Research Article

Homogamy in socio-economic background and education, and the dissolution of cohabiting unions

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Table of Contents

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Abstract

BACKGROUND
Despite the increasing prevalence of cohabitation, knowledge of how socio-economic homogamy affects the stability of cohabiting unions is scant. Few studies have compared the effects of homogamy in both ascribed and achieved socio-economic status on union dissolution.

OBJECTIVE
Our aim is to determine how homogamy and heterogamy in educational level and parental social class affect the risk of cohabitation dissolution in Finland.

METHODS
We use unique Finnish register data that includes information on non-marital cohabitation. Cox regression is used to analyse the risk of dissolution in 20,452 cohabitations. We examine the dissolution rates in all possible combinations of partner status, and analyse how these estimates deviate from the main effects of each partner's status.

RESULTS
According to the findings, homogamy in parental social class is of little consequence in cohabitation dissolution, although cohabitations between people from upper-white-collar and farmer families are disproportionately likely to dissolve. Educational differences between partners are more significant determinants of cohabitation stability: extreme heterogamy is associated with an increased separation risk, and homogamy decreases the separation risk among cohabitors with a higher university degree.

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CONCLUSIONS

In line with the perception that personal achievement is more significant than social origins in contemporary union dynamics, similarity in educational level increases cohabitation stability more than similarity in socio-economic origin. Although previous Nordic studies report little or no association between educational homogamy or heterogamy and marriage dissolution, our study shows that educational differences do matter in cohabiting unions.

1. Introduction

The extent to which socio-economic homogamy – in other words, similarity in partner status – guides union formation and dissolution is considered an indicator of barriers between status groups in a society. A strong homogamy tendency in partner selection and a disproportionate likelihood of union disruption among heterogamous couples may point to large social and cultural gaps between socio-economic groups. This study explores the effects of homogamy and heterogamy in educational level and parental social class on union dissolution in Finland. The aim is to assess the significance of status differences for union stability, and to determine whether similarity in childhood socio-economic circumstances or the achieved position of the partners is more decisive in contemporary union dynamics. Few studies thus far compare the effects of homogamy in ascribed and achieved socio-economic position on union stability. Research on partner selection nevertheless indicates that homogamy in achieved status is more prominent than in ascribed status (Kalmijn 1991, 1998; Hansen 1995). However, tendencies in partner selection result not only from people's preferences but also from the structural opportunities to meet and interact with potential partners of a similar status. One means of eliminating the effect of these structural factors is to examine the decisions the partners make after they have formed the union, such as to separate (see Hansen 1995; Müller 2003). Examining the effects of homogamy and heterogamy on union dissolution may thus facilitate assessment of whether people actually prefer partners who share similar socio-economic characteristics.

The focus of the study is on the dissolution of non-marital cohabiting unions. Cohabitation has become increasingly prevalent in Western countries in recent decades, and the Nordic countries have been forerunners in this development: currently there is little social distinction between cohabitation and marriage in these countries, and children are born and raised in both union types (Kiernan 2001; Heuveline and Timberlake 2004). Nine out of ten new unions in Finland are cohabitations (Jalovaara 2012). First cohabitations, at least, are more likely to end in separation than in marriage:

it is estimated that within ten years of formation, less than 40% of cohabitations have been converted to marriages, and over 50% are dissolved (Jalovaara 2013). Given that separation rates in Finland are known to be higher in cohabiting unions than in marriages (Liefbroer and Dourleijn 2006; Jalovaara 2013), dissolving unions are highly likely to be cohabitations. However, even in the Nordic countries research on union dissolution has focused mainly on marriages, and therefore little is known about the antecedents of cohabitation dissolution. The excellent Finnish register data enables us to fill this gap in knowledge regarding how socio-economic homogamy affects the stability of non-marital cohabitations.

Our study extends previous research on the effects of homogamy and heterogamy on union stability in several other ways as well. First, we examine the effects of homogamy in both parental social class (ascribed status) and individual educational attainment (achieved status). Numerous studies have investigated the effects of educational differences between partners on divorce risk, but less is known about the effects of homogamy in socio-economic origins on union stability. Second, given that homogamy is normative in unions, heterogamous couples tend to be rare, and studying them requires extensive data. The large number of observations in the register data at our disposal enables us to examine the probability of union dissolution in each combination of partner status, and thus to analyse the infrequent but theoretically interesting heterogamous couples, as well as different kinds of homogamous couples. These analyses produce exceptionally detailed knowledge about the effects of social boundaries on union stability. Finally, the use of register data allows us to avoid many of the problems encountered in studies based on survey data, such as biased samples due to the self-selection of respondents, and the misreporting of partner characteristics.

2. Background

2.1 Hypotheses concerning the effects of homogamy on union stability

The general assumption in the sociological literature is that homogamy increases union stability, whereas heterogamy increases the probability of breaking up. Social and cultural similarity is assumed to foster value consensus between partners on basic life goals and priorities, ensure a common basis of conversation, and reduce frictions that may arise from dissimilarity in tastes and worldviews (Bumpass and Sweet 1972; Kalmijn 2003; Kalmijn, de Graaf, and Janssen 2005). Given that forming a union with a person with dissimilar social and economic characteristics implies crossing a social boundary, a heterogamous union may also be disapproved of, and the couple may thus receive less social support from family members and friends (Kalmijn, de Graaf, and

Janssen 2005). We thus expect *homogamy in socio-economic background and educational level to increase, and heterogamy to decrease union stability (H1).*

Individuals' values, tastes, and lifestyles are shaped both within the parental family environment and in contexts outside it, such as in educational institutions and peer groups (Kalmijn 1991; Hansen 1995). If early socialization is particularly significant in the formation of cultural resources, homogamy in ascribed characteristics such as parental social class and ethnic background should diminish the risk of union dissolution (Hansen 1995). Social support from parental families and social networks may further increase union stability (Janssen 2002; Kalmijn, de Graaf, and Janssen 2005). On the other hand, if orientations and influences later in life (e.g., educational institutions and peer groups) strongly shape values and lifestyles, homogamy in achieved characteristics such as educational level and occupation should be decisive in terms of union stability (Hansen 1995). Existing literature postulates that as intergenerational social mobility has increased and young adults have become increasingly independent of their parents, social origin has become less important than achieved status in partner-selection decisions (Kalmijn 1991, 1998; Hansen 1995). Education in particular is considered to have a strong effect on the cultural resources of individuals, and hence on their partner preferences (Kalmijn 1991, 1998; Hansen 1995; Blossfeld 2009). On these grounds we posit that *educational homogamy is more important than homogamy in socio-economic background in maintaining union stability (H2).*

Given that the unions investigated in this study are cohabitations rather than marriages, similarity in achieved status is all the more likely to be of greater significance for their stability than similarity in ascribed status. The level of commitment among cohabiting couples is perceived as being lower than among married couples, indicated for instance in the higher dissolution rates (Liefbroer and Dourleijn 2006; Jalovaara 2013), lower childbearing intensity (Oláh and Bernhardt 2008), and more frequent break-up plans (Wiik, Bernhardt, and Noack 2009) among cohabitors. It has been suggested that cohabitors are therefore less concerned with kinship issues and more loosely bound to the wider family network than married partners (Schoen and Weinick 1993). This implies that homogamy in ascribed characteristics, such as social origins, is less relevant for cohabiting than for married couples (ibid.).

According to the microeconomic theory of marriage, a gendered division of household labour whereby the male partner specializes in paid work and the female partner in domestic work increases the gains from marriage and thus reduces the risk of dissolution (Becker, Landes, and Michael 1977). From this perspective, given that the level of education is not only a determinant of values and attitudes but also an indicator of an individual's labour-market prospects and earnings potential, the propensity to separate is likely to be lower among educationally hypergamous couples (couples in

which the male partner is more highly educated than the female partner) compared with homogamous couples. A union-stabilizing effect of educational hypergamy is unlikely to appear in the current study, however, for at least two reasons. First, given the high level of education and labour-force-participation rate among women in Finland, and the fact that the dual-earner family has become the social standard, economic dependence between partners is likely to be relatively symmetrical. Second, as noted in the literature, cohabiting partners in particular are likely to stay together under conditions of equality. Because cohabitation is often short-lived, and cohabiting partners have no legal marriage contract to secure them in case of a break-up (Brines and Joyner 1999), and also because there are fewer norms regarding the roles and behaviour of cohabiting rather than marriage partners (Baxter 2005), cohabitors tend to be more averse than married couples to the gendered division of household labour. Empirical evidence has shown that both attitudes and the actual division of housework are indeed more gender-egalitarian among cohabitors than among married couples (Smock 2000; Baxter 2005; Davis, Greenstein, and Gerteisen Marks 2007; Domínguez-Folgueras 2013). Accordingly, it has been suggested that socio-economic equality rather than specialization promotes cohabitation stability (Brines and Joyner 1999; Kalmijn, Loeve, and Manting 2007; Jalovaara 2013).

Given that our data enables us to examine the risks of union dissolution in each partner combination, we extend the general heterogamy hypothesis and posit that the effects of homogamy and heterogamy may depend on the social stratum. In accordance with the notion that homogamy in social origins is a means of maintaining class cultures and keeping distances between social groups, it has been argued that in-group union formation is particularly important for the upper classes of a society because it helps them to retain their privileged position (Hansen 1995). We thus assume that *homogamy in socio-economic background increases union stability among those from upper-white-collar families in particular (H3).* Furthermore, in view of the fact that larger social and cultural differences between partners are more likely than smaller ones to cause friction, we assume that *heterogamy is more likely to decrease union stability if the social distance between the groups is large (H4).* We might expect to see pronouncedly increased separation rates among couples with highly uneven educational attainments, as well as among those in which one partner comes from an upper-white-collar family and the other from a farmer or a blue-collar family, but only slight increases in dissolution risk among couples whose statuses differ less markedly.

2.2 Previous findings

Few studies examine how educational differences between cohabiting partners affect their probability of separating. Nevertheless, those that have been conducted indicate that educational heterogamy does play a role in cohabitation stability: Brown (2000) found that heterogamous couples in the U.S. faced an increased separation risk relative to homogamous couples, although the effect was not statistically significant, and Smock and Manning (1997) reported an elevated risk among clearly hypergamous couples. Moreover, educational hypogamy has been reported to increase the probability of cohabitation dissolution in West Germany (Müller 2003). The effects of educational differences on cohabitation stability have not been examined in the Nordic countries so far, but results concerning marriage dissolution in these countries are not supportive of the general heterogamy hypothesis: educational heterogamy has been reported to have only a minor (Jalovaara 2003) or no impact on divorce risk (Hansen 1995; Finnäs 1997; Lyngstad 2004, 2006). More clearly evident divorce-promoting effects of educational heterogamy have been observed in the U.S. and Western Europe, however (Bumpass, Castro Martin, and Sweet 1991; Tzeng 1992; Heaton 2002; Schoen 2002; Schoen et al. 2002; Kalmijn 2003; Müller 2003).

Studies examining the effects of homogamy in socio-economic family background on union dissolution are few and far between, which is probably due to the lack of data on both partners' parental family characteristics. Contradicting the hypothesis that homogamy in achieved socio-economic status is more important for union stability than homogamy in socio-economic origin, a Norwegian study (Hansen 1995) found that homogamy with respect to paternal occupational class rather than educational homogamy decreased divorce risk. Distinguishing between the economic and cultural aspects of paternal occupational status, Janssen (2002) found that homogamy in economic social origin, but not in cultural social origin, decreased the probability of divorce in the Netherlands. To the best of our knowledge, there have been no studies on the effects of homogamy in socio-economic family background on cohabitation dissolution.

Three very recent studies using the same register data as this one focus on the formation and dissolution of cohabitations and marriages in Finland (Jalovaara 2012, 2013; Mäenpää and Jalovaara 2013). According to the findings, greater socio-economic resources of women and men promote union formation and stability: high educational attainment, labour-force participation, and high income turned out to be associated with a higher rate of union entry (Jalovaara 2012), and with a lower rate of union dissolution (Jalovaara 2013). Although the socio-economic antecedents of union formation and dissolution were notably similar regardless of union type, marriage nevertheless seems to require a somewhat stronger economic foundation than cohabitation: advantageous socio-economic position tended to promote marriage without a preceding cohabitation

more strongly than the formation of a cohabiting union (Jalovaara 2012), and some of the union-stabilizing effects of greater socio-economic resources were stronger in marriages than in cohabitations (Jalovaara 2013). The female partner's higher contribution to household income was found to encourage separation in both union types: in the case of cohabitation this only happened when the woman's income clearly exceeded that of her partner, whereas the effect was stronger and more consistent in marriages (Jalovaara 2013). A previous paper based on the same study population as the current study shows how homogamy and heterogamy in socio-economic origin and educational level affect the probability that a cohabiting couple will proceed from cohabitation to marriage (Mäenpää and Jalovaara 2013). The results indicate that homogamous couples are not selected from cohabitation to marriage to any great extent in Finland: homogamy increased the marriage rate only among people who grew up in farmer families and those with no more than a basic level of education. Another significant finding was that the effects of educational heterogamy on the transition to marriage were not unequivocal, but varied across educational combinations of partners. What has not yet been studied is how similarity and dissimilarity in cohabiting partners' educational attainments and socio-economic family background influence their propensity to separate. This is the aspect we focus on in this paper.

2.3 Measuring the effects of homogamy and heterogamy

Most previous studies analysing the effects of homogamy and heterogamy in socio-economic background or education on union dissolution applied difference measures. On the crudest level, couples are divided into homogamous and heterogamous groups (e.g., Hansen 1995; Brown 2000). In the case of educational level, which is an ordinal characteristic, most studies further distinguish between heterogamous unions according to whether the female or the male partner is the more highly educated (e.g., Bumpass, Castro Martin, and Sweet 1991; Tzeng 1992; Heaton 2002; Schoen 2002; Schoen et al. 2002; Müller 2003), but the extent of the educational difference is more rarely considered (see, however, Kalmijn 2003). Difference measures have been criticized on various grounds, such as their inability to show whether the effects of homogamy and heterogamy depend on the absolute levels of education (see Eeckhaut et al. 2013). Taking advantage of the large number of observations in our data, we analyse the interactions between the partners' statuses in more detail by examining the rates of union dissolution in all possible combinations of partner status. A similar approach has been used in previous Nordic studies on the effects of educational differences on divorce risk (Jalovaara 2003; Lyngstad 2004, 2006).

3. Data and method

3.1 Data and study population

The data are extracted from the so-called *Palapeli* research register compiled at Statistics Finland. The register covers all individuals who belonged to the population of Finland on 31 December in at least one of the years between 1970 and 2000, and was formed by linking data from the population register and census and employment statistics, for instance, by means of personal identity codes. *Palapeli* comprises information on individuals and all their unions, partners, and children up to December 2003. Data on the partners' demographic and socio-economic characteristics are symmetrical, which is a major advantage in the study of homogamy. The extract analysed here is an 11% sample of individuals born before 1986.

Exceptionally, *Palapeli* includes detailed data on cohabiting unions from 1987 onwards. Unlike registers in Sweden and Norway, which identify cohabiting unions only when the couple has shared children, the Finnish registration system enables the inference of all cohabitations because a person's place of residence is known to the precision of a dwelling. Cohabiting couples are defined in *Palapeli* as a male and a female who have been domiciled in the same dwelling for over 90 days, who are not married to each other, who have no more than a 20-year age difference (this rule does not apply if the couple has shared children), and who are not siblings, or a parent and a child. The dates of union formation and dissolution are precise within one month.

We analysed cohabiting unions formed by women born in 1960–1977 during the period from January 1995 to December 2002. During this period 24,823 women entered a cohabiting union. Among those who had formed more than one such union the first one was included in the analysis. Only unions in which both partners were born in Finland were included in the study because much of the data on individuals born abroad are deficient with regard to the time preceding immigration. This condition excluded 1,921 cohabitations. Women whose partner was born before 1956 were also excluded (*n* = 1,039) because parental occupational class can be inferred only for birth cohorts from 1956 onwards. Furthermore, because many people under 20 years of age are still in education, unions formed when the women were under the age of 20 were excluded (*n* = 1,615). The final number of cohabiting unions was 20,452.

We assumed that cohabitation had ended if the couple had moved apart. The minimum duration of separation was set at one year: a woman was interpreted as not having separated if she went back to live with the partner within a year and had not formed another union in the meantime. Cohabitations were followed for dissolution from the month the couple moved in together to December 2003. Couples were censored if they moved abroad, if either partner died, if they married, or if the

observation period ended (December 2003). During the follow-up, cohabitations contributed 674,316 months at risk. In total 7,463 cohabiting couples (36.5%) separated, 6,448 (31.5%) married, 76 (0.4%) were censored through migration or death, and 6,465 (31.6%) were still cohabiting in December 2003.

3.2 Covariates

We measured *socio-economic background* in terms of parental occupational class.[3] This can be inferred from data on each person below the age of 15, when the household's reference person determines the occupational class. The reference person is the individual who is interpreted as having the primary responsibility for the subsistence of the household. In practice it is the parent with the higher income, and hence in most two-parent families it is the father. Occupational class is given in the register for every fifth year since 1970, and the measures were taken when the partners were 8–14 years old, depending on their year of birth. The first three categories distinguish people from (1) upper-white-collar employee families, (2) lower-white-collar employee families and (3) blue-collar families. The fourth group comprises people who grew up in farmer families (4). This category is qualitatively important in the case of Finland, which industrialized relatively late. The country is geographically and also socio-culturally quite strongly divided into urban areas on the one hand and sparsely populated countryside on the other. 'Farmer' here refers to self-employed people and employers in agriculture, forestry, and fishing, workers in these fields being classified as blue-collar workers. 15% of the Finnish labour force worked in agriculture, forestry, and fishing in 1975, and around half of them were self-employed workers without employees (Statistics Finland 1981). The last category is the residual group 'Other' (5), and includes individuals whose parental occupational status is student or pensioner, as well as those for whom data is missing. Individuals originating from families of self-employed people and employers (other than farmers) are also placed in this category: the data does not distinguish between small entrepreneurs and owners of large companies; thus the group would not constitute a meaningful category in itself. Self-employed people and employers comprise about half of the category, on account of which it is heterogeneous, and the results are not easy to interpret. Appendix Table 1 shows the months at risk by the partners' parental occupational classes.

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[3] Using parental education instead of occupational class would yield a more symmetrical measurement of parents' and their offspring's socio-economic position, but our data did not include any socio-economic information on the parental families except occupational class. The use of occupational class as an indicator of achieved status was not feasible either: occupational status is not as well established as educational attainment in a relatively young study population, and this measure is available in our data only at five-year intervals.

Given that *Palapeli* provides month-level data on the completion of educational qualifications, we constructed monthly updated time-varying covariates depicting the partners' *educational levels* (lagged one month). Individuals with no registered post-comprehensive, non-compulsory education are interpreted as having a basic-level qualification (1), which means at most nine years of education. Education up to the upper-secondary level (2) lasts 11–12 years and includes the matriculation examination (i.e., the final examination at the end of upper-secondary school that yields eligibility for higher education) and vocational qualifications obtained in one to three years. Lower-tertiary education (3) includes the lowest level of tertiary study (2–3 years following the upper-secondary level) and the lower-degree level (3–4 years following the upper-secondary level, e.g., polytechnic degrees and Bachelor's degrees from universities). Upper-tertiary education (4) includes the higher-degree level (5–6 years following upper-secondary education, e.g., Master's degrees from universities), as well as doctorates or equivalent education. Appendix Table 2 shows months at risk by the partners' educational levels.

We controlled for four basic factors that could have distorted our analysis of the association between socio-economic homogamy and union dissolution. Seven categories of *age homogamy* are distinguished: (1) female 8 or more years older, (2) female 4–<8 years older, (3) female >0–<4 years older, (4) male 0–<4 years older, (5) male 4–<8 years older, (6) male 8–<12 years older, and (7) male 12 or more years older. *The female partner's age at cohabitation entry* is classified in five categories: (1) 20–24, (2) 25–29, (3) 30–34, (4) 35–39, and (5) 40–42. A couple's *place of residence* is a time-varying covariate indicating where they resided at the end of the previous calendar year, updated yearly and categorized as follows: (1) Helsinki metropolitan area, (2) other urban, (3) semi-urban, and (4) rural. *Parental status* is a time-varying covariate, updated monthly and lagged one month. We formed seven categories (see Table 5) according to whether the couple had shared children, whether the child was the couple's first or a later child, whether the woman was pregnant, and whether the child was 0–12 months old or older. Pregnancy was deduced from the registered birth dates, and defined as seven months preceding a birth. The months at risk according to the control variables are shown in Table 5.

3.3 Method and analytical strategy

We used the Cox proportional hazards model to analyse the risk of cohabitation dissolution. The results are presented as hazard ratios (HR). We analysed the role played by homogamy and heterogamy by comparing the fit of a main-effects model and a joint-effects model (likelihood-ratio test). The main-effects model shows the average

effects of the male and the female partners' statuses on the risk of cohabitation dissolution. In the joint-effects model the full interaction of the partners' statuses is considered. For both socio-economic background and educational level the full interaction models produced a statistically significant improvement in fit. We then examined the parameter estimates in each cell and compared them with the estimates of the main-effects model to identify the forms of homogamy and heterogamy that decrease or increase the risk of dissolution.

When we analysed the main effects and the joint effects of the partners' parental occupational classes we controlled for the joint effects of their educational levels, and vice versa, in order to determine the independent effects of these two dimensions of homogamy. The control variables introduced above are also included in all the models.

4. Results

4.1 Homogamy in socio-economic background and cohabitation dissolution

Table 1 gives the main effects of parental occupational class on the risk of cohabitation dissolution. Among the women, separation risk is somewhat lower among those from farmer families than among other groups. No marked differences by socio-economic background are observable among the men.

The comparison of fits of the main-effects model and the joint-effects model indicates that the full interaction between the partners' parental occupational classes is statistically significant (p = 0.034). To determine in which cases homogamy or heterogamy affects the propensity to separate, we compare the hazard ratios from the joint-effects model displayed in Table 2 with the main effects in Table 1. In most cases the risks of dissolution in the various combinations of partner status are in line with the main effects: the hazard ratios in the columns comply with the main effects of the male partner's origins, and the hazard ratios in the rows comply with the main effects of the female partner's origins. Some exceptions can be detected, however. While the main effects imply that the risk of separation does not vary with the male partner's parental occupational class, it is obvious that this is not the case among women from upper-white-collar families (column 1 in Table 2): the dissolution risk is 38% higher if the male partner comes from a farmer family, and 34% higher if he comes from the category 'Other', compared with if he has an upper-white-collar family background. Among women from farmer families (column 4), whose separation rate is on average relatively low, the risk is elevated if the male partner comes from an upper-white-collar family.

The estimates in Table 2 are from fully adjusted models. The same interactive effects nevertheless emerge without adjusting for the four control variables as well (results not shown). In addition, the estimates from the joint-effects model of parental occupational class are practically the same regardless of whether we control only for the main effects of the partners' educational levels, or also their joint effects. Similarly, the effects of educational differences (Table 4) are robust to the inclusion of the interaction of the partners' parental occupational classes in the model. Homogamy in educational level and parental social class thus affect the likelihood of dissolving a cohabiting union independently of one another.

Table 1: **The main effects of parental occupational class on the risk of cohabitation dissolution, hazard ratios (HR) from a Cox regression model**

Parental occupational class	Female partner	Male partner
Upper white collar[a]	1.00	1.00
Lower white collar	0.97	0.95
Blue-collar worker	0.93*	0.98
Farmer	0.86**	0.97
Other	1.00	1.05

Note: The hazard ratios are adjusted for the control variables in Table 5 and the joint effects of educational level.
  *$p < .05$. **$p < .01$. ***$p < .001$.
  [a] Reference category.
Source: Palapeli register data, cohabitations formed during 1995–2002 involving women born in 1960–1977.

Table 2: **The joint effects of parental occupational class on the risk of cohabitation dissolution, hazard ratios (HR) from a Cox regression model**

		Female partner's parental occupational class				
		Upper white collar (1)	Lower white collar (2)	Blue-collar worker (3)	Farmer (4)	Other (5)
Male partner's parental occupational class	Upper white collar (1)	1.00[a]	0.95	0.98	1.11	1.07
	Lower white collar (2)	0.91	0.93	0.94	0.95	0.95
	Blue-collar worker (3)	0.96	1.01	0.94	0.82	1.01
	Farmer (4)	1.38	0.92	0.89	0.82	0.99
	Other (5)	1.34	1.09	0.94	0.81	1.05

Note: The hazard ratios are adjusted for the control variables in Table 5, and the joint effects of educational level.
  [a] Reference category.
Source: As for Table 1.

4.2 Homogamy in educational level and cohabitation dissolution

Table 3 presents the main effects of educational level. Among both women and men, higher educational attainment is associated with a reduced probability of cohabitation dissolution: individuals with only a basic-level education stand out as being at the highest risk of separation, whereas the risk is lowest among those with a tertiary-level education. A negative educational gradient has also been reported for both sexes in previous Nordic studies on cohabitation dissolution (Jalovaara 2013) and divorce from marriage (e.g., Finnäs 1997; Jalovaara 2001, 2003, 2013; Lyngstad 2004, 2006, 2011).

Model fit comparison indicates that the full interaction between the partners' educational levels is statistically significant ($p = 0.004$). As Table 4 shows, the hazard ratios from the joint-effects model often diverge from the main effects given in Table 3. Apparent deviations are found among couples in which one partner has a basic-level education (column 1 and row 1 in Table 4). A large educational difference increases the probability of cohabitation dissolution: the main-effects model predicts men with an upper-tertiary education to have a 43% lower separation risk than men with a basic-level education across all educational levels of the woman, while the joint-effects model estimates that if the female partner is educated to the basic level (column 1) the reduction is only 15%. While the main-effects model predicts upper-tertiary educated women to have a 38% lower separation risk than basic-level educated women across all levels of partner's education, if the male partner has no education beyond the basic level (row 1) the advantage in stability is only 22%.

Less extreme forms of educational heterogamy do not appear to substantially elevate the separation risk. Among people with an upper-secondary level education (column 2 and row 2) differences in separation risks by the partner's educational attainment are not very different from the estimates of the main-effects model. One interactive effect emerges among those with a lower-tertiary education (column 3 and row 3): while the main-effects model predicts upper-tertiary educated men to have a 43% lower separation risk than men with a basic-level education across all levels of the woman's education, if the female partner is educated to the lower-tertiary level (column 3) the reduction is only 30% (1-(0.49/0.70)).

Homogamy seems to decrease the risk of separation among people with an upper-tertiary level education (column 4 and row 4). While the main effects estimate upper-tertiary educated men to have a 43% lower risk of separation than basic-level educated men, a 19% (1-(0.57/0.70)) lower risk than upper-secondary educated men, and a 7% (1-(0.57/0.61)) lower risk than lower-tertiary educated men across all levels of the woman's education, the advantages in stability are substantially greater if the female partner is educated to the upper-tertiary level (column 4): 59% (1-(0.32/0.78)), 37% (1-(0.32/0.51)), and 20% (1-(0.32/0.40)), respectively. Similarly, the main effects of the female partner's educational level suggest that upper-tertiary education reduces the

separation rate by 38%, 19% (1-(0.62/0.77)), and 2% (1-(0.62/0.63)) compared with basic, upper-secondary, and lower-tertiary education, respectively, but if the male partner is educated to the upper-tertiary level (row 4) the reductions are as much as 62% (1-(0.32/0.85)), 26% (1-(0.32/0.43)), and 35% (1-(0.32/0.49)).

     The results concerning the effects of educational differences on cohabitation dissolution are also very robust to the adjustment of the four control variables (results not shown). However, among couples who are extremely hypogamous with respect to education (those in which the male is educated to the basic and the female to the upper-tertiary level), there is some 'excess' risk of separation that is attributable to age heterogamy: if we did not control for age homogamy, the dissolution-promoting effect of educational hypogamy would be even greater than in the fully adjusted model displayed above.

Table 3:   **The main effects of educational level on the risk of cohabitation dissolution, hazard ratios (HR) from a Cox regression model**

Educational level	Female partner	Male partner
Basic[a]	1.00	1.00
Upper secondary	0.77***	0.70***
Lower tertiary	0.63***	0.61***
Upper tertiary	0.62***	0.57***

Notes: Educational levels are time-varying covariates. The hazard ratios are adjusted for the control variables in Table 5 and the joint effects of parental occupational class.
    p < .05. **p* < .01. ***p* < .001.
    [a] Reference category.
Source: As for Table 1.

Table 4:   **The joint effects of educational level on the risk of cohabitation dissolution, hazard ratios (HR) from a Cox regression model**

		Female partner's educational level			
		Basic (1)	Upper secondary (2)	Lower tertiary (3)	Upper tertiary (4)
Male partner's educational level	Basic (1)	1.00[a]	0.84	0.70	0.78
	Upper secondary (2)	0.80	0.57	0.45	0.51
	Lower tertiary (3)	0.63	0.52	0.41	0.40
	Upper tertiary (4)	0.85	0.43	0.49	0.32

Notes: The combined variable is a time-varying covariate. The hazard ratios are adjusted for the control variables in Table 5 and the joint effects of parental occupational class.
    [a] Reference category.
Source: As for Table 1.

4.3 The effects of the control variables

Table 5 shows the effects of the control variables on the risk of cohabitation dissolution. The greater the difference between the partners' ages the higher the probability of separation. The gradient is steeper when the female partner is older, which conforms with previous Nordic findings that age heterogamy increases divorce risk especially when the wife is older (Hansen 1995; Finnäs 1997; Lyngstad 2004). The female partner's age at cohabitation entry is negatively associated with the risk of dissolution. This could indicate that cohabitations formed at younger ages are more likely to be 'trial marriages' or less serious relationships that might be comparable to going steady rather than marriage, whereas those formed at later ages are more likely to be social substitutes for marriage. The separation rate is lower among couples residing in semi-urban and rural municipalities than among those residing in urban areas. Not surprisingly, pregnancy and parenthood are associated with a reduced risk of cohabitation dissolution. Dissolutions are very rare during pregnancy and the child's first year, but the risk increases as the children grow. Overall, the effects of the control variables correspond with the findings of previous studies on union dissolution (see Lyngstad and Jalovaara 2010).

Table 5: **Months at risk and hazard ratios of cohabitation dissolution (HR) in the categories of the control variables**

	Months at risk	%	HR
Total	674,316	100	
Age homogamy			
Female 8 or more years older	11,732	1.7	3.54***
Female 4–<8 years older	35,255	5.2	1.99***
Female >0–<4 years older	161,643	24.0	1.21***
Male 0–<4 years older[a]	296,876	44.0	1.00
Male 4–<8 years older	119,759	17.8	1.17***
Male 8–<12 years older	39,121	5.8	1.48***
Male 12 or more years older	9,930	1.5	2.22***
Female's age at cohabitation entry			
20–24 years[a]	291,405	43.2	1.00
25–29 years	207,081	30.7	0.92**
30–34 years	123,715	18.3	0.77***
35–39 years	48,692	7.2	0.68***
40–42 years	3,423	0.5	0.56***

Table 5:   (Continued)

	Months at risk	%	HR
Total	674,316	100	
Place of residence[b]			
Helsinki metropolitan area[a]	171,199	25.4	1.00
Other urban	329,258	48.8	0.92**
Semi-urban	91,097	13.5	0.78***
Rural	82,762	12.3	0.79***
Parental status[b]			
No children[a]	473,153	70.2	1.00
No children, pregnant	26,179	3.9	0.14***
1st child 0–12 months	46,408	6.9	0.28***
1 child >12 months	65,570	9.7	0.61***
1 child or more, pregnant	11,504	1.7	0.20***
2nd or later child 0–12 months	18,472	2.7	0.26***
2 or more children >12 months	33,030	4.9	0.58***

Notes: The hazard ratios are adjusted for other covariates in the table, the joint effects of parental occupational class, and the joint effects of educational level.
      *p < .05. **p < .01. ***p < .001.
      [a] Reference category.
      [b] Time-varying covariate.
Source: As for Table 1.

5. Discussion

The purpose of this study was to examine the effects of homogamy and heterogamy in socio-economic background and educational attainment on the risk of cohabitation dissolution. We used unique Finnish register data offering a large number of observations that enabled the analysis of dissolution risks in all possible combinations of partner status. After confirming the statistical significance of the full interaction between the partners' statuses, we identified the forms of homogamy and heterogamy that influenced the propensity to separate by examining in which cases the estimates from the joint-effects model deviated from the main effects of the female and the male partners' statuses.

   Our general hypothesis is that social and cultural differences between partners, indicated by their differing social, economic, and demographic characteristics, constitute a risk for union stability (*H1*). With respect to parental social class, we found little support for this hypothesis: the only instance in which heterogamy consistently decreased cohabitation stability was when one partner had a farmer family background

and the other came from an upper-white-collar family. Hence, our hypothesis that homogamy would contribute to union stability among people from upper-white-collar families in particular (*H3*) is only weakly supported. The increased dissolution risk of unions between people from upper-white-collar families and farmer families is nevertheless consistent with the assumption that heterogamy is more likely to undermine union stability when the cultural distance between the groups is large (*H4*). The dissolution rate of cohabitations in which the female came from an upper-white-collar family and the male from the residual category 'Other' was also higher than might be expected on the basis of the main effects, but this effect did not apply when the genders were reversed.

Educational homogamy turned out to be relatively more important for cohabitation stability than homogamy in socio-economic family background. Extreme educational heterogamy – one partner having no education beyond the basic level and the other having a higher university degree – was clearly associated with an increased propensity to separate. This is in line with the hypothesis that a large educational difference in particular decreases cohabitation stability (*H4*). The separation risk of heterogamous couples in which the female was educated to the lower-tertiary level and the male to the upper-tertiary level was also higher than implied by the main effects. The general heterogamy hypothesis thus seems to apply particularly to the highest educated cohabitors: all the dissolution-promoting effects of heterogamy involve cohabitors with a higher university degree, and homogamy substantially reduced the dissolution risk among this group. This finding could suggest that the highest educated are most distinct from other groups in terms of values and lifestyles. As we expected, educational hypergamy did not reduce the risk of cohabitation dissolution: on the contrary, the dissolution-promoting effect of extreme hypergamy was even more notable than the respective effect of extreme hypogamy. The results are thus in accordance with the view that equal socio-economic contributions rather than male socio-economic dominance enhance cohabitation stability. Overall, we can say that educational differences between cohabiting partners affect the probability of separation more consistently than they affect the probability of proceeding to marriage (cf. Mäenpää and Jalovaara 2013).

The main effects of educational level on union dissolution seem to be similar in Nordic cohabitations and marriages, higher levels of education being associated with a lower risk of dissolution (see also Jalovaara 2013). However, whereas previous Nordic studies report little or no effect of educational homogamy and heterogamy on marital stability (Hansen 1995; Finnäs 1997; Jalovaara 2003; Lyngstad 2004, 2006), the present findings indicate that educational differences constitute a risk factor for cohabitation dissolution. This difference by union type may be due to the less serious character of cohabitation compared with marriage: people may be willing to cohabit with a person

they might not be willing to marry. Heterogamous cohabiting couples in particular might be less seriously involved in the relationship, which could explain their increased propensity to split up. On the other hand, heterogamous couples that marry might be especially committed to the relationship and have very serious intentions, which relates to a low probability of breaking up. Other kinds of processes behind selection from cohabitation to marriage may also play a role. Although educationally heterogamous couples are not 'weeded out' to any significant extent in the transition from cohabitation to marriage in Finland (Mäenpää and Jalovaara 2013), which could attenuate the effects of educational differences in marriages, it could be that the couples who marry have certain unobserved characteristics (such as personality traits or socio-economic attributes other than educational level) that render educational differences between them inconsequential in terms of marital stability. The extent to which the difference in the effects of educational heterogamy on cohabitation and marriage stability is attributable to union type per se as opposed to selection effects is a question for future research.

In line with hypothesis *H2*, our findings show that similarity with respect to individual educational attainment is a more important factor in cohabitation stability than similarity with respect to socio-economic family background. The scant effects of parental social class and the greater significance of education found here – in terms of both the main effects and the interactions between the partners' statuses – comply with the general conception that in modern, individualized societies one's own orientations and achievements influence one's life course more strongly than one's ascribed socio-economic status (Treiman and Yip 1989; Hansen 1995). The effects of social origin on life-course outcomes may be particularly weak in a country such as Finland, in which several state policies (such as tuition-free education up to the university level) aim at providing equal opportunities for citizens irrespective of their social background. Accordingly, the association between ascribed and achieved socio-economic status is reported to be comparatively weak in the Nordic countries (Breen and Jonsson 2005; Pfeffer 2008; Katrňák, Fučík, and Luijkx 2012).

Our results are consistent with those reported in studies on partner selection showing that homogamy is stronger with respect to achieved socio-economic status than with respect to socio-economic origins (Kalmijn 1991, 1998; Hansen 1995). In line with the reasoning that a union-stabilizing effect of homogamy reflects an actual preference for homogamy (see Hansen 1995; Müller 2003), our results suggest that Finnish cohabitants – the highest educated in particular – prefer a partner with similar educational attainments. Status barriers and cultural differences thus have relevance in contemporary union processes in Finland, with differences based on achieved status being more decisive than those based on ascribed status.

6. Acknowledgements

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Appendix Table 1: Months at risk by the cohabiting partners' parental occupational classes (percentage of the total in parentheses)

		Female partner's parental occupational class					
		Upper white collar	Lower white collar	Blue-collar worker	Farmer	Other	Total
Male partner's parental occupational class	Upper white collar	28,613 (4.2)	26,061 (3.9)	34,553 (5.1)	5,309 (0.8)	10,817 (1.6)	105,353 (15.6)
	Lower white collar	26,605 (3.9)	37,783 (5.6)	61,289 (9.1)	8,352 (1.2)	17,852 (2.6)	151,881 (22.5)
	Blue-collar worker	32,346 (4.8)	58,798 (8.7)	129,804 (19.2)	21,735 (3.2)	35,422 (5.3)	278,105 (41.2)
	Farmer	3,404 (0.5)	8,133 (1.2)	23,286 (3.5)	7,750 (1.1)	7,163 (1.1)	49,736 (7.4)
	Other	11,665 (1.7)	17,420 (2.6)	39,959 (5.9)	8,035 (1.2)	12,162 (1.8)	89,241 (13.2)
	Total	102,633 (15.2)	148,195 (22.0)	288,891 (42.8)	51,181 (7.6)	83,416 (12.4)	674,316 (100)

Source: Palapeli register data, cohabitations formed during 1995–2002 involving women born in 1960–1977.

Appendix Table 2: Months at risk by the cohabiting partners' educational levels (percentage of the total in parentheses)

		Female partner's educational level				
		Basic	Upper secondary	Lower tertiary	Upper tertiary	Total
Male partner's educational level	Basic	25,561 (3.8)	58,541 (8.7)	27,747 (4.1)	2,224 (0.3)	114,073 (16.9)
	Upper secondary	40,293 (6.0)	197,650 (29.3)	111,119 (16.5)	18,690 (2.8)	367,752 (54.5)
	Lower tertiary	8,632 (1.3)	56,012 (8.3)	61,185 (9.1)	15,960 (2.4)	141,789 (21.0)
	Upper tertiary	928 (0.1)	14,230 (2.1)	14,145 (2.1)	21,399 (3.2)	50,702 (7.5)
	Total	75,414 (11.2)	326,433 (48.4)	214,196 (31.8)	58,273 (8.6)	674,316 (100)

Source: As for Appendix Table 1.