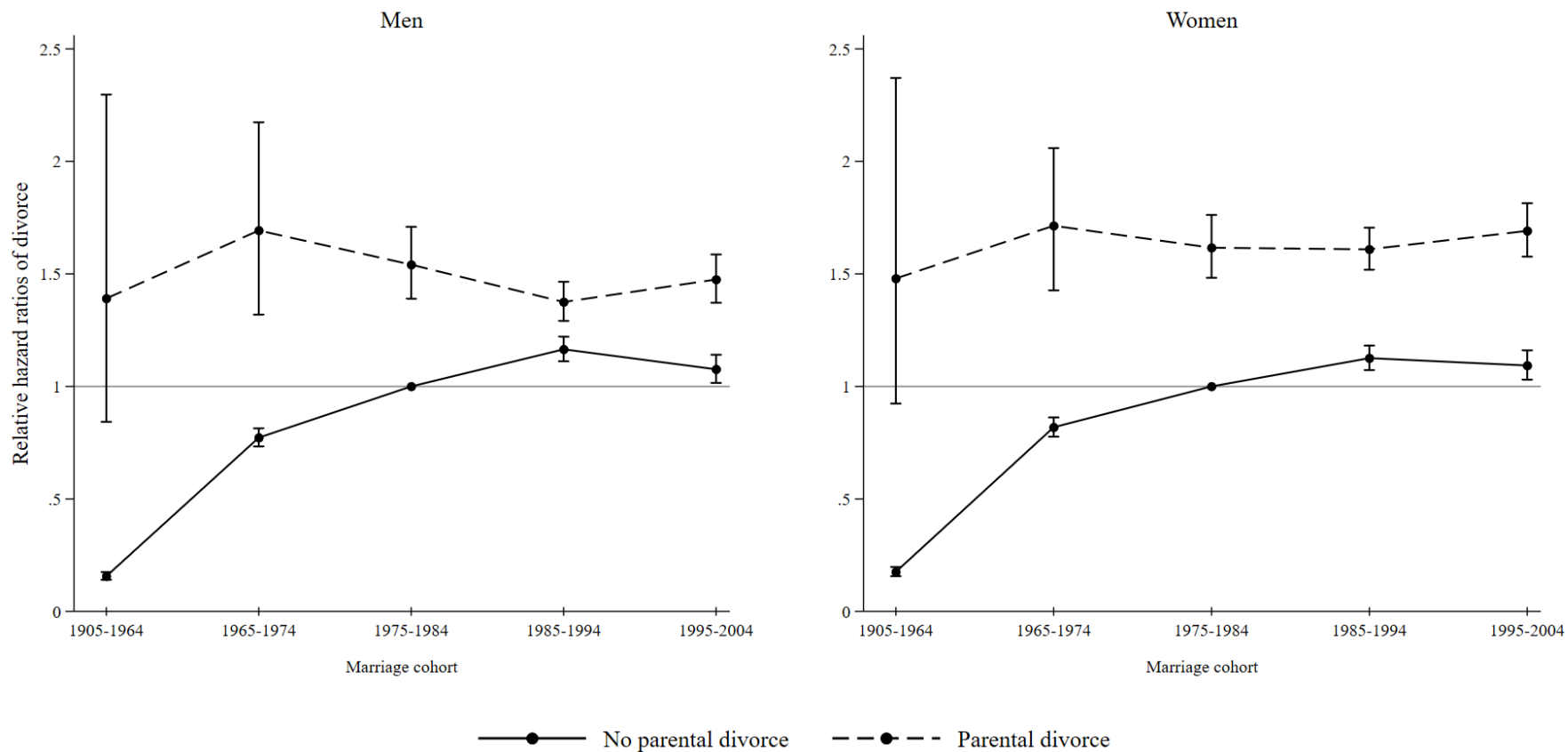
Figure 2. Relative hazard ratios of interactions between experience of parental divorce and individual's marriage cohort from Cox proportional hazard models on risk of divorce estimated for men and women separately, 1905–2015, using 95 percent confidence intervals.

Note: See Table 2 for model specification.
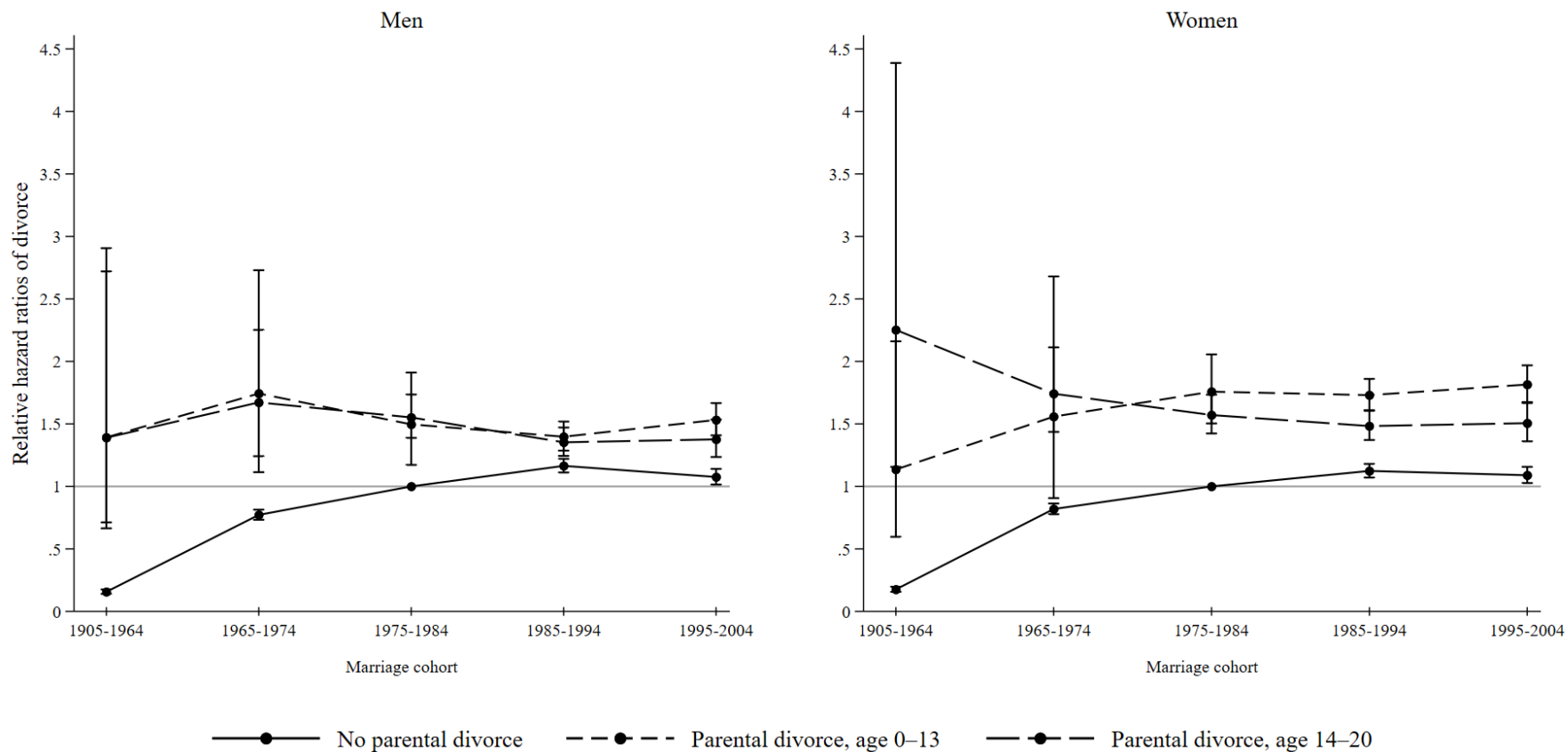
Figure 3. Relative hazard ratios of interactions between age at the time of parental divorce (0–13 and 14–20) and individual's marriage cohort from Cox proportional hazard model on risk of divorce estimated for men and women separately, 1905–2015, using 95 percent confidence intervals.

Note: See Table A2 for model specification.
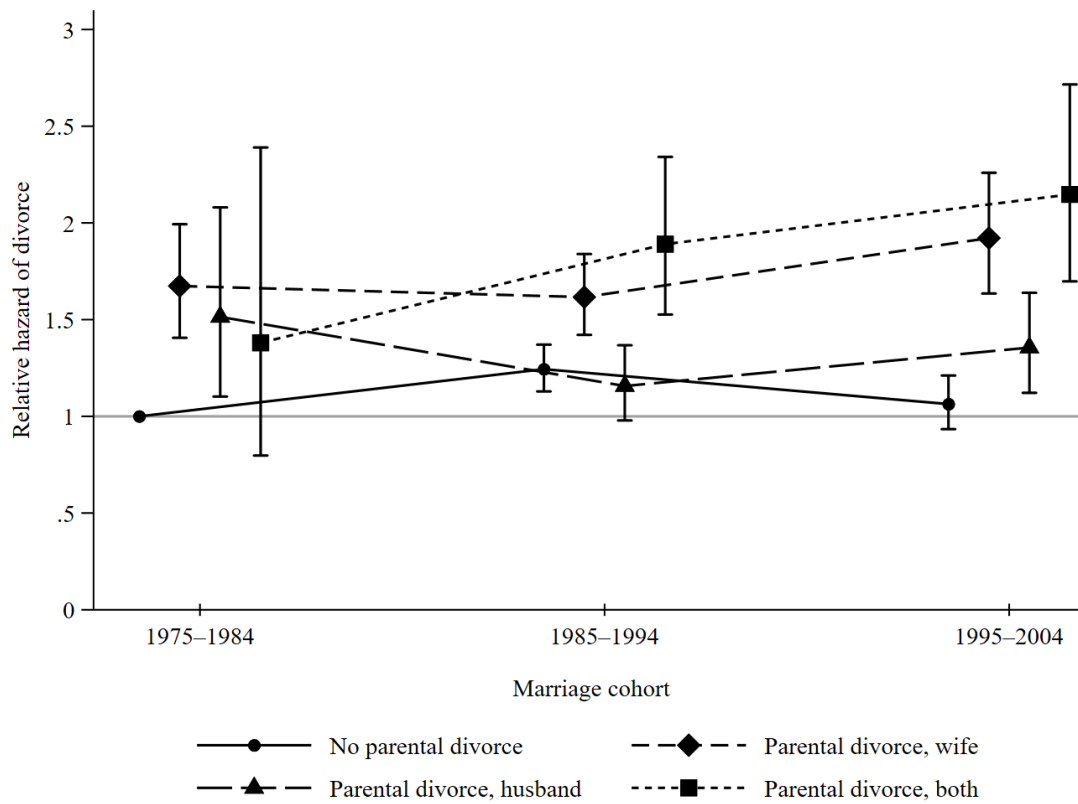
Figure 4. Relative hazard ratios of interactions between spouses' experience of parental divorce and marriage cohort from Cox proportional hazard model on risk of divorce using restricted sample, 1975–2015, using 95 percent confidence intervals.

Notes: See Table 3 for model specification.

Table 1. Sociodemographic differences in variables included in the analysis between men and women from intact and divorced families, 1905–2015. All numbers in percent.

	Men	Men	Women	Women
Parental divorce	No	Yes	No	Yes
Divorce	1.9	3.6	1.9	3.8
Marriage cohort				
1905–1964	13.6	2.9	12.6	2.2
1965–1974	23.2	2.2	22.2	3.2
1975–1984	25.2	13.1	25.0	16.3
1985–1994	24.3	43.6	25.6	43.8
1995–2004	13.7	38.2	14.6	34.5
Age at marriage				
15–20	1.9	2.2	8.6	7.7
21–25	34.0	27.3	44.8	38.9
26–30	40.6	42.8	31.6	35.4
31–40	23.5	27.7	15.0	18.0
Occupation SES				
Higher professional	13.1	12.8	7.3	6.5
Lower professional	36.9	34.9	47.0	43.2
Skilled	18.1	16.6	3.5	3.4
Lower skilled	24.4	29.8	33.2	37.9
Unskilled	5.3	5.7	6.8	8.7
Farmers	2.2	0.2	0.7	0.1
NA (only for women)	-	-	1.4	0.2
Father's occupation SES				
Higher professional	12.4	10.9	12.4	11.2
Lower professional	34.8	36.2	35.4	33.7
Skilled	18.7	21.9	19.6	22.9
Lower skilled	21.7	27.2	21.0	27.9
Unskilled	3.4	2.4	3.1	2.6
Farmer	9.1	1.4	8.5	1.7
Urbanicity of residence				
Large city	26.3	30.2	27.1	29.2
Medium/small city	48.9	44.9	48.7	44.9
No city	15.6	17.4	15.4	17.0
Rural area	9.2	7.5	8.9	8.9
Being an only child	20.5	23.0	20.5	23.5
Having a pre-school aged child	38.5	39.8	37.1	39.2
Observations (N)	732,172		726,882	
Marriages (n)	43,916		45,062	
Person-years	749,316		746,164	

Note: Percentage indicates distribution of variable within columns and are based on the number of person-years.

Table 2. Relative hazard ratios of interactions between experience of parental divorce and individual's marriage cohort from Cox proportional hazard models on risk of divorce estimated for men and women separately.

	Men	Women
Parental divorce * marriage cohort (Ref. no parental divorce * 1975–1984)		
1905–1964	1.39	1.48
	(0.356)	(0.356)
1965–1974	1.69***	1.71***
	(0.216)	(0.160)
1975–1984	1.54***	1.62***
	(0.081)	(0.071)
1985–1994	1.38***	1.62***
	(0.044)	(0.048)
1995–2004	1.48***	1.69***
	(0.055)	(0.061)
No parental divorce * marriage cohort (Ref. no parental divorce * 1975–1984)		
1905–1964	0.16***	0.18***
	(0.009)	(0.010)
1965–1974	0.77***	0.82***
	(0.020)	(0.022)
1975–1984	Ref	Ref
1985–1994	1.17***	1.13***
	(0.028)	(0.028)
1995–2004	1.08**	1.09***
	(0.032)	(0.033)
Number of marriages	43,904	45,062
Number of divorces	15,161	15,417
Total person-years	749,092	746,164
Chi-square	3,364.83	3,995.89

Notes: Statistical significance refers to difference compared to reference category *No parental divorce in 1975–1984 marriage cohort* and is indicated by *** p < 0.01 ** p < 0.05 * p < 0.1. Robust standard errors in parentheses. Models control for age at marriage, individual and father's SES, being an only child, urbanicity of place of residence, and if ego has a child younger than seven years.

Table 3. Relative hazard ratios of spouses' experience of parental divorce from Cox proportional hazard model on risk of divorce using restricted sample, 1975–2015.

	Hazard ratio
Parental divorce (Ref. No parental divorce)	
No parental divorce	Ref
Wife	1.71***
	(0.077)
Husband	1.26***
	(0.075)
Both	1.93***
	(0.150)
Number of marriages	9,836
Number of divorces	3,386
Total person-years	162,541
LR chi-square	752.70

Notes: Statistical significance refers to difference compared to reference category *No parental divorce* and is indicated by *** $p < 0.01$ ** $p < 0.05$ * $p < 0.1$. Robust standard errors in parentheses. Models control for both spouses' age at marriage, individual and father's SES, being an only child, urbanicity of place of residence, and if they have a child younger than seven years.

Appendix

A. Smoothed hazard rates by experience of parental divorce
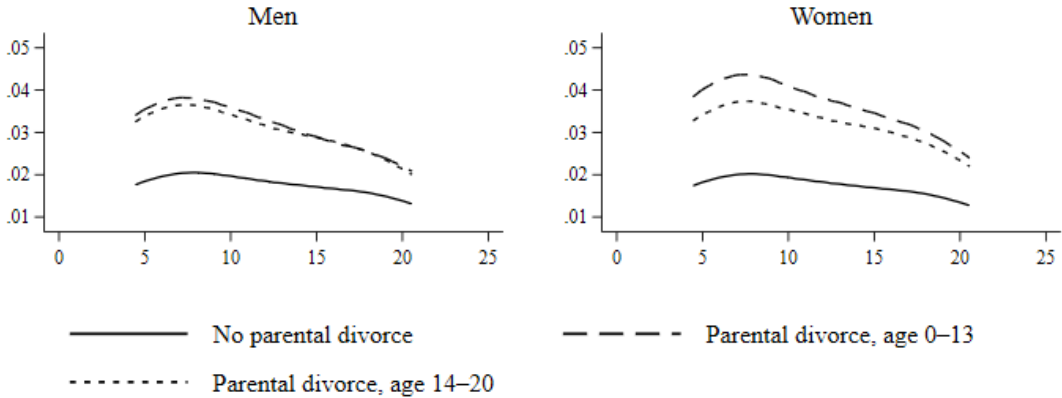
B. Smoothed hazard rates by age at the time of of parental divorce

C. Smoothed hazard rates by both spouses' experience of parental divorce

Figure A1. Hazard rates of divorce over analysis time for men and women by A) parental divorce, B) age at the time parental divorce, and C) spouses' experience of parental divorce.
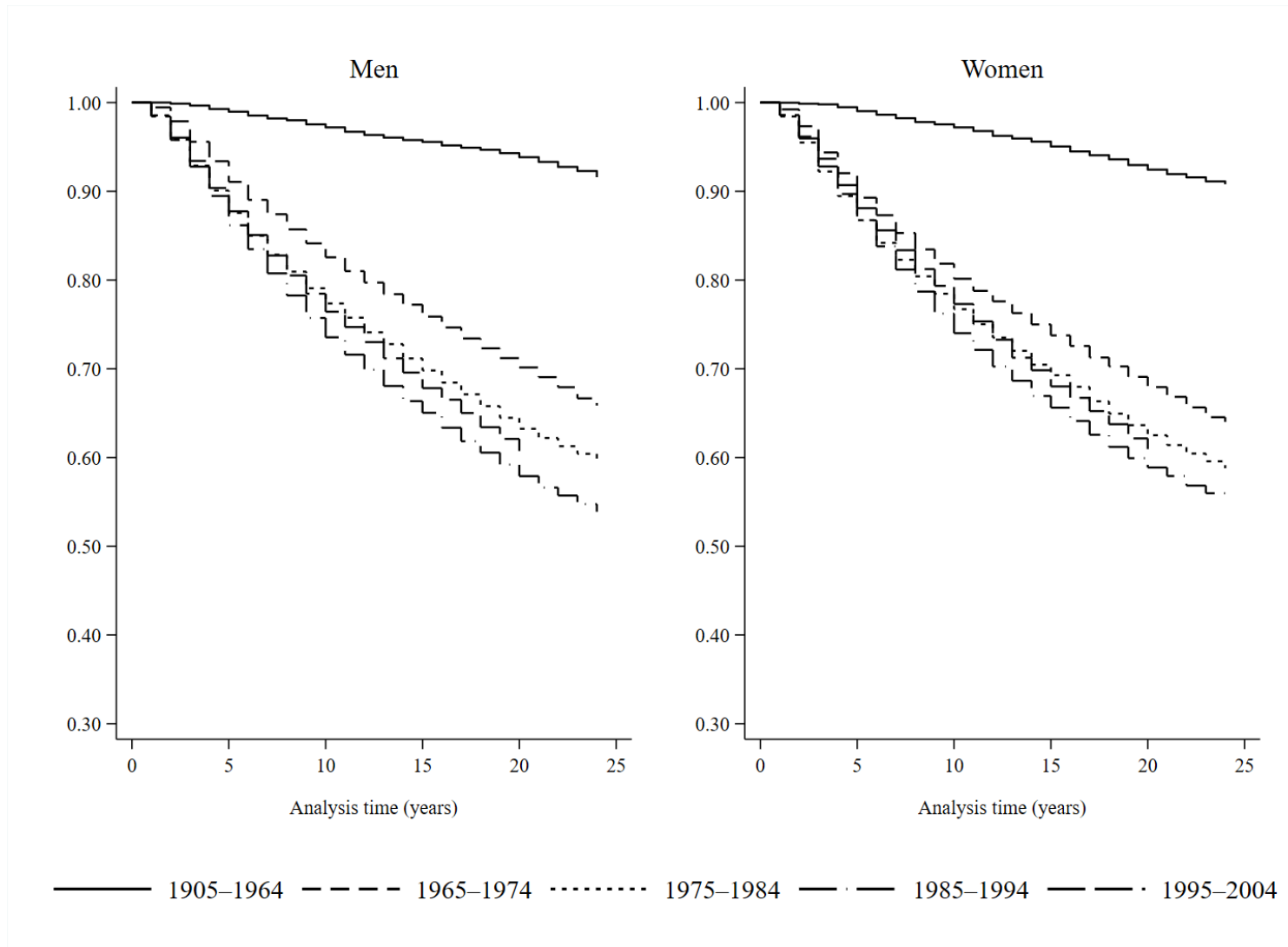
Figure A2. Kaplan-Meier survival estimates showing differences in risk of divorce by individuals' marriage cohorts for men and women, 1905–2015.
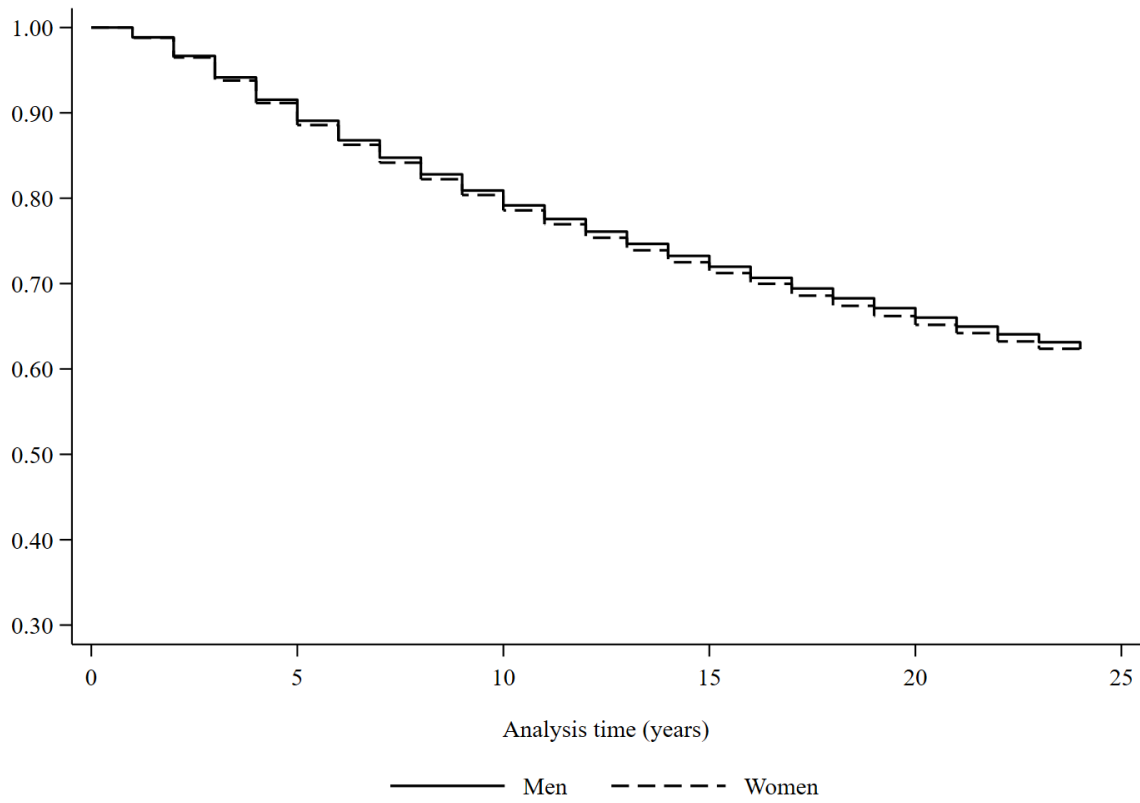
Figure A3. Kaplan-Meier survival estimates showing differences in risk of divorce for men and women, 1905–2015.
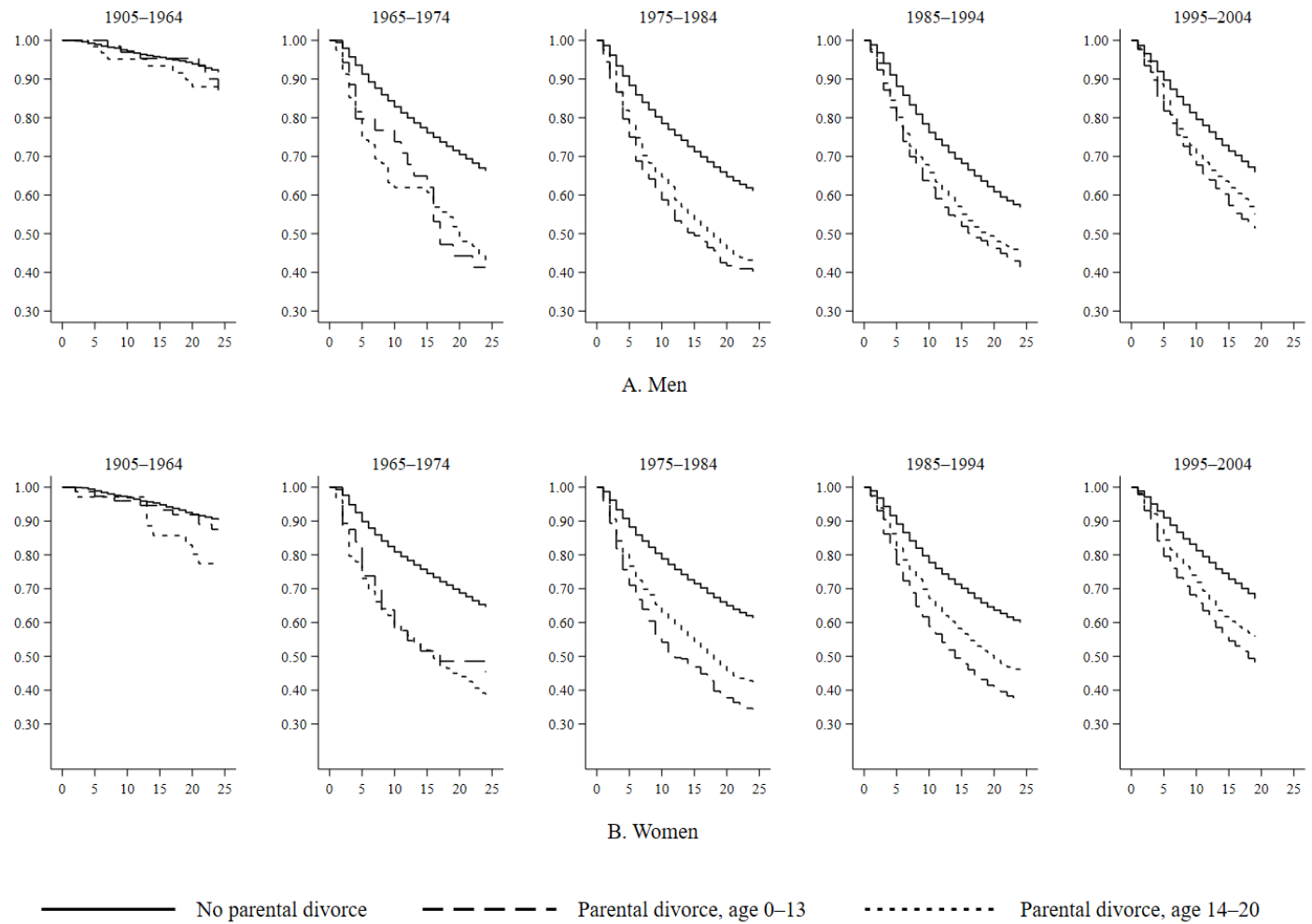
Figure A4. Kaplan-Meier survival estimates for marriage cohorts showing differences in risk of divorce regarding age at parental divorce versus no parental divorce for men and women, 1905–2015.
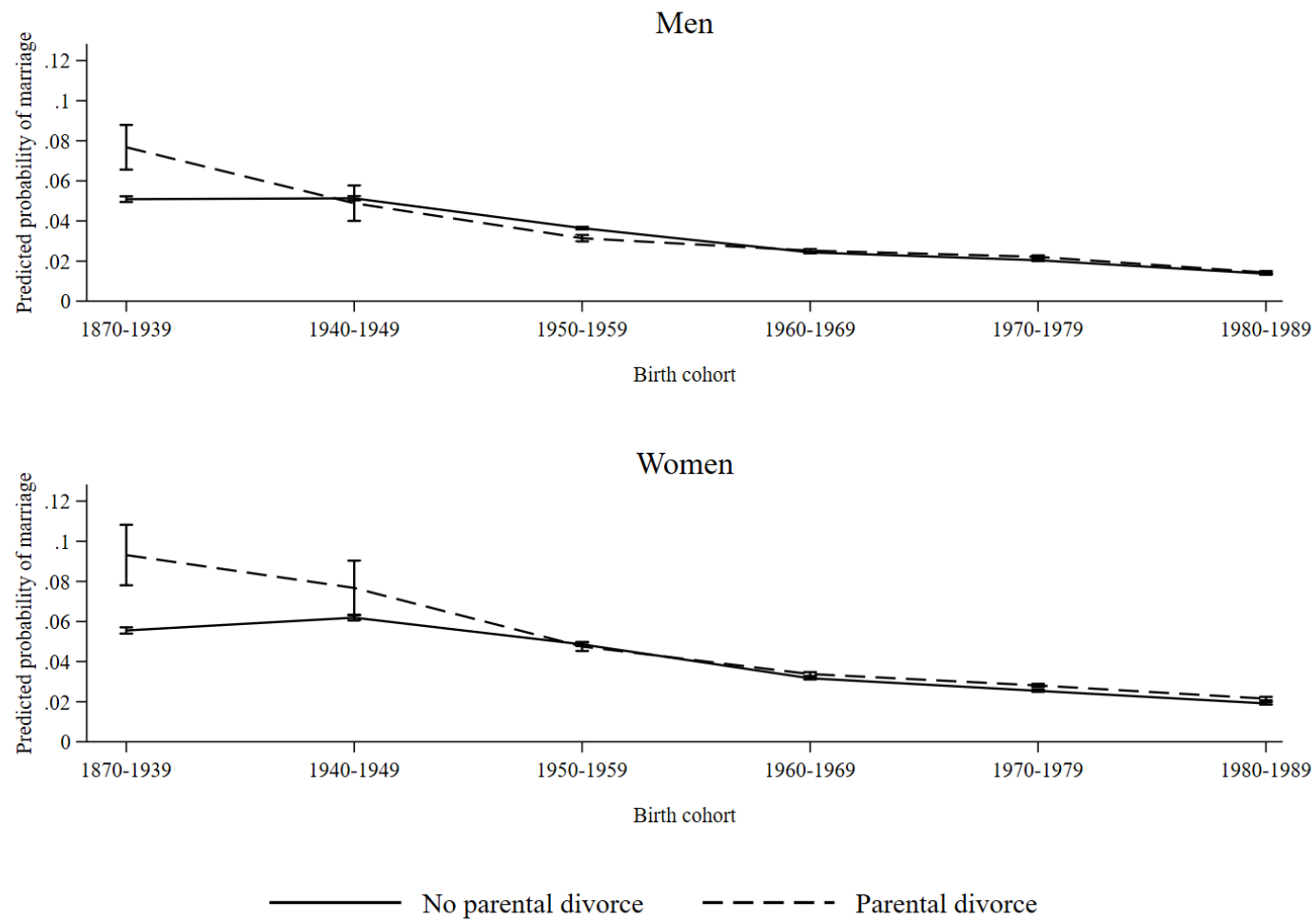
Figure A5. Predicted probabilities of marriage by experience of parental divorce for men and women by birth cohort, 1870–1989.
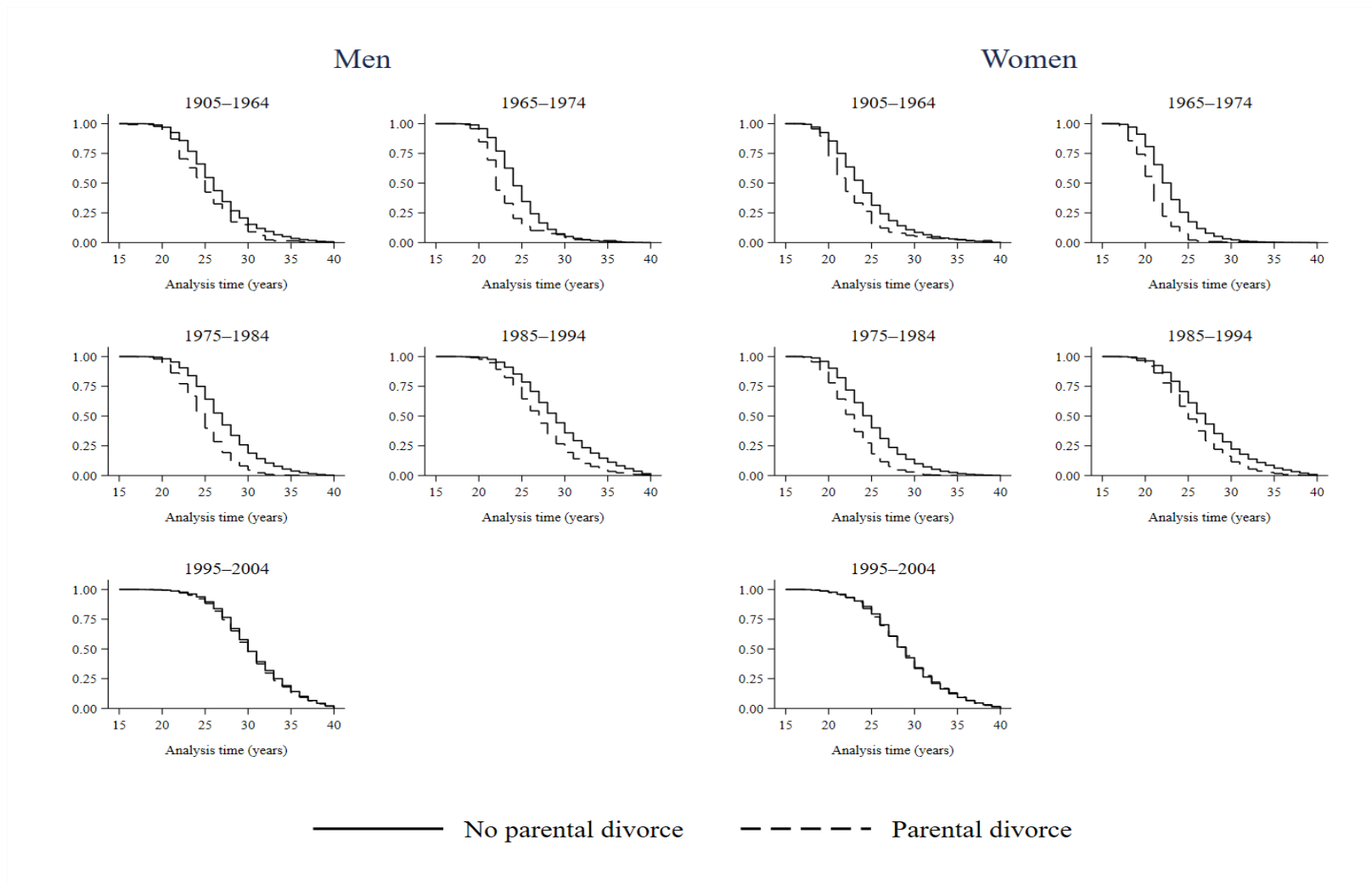
Figure A6. Kaplan-Meier survival estimates for marriage cohorts showing differences in risk of marriage regarding experience of parental divorce for men and women, 1905–2015.

Table A1. Relative hazard ratios of parental divorce from Cox proportional hazard model on risk of divorce for men and women separately.

|	Women	Men
Parental divorce (Ref. No parental divorce)	1.64***	1.44***
	(0.033)	(0.033)
Marriage cohort (Ref. 1975–1984)		
1905–1964	0.18***	0.16***
	(0.010)	(0.009)
1965–1974	0.82***	0.77***
	(0.021)	(0.020)
1975–1984	Ref	Ref
1985–1994	1.12***	1.14***
	(0.025)	(0.025)
1995–2004	1.11***	1.08***
	(0.029)	(0.029)
Age at marriage (Ref. 21–25)		
15–20	1.57***	1.42***
	(0.042)	(0.072)
21–25	Ref	Ref
26–30	0.78***	0.81***
	(0.016)	(0.016)
31–40	0.66***	0.74***
	(0.018)	(0.018)
SES (Ref. Lower managers, professionals)		
Higher managers, professionals	0.94*	0.91***
	(0.033)	(0.026)
Lower managers, professionals	Ref	Ref
Medium skilled workers	1.40***	1.14***
	(0.059)	(0.028)
Lower skilled workers	1.21***	1.40***
	(0.022)	(0.029)
Unskilled workers	1.42***	1.38***
	(0.042)	(0.052)
Farmers	0.61***	0.69***
	(0.095)	(0.068)
NA (only for women)	0.68**	-
	(0.121)	
Being an only child (Ref. having siblings)	1.16***	1.19***
	(0.022)	(0.023)
Urbanicity of place of residence (Ref. Large city)		
Large city	Ref	Ref
Medium/small city	0.95***	0.96**
	(0.018)	(0.018)
Normal municipality/ no city	0.81***	0.83***

	(0.021)	(0.021)
Rural area	0.74***	0.81***
	(0.025)	(0.027)
Father's highest achieved SES (Ref. Lower managers and professionals)		
Higher managers, professionals	0.98	0.94**
	(0.026)	(0.026)
Lower managers, professionals	Ref	Ref
Medium skilled workers	0.98	1.02
	(0.022)	(0.024)
Lower skilled workers	1.01	1.03
	(0.022)	(0.022)
Unskilled workers	1.00	1.06
	(0.053)	(0.055)
Farmers	0.67***	0.68***
	(0.028)	(0.028)
Having a pre-school aged child (Ref. No child < 7 years)	0.70***	0.72***
	(0.014)	(0.014)
Number of marriages	45,062	43,904
Number of divorces	15,417	15,161
Total person-years	746,164	749,092
LR chi-square	4,619.26	4,281.88

Notes: Statistical significance is indicated by *** $p < 0.01$ ** $p < 0.05$ * $p < 0.1$. Robust standard errors in parentheses.

Table A2. Relative hazard ratios of parental divorce at ages 0–13 and 14–20 from Cox proportional hazard model on risk of divorce for men and women separately.

	Men	Women
Parental divorce (Ref. No parental divorce)		
No parental divorce	Ref	Ref
Parental divorce, age 0–13	1.47***	1.76***
	(0.042)	(0.046)
Parental divorce, age 14–20	1.42***	1.53***
	(0.040)	(0.039)
Marriage cohort (Ref. 1975–1984)		
1905–1964	0.16***	0.17***
	(0.009)	(0.010)
1965–1974	0.77***	0.82***
	(0.020)	(0.021)
1975–1984	Ref	Ref
1985–1994	1.14***	1.11***
	(0.025)	(0.025)
1995–2004	1.07***	1.09***
	(0.029)	(0.029)
Age at marriage (Ref. 21–25)		
15–20	1.42***	1.57***
	(0.072)	(0.042)
21–25	Ref	Ref
26–30	0.81***	0.78***
	(0.016)	(0.016)
31–40	0.74***	0.67***
	(0.018)	(0.018)
SES (Ref. Lower managers, professionals)		
Higher managers, professionals	0.91***	0.94*
	(0.026)	(0.033)
Lower managers, professionals	Ref	Ref
Medium skilled workers	1.14***	1.41***
	(0.028)	(0.059)
Lower skilled workers	1.40***	1.21***
	(0.029)	(0.022)
Unskilled workers	1.38***	1.42***
	(0.052)	(0.042)
Farmers	0.69***	0.61***
	(0.068)	(0.094)
NA (only for women)	-	0.68**
		(0.120)
Being an only child (Ref. having siblings)	1.18***	1.16***
	(0.023)	(0.022)
Urbanicity of place of residence (Ref. Large city)		

Large city	Ref	Ref
Medium/small city	0.96**	0.95***
	(0.019)	(0.018)
Normal municipality/ no city	0.83***	0.81***
	(0.021)	(0.021)
Rural area	0.82***	0.74***
	(0.027)	(0.025)
Father's highest achieved SES (Ref. Lower managers and professionals)		
Higher managers, professionals	0.94**	0.98
	(0.026)	(0.027)
Lower managers, professionals	Ref	Ref
Medium skilled workers	1.02	0.97
	(0.024)	(0.022)
Lower skilled workers	1.02	1.00
	(0.022)	(0.022)
Unskilled workers	1.06	1.00
	(0.054)	(0.053)
Farmers	0.68***	0.67***
	(0.028)	(0.028)
Having a pre-school aged child (Ref. No child < 7 years)	0.72***	0.70***
	(0.014)	(0.014)
Number of marriages	43,904	45,062
Number of divorces	15,161	15,417
Total person-years	749,092	746,164
LR chi-square	4,282.35	4,638.46

Notes: See Table A1.

Table A3. Relative hazard ratios of spouses' experience of parental divorce from Cox proportional hazard model on risk of divorce using restricted sample, 1975–2015.

	Hazard ratio
Parental divorce (Ref. No parental divorce)	
No parental divorce	Ref
Wife	1.71***
	(0.077)
Husband	1.26***
	(0.075)
Both	1.93***
	(0.150)
Marriage cohort (Ref. 1975–1984)	
1975–1984	Ref
1985–1994	1.21***
	(0.052)
1995–2004	1.12**
	(0.061)
Wife's age at marriage (Ref. 21–25)	
15–20	1.42**
	(0.010)
21–25	Ref
26–30	0.84***
	(0.039)
31–40	0.67***
	(0.048)
Husband's age at marriage (Ref. 21–25)	
15–20	1.12
	(0.144)
21–25	Ref
26–30	0.95
	(0.044)
31–40	1.01
	(0.064)
Wife's SES (Ref. Lower managers, professionals)	
Higher managers, professionals	0.93
	(0.072)
Lower managers, professionals	Ref
Medium skilled workers	1.32***
	(0.125)
Lower skilled workers	1.18***
	(0.045)
Unskilled workers	1.31***
	(0.085)

Farmers	1.13
	(0.385)
Husband's SES (Ref. Lower managers, professionals)	
Higher managers, professionals	0.87**
	(0.052)
Lower managers, professionals	Ref
Medium skilled workers	1.07
	(0.056)
Lower skilled workers	1.25***
	(0.055)
Unskilled workers	1.10
	(0.090)
Farmers	0.75
	(0.167)
Wife being an only child (Ref. having siblings)	1.00
	(0.037)
Husband being an only child (Ref. having siblings)	0.96
	(0.036)
Urbanicity of place of residence (Ref. Large city)	
Large city	Ref
Medium/small city	1.02
	(0.042)
Normal municipality/ no city	0.91
	(0.051)
Rural area	0.81***
	(0.055)
Having a pre-school aged child (Ref. No child < 7 years)	0.68***
	(0.030)
Wife's father's highest achieved SES (Ref. Lower managers and professionals)	
Higher managers, professionals	1.07
	(0.059)
Lower managers, professionals	Ref
Medium skilled workers	0.93
	(0.045)
Lower skilled workers	0.98
	(0.046)
Unskilled workers	1.00
	(0.138)
Farmers	0.70***
	(0.062)
Husband's father's highest achieved SES (Ref. Lower managers and professionals)	
Higher managers, professionals	0.92
	(0.053)
Lower managers, professionals	Ref

Medium skilled workers	1.03
	(0.050)
Lower skilled workers	1.04
	(0.048)
Unskilled workers	1.13
	(0.143)
Farmers	0.70***
	(0.061)
Number of marriages	9,836
Number of divorces	3,386
Total person-years	162,541
LR chi-square	752.70

Notes: See Table A1.

Table A4. Relative hazard ratios of interactions between age at the time of parental divorce (0–13 and 14–20) and individual's marriage cohort from Cox proportional hazard model on risk of divorce estimated for men and women separately.

	Men	Women
Parental divorce, age 0–13 * marriage cohort		
1905–1964	1.39	1.14
	(0.476)	(0.373)
1965–1974	1.74**	1.56
	(0.399)	(0.431)
1975–1984	1.50***	1.76***
	(0.187)	(0.140)
1985–1994	1.40***	1.73***
	(0.059)	(0.064)
1995–2004	1.53***	1.82***
	(0.066)	(0.075)
Parental divorce, age 14–20 * marriage cohort		
1905–1964	1.39	2.3**
	(0.523)	(0.766)
1965–1974	1.67**	1.74***
	(0.254)	(0.172)
1975–1984	1.55***	1.57***
	(0.088)	(0.079)
1985–1994	1.35***	1.48***
	(0.058)	(0.059)
1995–2004	1.38***	1.51***
	(0.076)	(0.078)
No parental divorce * marriage cohort		
1905–1964	0.16***	0.18***
	(0.009)	(0.010)
1965–1974	0.77***	0.82***
	(0.020)	(0.022)
1975–1984 (reference category)		Ref
1985–1994	1.16***	1.12***
	(0.028)	(0.028)
1995–2004	1.08**	1.09***
	(0.032)	(0.033)
Number of marriages	43,904	45,062
Number of divorces	15,161	15,417
Total person-years	749,092	746,164
Chi-square	3,370.63	4,044.88

Notes: Statistical significance refers to difference compared to reference category *No parental divorce in 1975–1984 marriage cohort* and is indicated by *** $p < 0.01$ ** $p < 0.05$ * $p < 0.1$. Robust standard errors in parentheses. Models control for age at marriage, individual and father's SES, being an only child, urbanicity of place of residence, and if ego has a child younger than seven years. Hazard ratios depicted in Figure 3.

Table A5. Relative hazard ratios of interactions between spouses' experience of parental divorce and their marriage cohort from Cox proportional hazard model on risk of divorce using restricted sample for 1975–2015.

	Women
Parental divorce, wife * marriage cohort	
1975–1984	1.67***
	(0.149)
1985–1994	1.62***
	(0.106)
1995–2004	1.92***
	(0.158)
Parental divorce, husband * marriage cohort	
1975–1984	1.51**
	(0.245)
1985–1994	1.16*
	(0.099)
1995–2004	1.36***
	(0.131)
Parental divorce, both * marriage cohort	
1975–1984	1.38
	(0.387)
1985–1994	1.89***
	(0.206)
1995–2004	2.15***
	(0.257)
No parental divorce * marriage cohort	
1975–1984 (reference category)	Ref
1985–1994	1.24***
	(0.062)
1995–2004	1.06
	(0.070)
Number of marriages	9,836
Number of divorces	3,386
Total person-years	162,541
Chi-square	755.95

Notes: Statistical significance refers to difference compared to reference category *No parental divorce in 1975–1984 marriage cohort* and is indicated by *** $p < 0.01$ ** $p < 0.05$ * $p < 0.1$. Robust standard errors in parentheses. Models control for both spouses' age at marriage, individual and father's SES, being an only child, urbanicity of place of residence, and if they have a child younger than seven years. Hazard ratios depicted in Figure 4.

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