Is parental divorce homogamy associated with a higher risk of separation from cohabitation and marriage?

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Abstract

Numerous studies have shown that parental divorce is associated with an increase in adult children's divorce risk. We extend this literature by assessing how parental divorce on both sides of a couple is related to their partnership dynamics. Specifically, we explore (1) whether there is parental divorce homogamy and whether the parental divorce of both partners is associated with higher dissolution risks from (2) cohabiting and (3) married unions. Our analyses use event history models on high-quality Finnish Census Panel data covering 28,021 cohabiting and marital partnerships, and individuals are followed between ages 18 and 45. Findings show substantial parental divorce homogamy. Children who experienced parental divorce have an odds ratio 1.13 to enter a cohabitation with and odds ratio 1.17 to marry a fellow child of divorcees. Moreover, contrary to evidence from the United States and Norway, our findings for Finland support an additive, rather than multiplicative, association between parental divorce homogamy and union dissolution. Parental divorce homogamy increases offspring's union dissolution risk by 20% for cohabitation and 70% for marriage compared to couples where parents of neither partner are divorced. We conclude that parental divorce on both sides of a couple plays a role in union dissolution processes. In Finland, the sizes of these associations are notably weaker than previously found in the United States and Norway. This is likely because cohabitation and separation are more wide-spread and socially accepted in Finland and an expansive welfare state buffers the socio-economic consequences of divorce.

Keywords: divorce, cohabitation, union dissolution, intergenerational relations

1. Introduction

In recent decades, divorce, separation and re-partnering proliferated across many affluent democracies (Thomson, 2014). Numerous studies suggest that parental divorce increases offspring divorce (e.g., De Graaf and Kalmijn, 2006; Diekmann and Schmidheiny, 2013; Dronkers and Härkönen, 2008; Lyngstad and Jalovaara, 2010). The transmission of parental divorce therefore is one possible driver of rising or persistently high divorce rates (Wagner, 2020). Mechanisms linking parents' and offspring's divorce include socio-economic status transmission, social learning of attitudes and interpersonal behaviors from parents, and a lower threshold of union dissolution when it was observed in parents (Amato 1996; Amato and DeBoer 2001; Review: Lyngstad and Jalovaara 2010). Compared to divorce, much less is known about intergenerational transmission of separation when the adult children cohabit.

Union dissolution has numerous consequences for adults and children (Amato, 2000; Kalmijn and Leopold, 2020). For adults, consequences include new phases of living alone, single and non-residential parenthood, and the possible formation of new partnerships and stepfamilies. Divorced households are often single-income households that are at a higher risk of poverty (Hübgen, 2018; Smock et al., 1999), particularly for those with lower education or weak labor market attachment before or after union dissolution. Comparative research suggests that economic consequences of divorce are tempered by welfare state arrangements (Uunk, 2004).

Parental divorce is also related to children's up-bringing and family formation. Studies suggest that children of divorced parents tend to grow up on average with fewer socio-economic resources and fewer positive role models for interpersonal behavioral skills (e.g., Amato & Sobolewski 2001; Cherlin et al. 1995), such as compromising and conflict resolution, to maintain long-lasting relationships. Furthermore, they tend to hold more pro-divorce attitudes, which could lower thresholds for separation (e.g., Amato 1996).

Most studies focus on simple parent-child dyads to examine the intergenerational transmission of divorce. But separations are negotiated within couples. Compared to couples where only one of the partners parents divorced, the risk factors for separation and divorce in both partners of a couple could accumulate either additively or multiplicatively depending on the threshold for union dissolution at the societal level and across generations as well as the intensity of interpersonal conflict (Amato 1996, Wolfinger 2003). In this paper, we ask how parental divorce on both sides of a couple is related to offspring union formation and union dissolution risk. First, we examine whether there is parental divorce homogamy, that is, whether children of divorcees are more likely to partner with fellow children of divorcees. Second, we investigate to what extent the dissolution risk of cohabiting unions and marriages is higher when both partners' parents have divorced. This enables a more comprehensive account of the correlates of parental divorce homogamy for offspring family formation in cohabiting and married unions. We use rich representative register data for Finland that allows us to follow entire co-residential partnership histories between the ages of 18 and 45 and link each cohabiting and married partnership to both partners' parental divorce, which is usually not possible in available survey data.

The contribution of this study is threefold. First, we account for the entire prior co-residential partnership history from ages 18 to 45 as a pathway through which separation risks are passed from one generation to the next, including parental divorce homogamy in cohabitation and marriage. If children of divorced parents are more likely to partner with each other, parental divorce homogamy is relevant for a larger share of the population. Second, we explore whether the strength of parental divorce homogamy and its association with offspring separation risks are weaker in the Nordic welfare state of Finland compared to the United States, the only non-Nordic country for which estimates of this association exists. Third, to our knowledge, we present the first study that compares these associations for both cohabiting and married couples.

Cohabitation has become a common union type that is not only a prelude to marriage. Children of divorced parents may be more likely never to marry (Glenn and Kramer, 1987), and may cohabit instead. If parental divorce homogamy is concentrated among cohabiting couples, focusing on marriage only misses a substantial part of separations associated with parental divorce.

2. Background

2.1 Previous research

Numerous studies suggest that parental divorce increases children's divorce risk and that intergenerational divorce transmission is stronger in some contexts than in others (e.g., de Graaf and Kalmijn, 2006; Diekmann and Schmidheiny, 2013; Dronkers and Härkönen, 2008). For example, transmission is weaker in countries where divorce among the parent generation was more common (Dronkers and Härkönen, 2008) and less socially stigmatized (Kalmijn and Uunk, 2007). A meta-analysis on 120 European divorce studies showed that lower divorce barriers in a society are associated with weaker intergenerational divorce transmission (Wagner and Weiß, 2006). As divorce proliferates, its intergenerational transmission might become weaker, but it becomes relevant for a larger number of individuals who have experienced parental divorce. Compared to the sizeable literature on intergenerational divorce transmission in simple parent-child dyads, the couple level of both partner's experiencing parental divorce has received much less attention.

To our knowledge, to date, only three studies have examined how parental divorce on both sides of a couple is associated with offspring divorce risk (Amato, 1996; Storksen et al., 2007; Wolfinger, 2003). They all support up to three times higher divorce risks when both spouses' parents have divorced compared to those couples where parents of neither partner have

divorced. This suggests a multiplicative, rather than an additive, association of parental divorce from both sides of the couple. For the United States, Amato (1996) attributes this largely to a compound effect of poor interpersonal skills of both spouses that accumulate, causing conflict. Using different data for more recent cohorts in the United States, Wolfinger (2003) similarly finds a three times higher likelihood of divorce for couples where both parents divorced compared to couples where neither parents are divorced. In addition, children of divorced parents are 31% more likely to marry a fellow child of divorcees. Wolfinger (2003) concludes that parental divorce homogamy multiplicatively compounds the risk of offspring divorce.

The findings might be specific to the United States, where marriage is particularly idealized and culturally loaded in spite of high divorce and remarriage rates (Cherlin 2004; Lewis & Kreider 2015; Sharp & Ganong 2011). Further, in the United States the socioeconomic consequences of divorce are severe, especially for women due to limited welfare provisions for single mothers and persistent gender gaps in employment and wages (Cherlin, 2010). Compared to the estimates for the United States, for Norway Storksen et al. (2007) report slightly smaller estimates for both parental divorce homogamy and the divorce risk when both spouses' parents divorced.

2.2 The Finnish context

Finland is an interesting context to study intergenerational divorce transmission and parental divorce homogamy for several reasons. First, it is a forerunner of changes in partnership dynamics associated with the second demographic transition (Guzzo, 2014; Lesthaege, 2010). The average age at first marriage has increased and was 32 for women and 34 for men (Statistics Finland, 2015, 2018). The average age at divorce was 41 for women and 43 for men (Statistics Finland, 2018). Cohabitation is widely accepted: it is common for younger adults to cohabit for long periods of time before they marry (if they do marry) (Jalovaara and Fasang, 2020).

Nonetheless, marriage remains important as a signal of the highest commitment and cohabitations dissolve at a much higher rate than marriages (Jalovaara and Kulu, 2018).

Second, Finland is a gender-egalitarian country where women's employment rates are high. Further, the Finnish welfare state provides comparatively generous, largely universal and individualized services and income transfers that buffer the socio-economic consequences of union dissolution (Hakovirta, 2011). Thus, poverty is not as strongly transmitted by parental divorce as in liberal restricted welfare states as the United States. The association between parental divorce and offspring union dissolution is likely stronger in countries where divorce barriers are higher and divorce has more severe socio-economic consequences. Thus, we expect weaker parental divorce homogamy and weaker associations of parental divorce homogamy with offspring union dissolution compared to the United States (Amato, 1996; Wolfinger, 2003).

2.3 Extending mechanisms of intergenerational transmission of union dissolution to parental divorce homogamy

Commonly discussed mechanisms that transmit union dissolution (and union formation) from parents to children comprise socio-economic status transmission, socialization, and a genetic component (Fasang and Raab, 2014). These mechanisms partly play out and are reinforced by partnership histories preceding union dissolution (Lyngstad and Jalovaara, 2010), marrying, partner selection, and cohabitation. Union dissolution is negotiated within couples. Mechanisms of transmission between parents and children could either multiplicatively or additively compound when both partners experienced parental divorce. To extend the above mechanisms to parental divorce homogamy we assume that separation crucially depends on 1) the frequency and intensity of interpersonal conflicts, and 2) both partners' thresholds for divorce at given levels of conflict. Factors that increase the frequency and intensity of interpersonal conflict are

more likely to multiplicatively compound separation risks associated with parental divorce homogamy (Amato 1996, Wolfinger 2003). Conflicts accumulate and easily trigger further conflict multiplicatively without compensating forces. In contrast, factors that merely change thresholds for divorce but do not increase conflict, are more likely to additively compound among couples where both partners experienced parental divorce compared to where only one partner experienced parental divorce. Lower thresholds for divorce refer to lower levels of commitment to the relationship and a lack of love or positive perspective on the relationship (e.g. Amato and Rogers; Amato & Previti 2003; Clarke-Stewart & Brentano 2006). Under these circumstances, partners will more readily see separation as an acceptable option at given levels of conflict.

Below we provide an extension of the previously proposed mechanisms of intergenerational divorce transmission to parental divorce homogamy. Specifically, we distinguish whether the observed risk factors such as, interpersonal conflict, act as multipliers when observed in both partners (multiplicative effect) or whether they are more likely to simply operate additively (additive effect) (Figure 1). More generally, an additive effect could be found in societies and among generations where union dissolution is socially more acceptable and more common because the intergenerational transmission of divorce could be weaker and the role of divorce different. Because we cannot test all mechanisms discussed directly with our data, we focus on their implications for effect size in the added separation risks associated with parental divorce homogamy, which we can determine with high accuracy and reliability. We can directly account for indicators of status transmission and include extensive information on partnership histories preceding offspring divorce.

- **Figure 1** Illustration of an additive and multiplicative effect-

Concerning *status transmission*, low socio-economic status is associated with higher separation risks (Amato, 2010; Jalovaara, 2001; Kulu, 2014). Because socio-economic status is transmitted from one generation to the next, divorce transmission can arise as a by-product. Elevated stress, conflict and separation due to economic hardship have been found for married and cohabiting couples (Halliday Hardie and Lucas, 2010), and low income couples are less likely to ever marry and cohabit instead. If parental divorce homogamy is disproportionately associated with both partners experiencing economic disadvantage, the stress related to economic hardship is likely to increase the risk of union dissolution multiplicatively due to heightened interpersonal conflicts. Associations between dual low income or joblessness with separation are likely weaker in more generous welfare states as Finland that mitigate immediate economic hardship and related interpersonal conflict compared to liberal and conservative welfare types (Hansen, 2005).

Socialization and *social learning* refer to the norms and values about desirable and appropriate family lives that children learn in early childhood (Fasang and Raab, 2014). Children who have experienced parental divorce generally stigmatize separation less than children whose parents have not divorced (Dronkers and Härkönen, 2008). More positive attitudes towards divorce among both partners in a couple will lower thresholds for separation but seem unlikely to increase interpersonal conflicts. We therefore expect a mere additive increase in separation risks due to both partners having more favorable attitudes to divorce and more quickly agreeing on separation at a given level of conflict. Pro-divorce attitudes were already widespread for our study cohorts, particularly the child generation, in Finland. We expect that both partners holding more pro-divorce attitudes additively lower thresholds for divorce and that this is particularly salient for our study cohorts in Finland.

Socialization and social learning also occur with regard to relationship skills that are observed in the parental home (Wolfinger, 2003). If union dissolution is triggered by weak interpersonal skills between partners (typically the ability to communicate and compromise), children of divorced parents may adopt the same behavioral patterns that then undermine the stability of their relationships (Amato, 1996; Storksen et al., 2007). A transmission of weak relationship skills would increase the frequency and intensity of interpersonal conflicts and therefore lead to a multiplicative increase in couples' separation risk when both partners' parents divorced compared to when only one partner experienced parental divorce. Pro-divorce attitudes are related to country-specific cultural and institutional factors. Social learning of poor interpersonal relationship skills could multiplicatively accumulate conflict particularly when marriage and romantic love is strongly culturally idealized as in the United States, where disappointment of not reaching these ideals could trigger more conflict compared to a country context as Finland.

A genetic component can also contribute to intergenerational transmission of union dissolution. Shared genetic factors between siblings account for some of the intergenerational transmissions of divorce (McGue and Lykken, 1992). The exact biological and psychological mechanisms linking parental and offspring divorce largely remain a black box to date. In any case genetic and health related factors, for example the inheritance of certain personality traits seem more likely to affect interpersonal conflict (multiplicative) compared to altering separation thresholds (additive effects). Genetic effects on union dynamics could be stronger in liberal contexts as Finland where social norms are less restrictive (see Kohler 2002 for fertility).

The above mechanisms partly play out over the *partnership histories* preceding divorce. Several factors are associated with elevated divorce risks and are more likely for children of divorced parents: marrying at an early age (Kulu, 2014; Lehrer, 2008; Moore and Waite, 1981),

never marrying (Glenn and Kramer, 1987; Storksen et al., 2007), and having divorced previously (Amato, 2010). Moreover, separated individuals are more likely to separate again. In this study, we focus on two aspects of relationship histories preceding divorce: 1) parental divorce homogamy as part of assortative mating and 2) its role for separating from cohabiting relationships, not only marriages.

Parental divorce homogamy (Storksen et al., 2007; Wolfinger, 2003) is part of assortative mating. It can result from emotional closeness of sharing the experience of parental divorce or arise as a by-product of assortative mating. The strength of assortative mating differs across countries, likely leading to country-specific associations between parental divorce homogamy and offspring separation risk. The stronger assortative mating is, and the more negatively selected couples with parental divorce homogamy are, the stronger the association between parental divorce homogamy and offspring dissolution will be. Assortative mating on socioeconomic characteristics, and their association with family behavior are stronger in high inequality contexts as the United States, compared to low inequality contexts as Finland (Schwartz, 2013). We expect weaker and socioeconomically less negatively selected parental divorce homogamy and therefore weaker associations with offspring dissolution risk in Finland compared to the United States.

Long-lasting *cohabitations* are increasingly widespread in countries in advanced stages of the second demographic transition. If children of divorced parents tend to cohabit rather than marry (Storksen et al 2007), parental divorce might contribute to many more separations of co-residential unions than are captured in divorce transmission only. Despite the growing popularity of cohabitation, marriage and cohabitation differ in many respects. In Finland, most marriages start with cohabitation (Jalovaara, 2012) and couples that continue to cohabit often remain in

lower socioeconomic positions compared to couples who eventually marry (Jalovaara, 2013; Jalovaara and Kulu, 2018).

Normative barriers to dissolve cohabitations are lower compared to divorce. Even in Scandinavian countries, married couples report higher commitment and higher levels of relationship quality compared to cohabiters (Wiik et al., 2009). Married couples benefit from stronger social support and experience higher social pressure to stay together. Marriage is legally binding and its dissolution requires formal divorce procedures, while cohabiting relationships end by (simply) moving apart. Married couples are also more likely to have children and own joint property, which further operate as barriers for divorce (Jalovaara, 2013; Jalovaara and Andersson, 2018). Despite these differences, previous research has shown that the antecedents of union dissolution are similar for cohabitation and marriage in Finland, albeit socioeconomic resources are somewhat more important for marriages (Jalovaara, 2013).

Because marriage is usually preceded by cohabitation, any parental divorce homogamy found in marriages is also likely in cohabitations. If children of divorcees are more likely to never marry and cohabit instead (Glenn and Kramer, 1987; Storksen et al., 2007), parental divorce homogamy could be even stronger among cohabiting couples that eventually separate and do not marry. If lower thresholds for divorce rather than elevated interpersonal conflicts drive the association between parental divorce homogamy with offspring union dissolution in Finland, associations are likely weaker for separation from cohabitation compared to marriage. Parental divorce homogamy would then arguably contribute less to already low thresholds for separation and an already elevated separation risk in cohabiting couples. In contrast, parental divorce homogamy might be more relevant in lowering overall higher barriers and thresholds for divorce from marriage.

Finally, the above mechanisms might operate in *gender-specific* ways when only the man or only the woman experienced parental divorce. Note that gender differences in effect sizes would not distort our general framework of additive and multiplicative associations of dissolution risk with parental divorce homogamy relative to only one partner experiencing parental divorce. But the theoretical reasoning above easily extends to gender differences based on 1) women's higher likelihood to initiate the (emotional and bureaucratic) process of union dissolution (Hewitt, 2009; Hewitt et al., 2006; Sayer et al., 2011), and 2) gendered norms and socioeconomic correlates of divorce (Pessin, 2018). Both accounts suggest a stronger association when the woman's parents divorced compared to the man's parents. In Finland about 70 percent of divorce applications are filed by women (Kontula, 2013). Gendered initiation of separation from cohabitation is unknown. Women experiencing parental divorce might therefore be more relevant in lowering thresholds for initiating divorce and separation. If women lose more economically from divorce, having observed divorce in parents might make it easier to initiate or agree to divorce facing otherwise higher thresholds than men. Finland is a fairly gender egalitarian context with high levels of full-time female employment and generous individualized universal benefits that lower dependence on family members. But the gender earnings gap remains substantial especially among married men and women also in Finland (Jalovaara and Fasang 2020), suggesting that women on average do lose more economically from divorce compared to men.

2.4 Hypotheses

Our core research interest is to estimate the dissolution risk from cohabiting and married unions for couples where both partners' parents divorced, compared to couples where neither or only one of the partners' parents divorced (see Lundberg et al., 2020).

H1: Children of divorced parents are more likely to partner with a fellow child of divorced parents in cohabiting and married unions (*parental divorce homogamy hypothesis*).

H2: Children of divorced parents have a higher union dissolution risk in both cohabitation and marriage than those without divorced parents (*general parental divorce hypothesis*).

H3: Couples where both partners experienced parental divorce have a multiplicatively higher risk of union dissolution in both cohabitation and marriage compared to those in which neither of the partners experienced parental divorce (*dual parental divorce hypothesis, see Figure 1*).

H4: Parental divorce on both sides of a couple increases dissolution risk more in marriage than in cohabitation (*union type hypothesis*).

3. Data & methods

We use high-quality Finnish register data, The Finnish Growth Environment Panel (FinGEP), which is based on a 10 % sample of individuals who lived permanently in Finland in 1980. The data structure for one example case is displayed in Figure 2. First, the index-persons ("Parents") are linked to all their biological children (index-persons' children become our focal "Individuals"). Second, index-persons' children ("Individuals") are linked to each of their opposite-sex[1] co-residential either cohabiting or married partners ("Partner 1", "Partner 2", "Partner 3") and each partner is linked to their parents ("Partner's parents").

To derive all married and cohabiting partnerships, we selected a subsample of index-persons' daughters ("Individuals") born between 1969 and 1973 who we follow from ages 18 to 41–45 (i.e., between the years 1987 and 2014). In each year the (adult) daughters are matched

[1] Same-sex unions are not studied because the register data do not allow us to distinguish cohabiting couples from roommates, such as students who share a living facility in order to reduce expenses, and this would be a serious problem in these age groups.

with their cohabiting or marital partner if they have one. If we used both sons and daughters, we would inflate our sample by including some relationships twice. We, therefore, derive all relationships by reconstructing the daughters' relationship histories. Robustness checks using only the sons as index persons yielded qualitatively the same results, but a somewhat lower case number of couples as sons enter unions at a higher age. Since 1987, Finnish registers contain information about the place of residence down to the specific apartment, thereby enabling the linkage of opposite-sex individuals to co-residential couples, even when they are unmarried and childless (see Jalovaara and Kulu 2018). The partners can then be linked to their biological parents.

Unions were followed from their start until (if relevant) their dissolution. We considered all co-residential partnerships that women had between 18 and 41/45. Cohabiting couples enter the analysis when they start to cohabit (move in together). Married couples enter the analysis when they marry. In both cases, right censoring occurs after emigration, a partner's death, or age 41/45 (depending on cohort). For cohabitations, entry into marriage was an additional right censor. The final sample includes 28,021 cohabiting or married couples, who contributed 284,802 total couple-years at risk of union dissolution. Married couples contributed 219,935 couple-years at risk and 4,305 divorces, and cohabiting couples contributed 66,499 couple-years at risk and 10,897 separations. In contrast to survey data, register data does not suffer from non-response or memory bias and enables a reliable and representative linkage of couples and both partners' parental divorce. We excluded 1.9% of the cases because there was no information on the parents of both partners. In almost all of these cases, the parents were born abroad.

- **Figure 2** Illustration of data structure -

Our main predictor, parental divorce, is operationalized as follows: 0 "not divorced", 1 "woman's parents divorced", 2 "man's parents divorced", and 3 "both partners' parents divorced". The category "not divorced" includes still married parents and widowed parents. We excluded persons who were born to single mothers, because in such cases, information on the father is often missing, and our analysis requires information on both parents. After this restriction, less than 1 % (6,078 cases) of the parents of the remaining sample-persons were never married or did not have information on both parents. They were excluded from the analysis. We included all marriages of biological parents, regardless of whether parents married each other before or after the child was born.

Following the literature, we control for (overview in Table 1): both partners' education (time-varying variable, henceforth "tv"), both partners' parents' education, age at union formation, union order (tv), partnership duration (time elapsed since entry into either the cohabiting or married partnership, tv), birth cohort, and age of the youngest child in the family (tv). Parents' education is time constant and given by the dominance principle (i.e., the highest observed either maternal or paternal education). Parental education is categorized into primary, secondary (including vocational and general tracks), and tertiary education (including those with a bachelor's degree or higher). Both partners' education is coded time-varying as the highest degree attained at each observation point. Their education was categorized into primary, secondary (including vocational and general tracks), lower tertiary education (bachelor's degree), and higher tertiary (master's degree or higher).

- **Table 1** Descriptive information (distribution of couple-years at risk) -

In line with previous research, cohabiting couples in our sample dissolve their relationships more often than married couples (Table 1) (e.g., Jalovaara 2013). Partners' and

their parents' education levels are lower among cohabiters compared to married partners. The mean age of moving in together was slightly lower among married couples. Cohabiters have fewer children and more often have experienced parental divorce.

3.1 Methods

To assess parental divorce homogamy (hypothesis 1), we follow previous research to first estimate logistic regression models on the probability of entering a cohabiting or married relationship with a woman whose parents were divorced (Wolfinger 2003, Storksen 2007). The central independent variable was whether the man's parents were also divorced. To assess the association between parental divorce and offspring dissolution risk (hypotheses 2, 3, and 4), we used piecewise constant exponential event history models that divide the time axis into one-year intervals (Blossfeld et al., 2009). The baseline hazard is assumed constant within each one-year interval, but can vary flexibly without assuming any specific functional form between intervals.

For some women, we observe multiple partnerships, as separation is a potentially recurring event. Women who separate multiple times might differ from women who do not based on unobserved factors. Furthermore, previous separations tend to increase the risk of future ones. We followed two strategies to account for potential bias due to unobserved factors and recurring separations. First, we ran the entire analysis considering only the first cohabitation and the first marriage (analysis available from authors). The results remained substantively the same. Second, we ran all models including a "frailty" term, a woman-level random effect that controls for the time-invariant unmeasured characteristics of a woman (or unobserved heterogeneity) that could influence the hazard of union dissolution for any of her partnerships, for example, personality traits or inter-personal behavior. We tested both gamma and inverse Gaussian-distributed shared frailty, but the results were similar. Table A1 in the appendix presents gamma-distributed shared

frailty which is widely used in the literature because it has a flexible shape and is analytically tractable (Gutierrez, 2002). The results remained substantively the same with and without frailty. We, therefore, conclude that unobserved time-invariant characteristics and recurring separations do not seem to bias our estimates of separation risks to a substantive degree. Below we present models without the frailty term. Stata 15.1 was used for the data analysis.

4. Results

4. 1 Do children of divorced parents partner more with each other?

Table 2 shows logistic regression models on the probability to enter into cohabitation or marriage for a woman whose parents are divorced to assess *parental divorce homogamy* (hypothesis 1). The estimates support considerable parental divorce homogamy that is even stronger in marriages compared to cohabitations. Net of controls, odds ratio for men whose parents are divorced of being married to a woman whose parents are divorced is 1.17 (95% CI, 1.14-1.20) and for cohabiting couples' odds ratio is 1.13 (95% CI 1.08-1.17). Parental divorce is part of assortative mating making parental divorce homogamy a relevant feature on the population level.

- **Table 2** Parental divorce homogamy: Men's likelihood to partner with a woman whose parents are divorced (Logit-model, Odds-ratios) -

4.2 How is parental divorce from both sides of the couple related to separation risks in cohabitation and marriage?

Figure 3 shows Kaplan-Meier survival curves for separation from cohabitation (top) and marriage (bottom) by parental divorce. In line with the previous literature, cohabitations dissolve at a higher rate and more quickly than marriages (Figure 3). In addition, differences in separation risks by parental divorce are more pronounced for marriages than for cohabitations. Couples where both partners experienced parental divorce show the highest divorce risks, followed by couples where only one partner experienced parental divorce. The final line shows divorce risks for couples where neither of the partner's parents are divorced. The Kaplan-Meier survival estimates are thereby consistent with hypotheses 2 (*general parental divorce hypothesis*), 3 (*dual parental divorce hypothesis*), and 4 (*union type hypothesis*).

- **Figure 3** Kaplan-Meier survival curves with confidence intervals on union dissolution from cohabitation (top) and marriage (bottom) by parental divorce status. -

Table 3 shows exponential piecewise constant models for dissolution risks from cohabitation and marriage. In line with hypotheses 2 and 3 (*general parental divorce hypothesis* and *dual parental divorce hypothesis*), among both cohabiting and married couples, the risk of separation was higher for couples where both partners' parents had divorced, compared to couples where just one partner, or neither of the partners, had experienced parental divorce (Model 0 in Table 3). Parental divorce on both sides of the couple increased the risk of union dissolution more among married than among cohabiting couples (hypothesis 4 - *union type hypothesis*). For married couples, when one of the partners' parents were divorced compared to neither, we observe a 28–35% increase in the risk of divorce. If both partners' parents were divorced, the risk of offspring divorce increased additively to 70% (Appendix Table A2,

hypothesis 3 - *dual parental divorce hypothesis*). For cohabiting couples, the difference in the association between the parental divorce and own risk of union dissolution is much lower: an 8–13% higher risk for union dissolution if one of the partners' parents is divorced and an additive increase of 20% if both partners' parents divorced (Appendix Table A2, hypothesis 3 - *dual parental divorce hypothesis*). When all control variables were included (full model in Table 3), the differences between parental divorce status slightly diminished, especially for married couples, compared to the raw associations. Including the education of parents and offspring led to the largest reduction in the size of the association between own and parental divorce—which remains notable — suggesting that some but not all the transmission of divorce can be attributed to status transmission.

- **Table 3** Parental divorce and union dissolution: Exponential piecewise constant model, hazard ratios (HR) with 95 % confidence intervals (CI) -

The increase in separation risks associated with parental divorce on both sides of the couple is almost exactly twice as high as when only one partners' parents are divorced, clearly supporting an additive and not a multiplicative association in Finland. We further tested whether there is any indication of a multiplicative association on separation risk due to dual parental divorce by including an interaction term between the men's and women's parental divorce. The interaction term proved close to zero for both cohabitations and marriages (see Appendix Table A3). Contrary to previous studies where the size of the estimates for the probability of own divorce was three times larger for couples whose parents both divorced pointing at a multiplicative association (Amato, 1996; Storksen et al., 2007; Wolfinger, 2003), we find strong evidence for

our study cohorts in Finland a merely additive increase of separation risks when parents on both sides of a couple are divorced.

Adding to previous studies on the association between parental divorce homogamy with divorce from marriage, we for the first time show that the association between parental divorce and offspring separation risk differs between cohabitation and marriage. Parental divorce increases separation risk more for married couples than for cohabiting couples, thus supporting hypothesis 4. Although our data do not allow us to clearly disentangle the mechanisms driving the heterogeneous association for dual parental divorce for cohabitation and marriage, we are confident that birth cohort, offspring and parental education (*status transmission*), as well as age at union formation, union order, and the age of the youngest child in the family (*preceding relationship history*) do not account for these differences to large extend.

5. Robustness checks

In addition to the analyses reported in detail above, we also performed a series of robustness checks to further substantiate our results. First, we replicated all analyses using men as sample index persons. The results from the multivariate analyses (see Appendix Table A4-A5) are highly consistent with those discussed above. The only notable difference is in the descriptive distributions[2]: individuals in the sample based on man index persons were slightly older when they entered unions (cohabitation: 26.7 vs. 25.0, marriage: 25.4 vs 23.8) compared to the women's sample and we observe slightly fewer unions of men than for women when keeping the same age bracket as the observation period (cohabitation: 68,889 couple-years vs 70,460 couple-years, marriage: 197,987 couple-years vs 216,525 couple-years). Second, we conducted

[2] Available from the first author.

all analyses using a different indicator for parental background: the results did not change when we used ISEI instead of education (highest ISEI of the parents (dominance).[2]

6. Conclusion

This study aimed to assess the role of parental divorce homogamy for couple's partnership dynamics. Specifically, we considered 1) parental divorce homogamy in partner selection, and the dissolution of 2) cohabiting and 3) married unions. To our knowledge, only three previous studies, two in the United States (Amato, 1996; Wolfinger, 2003) and one in Norway (Storksen et al., 2007) and for older cohorts, have examined consequences of parental divorce homogamy for marital stability. Our study is the first to consider individuals' entire history of co-residential partnerships and to investigate the differences between cohabitations and marriages.

We add to the literature in three ways. First, we show that parental divorce from one or both sides of a couple does not only elevate offspring divorce risk, but also drives parental divorce homogamy and additively compounds separation risks in both cohabitation and marriage. We could include all co-residential partnerships regardless of marital status which is rarely possible as data on cohabitations and parents of cohabiting partners over longer periods is usually unavailable. The mechanisms transmitting union dissolution, therefore, also operate and are reinforced along different stages of the partnership history preceding union dissolution. Because children of divorced parents are more likely to partner with each other, the elevated separation risks when both partners' parents are divorced is relevant for a larger share of the population. It is therefore important to study intergenerational divorce transmission on the couple level, instead of focusing on the parent-child dyad of one partner only.

Second, together with previous studies, our findings contextualize the role of parental divorce homogamy for offspring family formation and union dissolution. In Finland, a forerunner

of the second demographic transition, cohabitation and separation are common, widely socially accepted, and not economically disastrous, especially for our relatively young cohort of the child generation. Wolfinger (2003) found that parental divorce increased the likelihood of choosing a partner whose parents are also divorced by 58 % without controls and 31 % including a broad set of controls in the United States. In contrast, we merely found a 13 %, and a 17 % increase (including controls) in choosing a partner whose parents are also divorced for cohabitation and marriage, respectively, including a relatively narrow set of controls. The size of the coefficient for parental divorce homogamy in marriage in Finland roughly corresponds to half of the one estimated for the United States. Findings are thereby in line with weaker assortative mating and less negative selection into parental divorce homogamy in low inequality contexts as Finland compared to high inequality contexts as the United States. Moreover, contrary to previous studies, we found a merely additive (double) and not multiplicative (triple) increase in the coefficient for parental divorce from both sides of a couple for their separation risk from both cohabitations and marriages.

Previous studies have interpreted the multiplicative association as poor interpersonal skills that cumulatively spiral into conflict and separation. While we could not directly measure interpersonal skills, our findings for Finland do not support such an interpretation. Rather, our findings are consistent with the interpretation that dual parental divorce primarily lowers thresholds for divorce from both partners, rather than cumulatively increasing interpersonal conflict. This is in line with the assumption that the transmission of pro-divorce attitudes and lower thresholds for divorce when having observed it in one's own parents, as well as weaker and less negatively selected parental divorce homogamy are salient mechanisms connecting parental divorce homogamy to offspring separation in Finland. Associations between both partners' parental divorce and offspring union dissolution are likely stronger in countries where

cohabitation and separation are more stigmatized, marriage is idealized and symbolically loaded, the welfare state does not effectively buffer its socio-economic consequences and assortative mating on parental divorce is stronger and more negatively selected. Unfortunately, given the data at hand, we cannot clearly specify the relative importance of each of these factors in contributing to the lower associations found between parental divorce homogamy and offspring union dissolution in Finland. This remains an important task for future research.

Third, to our knowledge, we present the first study that compares the role of parental divorce from both sides of a couple on dissolution risks in both cohabiting and married relationships. Examining cohabitation is gaining importance as it proliferates as a substitute, not only a prelude, for marriage and is associated with lower socio-economic standing and higher baseline union dissolution risks (Jalovaara, 2013). If dual parental divorce is concentrated among cohabiting couples, elevating their separation risk, this could additionally reinforce cohabiting couples' socio-economic disadvantages compared to married couples. This is not supported by our findings. Instead, we show that both parental divorce homogamy and divorce transmission from one or both sides of the couple is stronger in marriages than in cohabitations. It seems that the same event, divorce from marriage, is more strongly transmitted across generations. The stronger normative signal of commitment attached to marriage likely creates a higher threshold for divorce, in addition to the legal and economic burdens associated with divorce compared to dissolving a cohabiting union. Further, having observed one's parents' divorce might encourage offspring to go through with divorce instead of remaining in a possibly unsatisfactory partnership. Separation risks from cohabitation are generally higher and other factors appear to be more influential compared to parental divorce, albeit it also notably increases separation risks for cohabiting unions. Indeed, we would miss crucial information about the separation of co-residential unions due to dual parental divorce if we only focused on offspring divorce from

marriage, as has been done in previous studies (Amato, 1996; Storksen et al., 2007; Wolfinger, 2003). More generally, the lower separation risk from cohabitation compared to marriage associated with parental divorce homogamy is consistent with our interpretation of its additive rather than multiplicative effects in Finland: parental divorce seems to primarily lower thresholds for separation, which are generally higher in marriage than cohabitation, rather than increasing interpersonal conflict. Heightened interpersonal conflict associated with parental divorce homogamy could be expected to multiplicatively increase separation risks from both marriage and cohabitation, which is not supported by our estimates for Finland.

Our findings have to be interpreted in light of several limitations. First, while the register data allows us to include representative information on parental divorce from both sides of the couple and reconstruct entire partnership histories including all cohabiting unions on a yearly basis over a long period, it contains limited information to disentangle potential mechanisms that drive the intergenerational transmission of divorce. In contrast to survey data, register data do not include information on pro-divorce attitudes and values, interpersonal behavior, or relationship quality: next to the mechanisms considered so far, recent evidence (Gager et al., 2016) suggests that it is not the parental divorce per se (i.e., change in family structure) that increases offspring dissolution risk, but rather parental conflict and the poor relationship quality that preceded the divorce. Gager and colleagues (2016) show that parental conflicts increase offspring separation risks irrespective of parental divorce. With register data we could not test these mechanisms directly, but we did provide some insights by theoretically considering which mechanisms would plausibly lead to additive or multiplicative effects of parental divorce homogamy. We can assess population level effect sizes with particularly high precision and reliability with the register data and hope that our theoretical considerations, while partly speculative will be useful to inform future research.

Second, we could not statistically compare our data of the weaker association between parental divorce homogamy on own union dissolution risk in Finland to previous studies or other countries, which would have required merging the respective national samples. Still, assuming that the US and Norwegian data are reasonably representative, the weaker association found in our study for Finland strongly suggests that intergenerational divorce transmission is weaker at various stages of family formation compared to the older cohorts studied in the United States and Norway. This weaker association for Finland compared to the United States is in line with the cross-nationally comparative divorce literature suggesting that intergenerational continuity in union dissolution is lower in contexts where separation is more wide-spread, less socially stigmatized, and its socio-economic consequences are less severe (Dronkers and Härkönen, 2008; Kalmijn and Uunk, 2007). Against this backdrop, the relatively stronger association found by Storksen et al. (2007) for Norway are somewhat puzzling. One reason for different findings for Finland may be that our data represents younger cohorts among whom parental divorce is more common. This might explain why we found additive associations in Finland when previous studies have found multiplicative associations in Norway. This would suggest an important role of normative change and the relative prevalence of divorce in addition to structural conditions of separation entrenched in welfare state institutions. Another reason might be that our data is representative for the Finnish population whereas the Norwegian data regard only one county. Harmonized cross-national longitudinal data accounting for changes in family constellations of partners would allow for directly testing differences the strength of associations with parental divorce homogamy and estimating country and cohort interaction effects.

Third, our information on parental relationship histories was limited. We were unable to include parental separation from cohabitation, as cohabitations can only reliably be identified in the Finnish registers from 1987 onwards. It is possible that offspring separation risks from

cohabitation are more strongly associated with parental separation than with divorce, if indeed transmission of the same demographic event is particularly strong. But cohabitations were less widespread among the parent generation and therefore possibly played only a minor role compared to younger generations. Moreover, our data does not allow us to precisely locate the children's age when their parents divorced. Previous studies suggest that parental divorce early in the child's life is particularly consequential for later life outcomes (Amato, 1996). Finally, due to the set-up of our research design, we only observe relatively early separations and divorces before ages 41-45. For Norway, Storksen et al. (2007) show that the association of parental divorce with offspring divorce was highest within the first ten years of offspring marriages. These are arguably well-covered in our data, given an average first marriage age of about 32 and average age of divorce of 41 in Finland (Statistics Finland, 2015, 2018). Yet, the associations found in our study might differ for later life and higher-order union dissolutions. Future research is needed to assess how the timing of single or dual parental divorce in the child's life matters for their family formation and how these associations vary across countries. Finally, the results presented in this article should be interpreted as associations, and not causal relationships.

We conclude that not considering how parental divorce from both sides of a couple affects their broader family formation processes risks underestimating the consequences of parental divorce for demographic behavior and associated socio-economic outcomes. Parental divorce homogamy additively increases separation risks to a greater extent in marriages than in cohabitations even in a generous welfare state with liberal family values as Finland. Analyzing multigenerational dynamics of wider kinship and in-law networks as determinants of demographic behavior and socio-economic outcomes (Kailaheimo-Lönnqvist et al., 2019; Mare, 2011) as well as systematically assessing their cross-national variation remain important tasks for future research. Studies on the intergenerational transmission of family formation more

broadly, including the timing and sequencing of union dynamics and fertility (Fasang and Raab 2014) would benefit from considering both partners' parents' family formation. Because family formation is negotiated within couples, both partner's parents likely matter for all of these processes, but currently are often relegated to unexplained components in regression analyses. For example parental divorce homogamy could contribute to rising divorce rates (Wagner, 2020) and parental divorce is linked with a lower probability of becoming a parent (Jalovaara 2013). Parental divorce homogamy and its growing frequency might thereby also reduce fertility.

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Tables

Table 1 Descriptive information (distribution of couple-years at risk).

Variable		*Cohabitation (never-married) %*	*Cohabitation (all) %*	*Marriage %*
Union dissolution		14	10	2
Parental divorce				
	Not divorced	54	63	67
	Woman's parents divorced	18	17	15

	Man's parents divorced	19	15	14
	Both divorced	8	5	4
Age of the youngest child				
	Childless	56	34	27
	0–12 months	6	10	12
	1–3 years	15	23	26
	4–10 year	16	24	27
	11– years	7	8	8
Woman's education				
	Primary	15	9	8
	Secondary	49	40	38
	Lower tertiary	29	36	37
	Higher tertiary	7	16	17
Man's education				
	Primary	21	13	12
	Secondary	57	50	48
	Lower tertiary	17	24	25
	Higher tertiary	5	13	15
Education of the woman's parents				
	Primary	33	28	28
	Secondary	56	58	57
	Tertiary	11	14	15
Education of the man's parents				
	Primary	37	32	33
	Secondary	52	53	85
	Tertiary	11	15	15
		Mean (SD)		
Union order		1.4 (0.9)	1.2 (0.7)	1.2 (0.6)
Partnership duration		5.1 (5.4)	7.9 (6.2)	8.8 (6.2)
Age at moving in together		25.0 (5.8)	24.2 (4.7)	23.8 (4.3)

Table 2 Parental divorce homogamy: Men's likelihood to partner with a woman whose parents are divorced. Logit-model, Odds-ratios (OR), and 95% confidence intervals (95% CI).

	Cohabitation		Marriage	
	OR	95% CI	OR	95% CI
Man's parents divorced	1.13	1.08-1.17	1.17	1.14-1.20
Year of birth	1.05	1.04-1.06	1.02	1.01-1.02
Age at union formation	0.99	0.98-0.99	0.99	0.99-1.00
Union order	1.10	1.08-1.13	1.13	1.11-1.15
Child	0.94	0.91-0.98	0.91	0.89-0.93
Woman's edu (ref: primary)				
secondary	0.85	0.81-0.90	0.81	0.77-0.84
lower tertiary	0.81	0.76-0.85	0.75	0.72-0.78
higher tertiary	0.61	0.56-0.67	0.62	0.59-0.66
Man's edu (ref: primary)				
secondary	0.53	0.50-0.55	0.66	0.64-0.68
lower tertiary	0.35	0.33-0.37	0.48	0.47-0.50
higher tertiary	0.33	0.29-0.36	0.43	0.41-0.44
Woman's parents' edu (ref: primary)				
secondary	1.03	0.99 -1.07	0.99	0.97-1.01
tertiary	1.24	1.17-1.32	1.14	1.10-1.19
Man's parents' edu (ref: primary)				
secondary	1.54	1.49-1.60	1.61	1.57-1.65
tertiary	1.45	1.36-1.54	1.44	1.39-1.50
N (couple-years)	70,460		216,525	

Table 3 Parental divorce and union dissolution: exponential piecewise constant model, hazard ratios (HR) with 95 % confidence intervals (CI).

	Cohabitation				Marriage			
	Model 0		Full model		Model 0		Full model	
	HR	95% CI	HR	95% CI	HR	95% CI	HR	95% CI
Parental divorce (ref: both divorced)								
W parents divorced	0.88	(0.82-0.95)	0.93	(0.86-0.99)	0.74	(0.64-0.85)	0.81	(0.79-0.94)
M parents divorced	0.85	(0.79-0.92)	0.89	(0.82-0.96)	0.64	(0.56-0.75)	0.75	(0.65-0.87)
Not divorced	0.74	(0.69-0.80)	0.82	(0.76-0.88)	0.44	(0.39-0.50)	0.59	(0.52-0.68)
Partnership duration								
0	0.44	(0.41-0.47)	0.90	(0.85-0.95)	0.01	(0.01-0.02)	0.06	(0.05-0.09)
1	0.37	(0.34-0.39)	0.76	(0.65-0.88)	0.03	(0.02-0.04)	0.13	(0.09-0.17)
2	0.31	(0.28-0.33)	0.72	(0.67-0.77)	0.04	(0.03-0.04)	0.16	(0.12-0.22)
3	0.26	(0.24-0.28)	0.70	(0.65-0.75)	0.04	(0.03-0.04)	0.18	(0.14-0.24)
4	0.21	(0.19-0.23)	0.70	(0.65-0.75)	0.04	(0.03-0.04)	0.19	(0.14-0.26)
5	0.18	(0.16-0.20)	0.69	(0.59-0.80)	0.04	(0.03-0.05)	0.23	(0.17-0.30)
6	0.14	(0.12-0.16)	0.55	(0.46-0.65)	0.04	(0.03-0.05)	0.21	(0.16-0.28)
7	0.13	(0.11-0.15)	0.51	(0.43-0.61)	0.04	(0.03-0.05)	0.20	(0.15-0.27)
8	0.11	(0.09-0.13)	0.44	(0.37-0.54)	0.04	(0.03-0.05)	0.22	(0.17-0.30)
9	0.08	(0.07-0.09)	0.32	(0.26-0.40)	0.04	(0.03-0.05)	0.18	(0.13-0.24)
10	0.09	(0.08-0.11)	0.37	(0.30-0.45)	0.04	(0.03-0.04)	0.17	(0.17-0.15)
11	0.07	(0.06-0.09)	0.28	(0.22-0.36)	0.04	(0.03-0.04)	0.16	(0.12-0.22)
12	0.05	(0.04-0.07)	0.20	(0.14-0.24)	0.04	(0.03-0.04)	0.16	(0.12-0.22)
13	0.05	(0.04-0.07)	0.18	(0.12-0.22)	0.04	(0.03-0.04)	0.16	(0.12-0.22)
14	0.05	(0.04-0.07)	0.17	(0.11-0.22)	0.03	(0.02-0.04)	0.14	(0.11-0.19)

15	0.05	(0.04-0.07)	0.16	(0.09-0.18)	0.04	(0.03-0.04)	0.13	(0.10-0.18)
16-19	0.34	(0.24-0.48)	0.86	(0.60-1.26)	0.42	(0.34-0.52)	1.63	(1.19-2.24)
20-26	0.22	(0.13-0.37)	0.45	(0.27-0.76)	0.15	(0.12-0.20)	0.52	(0.37-0.74)
Year of birth			X				X	
Age at union formation			0.94	(0.93-0.95)			0.96	(0.95-0.97)
Union order			1.18	(1.15-1.22)			1.37	(1.30-1.43)
Child's age (ref. no child)								
0-12 months			0.31	(0.27-0.35)			0.20	(0.16-0.24)
1-3 years			0.52	(0.49-0.56)			0.59	(0.54-0.65)
4-10 years			0.79	(0.73-0.86)			1.04	(0.95-1.15)
11- years			2.03	(1.89-2.19)			1.28	(1.09-1.50)
Woman's edu [2]								
secondary			0.92	(0.86-0.97)			0.68	(0.61-0.75)
lower tertiary			0.92	(0.86-0.98)			0.59	(0.53-0.66)
higher tertiary			0.96	(0.86-1.07)			0.58	(0.50-0.68)
Man's edu [2]								
secondary			0.91	(0.86-0.95)			0.79	(0.72-0.87)
lower tertiary			0.88	(0.82-0.94)			0.76	(0.68-0.86)
higher tertiary			0.96	(0.86-1.08)			0.79	(0.68-0.92)
Woman's parents' edu [2]								
secondary			1.13	(1.07-1.18)			1.01	(0.93-1.09)
tertiary			1.29	(1.20-1.39)			1.22	(1.09-1.37)
Man's parents' edu [2]								
secondary			1.03	(0.98-1.08)			1.01	(0.94-1.09)
tertiary			1.23	(1.15-1.32)			1.04	(0.93-1.17)

[1] From the beginning of cohabitation or marriage; [2] Reference: primary education

Figures

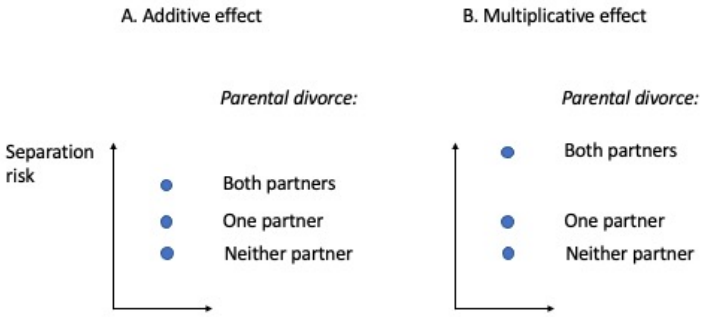


Fig. 1 Illustration of the additive effect and multiplicative effect of parental divorce.

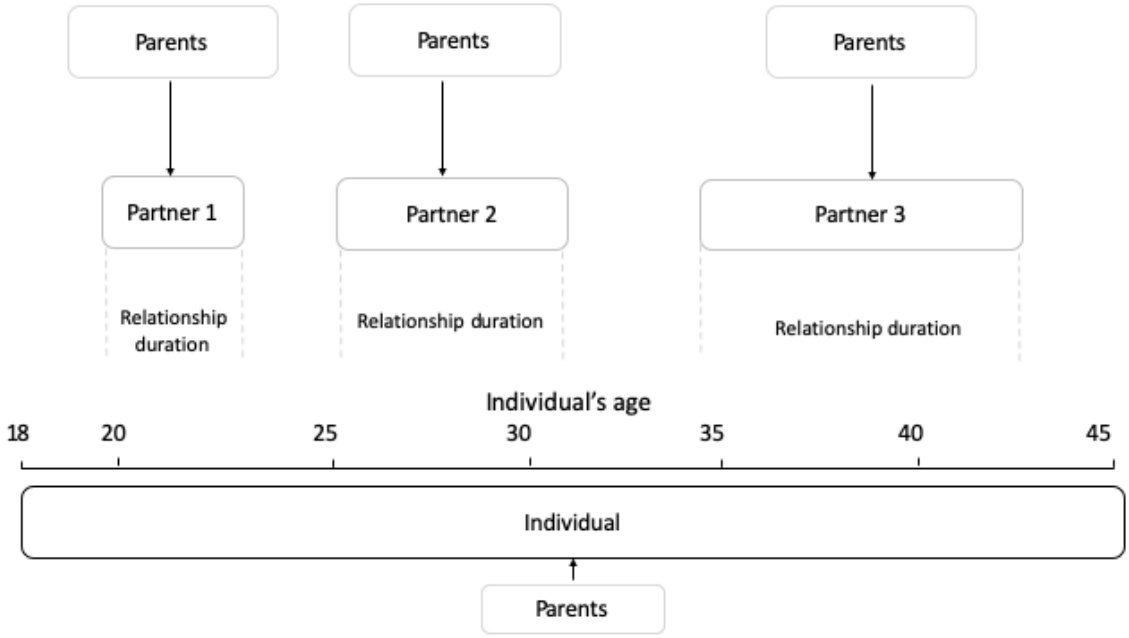
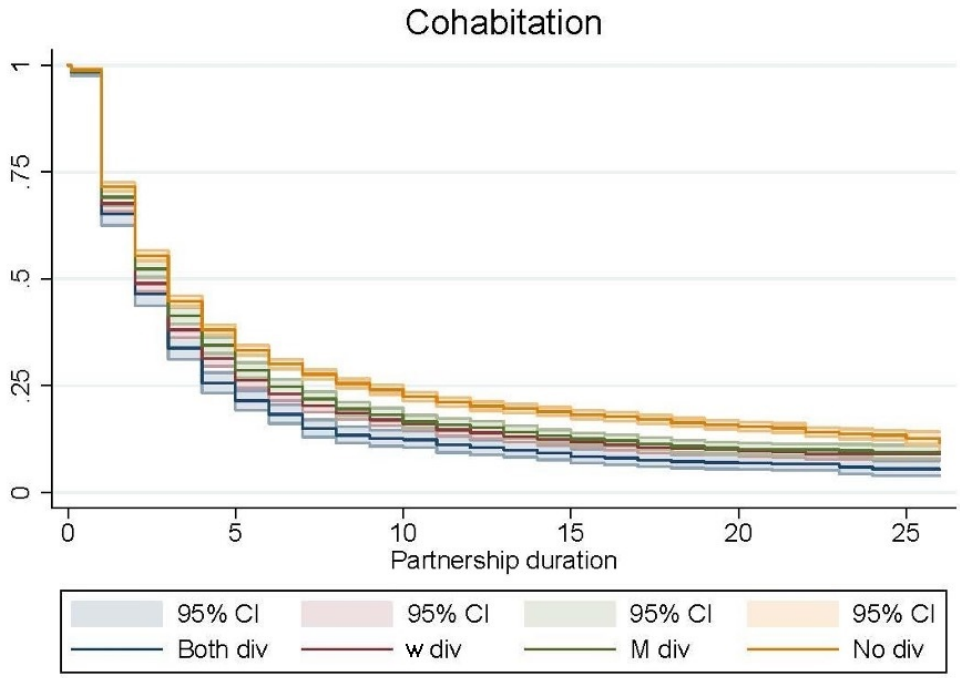
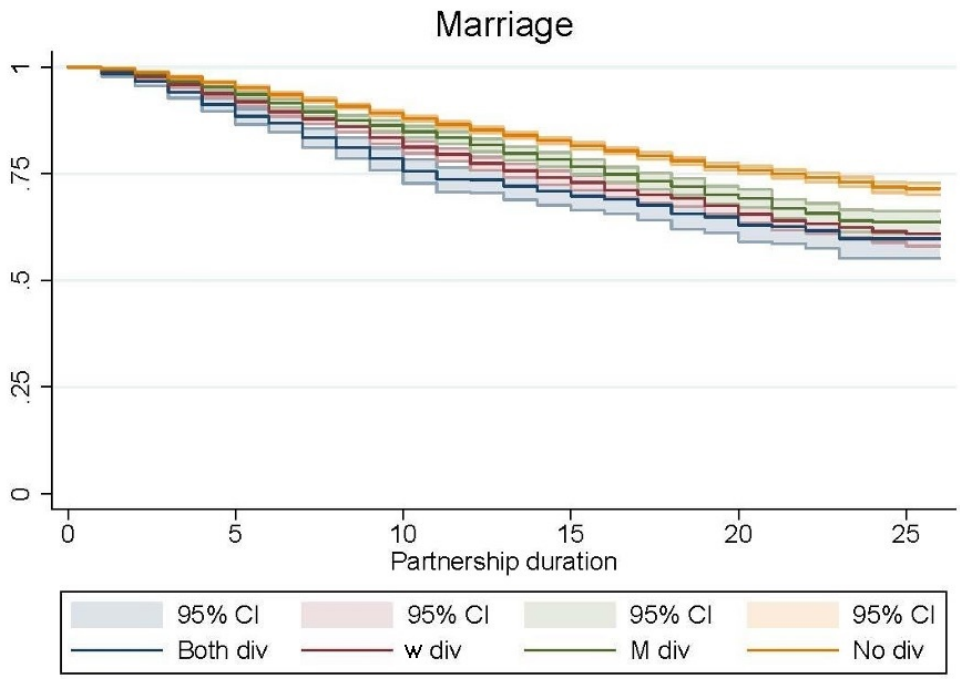


Fig. 2 Illustration of data structure: all previous co-residential partnerships and parental information is included between ages 18 and 41/45.


Cohabitation
0
.25
.5
.75
1
0
5
10
15
20
25
Partnership duration
95% CI
95% CI
95% CI
95% CI
Both div
w div
M div
No div


Marriage
0
.25
.5
.75
1
0
5
10
15
20
25
Partnership duration
95% CI
95% CI
95% CI
95% CI
Both div
w div
M div
No div

Notes: Partnership duration is cohabitation duration for cohabitations, and marriage duration for marriages.

Fig. 3 Kaplan-Meier survival curves on union dissolution from cohabitation (top) and marriage (bottom) by parental divorce status.

Appendix

Table A1 Parental divorce and union dissolution (women as sample persons). Exponential piecewise constant model, results are reported as hazard ratios (HR) and their 95 % confidence intervals (CI) with woman-level frailty.

	Cohabitation				Marriage			
	Model 0		Full model		Model 0		Full model	
	HR	95% CI	HR	95% CI	HR	95% CI	HR	95% CI
Parental divorce (ref: both divorced)								
W parents divorced	0.88	(0.83-0.96)	0.92	(0.86-0.98)	0.75	(0.65-0.86)	0.83	(0.80-0.96)
M parents divorced	0.85	(0.79-0.92)	0.90	(0.83-0.97)	0.65	(0.57-0.76)	0.76	(0.66-0.88)
Not divorced	0.74	(0.67-0.78)	0.82	(0.76-0.88)	0.46	(0.41-0.52)	0.60	(0.53-0.69)
Partnership duration								
0	0.44	(0.42-0.48)	0.91	(0.86-0.96)	0.01	(0.01-0.02)	0.06	(0.05-0.09)
1	0.37	(0.36-0.41)	0.76	(0.65-0.88)	0.03	(0.02-0.04)	0.13	(0.09-0.17)
2	0.31	(0.28-0.33)	0.72	(0.67-0.77)	0.03	(0.03-0.04)	0.15	(0.11-0.21)
3	0.26	(0.25-0.29)	0.71	(0.66-0.76)	0.04	(0.03-0.04)	0.18	(0.14-0.24)
4	0.21	(0.20-0.24)	0.70	(0.65-0.75)	0.03	(0.03-0.04)	0.19	(0.14-0.26)
5	0.18	(0.16-0.20)	0.69	(0.59-0.80)	0.03	(0.03-0.05)	0.23	(0.17-0.30)
6	0.14	(0.13-0.17)	0.56	(0.47-0.66)	0.04	(0.03-0.05)	0.20	(0.15-0.27)
7	0.13	(0.11-0.15)	0.52	(0.44-0.62)	0.04	(0.03-0.05)	0.20	(0.15-0.27)
8	0.11	(0.09-0.13)	0.44	(0.37-0.54)	0.04	(0.03-0.05)	0.22	(0.17-0.30)
9	0.08	(0.08-0.10)	0.32	(0.26-0.40)	0.04	(0.03-0.05)	0.18	(0.13-0.24)
10	0.09	(0.08-0.11)	0.38	(0.31-0.46)	0.04	(0.03-0.04)	0.17	(0.17-0.15)
11	0.07	(0.07-0.10)	0.27	(0.21-0.35)	0.04	(0.03-0.04)	0.16	(0.12-0.22)
12	0.05	(0.05-0.08)	0.20	(0.14-0.24)	0.03	(0.02-0.03)	0.16	(0.12-0.22)
13	0.05	(0.04-0.07)	0.18	(0.12-0.22)	0.03	(0.03-0.04)	0.15	(0.11-0.21)

14	0.05	(0.04-0.07)	0.17	(0.11-0.22)	0.02	(0.01-0.03)	0.14	(0.11-0.19)
15	0.05	(0.04-0.07)	0.16	(0.09-0.18)	0.04	(0.03-0.04)	0.13	(0.10-0.18)
16-19	0.34	(0.25-0.49)	0.86	(0.60-1.26)	0.42	(0.34-0.52)	1.63	(1.19-2.24)
20-26	0.22	(0.13-0.37)	0.44	(0.26-0.75)	0.15	(0.12-0.20)	0.52	(0.37-0.74)
Year of birth			X				X	
Age at union formation [1]			0.94	(0.93-0.95)			0.97	(0.96-0.99)
Union order			1.18	(1.15-1.22)			1.36	(1.29-1.43)
Child's age (ref. no child)								
0-12 months			0.30	(0.26-0.34)			0.20	(0.16-0.24)
1-3 years			0.52	(0.49-0.56)			0.60	(0.56-0.66)
4-10 years			0.80	(0.74-0.87)			1.04	(0.95-1.15)
11- years			2.03	(1.89-2.19)			1.28	(1.09-1.50)
Woman's edu [2]								
secondary			0.91	(0.87-0.98)			0.68	(0.61-0.75)
lower tertiary			0.92	(0.86-0.98)			0.60	(0.54-0.67)
higher tertiary			0.96	(0.86-1.07)			0.59	(0.51-0.69)
Man's edu [2]								
secondary			0.91	(0.86-0.95)			0.78	(0.71-0.86)
lower tertiary			0.89	(0.83-0.95)			0.76	(0.68-0.86)
higher tertiary			0.96	(0.86-1.08)			0.79	(0.68-0.92)
Woman's parents' edu [2]								
secondary			1.14	(1.08-1.19)			1.01	(0.93-1.09)
tertiary			1.29	(1.20-1.39)			1.22	(1.09-1.37)
Man's parents' edu [2]								
secondary			1.03	(0.98-1.08)			1.01	(0.94-1.09)
tertiary			1.23	(1.15-1.32)			1.04	(0.93-1.17)

[1]From the beginning of cohabitation or marriage; [2]Reference: primary education

Table A2 Parental divorce and union dissolution (women as sample persons). Exponential piecewise model, results are reported as hazard ratios (HR) and their 95 % confidence intervals (95% CI).

	Cohabitation		Marriage	
Parental divorce (ref: not divorced)	HR	95% CI	HR	95% CI
W divorced	1.13	1.06-1.19	1.35	1.24-1.48
M divorced	1.08	1.02-1.14	1.28	1.17-1.41
Both divorced	1.20	1.12-1.29	1.70	1.49-1.94

Controls: Partnership duration, Year of birth, Age at union formation, Union order, Child's age, Woman's and Man's education, Woman's and Man's parents' education

Table A3 Parental divorce and union dissolution (women as sample persons). Exponential piecewise model, results are reported as hazard ratios (HR) and their 95 % confidence intervals (95% CI).

	Cohabitation		Marriage	
	HR	95% CI	HR	95% CI
W parental div # M parental div	0.987	0.90-1.11	0.983	0.83-1.17

Controls: Partnership duration, Year of birth, Age at union formation, Union order, Child's age, Woman's and Man's education, Woman's and Man's parents' education

Table A4 Parental divorce homogamy: Men's likelihood to partner with a woman whose parents are divorced. Logit-model, Odds-ratios (OR), and 95% confidence intervals (95% CI).

	Cohabitation		Marriage	
	OR	95% CI	OR	95% CI
Woman's parents divorced	1.14	1.10-1.18	1.28	1.25-1.31
Year of birth	1.04	1.03-1.11	0.99	0.98-1.00
Age at union formation	1.00	0.99-1.00	1.01	1.00-1.01
Union order	1.09	1.06-1.111	1.13	1.11-1.15
Child	1.02	0.98-1.05	1.03	1.01-1.05
Woman's edu (ref: primary)				
secondary	0.90	0.87-0.94	0.81	0.79-0.84
lower tertiary	0.83	0.78-0.87	0.67	0.65-0.70
higher tertiary	0.89	0.81-0.97	0.65	0.62-0.68
Man's edu (ref: primary)				
secondary	0.45	0.43-0.72	0.54	0.52-0.56
lower tertiary	0.35	0.33-0.37	0.43	0.41-0.44
higher tertiary	0.23	0.21-0.25	0.32	0.30-0.34
Women's parents' edu (ref: primary)				
secondary	1.30	1.09 -1.17	1.07	1.04-1.09
tertiary	1.10	1.04-1.17	1.14	1.10-1.18
Man's parents' edu (ref: primary)				
secondary	1.60	1.54-1.66	1.39	1.35-1.42
tertiary	1.32	1.25-1.40	1.28	1.23-1.32
N (couple-years)	68,889		197,987	

Table A5 Parental divorce and union dissolution (Men as sample persons): exponential piecewise constant model, hazard ratios (HR) with 95 % confidence intervals (95% CI).

	Cohabitation				Marriage			
	Model 0		Full model		Model 0		Full model	
	HR	95% CI	HR	95% CI	HR	95% CI	HR	95% CI
Parental divorce (ref: both divorced)								
W parents divorced	0.91	(0.85-0.97)	0.91	(0.85-0.97)	0.78	(0.69-0.89)	0.97	(0.85-1.10)
M parents divorced	0.88	(0.82-0.94)	0.88	(0.83-0.94)	0.75	(0.66-0.85)	0.86	(0.77-0.99)
Not divorced	0.76	(0.71-0.80)	0.81	(0.77-0.87)	0.46	(0.41-0.52)	0.67	(0.60-0.77)
Partnership duration								
0	0.35	(0.33-0.37)	1.09	(0.95-1.24)	0.01	(0.01-0.02)	0.04	(0.03-0.06)
1	0.29	(0.28-0.31)	1.02	(0.89-1.17)	0.02	(0.02-0.03)	0.07	(0.05-0.09)
2	0.24	(0.22-0.26)	0.94	(0.81-1.08)	0.03	(0.03-0.04)	0.11	(0.08-0.14)
3	0.20	(0.18-0.22)	0.86	(0.75-1.00)	0.03	(0.03-0.04)	0.13	(0.10-0.18)
4	0.17	(0.16-0.19)	0.83	(0.65-0.75)	0.03	(0.03-0.04)	0.17	(0.13-0.23)
5	0.14	(0.13-0.16)	0.75	(0.71-0.96)	0.04	(0.03-0.04)	0.22	(0.16-0.29)
6	0.12	(0.10-0.13)	0.66	(0.64-0.89)	0.04	(0.03-0.05)	0.27	(0.20-0.36)
7	0.10	(0.09-0.12)	0.59	(0.55-0.79)	0.04	(0.03-0.04)	0.29	(0.21-0.39)
8	0.09	(0.08-0.11)	0.57	(0.49-0.72)	0.04	(0.03-0.04)	0.32	(0.24-0.43)
9	0.10	(0.09-0.12)	0.64	(0.46-0.70)	0.04	(0.03-0.04)	0.36	(0.27-0.48)
10	0.08	(0.06-0.10)	0.49	(0.53-0.80)	0.04	(0.03-0.04)	0.36	(0.26-0.48)

11	0.06	(0.04-0.07)	0.33	(0.39-0.62)	0.04	(0.03-0.04)	0.36	(0.24-0.45)
12	0.06	(0.04-0.07)	0.31	(0.25-0.44)	0.03	(0.03-0.04)	0.33	(0.23-0.42)
13	0.03	(0.02-0.03)	0.16	(0.11-0.24)	0.03	(0.03-0.04)	0.31	(0.23-0.42)
14	0.06	(0.04-0.08)	0.25	(0.18-0.35)	0.03	(0.03-0.04)	0.27	(0.20-0.37)
15	0.05	(0.03-0.07)	0.22	(0.15-0.30)	0.03	(0.03-0.04)	0.26	(0.20-0.36)
16-19	0.30	(0.21-0.42)	1.01	(0.70-1.46)	0.24	(0.19-0.29)	1.27	(0.91-1.76)
20-26	0.19	(0.11-0.33)	0.56	(0.31-0.99)	0.10	(0.07-0.14)	0.48	(0.32-0.70)
Year of birth			X				X	
Age at union formation			0.95	(0.95-0.96)			0.99	(0.98-1.00)
Union order			1.20	(1.17-1.23)			1.28	(1.21-1.34)
Child's age (ref. no child)								
0-12 months			0.06	(0.04-0.07)			0.01	(0.00-0.01)
1-3 years			0.05	(0.04-0.06)			0.03	(0.02-0.04)
4-10 years			0.24	(0.21-0.27)			0.08	(0.07-0.09)
11- years			1.75	(1.64-1.86)			0.56	(0.49-0.64)
Woman's edu [2]								
secondary			0.88	(0.84-0.93)			0.71	(0.65-0.78)
lower tertiary			0.88	(0.82-0.94)			0.69	(0.61-0.77)
higher tertiary			0.99	(0.89-1.10)			0.69	(0.59-0.80)
Man's edu [2]								
secondary			0.90	(0.85-0.95)			0.55	(0.49-0.62)
lower tertiary			0.85	(0.79-0.91)			0.46	(0.41-0.52)
higher tertiary			0.94	(0.84-1.04)			0.38	(0.32-0.44)
Woman's parents' edu [2]								
secondary			1.05	(1.00-1.10)			0.98	(0.91-1.06)
tertiary			1.18	(1.10-1.26)			0.96	(0.85-1.08)

Man's parents' edu [2]				
secondary	1.13	(1.08-1.19)	1.09	(1.01-1.19)
tertiary	1.29	(1.20-1.38)	1.11	(0.98-1.25)

[1] From the beginning of cohabitation or marriage; [2] Reference: primary education