Elina Mäenpää

SOCIO-ECONOMIC HOMOGAMY AND ITS EFFECTS ON THE STABILITY OF COHABITING UNIONS

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The Population Research Institute
Väestöliitto
Kalevankatu 16 B
PL 849, 00101 Helsinki
Puh. (09) 228 050, Fax (09) 6121211
www.vaestoliitto.fi

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ABSTRACT

The tendency towards socio-economic homogamy – partner similarity in terms of socio-economic status – is of great interest to social scientists, for two reasons. First, socio-economic homogamy is an indicator of social closure between status groups in a society. Second, given that homogamy leads to the accumulation of advantageous and disadvantageous socio-economic conditions within couples, it also intensifies social and economic inequalities between families. The objective of this thesis is to enhance knowledge of socio-economic homogamy and its consequences for union stability in Finland. The first aim was to analyse the strength and patterns of socio-economic homogamy in partner choice. The second aim was to determine whether and, if so, how homogamy is associated with the likelihood of ending non-marital cohabitation – through separation on the one hand, or marriage on the other. In addition, two dimensions of socio-economic status, individual educational attainment and social class of the family of origin, were analysed to find out whether matching on individually achieved status or on the status of the parental family had a bigger effect on union dynamics.

The analyses were based on sets of register data compiled at Statistics Finland. Log-linear models were applied to study homogamy tendencies and their changes in marriages and cohabitations of women born in 1957–1979 at the age of 30. The effects of homogamy and heterogamy on the likelihood of separation and marriage were analysed with Cox proportional hazards model in cohabitations formed in the period 1995–2002 by women born in 1960–1977. An elaborate approach was adopted: marriage and separation rates were examined in each possible combination of partner status.

The results imply that people tend to choose partners who are similar to them in terms of educational attainment and class background. However, homogamy was stronger with regard to education than to social-class origins. This is line with the view that boundaries based on achieved status are more difficult to cross in modern, individualized societies than boundaries based on social origins. The most highly educated – those with a higher university degree – were particularly strongly inclined towards homogamy. The general strength of homogamy did not change much across the birth cohorts from the late 1950s to the 1970s, but the trends differed depending on the level of education: homogamy strengthened among those with a low level of education, and weakened among the highly educated. The results also indicate that in the absence of homogamy, women increasingly tend to have partners whose level of education is lower than theirs.

Homogamy in class background had a relatively weak influence on the stability of cohabiting unions. Homogamy increased the marriage rate among the children of farmers, whereas heterogamy was associated with an increased separation risk when one partner came from a farmer family and the other from an upper-white-collar family. Educational differences played a somewhat more significant role in these transitions. Homogamy was associated with a reduced risk of separation among the most highly educated cohabitors in particular. The effects of educational homogamy on the marriage rate were less consistent: homogamy increased the marriage rate among cohabitors with a basic-level education, but reduced it among the most highly educated.

The findings reveal that status barriers and cultural differences are of significance in partner choice and the stability of cohabiting unions in Finland, and that group boundaries based on achieved status are stronger than those based on ascribed status in terms of union dynamics.

TIIVISTELMÄ

Sosioekonominen homogamia – puolison valitseminen samasta sosioekonomisesta ryhmästä – on yhteiskunnallisesti merkittävä tutkimuskohde pääasiassa kahdesta syystä. Sosioekonomista homogamiaa voidaan ensinnäkin pitää osoituksena statusryhmien välisestä sosiaalisesta sulkeutuneisuudesta. Toiseksi, homogamia johtaa hyväosaisuuden ja toisaalta huono-osaisuuden kasaantumiseen perheissä, ja kasvattaa siten sosiaalista ja taloudellista eriarvoisuutta perheiden välillä. Tämän tutkimuksen tarkoituksena oli tutkia sosioekonomista homogamiaa ja sen yhteyttä liiton kestävyyteen Suomessa. Ensimmäisenä tavoitteena oli tarkastella, esiintyykö puolisonvalinnassa homogamiaa ja onko homogamiataipumuksissa tapahtunut muutoksia viime vuosikymmeninä. Toisena tavoitteena oli tutkia, miten puolisoiden samankaltaisuus tai erilaisuus vaikuttaa todennäköisyyteen, että avoliitto päättyy – joko parin erilleen muuttoon tai avioitumiseen. Sosioekonomisen aseman mittareina käytettiin sekä omaa koulutustasoa että lapsuuden perheen sosiaaliluokkaa. Näin voitiin tarkastella, onko samankaltaisuus saavutetun aseman vai sosioekonomisen perhetaustan mukaan tärkeämpää liittojen solmimisessa ja purkautumisessa.

Tutkimusaineistona oli Tilastokeskuksessa muodostettu rekisteriaineisto. Homogamiataipumusten ja niiden muutosten tarkasteluun käytettiin vuosina 1957–1979 syntyneiden naisten avo- ja avioliittoja heidän ollessaan 30-vuotiaita. Homogamian yhteyttä avoliittojen purkautumisen todennäköisyyteen tutkittiin vuosina 1960–1977 syntyneiden naisten jaksolla 1995–2002 solmimissa avoliitoissa.

Tulosten mukaan suomalaisilla on taipumus valita puoliso samasta sosioekonomisesta ryhmästä. Homogamia oli kuitenkin voimakkaampaa koulutusasteen kuin lapsuuden perheen sosiaaliluokan mukaan. Tulos on yhdenmukainen sen oletuksen kanssa, että nykyaikaisissa yhteiskunnissa saavutetun aseman mukaiset luokkarajat ovat jyrkempiä kuin perhetaustaan liittyvät luokkarajat. Korkeimmin koulutetut – ylemmän korkea-asteen tutkinnon suorittaneet – olivat kaikkein taipuvaisimpia homogamiaan. Homogamiataipumuksissa ei tapahtunut yleisellä tasolla suuria muutoksia 1950-luvun lopulla syntyneistä 1970-luvulla syntyneisiin, mutta koulutusryhmien välillä oli eroja: homogamia heikentyi korkeasti koulutettujen keskuudessa, ja voimistui vähän koulutetuilla. Homogamian ohella naisilla osoittautui olevan taipumus valita yhä useammin puolisoksi mies, jonka koulutusaste on matalampi kuin itsellä.

Lapsuuden perheen sosiaaliluokan mukaisella samankaltaisuudella oli vain vähän vaikutusta avoliiton pysyvyyteen. Homogamia oli yhteydessä suurempaan avioitumisen todennäköisyyteen maataloustaustaisilla avopuolisoilla, kun taas maataloustaustaisten ja ylemmistä toimihenkilöperheistä tulevien henkilöiden välisillä avoliitoilla oli kohonnut eroon päättymisen riski. Puolisoiden koulutuserojen merkitys oli jonkin verran suurempi. Homogamia oli yhteydessä pienempään eroriskiin erityisesti korkeasti koulutetuilla. Koulutushomogamia lisäsi avioitumisen todennäköisyyttä pelkän perusasteen koulutuksen saaneilla avopareilla, kun taas korkeasti koulutetuilla avopareilla homogamia oli yhteydessä pienempään avioitumisen todennäköisyyteen.

Tutkimus osoittaa, että puolisoiden sosioekonomisella samankaltaisuudella on merkitystä sekä liitonmuodostuksessa että avoliittojen pysyvyydessä Suomessa, ja että saavutetun aseman mukainen samankaltaisuus on tärkeämpää kuin sosioekonomisen perhetaustan mukainen samankaltaisuus.

LIST OF ORIGINAL PUBLICATIONS

I Mäenpää, E. (2014). Homogamy in educational level and parental social class in Finland: A log-linear analysis. *European Sociological Review*, Advance Access published December 10, 2014. DOI: 10.1093/esr/jcu088.

II Mäenpää, E. & Jalovaara, M. (2014a). Achievement replacing ascription? Changes in homogamy in education and social class origins. Submitted and available as a working paper *Stockholm Research Reports in Demography* 2014:23 (www.suda.su.se/publications_sub_srrd.asp).

III Mäenpää, E. & Jalovaara, M. (2014b). Homogamy in socio-economic background and education, and the dissolution of cohabiting unions. *Demographic Research* 30(65): 1769–1792.

IV Mäenpää, E. & Jalovaara, M. (2013). The effects of homogamy in socio-economic background and education on the transition from cohabitation to marriage. *Acta Sociologica* 56(3): 247–263.

1 INTRODUCTION

Family formation has diversified considerably in Western societies over the past century: choices about whether and when to form a union, to have children, or to break up a union have become more and more individual. The family nevertheless remains a central social institution that provides emotional satisfaction, social support and financial security for its members, and the majority of people form a union at some point during their lives. Family formation process starts with the choice of a partner. Both romantic attraction and more rational considerations are likely to play a role in this selection, but in any event, partner choice in modern societies is predominantly a voluntary matter decided among the potential partners. Despite this opportunity to decide freely, however, some regular patterns in couple formation emerge. One such "rule" is homogamy, or similarity among partners. Social scientists have accumulated substantial evidence of homogamy with regard to several social, demographic and economic characteristics, including ethnicity, religion, age and socio-economic status.

Socio-economic homogamy has been attracting the interest of sociologists for a long time. A focal reason for the vast research interest is that status homogamy is considered an indicator of the degree of openness in a society. Marital choices are thought to reflect social barriers between status groups: given that marriage is an intimate and often a long-term relationship that binds two people and also their families and social networks together, heterogamy (choosing a dissimilar partner) indicates that members of the different groups accept each other as social equals whereas strong homogamy tendencies reflect status-group closure (Kalmijn 1991a, 1998; Smits et al. 2000; Blossfeld 2009). However, the significance of socio-economic homogamy is not simply that it reflects social and cultural boundaries between status groups. Another strong motivation for studying couple formation is the fundamental role homogamy plays in shaping the socio-economic characteristics of families (Schwartz 2013). Given that co-residential partners are likely to pool their resources, homogamy results in the accumulation of advantageous and disadvantageous socio-economic conditions: those in a high position gain access

to even more resources when they choose a similar partner, whereas those with few resources do not upgrade their status. Socio-economic homogamy thus contributes to social and economic inequality between families and households (Schwartz & Mare 2005; Blossfeld 2009; Schwartz 2013).

This thesis takes on the task of analysing socio-economic homogamy in Finland. Previous research findings on union formation in Finland indicate that individuals in a high socio-economic position are more likely than those in a lower position to form a union (Jalovaara 2012). However, it is not known to what extent those with a high (or low) status end up together: with the exception of a couple of cross-national comparative studies (Domański & Przybysz 2007; Katrňák et al. 2012), no recent research has examined the strength and patterns of socio-economic homogamy in Finland. The focus here is on two dimensions of socio-economic position: educational attainment and socio-economic family background. The former represents the socio-economic standing that an individual has achieved through his/her own actions during the life-course, whereas the latter reflects the social, economic and cultural resources that originate from the parental family. Despite the vast research interest in socio-economic homogamy, only a few studies analyse the relative importance of matching on individual socio-economic achievement as opposed to social-class origins in partner choice (see, however, Blau & Duncan 1967; Kalmijn 1991a; Hansen 1995; Uunk et al. 1996). Thus, the first aim of the thesis is to compare the strength of homogamy with respect to education and class background. To get insight into the question of whether boundaries between status groups are becoming increasingly open or closed, the study also examines changes in these dimensions of homogamy in recent decades. A focal question is whether the trends have been similar or different with respect to achieved and ascribed status.

To provide a comprehensive understanding of the role of status-group boundaries in union dynamics, the thesis also focuses on the extent to which socio-economic differences between partners matter once they have decided to form a union. The second objective is thus to analyse how socio-economic homogamy and heterogamy affect union stability. Given that dissimilar socio-economic attributes may cause value dissonance, communication problems and disagreement over life goals and priorities between the partners, it is likely that there is a higher risk of dissolution in heterogamous than in homogamous unions (Bumpass & Sweet 1972; Kalmijn 2003). Several studies have addressed the question of whether or not heterogamy increases the probability of divorce among married couples. Therefore, this thesis opens up new perspectives on the issue and focuses on the association between socio-economic homogamy and the stability of non-marital cohabiting unions.

The aim is to find out whether a shared socio-economic status or a shared family background, or perhaps socio-economic complementarity between cohabiting partners affects the likelihood that the couple will either separate, or enter into marriage.

The focus on non-marital cohabitation is highly relevant in the Finnish case. Cohabitation is a typical start to a union: over 90% of new unions are cohabitations (Jalovaara 2012). There is also little social distinction between cohabitation and marriage, and children are born and raised in both union types. However, cohabiting unions are more likely to be short-lived: it is estimated that over 40% of cohabiting couples separate within four years of moving in together (Jalovaara 2013). Thus, given the high prevalence of cohabiting unions and their high dissolution rate, it is important to identify the factors that contribute to their stability. The high-quality register data from Statistics Finland used in this study provides union histories of individuals, covering both marriages and non-marital cohabitations, thereby making it possible to examine the antecedents of ending a cohabiting union. The availability of data on cohabiting unions also allows both marriages and cohabitations to be covered in analyses of partner selection. Analysis of both types of unions contributes to current knowledge on matching patterns in *de facto* (different-sex) and not just marital unions.

Data derived from Finnish administrative registers also has other major advantages for homogamy research. Given that homogamy in partner choice is normative, heterogamous couples – those of very different status in particular – tend to be rare. Survey samples are thus not usually large enough to allow for a detailed analysis of the effects of heterogamy on union stability. The high number of couples in the data set used in this thesis makes it possible to distinguish between different types of heterogamous and homogamous couples, and to analyse the likelihood of separation and marriage in each of these categories. Through the exploitation of these excellent data, therefore, the thesis explores in depth the role of socio-economic homogamy in union dynamics in the context of a Nordic welfare state.

2 BACKGROUND

2.1 Explanations for socio-economic homogamy

Socio-economic homogamy results from the interplay of various social and demographic forces. Three factors are commonly referred to in the sociological literature: individual preference for similarity; the influence of general social norms and the control of third parties such as the parental family; and the structural constraints of the marriage market that affect the probability of meeting and interacting with potential partners of similar status. Consideration of these factors facilitates the formulation of hypotheses about a) the relative importance of homogamy in education and social-class background, b) changes in the strength of these two dimensions and c) status groups that are the most homogamous.

Preference for similarity

One driving force behind socio-economic homogamy is that people prefer to choose a partner who comes from the same socio-economic stratum. People of similar status tend to share similar cultural resources such as values, attitudes and lifestyles, as well as tastes in art, music and literature. Cultural similarity facilitates mutual understanding between partners, confirms their behaviours and worldviews and thereby provides a basis for an enduring relationship (Burgess & Wallin 1943; Coombs 1962; Kalmijn 1991a, 1998). Schwartz (2013) calls this perspective "the matching hypothesis".

An individual's cultural resources are developed and shaped during the life-course both in the parental family environment and in contexts outside it, such as educational institutions and peer groups (Kalmijn 1991a). If early cultural socialization is particularly significant in the formation of tastes, values and lifestyles, it should be reflected as a preference for homogamy in ascribed status: in other words, people should seek a partner who originates from the same social class. Then again, if orientations and influences later in

life – during the educational career in particular – have a strong influence on the cultural resources of individuals, people should favour homogamy in achieved status, and hence prefer partners who are similar in educational attainment or occupational status (Kalmijn 1991a; Hansen 1995).

The significance of early cultural socialization is emphasized in the work of Bourdieu (1984). According to Bourdieu (1984), taste – which is manifested in certain kinds of preferences in art, food, clothing, home decoration, leisure-time activities and so on – is a "match-maker": it brings together people that go together. Each social class has a distinctive taste and lifestyle, and what is of the essence is that the legitimate tastes and culture of the upper class cannot be learned or taught: they are internalized through early socialization and every-day life in the family of origin (Bourdieu 1984; see also Hansen 1995).

However, it has been suggested that as intergenerational social mobility as well as geographical mobility have increased in the course of modernization, and young adults have become increasingly independent of their parents, the impact of the parental family environment on adulthood values and lifestyles has declined. Instead, education strongly shapes individual cultural resources and, hence, partner-selection decisions (Kalmijn 1991a, 1998; Hansen 1995; Solís et al. 2007; Blossfeld 2009; Schwartz 2013). Thus, it is to be expected that educational homogamy is more important than homogamy in social-class origins in contemporary partner choice, and that the salience of educational similarity has grown in recent decades whereas the significance of class-background homogamy has diminished.

Competition for high-status partners

"The competition hypothesis" emphasizes the economic rather than the cultural side of socio-economic status, and posits that homogamy results not from a preference for similarity but from a preference for a partner with plentiful socio-economic resources (Schwartz 2013). According to this perspective, people compete in the marriage market for partners they consider as having the most attractive resources (Kalmijn 1998; Schwartz 2013). Socio-economic homogamy results from two-sided competition: given that individuals in a high socio-economic position are not willing to partner with persons in a lower position, those with ample resources end up selecting among themselves whereas those with poor resources have to rely on one another (Kalmijn 1998; Halpin & Chan 2003; Erola et

al. 2012; Schwartz 2013). As societies modernize and education becomes the main determinant of an individual's socio-economic standing, overriding the influence of family background on status attainment, people will increasingly consider education rather than socio-economic origins when they choose a partner (Kalmijn 1991a; Smits et al. 1998, 2000; Blossfeld 2009; Schwartz 2013). The implication here, too, is that similarity in educational level is more significant in contemporary couple formation than similarity in socio-economic family background, and that educational homogamy should have increased and class-background homogamy decreased in recent decades.

The core idea behind competition theory is that if the preferences of men and women with regard to the socio-economic resources of their partners are similar, the outcome is homogamy. However, if the preferences of the sexes differ, other kinds of couple-formation patterns emerge. For instance, the assumption in gender-traditional societies, in which men are typically breadwinners and women care for the household and the children, is that women compete for socio-economically successful men whereas men tend to value other traits in women, such as homemaking skills and looks (Kalmijn 1998; Blossfeld & Timm 2003; Erola et al. 2012). These asymmetrical preferences lead to socio-economic hypergamy – women partnering with men who are in a higher socio-economic position than they are. However, as women increasingly participate in the labour force and the female partner's earnings as well determine the living standards of the family, it is suggested that women who are rich in socio-economic resources become more attractive to men (Blossfeld & Timm 2003; Halpin & Chan 2003; Schwartz & Mare 2005; Domański & Przybysz 2007; Blossfeld 2009). This trend implies a weakening tendency towards socio-economic hypergamy and a growing tendency towards homogamy.

Social norms and parental control

Even though partner selection based on romantic love and individual choice is the well-established ideal in Western societies, partner choice may still not be entirely free from the influence of social norms and the control of third parties such as parental families. Thus, one reason why people choose a partner from their own status group may be that they follow the social norms and rules of the surrounding community that prescribe what kind of partner is proper and desirable. For instance, parents and other family members have an incentive to encourage children to partner with someone who originates from the same social class because marriage is not only about the couple and

the relationship, but also about social reproduction: transmitting material and symbolic capital across generations (Bourdieu 1976). Heterogamy could also threaten the internal cohesion and homogeneity of a social group, whereas homogamy keeps social distances between status groups (Hansen 1995; Kalmijn 1998). Thus, social norms may favour class-background homogamy because it maintains class cultures and also helps the upper classes to retain their resources and privileges over time (Bourdieu 1976; Hansen 1995).

In the course of modernization, however, parents' control over their children's partner choices has become quite limited: although parents may set up meetings with potential partners, for instance, and express their approval or disapproval of the relationship, in the end they do not have many practical sanctions to apply (or they do not dare to apply them) if the choice is unfavourable (Uunk et al. 1996; Kalmijn 1998; Solís et al. 2007; Blossfeld 2009). The diminishing direct impact of the parental family on partner choice implies, too, that homogamy with respect to social-class origins has declined and that partner selection is increasingly guided by achieved characteristics such as educational attainment.

Chances of meeting

Partner choice is also about chance – the people individuals happen to encounter when searching for a partner. Thus, if someone chooses a partner from the same status group, it may simply be because he or she has mostly come across people of a similar status. However, it should be noted that there is a fine line between preferences and chance: people are able to affect their probability of homogamous encounters by choosing to live in areas and spend their time in places where they will find people of similar status.

On the macro level, a large group size, a high degree of geographical concentration and an even sex distribution increase the odds of homogamy (Kalmijn 1998). For instance, the fact that highly educated people tend to live in urban areas, as opposed to being evenly distributed across the country, increases their chances of making intra-group contacts. However, a structural factor that is increasingly hindering educational homogamy in Finland is the growing dissimilarity in the educational distributions of men and women. Educational attainments among men and women aged 30–34 years were practically the same in 1980: 42% of men and 43% of women had no education beyond the basic level, and around a quarter had completed tertiary-level education (Statistics Finland 2014a). Since then, educational attainment has increased at a considerably higher rate among women than among men. In

2010, 52% of women aged 30–34 years had a tertiary-level education and only 10% had no more than a basic-level education, whereas the respective percentages among men were 34 and 17 (ibid.). Given this growing imbalance, women who are educated to the tertiary level and men who have no education beyond the basic level face increasing difficulties in partnering homogamously. Consequently – and contrary to what modernization theory predicts – declining educational homogamy in recent decades is to be expected. As for social-class origins, the transformation of the Finnish occupational structure has reduced the numbers of people coming from farmer families and increased the proportion of those with a white-collar background. The structural chances of homogamy have thus deteriorated for the former group, and improved for the latter.

The micro-level environments in which people meet potential partners – such as schools, neighbourhoods and leisure activities – also promote homogamy: given that these settings tend to be socially homogeneous, similar people often end up together (Kalmijn 1998). Neighbourhood encounters are suggested to promote homogamy in family background, whereas schools tend to promote educational homogamy (ibid.). Given that people spend more and more time in education over their life-course, the probability of meeting a partner in that context has increased, which implies an increasing likelihood of educational homogamy (Mare 1991; Hansen 1995; Blossfeld & Timm 2003; Blossfeld 2009). Similarly, as more and more young people move away from their childhood homes to study in cities, the less likely they are to search for and find a partner from their childhood environment, which reduces the probability of family-background homogamy. This development may have decreased the odds of homogamy particularly among the children of farmers.

The by-product explanation

The "by-product" explanation of homogamy considers that people select their partner on the basis of various individual characteristics, and that these characteristics may be more or less overlapping (Kalmijn 1998). Thus, homogamy on one dimension may be (partly) a reflection of homogamy on another dimension. This means that a given observed homogamy tendency might turn out to be much weaker when homogamy tendency on another, correlated dimension is taken into account. The by-product explanation is feasible in the context of the current study: given that the two aspects of socio-economic status investigated are commonly known to correlate – people with a high socio-economic background often achieve a comparatively high

level of education, whereas those from the lower classes tend to acquire fewer educational resources – homogamy in social-class origins may partly result from matching on the dimension of educational attainment, and vice versa.

Which status groups are the most homogamous?

The factors discussed above may induce homogamy to a varying extent among different status groups. It has been suggested that social reproduction through homogamy in social-class origins is particularly important to the upper classes because it helps them to retain their privileged position (Hansen 1995). Thus, one might expect homogamy to be particularly strong among people who originate from the higher strata. Those from upper-class families might also be eligible partners and hence competed for because they are likely to inherit material wealth from their parents. Moreover, given that growing up in a farmer family implies a rather distinct social and geographical childhood environment, children of farmers could well display high rates of homogamy (Kalmijn 1991a, 1998). One might thus also expect farmer-family-background homogamy to be quite pronounced in Finland, which industrialized relatively late and the agrarian tradition still prevails. At present, 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.

With regard to educational attainment, the least and the most highly educated – those with no more than a basic-level of education and those with a higher university degree, respectively – can be assumed to have the most distinct cultural resources, and thus to be the most homogamous educational groups. Strong homogamy tendencies at the extremes of the educational hierarchy are also to be expected because of "floor" and "ceiling" effects: in the absence of homogamy, people with the lowest level of education only have the option to "partner up", and those with the highest level only have the option to "partner down" (Pullum & Peri 1999). However, it is also possible that the likelihood of educational homogamy increases with the level of education: given that people with low educational qualifications leave the school environment and enter working life at a younger age than those who acquire further education, their social networks at work and play are more heterogeneous, and thus they are more likely to meet potential partners with different educational attainments (Blossfeld & Timm 2003; Blossfeld 2009).

2.2 The Finnish context

Finland provides an interesting context in which to examine socio-economic homogamy and its implications for union stability. The country is one of the Nordic welfare states in which various state policies aim at reducing social and economic differences between citizens. For instance, education up to the university level is tuition-free in Finland, and income-security programmes and public social and health services reduce disparities in living conditions between individuals from different socio-economic groups. It is therefore likely that social and cultural boundaries between status groups are relatively low in the Nordic countries. Indeed, the social structure of Nordic societies is comparatively open, as indicated by the high levels of intergenerational social mobility in these countries (Breen 2004; Pfeffer 2008; Katrňák et al. 2012). In Finland, for example, over 70% of men and over 80% of women born in the early 1960s were, in their late thirties, in a different class from that of their parents (Erola 2009). Given the higher level of social openness, it is suggested that status considerations play a relatively small role in partner choice in the Nordic welfare regime (Domański & Przybysz 2007). Accordingly, comparative European studies report that educational homogamy is relatively weak in the Nordic countries, whereas it is strongest in Eastern and Central Europe (Domański & Przybysz 2007; Katrňák et al. 2012). Thus, given that even similarity in achieved status has relatively little importance in partner choice, and that social origin and destination are fairly weakly connected, it is likely that a shared socio-economic family background will play quite a minor role in couple formation and union stability in Finland.

Another feature of Nordic societies that may well be reflected in partner choice with regard to socio-economic position is the similarity in the economic roles of men and women. One of the aims of the Nordic welfare model is to encourage the economic participation of both genders and to ease the combining of family life and paid work. The dual-earner family is the predominant ideology and practice in Finland, and the tradition of working women is long: female labour made an essential contribution to farming in the agrarian society, and the proportion of women in paid work was the largest in the Western world in the post-war decades of the 1950s and 1960s (Julkunen 1999). The current female labour-force-participation rate in Finland is among the highest in the OECD countries (OECD 2013), and compared even with their Nordic counterparts, married Finnish women – and even mothers of young children – are more likely to work full time (Mutari & Figart 2001; Eurostat 2014). The level of education in Finland is, on average, higher among women than among men. Thus, it is unlikely that Finnish women will tend to "part-

ner up" with regard to socio-economic attributes, and both women and men could be expected to value socio-economic resources in potential partners. As found in a recent study conducted in Finland, higher educational attainment, labour-force participation and a high income increase the probability of union formation among both men and women (Jalovaara 2012).

2.3 Marriage and cohabitation in Finland

Marriage has traditionally been the basis of family life and procreation. Cohabitation – the romantic co-residence of two individuals who are not married to each other – was a marginal phenomenon in Western countries before the 1960s (Kiernan 2001). Unmarried couples living together were generally socially disapproved of and were considered to be "living in sin". However, patterns of family formation started to change during the 1960s and 1970s: marriage rates declined and the average age at first marriage rose, divorces became more common and the popularity of non-marital cohabitation increased, as did the proportion of extra-marital births (Kiernan 2001; Surkyn & Lesthaeghe 2004; Lesthaeghe 2010). These developments are often referred to as "the second demographic transition", the roots of which are seen to lie in a marked shift in the value system of Western societies: individual autonomy and self-actualization have become more valued, whereas control and authority are increasingly being rejected (Surkyn & Lesthaeghe 2004). The Nordic countries, Sweden at the forefront, were the forerunners in this transition (Popenoe 1987; Kiernan 2001). Currently, in the early 21st century, these nations still stand out from other industrialized countries with their high proportions of cohabiting couples, high mean age at marriage and high divorce rates (Kiernan 2004; Pitkänen & Jalovaara 2007; OECD 2014).

Cohabitations covered less than 3% of all unions in Finland in 1970, but the proportion increased steadily and reached almost 25% in 2005 (Pitkänen & Jalovaara 2007). At the same time, the mean age of women at first marriage rose from under 24 to 29 years (ibid.). Cohabitation became the usual way to start a union. Only one in ten of first unions among Finnish women born in the early 1940s were cohabitations, but the situation gradually turned around: only one in ten of first unions among women born in the 1960s and 1970s were marriages (Finnäs 1995; Jalovaara 2012). Cohabitation has also become a long-term alternative to marriage for many couples, and childbearing within cohabitation is common: currently, over 40% of children are born to unmarried mothers (Statistics Finland 2013a). However, although cohabitation is a prevalent and socially approved family form in Finland, the

practice typically involves young couples. In 2013, the vast majority of women aged 20–24 who were living in a union were cohabiting (84%), and cohabitations outnumbered marriages also among 25–29-year-olds (58%). Most women in the older age groups had chosen to marry instead: the proportion of cohabitations drops to 36% among 30–34-year-olds, and further to 26% among 35–39-year-olds (Statistics Finland 2014b). Cohabiting unions also tend to dissolve relatively quickly. According to recent estimates based on first cohabitations in Finland, 50% of cohabitors separate, 40% marry, and only 10% still cohabit after ten years of moving in together (Jalovaara 2013). In any event, the rise in the prevalence of cohabitation has rendered young married couples a more select group than before. Consequently, it has become essential in the fields of family demography and sociology to focus research on all families irrespective of marital status.

The legal status of the union does not matter much in terms of the everyday life of Finnish couples. According to a Finnish family survey (Paajanen 2007), the most common reason among cohabitors for not getting married is that there is no particular reason to do so. The financial incentives for converting cohabitation into marriage are few in Finland. Being married does not bring any tax benefits over being a non-married cohabiting couple, for instance, because the Finnish taxation system is individual-based. With regard to social security benefits, cohabiting partners are generally treated like married couples. However, some legal obligations and rights only concern marital relationships. Marriage partners have an obligation to provide maintenance if one partner is unable to support him/herself. Moreover, when a marriage dissolves, either through divorce or bereavement, the partners have a marital right to each other's property. This means that the net property of each spouse is summed and then distributed equally so that each one receives half of the total net property (unless the couple has a prenuptial agreement). Only married partners are entitled to a widow's pension. Furthermore, cohabiting partners have no automatic inheritance right to each other's property, and inheritance tax is much higher for a cohabiting partner than for a married partner. In response to the growing popularity of cohabitation, in 2011 (after the study period of this thesis), a law on the dissolution of the household of cohabiting partners was enacted that gives some legal protection in the case of a break-up or bereavement among couples who have lived together for over five years or who have common children. Marriage nonetheless remains subject to more legal regulation than cohabitation.

It may be that because financial issues are more explicitly organized in marriage, individuals in a high socio-economic position are more likely to

choose marriage over cohabitation. Accordingly, studies from the Nordic countries report that high educational attainment and high incomes are associated with a greater likelihood of converting cohabitation into marriage (Finnäs 1995; Bracher & Santow 1998; Duvander 1999; Kravdal 1999; Mäenpää 2009; Saarela & Finnäs 2014). Individuals with high socio-economic resources may opt for marriage for various other reasons as well: for instance, they better meet normative expectations about what the transition to marriage involves (such as a decent material standard of living and financial independence from parents), and conservative family-formation behaviour may be more highly valued among higher social classes (Kravdal 1999; Jalovaara 2012).

2.4 Theoretical views on the effects of homogamy on cohabitation stability

Homogamy and cohabitation dissolution

Partner choice has consequences for relationship quality and satisfaction (Schwartz 2013). Union dissolution could be taken as an indication that the partners are dissatisfied with the union – or at least one of them is. However, because separation tends to involve various social, psychological and economic costs, a long-lasting union may not necessarily be an indication of a satisfying relationship – the costs associated with dissolution may prevent unhappy couples from separating. Given that the barriers to separation are likely to be lower in cohabitations than in marriages, it is conceivable that dissatisfaction with the relationship is more likely to lead to separation in a cohabiting union than in a marriage.

The general assumption in the sociological literature is that homogamy decreases the likelihood of union dissolution, whereas heterogamy increases the probability that a couple will break up. Social, cultural and economic similarity is believed to promote value consensus between partners on basic life goals and priorities, ensure a common basis of conversation, and reduce frictions that dissimilarity in tastes and worldviews may cause (Bumpass & Sweet 1972; Kalmijn 2003; Kalmijn et al. 2005). Furthermore, because choosing a partner with dissimilar social and economic resources implies crossing a social boundary, family members and friends may disapprove of a heterogamous partner choice and thus give less social support to the couple, which may escalate the problems in the union (Janssen 2002; Kalmijn et al. 2005). Therefore, it is to be expected that homogamy in social-class origins and education decreases the separation rate, and that heterogamy increases it.

Given the more determining role of education than socio-economic family background in contemporary partner choice, it could also be assumed that educational homogamy plays a bigger role in maintaining union stability than homogamy in social-class origins. Furthermore, given that the focus in this thesis is on the stability of non-marital cohabitations as opposed to marriages, similarity in achieved socio-economic status is all the more likely to have a greater stabilizing effect than similarity in ascribed status. This assumption is based on the "looser bond" theory of cohabitation (Schoen & Weinick 1993). According to this perspective, cohabitors are less strongly committed to the relationship than married partners, as indicated, for instance, by the fact that cohabitations are more likely to dissolve and less likely to lead to childbearing than marriages. In view of the weaker commitment and the shorter duration of the union, it has been suggested that cohabitors are less concerned with kinship issues and more loosely bound to the wider family network than married partners. Thus, similarity in terms of ascribed characteristics such as socio-economic, religious and ethnic family background is considered to be less significant in cohabitation than in marriage, whereas cohabitors may give more weight to achieved status and economic contributions from both partners (ibid.). Thus, one might expect educational similarity to play a considerably more significant role in cohabitation stability than similarity in socio-economic origins.

Although cohabitation is commonplace and socially accepted in the Nordic countries, there are indications that here, too, cohabitors are, on average, less strongly committed to the relationship than married couples. Cohabiting unions break up more easily than marriages (Liefbroer & Dourleijn 2006; Gähler et al. 2009; Jalovaara 2013), and are less likely to involve childbearing (Oláh & Bernhardt 2008). A survey study from Sweden and Norway also reports that cohabitors are not as serious about their relationships and more often plan to break up than married respondents (Wiik et al. 2009). Thus, it is reasonable to expect the predictions of the "looser bond" perspective to apply in the Finnish case as well.

According to the microeconomic theory of marriage, gender-specific specialization in household labour whereby the man specializes in paid work and the woman takes care of domestic tasks increases the gains from marriage and thus reduces the risk of divorce (Becker et al. 1977). Given that educational attainment is a key predictor of an individual's labour-market success and earnings potential (Blossfeld 2009), this theory posits that educationally hypergamous couples (in which the man is more highly educated than the woman) should have a lower risk of separation than educationally homogamous couples. Educational hypergamy is nevertheless unlikely to

decrease the risk of union dissolution in the current study, for at least two reasons: the relatively gender-egalitarian context of Finland and the focus on cohabitations. In the former case, the high level of education and labour-force participation among Finnish women and the fact that the earnings of both partners normally make an important contribution to maintaining the living standards of the family, mean that mutual economic dependence is likely to be relatively symmetrical. With regard to the focus on cohabitations, it has been suggested that socio-economic equality stabilizes cohabiting unions in particular. Because such unions dissolve relatively quickly, and non-marital partners have no legal marriage contract to safeguard them when they separate (Schoen & Weinick 1993; Brines & Joyner 1999), and also because norms regarding the roles and behaviour of partners are fewer in cohabitations than in marriages (Baxter 2005), cohabitors are less likely than married couples to develop a gendered division of household labour. Accordingly, empirical studies show that both attitudes and the actual division of housework are more egalitarian among cohabitors than among married couples (Smock 2000; Baxter 2005; Davis et al. 2007; Domínguez-Folgueras 2013). It has been theorized on these grounds that socio-economic equality rather than specialization increases the stability of cohabitations (Brines & Joyner 1999; Kalmijn et al. 2007; Jalovaara 2013).

It is also conceivable that socio-economic similarity is not equally important in terms of union stability for all status groups. Thus, the general heterogamy hypothesis is extended here to suggest that the effects of homogamy and heterogamy may depend on the social stratum. Given the suggestion that homogamy in social origins is particularly important to the upper classes, it could be that homogamy in class background increases cohabitation stability among those from upper-white-collar families in particular. Furthermore, on the assumption that large social, cultural and economic gaps between partners are more likely than smaller ones to cause conflicts, heterogamy is more likely to be associated with an increased risk of separation if the social distance between the groups is large. One might expect to see, for instance, substantially increased dissolution rates among couples differing substantially in educational achievement, but only small increases in separation rates among those whose status differences are less marked.

Homogamy and proceeding to marriage

Couples proceed from cohabitation to marriage for various reasons. For some, choosing to marry is primarily about choosing between cohabitation and marriage as the type of union, and the partners would have stayed together anyway. The decision to marry may involve practical considerations (such as legal issues), value-based factors (preference for a more conventional family form), or a desire to celebrate the relationship and to have a wedding party, for example. For others, marrying may be about finding "the right partner": marriage indicates the decision to stay together instead of breaking up. In any event, proceeding from cohabitation to marriage can be generally seen as a positive indicator of the state of the relationship.

Existing sociological literature offers few theoretical predictions of how socio-economic homogamy might affect the propensity to progress from cohabitation to marriage. However, it is possible to develop hypotheses on the basis of studies that compare partner selection in cohabitation and marriage (Schoen & Weinick 1993; Blackwell & Lichter 2000, 2004; Hamplova 2009). These studies describe various ways in which cohabitation and marriage might differ as union types, and further, how these differences might contribute to differences in the degree of homogamy between cohabiting and married couples. Given that Finnish couples tend to make the decision to marry only after having lived together for some time, the differences in partner preferences between cohabitors and married couples become visible in this context mainly in the ways in which couples are selected from cohabitation to marriage.

The first hypothesis derives from the looser-bond perspective on cohabitation (Schoen & Weinick 1993) introduced in the previous section, according to which homogamy in social-class origins is less significant for cohabiting couples than for married partners, and cohabitors tend to favour educational homogamy. It is thus feasible to suppose that couples who are homogamous as opposed to heterogamous in class origins are more likely to make the transition to marriage, and that educational homogamy, in turn, is associated with a lowered likelihood of marrying. Educationally hypergamous couples in particular could be expected to choose marriage, in which the gendered division of household labour is a more secure arrangement than in cohabitation (see Brines & Joyner 1999).

An alternative to the looser-bond theory of cohabitation is the "double selection" perspective (Blackwell & Lichter 2000, 2004). This perspective posits that cohabitation provides a staging ground for evaluating potential marriage partners and fostering better marital matches. The core supposition is that people prefer partners with similar characteristics and resources in general, but that cohabitors are less selective than married people. Thus,

marital matches are doubly selected in most cases – first into cohabitation and then into marriage – and homogamy is the general selection criterion (ibid.). Consequently, homogamy in both ascribed and achieved status should be associated with an increased likelihood of marrying among cohabitors. In the context of the current study this implies that homogamy in both class background and educational attainment will increase the propensity to marry.

Nonetheless, just as in the case of union dissolution, the effects of socio-economic homogamy and heterogamy on the transition from cohabitation to marriage might not be similar across all social strata. Given that social distinction and keeping distances between status groups might be particularly important to the upper classes of a society (Hansen 1995), and that marriage binds the partners and their families together more strongly than cohabitation, it is likely that homogamy in social-class origins will increase the marriage rate among those from upper-white-collar families in particular. Moreover, the larger the cultural distance between the status groups, the more likely it is that heterogamy will decrease the likelihood of marrying.

It is also conceivable that homogamy is not very strongly associated with the probability of proceeding from cohabitation to marriage in Finland. It has been suggested that when cohabitation and marriage have similar functions and are indistinguishable in many ways, homogamy patterns should be similar regardless of union type (Hamplova 2009). Given the fact that cohabitation has become a long-term alternative to marriage for many couples in Finland, and that childbearing within cohabitation is common, it may be that homogamy in neither ascribed nor achieved status affects the likelihood of making the transition to marriage. Furthermore, the comparatively high level of gender equality and the high level of labour-force participation among women make it unlikely that even married partners will develop a gendered division of household labour. It is therefore possible that educational hypergamy in this context is not associated with an increased marriage rate among cohabitors.

All in all, there are several ways in which socio-economic homogamy may be associated with the probability of converting cohabitation into marriage in the Finnish context. The degree of support that each hypothesis attracts will give further insight into the differences between cohabitation and marriage as union types in Finland.

3 PREVIOUS EMPIRICAL FINDINGS

3.1 The various forms of socio-economic homogamy

An extensive body of literature in the social sciences focuses on the tendency towards socio-economic homogamy (for reviews see Kalmijn 1998, Blossfeld 2009 and Schwartz 2013). Previous studies provide clear evidence of homogamy with respect to various dimensions of socio-economic status such as income level (Henz & Sundström 2001; Jepsen & Jepsen 2002; Haandrikman & Van Wissen 2012), labour-market position (Ultee et al. 1988; Henkens et al. 1993; Verbakel et al. 2008; de Lange et al. 2013), occupational class (Pöntinen 1980; Kalmijn 1994; Hansen 1995; Smits et al. 1999; Verbakel et al. 2008; Domański & Przybysz 2012) and educational attainment (Trost 1967; Michielutte 1972; Ultee & Luijkx 1990; Kalmijn 1991a, 1991b; Mare 1991; Schoen & Weinick 1993; Hansen 1995; Uunk et al. 1996; Smits et al. 1998; Pullum & Peri 1999; Blackwell & Lichter 2000, 2004; Jepsen & Jepsen 2002; Birkelund & Heldal 2003; Halpin & Chan 2003; Smits 2003; Schwartz & Mare 2005, 2012; Esteve & Cortina 2006; Katrňák et al. 2006, 2012; Solís et al. 2007; Domański & Przybysz 2007, 2012; Hamplova & Le Bourdais 2008; Hou & Myles 2008; Rosenfeld 2008; Hamplova 2009; Schwartz & Graf 2009; Smits & Park 2009; Han 2010; Schwartz 2010; Torche 2010; Haandrikman & Van Wissen 2012; Verbakel & Kalmijn 2014).

Educational homogamy is by far the most popular topic of research. This is because educational attainment is a key determinant of labour-market success and has a strong influence on an individual's cultural resources, and not least because it is an indicator for which data on both partners is generally available (see Blossfeld 2009). Group-specific analyses report a U-shaped association between the level of education and the strength of homogamy: homogamy is most pronounced among those with the least and the most educational resources (Uunk et al. 1996; Pullum & Peri 1999; Blackwell & Lichter 2000, 2004; Esteve & Cortina 2006; Solís et al. 2007; Domański & Przybysz 2007, 2012; Hamplova & Le Bourdais 2008; Rosenfeld 2008). It has

also been found that large educational differences are more serious impediments to union formation than smaller educational gaps (Halpin & Chan 2003; Blackwell & Lichter 2000, 2004). Furthermore, according to a comparative study on educational assortative marriage in Europe (Domański & Przybysz 2007), there is a tendency towards hypergamy in most European countries: men tend to have higher educational qualifications than their female partners, even when differences in educational distributions among married women and men are accounted for. However, Finland, Sweden and Norway are among the few countries in which women are inclined to marry men with a lower level of education: in other words, there is a tendency towards educational *hypogamy* (Domański & Przybysz 2007).

Relatively few studies analyse homogamy with respect to the socio-economic position of the family of origin, which is probably due to the scarcity of data sources that include information on both partners' parental family characteristics. The reported studies that do, although rather dated, report a clear tendency towards homogamy in social-class background (Burgess & Wallin 1943; Coombs 1962; Blau & Duncan 1967; Kalmijn 1991a; Hansen 1995; Uunk et al. 1996). Reflecting the view that homogamy is particularly important among the upper social strata, a Hungarian study reports the highest rates of family-background homogamy among people from upper-class families (Uunk et al. 1996). However, studies from the US (Kalmijn 1991a) and Norway (Hansen 1995) report that people from farmer families are the most homogamous. In accordance with the view that homogamy in ascribed as opposed to achieved characteristics is less significant in modern societies, the studies also show that homogamy is weaker in paternal occupational class than in individual educational attainment (Blau & Duncan 1967; Kalmijn 1991a; Hansen 1995; Uunk et al. 1996).

Given the strong correlation between various dimensions of socio-economic status, surprisingly few studies analyse the extent to which homogamy in a given dimension of socio-economic status is a "by-product" of homogamy in another, correlated status dimension or, respectively, the extent to which the dimensions of homogamy are independent of one another (see, however, Ultee et al. 1988; Henkens et al. 1993; Uunk et al. 1996; Verbakel et al. 2008; de Lange et al. 2013). It nevertheless seems that educational homogamy and class-background homogamy are partly overlapping dimensions. An early US study on the topic (Blau & Duncan 1967) reported a clearly reduced correlation between the partners' social-class origins when the association between their educational attainments was controlled for. The correlation did not disappear, however, which means that the association between the partners' socio-economic family backgrounds was not entirely attributable

to matching on individual educational attainment. A log-linear analysis of Hungarian marriages (Uunk et al. 1996) also revealed that homogamy in social-class origins and education partly overlapped, and that controlling for educational homogamy lowered the estimate of class-background homogamy more than the other way round.

This thesis contributes to the existing literature on socio-economic homogamy by analysing the strength and patterns of homogamy in both education and class background in the relatively egalitarian context of Finland. The study also analyses the degree to which these two dimensions of homogamy overlap.

3.2 Changes in socio-economic homogamy over recent decades

In line with modernization theory, according to which similarity in achieved status has become increasingly important in partner selection, and the fact that educational "assortative meeting" has become more common as the time spent in educational institutions has expanded, several studies suggest that educational homogamy increased in Western societies during the second half of the 20th century (Kalmijn 1991a, 1991b; Mare 1991; Uunk et al. 1996; Blossfeld & Timm 2003; Halpin & Chan 2003 [for Ireland]; Schwartz & Mare 2005; Hou & Myles 2008; Schwartz & Graf 2009). However, not all studies reached this conclusion: some report declining trends (Birkelund & Heldal 2003; Halpin & Chan 2003 [for Britain]; Henz & Jonsson 2003), whereas others suggests that educational homogamy has remained relatively constant (Raymo & Xie 2000; Rosenfeld 2008). Inconsistent findings concerning the US have been attributed to differences in analytical focus, for instance (Hou & Myles 2008; Blossfeld 2009): some studies analyse overall trends whereas others focus on the level of education, or the difficulty of crossing educational barriers. Another possibility is that because the changes in educational homogamy have been fairly small, the choice of study population and method of analysis might have affected the conclusions (see Hou & Myles 2008; Rosenfeld 2008; Blossfeld 2009).

It is also implied in modernization theory that similarity in ascribed socio-economic status has become less influential in partner choice. However, not much is known about changes in homogamy with regard to social-class origins. The few studies that have been conducted nevertheless indicate that the increase in educational homogamy has been paralleled by a decrease in

homogamy with regard to paternal occupational class (Kalmijn 1991a; Uunk et al. 1996). However, given that the data sets used in these studies extend only to the 1970s, research on more recent trends is lacking. In order to narrow this knowledge gap, this thesis analyses homogamy trends in Finnish birth cohorts with regard to both educational attainment and social-class origins. Given that focusing on overall development may conceal large differences in trends between status groups (Hou & Myles 2008; Blossfeld 2009), the analysis covers both overall trends as well as changes by status group.

3.3 Socio-economic homogamy and cohabitation stability

Most studies analysing the effect of educational differences between cohabiting partners on the probability of their ending the cohabitation – through either separation or marriage – concern the US (Smock & Manning 1997; Brown 2000; Sassler & McNally 2003). A couple of studies on the topic have been conducted in Finland (Mäenpää 2009; Saarela & Finnäs 2014), and one in West Germany (Müller 2003). All of them quite consistently report no significant association between educational homogamy and proceeding from cohabitation to marriage (Smock & Manning 1997; Brown 2000; Müller 2003; Sassler & McNally 2003; Mäenpää 2009). It is worth noting, however, that the survey data sets used in the US studies include relatively small numbers of observations and thus the analyses lack statistical power. Saarela and Finnäs (2014) is the only study reporting a negative effect of educational heterogamy on marriage propensity: there was a slightly decreased marriage rate among cohabiting partners who differed widely in educational level (one partner educated to the basic level and the other to the tertiary level). In general, previous studies report that higher educational attainment is associated with a higher likelihood of proceeding from cohabitation to marriage (Finnäs 1995; Bracher & Santow 1998; Duvander 1999; Kravdal 1999; Wu & Pollard 2000; Oppenheimer 2003; Lichter et al. 2006; Lemmon et al. 2009; Mäenpää 2009; Saarela & Finnäs 2014).

The picture is a little more diverse with regard to separation. According to one study (Müller 2003), educational hypogamy increases the probability of separation among cohabitors, whereas another reports an elevated separation rate among extremely hypergamous couples (Smock & Manning 1997). It was found in a Finnish study (Saarela & Finnäs 2014) that a wide educational difference – hypergamy in particular – increased the risk of dissolution, but only among childless cohabiting couples. Finally, two (small-N) studies report

no significant effect of educational homogamy or heterogamy on cohabitation dissolution (Brown 2000; Sassler & McNally 2003). Overall, it seems that educational differences play at least some role in cohabitation dissolution in all the countries covered. This is somewhat at odds with previous findings on the effects of educational differences on marriage dissolution: educational heterogamy has been reported to have only a minor (Jalovaara 2003) or no influence on divorce risk (Hansen 1995; Finnäs 1997; Lyngstad 2004, 2006) in the Nordic countries, whereas more evident divorce-promoting effects have been found in the US and Western Europe (Bumpass et al. 1991; Tzeng 1992; Heaton 2002; Schoen 2002; Schoen et al. 2002; Kalmijn 2003; Müller 2003). With regard to the effects of absolute levels of education, previous studies from the Nordic countries indicate that high educational achievement in both partners is associated with a lower likelihood of separation in marriages (Finnäs 1997; Jalovaara 2001, 2003, 2013; Lyngstad 2004, 2006, 2011) and cohabitations (Jalovaara 2013; Saarela & Finnäs 2014).

Few studies analyse the effects of homogamy in socio-economic family background on union dissolution. According to a Norwegian study (Hansen 1995), although educational homogamy does not lower the probability of divorce, homogamy with regard to paternal occupational class does decrease the risk. These findings contradict the assumption of the greater significance for union stability of homogamy in achieved socio-economic status as opposed to ascribed status. According to a study from the Netherlands (Janssen 2002) that distinguished between the economic and cultural aspects of paternal occupational status, homogamy in economic social origin decreased the probability of divorce. To the best of my knowledge, no studies concerning the effects of homogamy in class origins on cohabitation dissolution have thus far been conducted.

The main contributions of the current study to the empirical literature on the effects of socio-economic homogamy on union stability are threefold. The first is its focus on the stability of non-marital cohabiting unions. Given the increasing prevalence of cohabitation in Finland and other Western societies, there is a need to accumulate knowledge about the factors that affect their stability. Second, the study analyses the effects of homogamy in both education and class background, hence the results contribute to the body of knowledge about the relative importance of partner similarity with regard to ascribed and achieved socio-economic status in contemporary union dynamics. Third, as discussed in the next section, the study details the effects of homogamy and heterogamy on union stability.

3.4 Methodological approaches to assessing the effects of homogamy on union stability

One of the first – and one of the most important – issues a researcher embarking on the task of determining whether, and if so how homogamy affects union stability has to resolve is how to measure the effects of homogamy and heterogamy. This task is not as simple as one might think at first, which shows in the various approaches that have been employed (see Eeckhaut et al. 2013 for a thorough review of the diversity of measures and the problems associated with these approaches).

Most of the studies referred to above applied difference measures. On the crudest level, couples are divided into two groups: those that are homogamous and those that are heterogamous (e.g., Hansen 1995; Brown 2000). With regard to educational level, most studies further classify heterogamous couples as hypergamous or hypogamous (e.g., Bumpass et al. 1991; Tzeng 1992; Heaton 2002; Schoen 2002; Schoen et al. 2002; Müller 2003). Whether large educational differences matter more than smaller ones is more rarely considered (see, however, Kalmijn 2003). Difference measures have been criticized on various theoretical and methodological grounds: for instance, they do not show whether or not the effects of homogamy and heterogamy are dependent on absolute levels of education (see Eeckhaut et al. 2013).

The current study takes advantage of the large numbers of couples in the register data and analyses the interactions between the partners' statuses more elaborately: marriage and dissolution rates are examined in all possible combinations of the partners' positions. A similar approach has been used in previous register-based, large-N Nordic studies concerning the effects of educational differences on divorce or exit from cohabitation (Jalovaara 2003; Lyngstad 2004, 2006; Mäenpää 2009; Saarela & Finnäs 2014). However, the drawback of the approach is that it is sometimes difficult to determine whether the relative risk of an event in a given combination of partner statuses includes a genuine interactive effect, or whether it merely reflects the main effects – in other words whether the combination produces a marriage or dissolution rate that is bigger (or smaller) than "the sum of its parts" (see Saarela & Finnäs 2014 for an exception). Thus, to take a step further, a simple analytical tool is applied in the analysis of transition to marriage (Sub-study IV) to explicitly distinguish the partner combinations that interact (see Chapter 5.5 "The Cox regression model" below).

4 THE AIMS OF THE STUDY

The objective of this thesis is to add to current knowledge about socio-economic homogamy and its consequences for union stability. The study has two broad aims: 1) to analyse the strength and patterns of socio-economic homogamy in partner choice and 2) to determine whether, and if so how homogamy is associated with the likelihood of ending a non-marital cohabitation – through separation on the one hand or marriage on the other. Two aspects of socio-economic status are analysed – educational attainment and social-class background – to find out whether similarity in the socio-economic resources of the parental family or in individual status achievement plays a more significant role in union dynamics. Given that homogamy is an indicator of social barriers between status groups, the thesis provides one perspective on the degree and development of social openness in Finnish society. The results also contribute to current knowledge about cohabiting unions, which although commonplace in Finland are under-researched in terms of their dynamics. The specific aims were:

- To compare the strength of homogamy with regard to education and social-class origins, and to identify the groups that are the most homogamous (Sub-study I)
- To determine the extent to which homogamy in education and social-class origins are dependent on or independent of one another (Sub-study I)
- To analyse how homogamy in education and social-class origins has changed among cohorts born in the 1970s compared with those born in the 1950s and 1960s (Sub-study II)
- To determine whether, and if so how homogamy and heterogamy in education and social-class origins affect the likelihood of separation among cohabitors (Sub-study III)
- To determine whether, and if so how homogamy and heterogamy in education and social-class origins affect the likelihood of marrying among cohabitors (Sub-study IV).

5 DATA AND METHODS

5.1 The *Palapeli* research register

The analyses are based on the *Palapeli* (Parisuhde, lapset, perhe ja elinolot – Partnership, children, family and living conditions) register data set compiled at Statistics Finland. The data set was formed through the linking of data from a longitudinal population census file and registers of employment, educational qualifications and vital events, for instance. *Palapeli* comprises the union and childbearing histories of individuals, and various indicators of their and their partners' demographic and socio-economic characteristics. The fact that registers provide objective, symmetrical measures of socio-economic status for both partners avoids problems that may arise from the misreporting of respondents' and their partner's socio-economic attributes. Moreover, given that no effort or informed consent is required from individuals in the register, the data are not vulnerable to self-selection bias.

What makes the version of *Palapeli* used here unique is that it includes detailed data on the formation and dissolution of both marriages and non-marital cohabiting unions. Register information on all cohabitations is exceptional even in the Nordic context. Unlike registers in Sweden and Norway, Finnish registers contain information on the place of residence down to the specific dwelling, which enables the linkage of individuals to co-residential couples even if they are unmarried and childless. Marriage data starts in *Palapeli* from the year 1972, and cohabitation data from 1987. The dates of union entry and dissolution are given in the sample at the precision of a month.

Cohabitation data in *Palapeli* is based on information about co-residence, in other words on data about the dates of moving into and out of dwellings. A man and a woman are considered to live in a co-residential union if they have been domiciled in the same dwelling for over 90 days, their age difference is no more than 20 years (this rule applies only to couples without any shared children), and they are not close relatives (siblings or a parent and child, for example). If the co-residential partners are not married to each other, they are regarded as cohabiting. The inference of co-residential unions begins from

the person's 18th birthday year. Spells of co-residence shorter than 90 days are excluded because many of them are not actual unions but result from overlapping dates in moving notifications: the new resident might have reported moving into a dwelling before the former resident has reported moving out. All co-residential unions that prevailed on 31 December 1986 and those that were formed after this date are included in the data. In the case of unions that prevailed on 31 December 1986 the time of moving in together is not known, whereas both the time of moving in together and separation (if any) are available for those formed after this date.

The inference of cohabitation in not, of course, flawless: it constitutes couples from people who are not in a relationship with each other, and respectively, does not identify couples whose age difference is large, or who live together but are not officially registered as domiciled in the same dwelling, for example. Statistics Finland applies a similar inference in family statistics, with the exception that the maximum age difference for cohabiting couples is 15 years, and there is no lower limit for the duration of co-residence. According to the statistics' quality description, the inferred number of cohabiting couples is very close to the figures obtained by interview surveys (Statistics Finland 2013b). In general, inferring cohabiting couples on the basis of a common address is highly reliable in the Finnish case in the sense that people actually live at the addresses recorded in the population register: a sample survey conducted in 2012 reports that the address information in the Population Information System was correct for 98% of people (ibid.). Furthermore, the minimum duration of 90 days set for cohabitations in *Palapeli* has the advantage that it weeds out some incorrectly inferred cohabitations and directs the focus on longer-term co-residence. The fact that previous studies using the *Palapeli* data set have yielded sensible and credible results regarding the dynamics of cohabiting unions (e.g., Jalovaara 2012, 2013) also indicates the high quality of Finnish register-based cohabitation data.

The register gives the dates of union formation and dissolution only for different-sex unions. Registration of civil partnership for same-sex couples was introduced in Finland in 2002, but the formation and dissolution of registered partnerships is not followed in *Palapeli*. Moreover, given that the non-romantic co-residence of two women or two men is common especially during studentship, same-sex cohabiting unions have not been inferred because the outcome would contain relatively many cohabitations that are not, in fact, romantic unions. Previous studies nevertheless show a clear tendency towards educational homogamy in same-sex unions as well (Jepsen & Jepsen 2002; Schwartz & Graf 2009; Verbakel & Kalmijn 2014).

Sub-studies I, III and IV are based on the original version of the *Palapeli* register (permission number TK-53-747-05), which was generated in co-operation with Statistics Finland and a research group led by professor Kari Pitkänen at the Department of Sociology, University of Helsinki. This data set covers all individuals who were among the population of Finland on 31 December in at least one of the years between 1970 and 2000, and data on them extends up to the end of 2003. The extract used in the studies is an 11% random sample of persons born before 1986. This version of *Palapeli* has been used previously to study the socio-economic antecedents of union formation (Jalovaara 2012), union dissolution (Cooke et al. 2013; Jalovaara 2013) and the birth of children (Hoem et al. 2013; Jalovaara & Miettinen 2013).

Sub-study II is based on a corresponding but updated version of these data, FDF (*Family Dynamics in Finland*, permission number TK-53-663-11), produced at Statistics Finland for a research group led by Docent Marika Jalovaara at the Department of Social Research, University of Turku. The updated data set includes individuals among the population of Finland on 31 December in at least one of the years 1970, 1975, 1980, 1985 and 1987–2010, and their union histories are available up to the year 2009. The sample covers 11% of persons born between 1940 and 1995.

Ethical issues were acknowledged in the data processing. The personal identity codes of individuals were replaced with running numbering in the extracts given to researchers. To further impede the identification of individuals, categories of variables containing sensitive information (such as income or place of residence) were collapsed, and the exact dates of events (the birth of children, immigration and emigration, for example) are not given but are presented to the precision of a month. The researchers are prohibited from trying to identify people from the register.

5.2 Study population

Sub-study I

The analyses of homogamy in partner selection cover cohabitations and marriages of women born between 1965 and 1973 at the age of 30 years. A focal reason for choosing this setting is that most people have finished their education by the age of 30, and thus the estimates of educational homogamy are not distorted by unfinished studies. For instance, given that women are on average a few years younger than their male partners and thus complete their educational degrees later, analysing the association between the partners'

educational attainments at a younger age or at the time of union formation could lead to an underestimate of homogamy and an overestimate of hypergamy. Furthermore, given that 30-year-old cohabiting or married women often have children, the results reflect socio-economic inequalities across the growth environments of children (Schwartz & Mare 2005).

Of the original 22,148 unions, those in which either or both partners were born outside Finland (n = 1,682, 7.6%) were dropped because their socio-economic data tends to be incomplete. Unions in which the male partner was born before 1956 (n = 565, 2.6%) were also excluded because social-class origins can only be inferred for people born in 1956 or later (see section "Social-class origins" below). Finally, couples in which either or both partner's social-class origins was categorized as "other" (see section "Social-class origins" below) were excluded (n = 4,933, 22.3%). This was done in order to facilitate the comparison of the strength of homogamy in education and socio-economic origins: after excluding this category, both variables include four categories, all of which are sociologically meaningful. The final number of couples was 15,066, of which 65% were married and 35% cohabiting.

Sub-study II

Analyses of changes in homogamy focused on unions of women born in Finland between 1957 and 1979 at the age of 30 years. This birth cohort range was chosen because the 1957 cohort is the oldest one for which data on both marriages and cohabitations are available at the age of 30, and given that the updated data set extends to 2009, the latest valid birth cohort is 1979. These 23 birth-year cohorts were grouped into six larger cohorts: 1957–1960, 1961–1964, 1965–1968, 1969–1972, 1973–1976 and 1977–1979. Only women with a Finnish-born partner were included in the analysis.

Changes in homogamy with regard to social-class origins were analysed only in cohorts born between 1965 and 1979. This is because couples in which the male partner was born before 1956 had to be excluded given that data on class background is not available for them (see section "Social-class origins" below). This exclusion means dropping couples with large age differences, which again could bias the estimates of homogamy. Given that having a partner who was born before 1956 is relatively common among cohorts born in 1957–1964, they were omitted altogether.

Table 1 gives descriptive information about the studied cohorts. While 1.4% of women born in 1957–1960 had a foreign-born partner, the proportion was 5.1% among those born in 1977–1979. The proportion of women who cohabit increases steadily over the cohorts: while less than 20% of women

born in 1957–1960 who were living in a union at the age of 30 were cohabiting, the proportion was 43% in the 1977–1979 cohort. The proportion of women whose partner was born before 1956 varies from 3.7% in the 1965–1968 cohort to 0.1% in the 1977–1979 cohort.

Table 1. Description of the study population in Sub-study II

Birth cohort	1957–60	1961–64	1965–68	1969–72	1973–76	1977–79
N of women in a union at age 30	12,272	11,495	10,557	8,691	9,113	6,967
Foreign-born partner (%)	1.4	2.0	2.5	3.1	4.7	5.1
N in analyses of educational homogamy[a]	12,104	11,262	10,293	8,419	8,689	6,611
Cohabiting (%)	19	26	33	38	42	43
Partner born before 1956 (%)	-	-	3.7	1.3	0.4	0.1
N in analyses of homogamy in social-class origins[b]	-	-	9,915	8,312	8,654	6,603

[a]Excluding women whose partner was born abroad

[b]Excluding women whose partner was born abroad and women whose partner was born before 1956

Sub-studies III and IV

Sub-studies III and IV focus on separation and marriage from cohabitations of women born between 1960 and 1977. Cohabitations that the women formed during the period 1995–2002 were selected to the analysis. The women were thus 18–42 years old at the time of cohabitation entry. Given that the data extends to December 2003, December 2002 was chosen as the upper limit of union formation in order to provide at least one year of follow-up time to all unions.

Between 1995 and 2002, 24,823 women entered a cohabiting union. Among those who had formed more than one such a union (about 20% of the women), the first one was included in the analysis. As in Sub-studies I and II, cohabitations in which either or both partners were born abroad (n = 1,912, 7.7%) and those in which the male partner was born before 1956 (n = 1,039, 4.2%) were excluded. Given that many people under 20 years of age are still in education, unions formed when the woman was under 20 years of age were also excluded (n = 1,615, 6.5%). The final number of cohabitations in the analysis was 20,452.

The method of analysis in Sub-studies III and IV is the Cox proportional hazards model for time-to-event data (see Chapter 5.5 "The Cox regression model" below). Cohabitations were followed for dissolution (i.e. moving apart; Sub-study III) and marriage (Sub-study IV) from the month the couple moved in together to December 2003. 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.

Couples were right-censored if they moved abroad, if either partner died, or if the observation period ended (December 2003). In the analysis of cohabitation dissolution (Sub-study III), couples were also censored at marriage, and respectively, in the analysis of transition to marriage (Sub-study IV), at separation.[1] The 20,452 cohabitations contributed altogether 674,316 months at risk of marriage or dissolution during the follow-up. In total 7,463 couples (36.5%) separated, 6,448 (31.5%) married, 40 (0.2%) emigrated, 36 (0.2%) were censored through death, and 6,465 (31.6%) were still cohabiting in December 2003.

5.3 Variables

Social-class origins

Social class of origin was measured in terms of parental occupational class. This can be inferred from data on each person below the age of 15, when occupational class is determined by the household's reference person. Reference person is the individual who is interpreted as having the primary responsibility for the subsistence of the household. In two-parent families, it is in practice the parent with higher income, who in most cases is the father. Data on occupational class comes from censuses and it starts from the year 1970, which means that the oldest birth cohort for which parental data is available is 1956. After 1970, data is available for every fifth year, and the measures were taken when the partners were 8–14 years old, depending on their year of birth.[2] Months at risk in each combination of the partners' social-class origins are presented in Appendix Table 1 of Sub-study III and in Appendix Table A1 of Sub-study IV.

[1] Although marriage and separation from cohabitation are competing events (i.e., one event prevents the other event from occurring altogether), competing-risks regression is not applied here. In competing-risks regression, an observed effect of a covariate on the event of interest can be caused by an effect of the covariate on a competing event. This is not the purpose in the current study.
[2] Parental occupational class is measured for the birth cohorts in the following years: birth cohorts 1956–62: year 1970; 1963–67: 1975; 1968–72: 1980; 1973–77: 1985; 1978–82: 1990; 1983–87: 1995; 1988–92: 2000; 1993–97: 2005.

Five categories of parental occupational class are distinguished: *upper-white-collar employee*, *lower-white-collar employee*, *manual worker*, *farmer* and *other*. "Farmer'" refers to self-employed people and employers in agriculture, forestry and fishing (workers in these fields are classified as manual workers). In 1975, most people working in agriculture, forestry and fishing were own-account workers without employees (Statistics Finland 1981). The heterogeneous residual group "other" includes individuals whose reference person's occupational status is student or pensioner and those for whom data is missing. Individuals originating from families of self-employed persons and employers (other than farmers) are also placed in this category: given that the data does not distinguish between small entrepreneurs and owners of large companies, the group would not constitute a meaningful category in itself. Self-employed people and employers comprise about half of the category "other".

Educational attainment

Palapeli provides month-level data on the completion of educational qualifications. The data are obtained from Statistics Finland's register of completed education and degrees. Data collected in the 1970 census forms the basis of the register, and it has been updated annually since then. Educational degrees were classified in four categories. Individuals with no registered post-comprehensive, non-compulsory education are interpreted as having a *basic-level qualification*, which means at most nine years of schooling. Education up to the *upper-secondary level* lasts 11–12 years and includes the matriculation examination (the final examination at the end of upper-secondary school) and vocational qualifications obtained in one to three years. *Lower-tertiary education* covers 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* includes the higher-degree level (5–6 years following upper-secondary education, e.g., Master's degrees from universities) and doctorate education.

In Sub-studies I and II, which analyse homogamy tendencies and their changes, educational attainment was measured for both partners in the month the woman turned 30 years of age. In sub-studies III and IV, which analyse separation and marriage from cohabitation, monthly updated time-dependent covariates were constructed. The covariates were lagged one month, in other words they measure the partners' educational attainments at time $t - 1$. Months at risk in each combination of the partners' educational levels

are presented in Appendix Table 2 of Sub-study III and in Appendix Table A2 of Sub-study IV.

Control variables in Sub-studies III and IV

Four basic factors that could have distorted the analysis of the association between socio-economic homogamy and separation and marriage from cohabitation were controlled for in Sub-studies III and IV. Months at risk according to these variables and their effects on separation and marriage rates are shown in Table 5 of Sub-study III and in Table 7 of Sub-study IV. Given that socio-economic differences between partners may be related to age differences, controlling for *age homogamy* is of particular importance. Seven categories were distinguished: female 8 or more years older, female 4–<8 years older, female >0–<4 years older, male 0–<4 years older, male 4–<8 years older, male 8–<12 years older and male 12 or more years older.

Three other control variables were introduced on the grounds that these factors are well known to influence union stability (see Lyngstad & Jalovaara 2010), and they are also associated with an individual's socio-economic status. *The female partner's age at cohabitation entry* is classified in five categories: 20–24, 25–29, 30–34, 35–39 and 40–42 years. *Place of residence* is a time-dependent covariate indicating the degree of urbanization of the couple's municipality of residence at the end of the previous calendar year. The covariate is updated yearly and categorized as follows: Helsinki metropolitan area, other urban, semi-urban and rural.

Parental status is a time-dependent covariate which is updated monthly and lagged one month. In Sub-study III, seven categories were formed according to whether the couple had shared children or not, 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. In Sub-study IV, second and later children were further distinguished, which produced three additional categories. Pregnancy was deduced from the registered birth dates, and defined as seven months preceding a birth. Thus, the covariate does not capture pregnancies leading to spontaneous or induced abortion.

5.4 Log-linear models

Log-linear modelling was used in Sub-studies I and II to analyse homogamy with regard to education and social-class origins, and changes in homogamy over birth cohorts. Log-linear models have been extensively applied to analyses of homogamy because they enable the analysis of the association between the partners' statuses while controlling for the confounding effect of marginal distributions. A log-linear model makes no distinction between dependent and independent variables: it examines the association between categorical variables through the analysis of expected cell frequencies. When the association between the partners' social-class origins, for example, is analysed, the saturated model that fits the cells exactly is the following:

$$\log(F_{ij}) = \lambda + \lambda_i^{Mp} + \lambda_j^{Fp} + \lambda_{ij}^{MpFp}. \quad (1)$$

Here, F_{ij} is the expected cell frequency, λ is the grand mean, λ_i^{Mp} and λ_j^{Fp} are the marginal effects of the male and the female partners' social-class origins, and λ_{ij}^{MpFp} is the interaction between the partner's origins. To achieve a simple, intuitive analysis of couple resemblance, the full interaction λ_{ij}^{MpFp} is replaced in the analyses with homogamy parameters (H), which measure the tendency of unions to concentrate on specific cells in the cross-table of the partners' statuses:

$$\log(F_{ij}) = \lambda + \lambda_i^{Mp} + \lambda_j^{Fp} + H. \quad (2)$$

The specifications of homogamy parameters H used here are presented visually in Appendix Table 1 of Sub-study I. First, homogamy tendencies are modelled with the *general homogamy parameter*, which measures the overall tendency towards homogamy. This is a dummy coded 1 for all cells on the main diagonal (where couples who are similar in status are located), and an exponentiated coefficient gives the odds of homogamy relative to the odds of heterogamy (Pullum & Peri 1999). Next, *group-specific homogamy parameters* are used to see how homogamy tendencies vary between status groups. Here, each cell on the main diagonal is given a separate value. The exponentiated coefficient can be interpreted, for instance, as the odds of basic-level educational homogamy relative to the odds of educational heterogamy (Pullum & Peri 1999; Solís et al. 2007). Finally, the *educational hypergamy parameter* is used to assess the tendency of women to partner with more highly (or less highly) educated men. This parameter is a dummy coded 1 for all couples in which the male partner is more highly educated than the female partner, and it is added to a model that includes the parameter for general educational ho-

mogamy. Hypergamy is examined only in the case of educational attainment, given that the variable for social-class origins is only partly ordinal.

In Sub-study I, homogamy tendencies were first analysed without controlling for a homogamy tendency in the other dimension. In other words, two-way tables between the partners' social-class origins (4 × 4) and their educational attainments (4 × 4) were analysed separately. The four-way table between the partners' class origins and educational levels (4 × 4 × 4 × 4) was analysed to control for the other homogamy dimension. The adjusted estimates were obtained by including in the model the marginal effects of both characteristics ($\lambda_i^{Mp}, \lambda_j^{Fp}, \lambda_k^{Me}, \lambda_l^{Fe}$), the association between class origins and education among men and women ($\lambda_{ik}^{MpMe}, \lambda_{jl}^{FpFe}$) and the homogamy parameters of both characteristics (H^P, H^E) (see Kalmijn 1991a; Pullum & Peri 1999):

$$\log(F_{ijkl}) = \lambda + \lambda_i^{Mp} + \lambda_j^{Fp} + \lambda_k^{Me} + \lambda_l^{Fe} + \lambda_{ik}^{MpMe} + \lambda_{jl}^{FpFe} + H^P + H^E. \qquad (3)$$

Comparison of the adjusted and unadjusted estimates of homogamy reveals the degree to which the two dimensions of homogamy are mutually (in)dependent. For instance, if equation (3) produces the same estimate of homogamy in social-class origins as equation (2), homogamy in parental occupational class is independent of the tendency towards educational homogamy (see Pullum & Peri 1999).

Sub-study II examines changes in homogamy tendencies between birth cohorts. Thus, the analyses focus on three-way tables between the male partner's status, the female partner's status, and the birth cohort. For educational attainment, we had a 4 × 4 × 6 table (four categories of education and six cohorts), and for class background, a 5 × 5 × 4 table (five categories of class origins and four cohorts). In the case of social-class origins, for instance, the saturated model is of the following form:

$$\log(F_{ijk}) = \lambda + \lambda_i^{Mp} + \lambda_j^{Fp} + \lambda_k^{C} + \lambda_{ik}^{MpC} + \lambda_{jk}^{FpC} + \lambda_{ij}^{MpFp} + \lambda_{ijk}^{MpFpC}. \qquad (4)$$

Here, $\lambda_i^{Mp}, \lambda_j^{Fp}$ and λ_k^{C} are the marginal effects of the male partner's class origins, the female partner's class origins and the birth cohort, $\lambda_{ik}^{MpC}, \lambda_{jk}^{FpC}$ and λ_{ij}^{MpFp} are their two-way interactions, and λ_{ijk}^{MpFpC} is their three-way interaction. Given that the two-way interaction λ_{ij}^{MpFp} is replaced with the homogamy parameters described above, interactions between a given homogamy parameter and the birth cohort form the core of the analyses. Log-linear models were fitted with the program R: A Language and Environment for Statistical Computing, version 2.13.0 (R Core Team 2012).

5.5 The Cox regression model

The Cox proportional hazards model

The Cox proportional hazards model (Cox 1972) was used in Sub-studies III and IV to analyse cohabitation dissolution and the transition from cohabitation to marriage. The Cox model is a so-called survival model, which takes into consideration both the frequency and the timing of the event of interest. The model can be expressed as

$$\lambda(t) = \lambda_0(t) \times \exp\left(\beta_1 X_1 + \cdots + \beta_p X_p\right) \quad (5)$$

where $\lambda(t)$ is the hazard of marriage at duration t, $\lambda_0(t)$ is a baseline hazard function (the hazard for a person with the reference characteristics on each of the explanatory covariates X), $X_1,\ldots, X_p$ are the explanatory covariates, and $\beta_1,\ldots, \beta_p$ are the regression coefficients associated with them. The model is semi-parametric given that the baseline hazard is left unspecified. The results are presented as hazard ratios (HR, $\exp(\beta)$). A hazard ratio is a given group's hazard of event relative to the chosen reference category's hazard. For instance, a hazard ratio of 1.20 indicates that the group's hazard of event is 20% higher than the reference category's hazard. Stata statistical software (versions 10–13) was used for the analyses.

Analytical strategy

The central aim of the thesis was to carry out a detailed analysis of the effects of homogamy and heterogamy on the stability of cohabiting unions. Thus, the hazards of separation and marriage were examined in all possible combinations of partner status. The interactions (the combined variable) of the partners' educational levels were controlled for when the interactions of their social-class origins were analysed, and vice versa, in order to determine the independent effects of these two dimensions of homogamy. The control variables introduced above were also included in all the models.

The analysis in Sub-study III, which focused on cohabitation dissolution, was based on the comparison of estimates from two models: the *main-effects model* and the *joint-effects model*. The main-effects model shows the average effects of each partner's status on the risk of cohabitation dissolution, and serves as a baseline for evaluating whether any interactive effects between the partner's statuses exist. In the case of educational attainment, for instance, the main-effects model is the following:

$$\lambda(t) = \lambda_0(t) \times \exp(\boldsymbol{\beta}_C \boldsymbol{X}_C + \beta_{FE} X_{FE} + \beta_{ME} X_{ME}) \quad (6)$$

Here, $\boldsymbol{X}_C$ is the vector of the variables that are controlled for, X_{FE} is the education of the female partner and X_{ME} is the education of the male partner.

The joint-effects model produces the hazard ratios of dissolution for all possible combinations of the partners' educational attainments. This corresponds with including the full interaction of the partners' education in the model. The joint-effects model is the following:

$$\lambda(t) = \lambda_0(t) \times \exp(\boldsymbol{\beta}_C \boldsymbol{X}_C + \beta_E X_E) \quad (7)$$

Here, X_E is the combined variable of the partners' educational attainments.

The presence and nature of any interactions between the partners' statuses were determined by assessing whether the estimates from the joint-effects model merely reflected the main effects of each partner's position, or whether it revealed patterns that deviated from the main effects. In other words, the aim was to find out whether the effect of the female partner's status on cohabitation dissolution depended on the male partner's status (and vice versa), or whether the patterns produced by the main-effects model applied across all categories of partner status. We also tested the statistical significance of the overall interaction between the partners' statuses by comparing the fit of the main-effects model and the joint-effects model using a likelihood-ratio test.

Corresponding analyses were carried out in Sub-study IV, which concerned the transition from cohabitation to marriage. A complementary analytical strategy also was used in Sub-study IV to precisely locate the combinations that interacted and to assess the magnitude and the statistical significance of the interactive effects between the partners' statuses. *Dummy variables* of each combination were used for this purpose. To illustrate the modelling strategy, let us take as an example the partners' educational attainments, and the combination in which both partners have no education beyond the basic level. First, a dummy variable representing such couples was created (both basic = 1, others = 0). This dummy was then added to a model that included the main effects of the partners' educational levels (the main-effects model, equation (6) above). The model that includes the dummy is thus the following:

$$\lambda(t) = \lambda_0(t) \times \exp(\boldsymbol{\beta}_C \boldsymbol{X}_C + \beta_{FE} X_{FE} + \beta_{ME} X_{ME} + \beta_{B\&B} X_{B\&B}) \quad (8)$$

Here, $X_{B\&B}$ is the dummy for the combination in which both partners are educated to the basic level. Given that the main effects of each partner's education are included in the model, the hazard ratio of the dummy reveals *whether there is an "excess" or a "deficit" risk of marriage in this particular combination, over and above the main effects*. The marriage rate that prevails among all other couples outside the combination in question serves as a reference in this analysis. A hazard ratio greater than 1.00 indicates an interactive effect that increases the marriage rate, whereas a ratio smaller than 1.00 implies an interaction that decreases the rate. The above procedure was repeated for all combinations.

6 RESULTS

6.1 Homogamy in social-class origins and education

Let us first consider the prevalence of socio-economic homogamy in the unions of 30-year-old Finnish women. Table 2 shows the cross-tabulations of the partners' social-class origins, and Table 3 those of their educational attainments. Educational homogamy is more prevalent than homogamy in socio-economic family background: 46% of the couples have similar educational attainments, whereas 40% share a similar class background. Unions in which the woman is more highly educated than the man (34% of all couples) are more common than those in which the man is the more highly educated (20% of all couples). However, given that the average level of education is higher among female than among male partners (see the totals in Table 3), a larger proportion of hypogamous than hypergamous couples is to be expected even without any real tendency towards educational hypogamy.

Table 3 also shows how rare extreme educational heterogamy is: of more than 15,000 unions, only 73 are between people with a basic level and an upper-tertiary level of education. From another perspective, whereas 50% of women educated to the upper-tertiary level are partnered with a man who is similarly educated (1,039/2,097), only 1% of women with a basic level of education have a partner who is educated to the upper-tertiary level (17/1,479).

As Table 4 shows, the overlap of the two dimensions of homogamy is quite modest. Only 19% of the couples are homogamous with regard to both educational attainment and class background, which is very close to the proportion that is to be expected if the dimensions were independent ($0.46 \times 0.40 = 0.18$). One third of the couples are heterogamous with respect to both dimensions, and around half are homogamous on one dimension but heterogamous on the other. These proportions are also very close to what might be expected if the dimensions were independent.

Table 2. Cross-tabulation of the partners' social-class origins (% of total below in parentheses)

		Female partner				
		Upper white collar	Lower white collar	Manual worker	Farmer	Total
Male partner	Upper white collar	784	691	908	183	2,566
		(5.2)	(4.6)	(6.0)	(1.2)	(17.0)
	Lower white collar	703	946	1,615	247	3,511
		(4.7)	(6.3)	(10.7)	(1.6)	(23.3)
	Manual worker	826	1,719	3,900	663	7,108
		(5.5)	(11.4)	(25.9)	(4.4)	(47.2)
	Farmer	175	338	915	453	1,881
		(1.2)	(2.2)	(6.1)	(3.0)	(12.5)
	Total	2,488	3,694	7,338	1,546	15,066
		(16.5)	(24.5)	(48.7)	(10.3)	(100)

Homogamous (on the main diagonal): 40%

Table 3. Cross-tabulation of the partners' educational attainments (% of total below in parentheses)

		Female partner				
		Basic	Upper secondary	Lower tertiary	Upper tertiary	Total
Male partner	Basic	462	1,040	543	56	2,101
		(3.1)	(6.9)	(3.6)	(0.4)	(14.0)
	Upper secondary	866	3,423	2,540	436	7,265
		(5.8)	(22.7)	(16.9)	(2.9)	(48.2)
	Lower tertiary	134	1,112	1,965	566	3,777
		(0.9)	(7.4)	(13.0)	(3.8)	(25.1)
	Upper tertiary	17	293	574	1,039	1,923
		(0.1)	(1.9)	(3.8)	(6.9)	(12.8)
	Total	1,479	5,868	5,622	2,097	15,066
		(9.8)	(39.0)	(37.3)	(13.9)	(100)

Homogamous (on the main diagonal): 46%
Hypergamous (below the main diagonal): 20%
Hypogamous (above the main diagonal): 34%

Table 4. Overlap of homogamy in social-class origins and educational attainment

Homogamy in social-class origins	Homogamy in education	N	%	% exp[a]
Yes	Yes	2,888	19	18
Yes	No	3,195	21	22
No	Yes	4,001	27	27
No	No	4,982	33	32
Total		15,066	100	100

[a]The expected percentages if homogamy in social-class origins and education are independent of one another.

Let us now turn to the log-linear modelling of homogamy. Figure 1 shows the estimates of the general tendency towards homogamy in social-class origins and education. Given that estimates above 1.0 indicate a tendency towards homogamy, there is a statistically significant homogamy tendency in both status dimensions. Educational homogamy is clearly stronger than homogamy in socio-economic family background: without adjusting for homogamy tendency in the other dimension (the left bars in Figure 1), the odds of educational homogamy are 2.1-fold relative to the odds of educational heterogamy, whereas the corresponding ratio for social-class origins is 1.5.

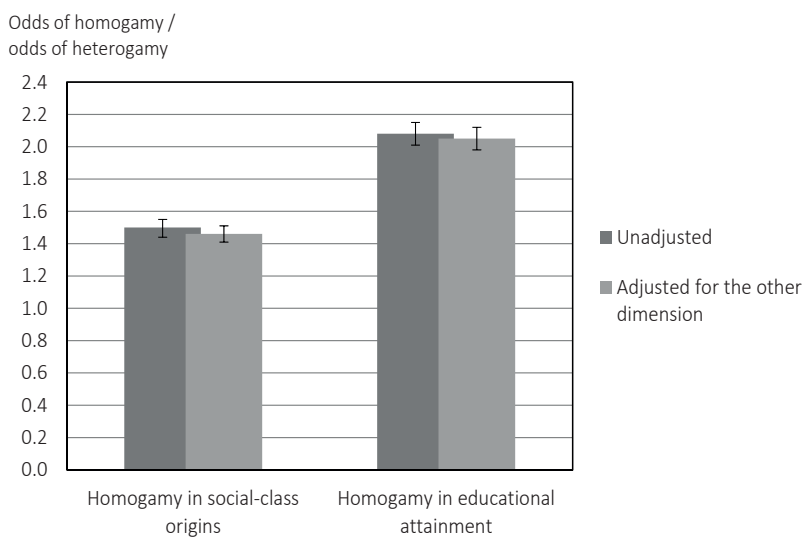

Figure 1. General homogamy tendencies in social-class origins and educational attainment (exponentiated parameter estimates from log-linear models with 95% confidence intervals)

The right-hand bars in Figure 1 show the homogamy estimates when the tendency in the other dimension is controlled for. The adjustment does not have much of an effect on the estimates. The estimate for homogamy in social-class origins decreases slightly more clearly than the estimate for educational homogamy, which indicates that homogamy in social-class origins is more dependent on educational homogamy than vice versa. The independence of the two dimensions is nonetheless notable.

Figure 2 depicts the group-specific estimates of homogamy in social-class origins. People from farmer families are the most homogamous (odds of homogamy relative to the odds of heterogamy 3.1), followed by those from upper-white-collar families (2.5). Homogamy is quite modest among people from manual-worker families (1.3), and those from lower-white-collar families do not tend to partner homogamously (0.9). Controlling for group-specific educational homogamy only affects the estimate of upper-white-collar homogamy, which decreases from 2.5 to 2.0.

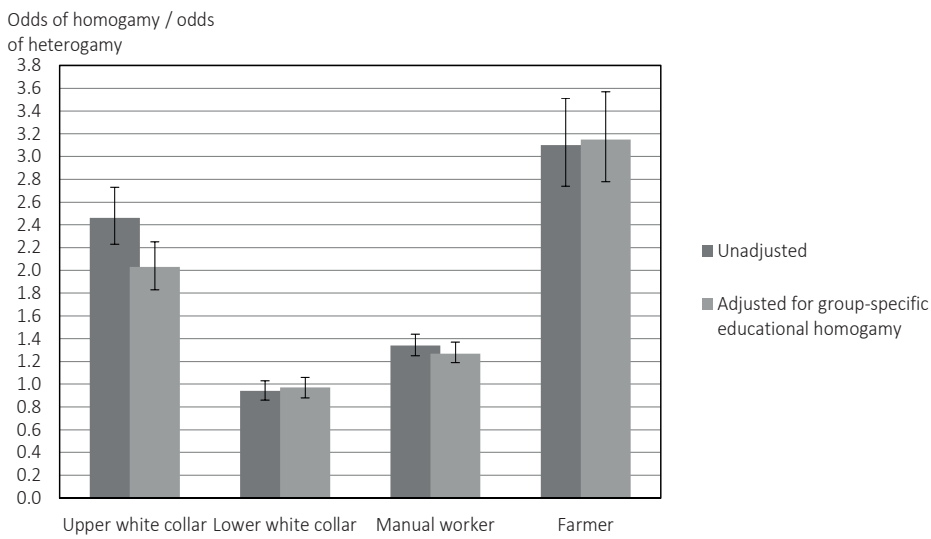

Figure 2. Homogamy tendency by social-class origins (exponentiated parameter estimates from log-linear models with 95% confidence intervals)

With regard to educational attainment (Figure 3), those with an upper-tertiary level of education are by far the most homogamous – their odds of homogamy are 11.6-fold relative to the odds of heterogamy. People with a basic-level education show the second highest rate of homogamy (2.7), followed by those with a lower-tertiary education (1.7). The homogamy tendency

is weak among those educated to the upper-secondary level (1.2). Controlling for group-specific homogamy in social-class background only decreases the estimate for upper-tertiary-level homogamy, from 11.6 to 10.6. Thus, only upper-white-collar background homogamy and upper-tertiary level educational homogamy are (partly) overlapping dimensions.

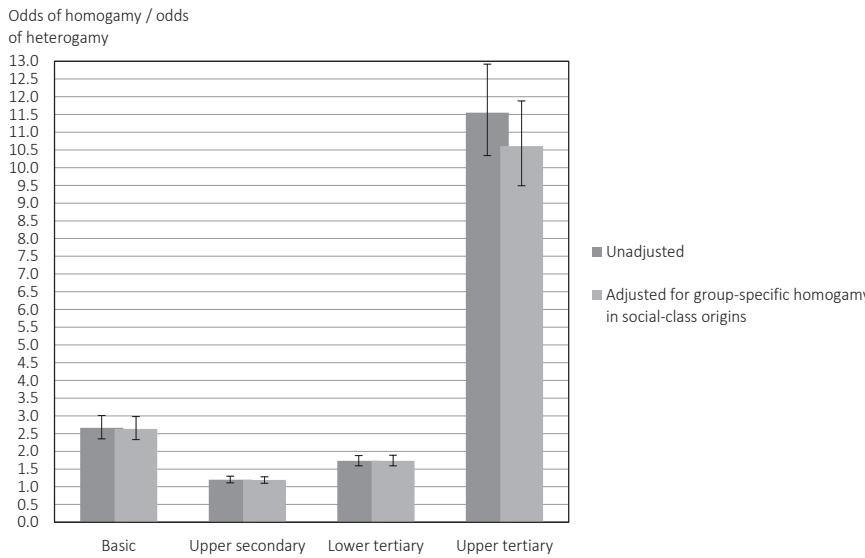

Figure 3. Homogamy tendency by educational attainment (exponentiated parameter estimates from log-linear models with 95% confidence intervals)

6.2 Changes in homogamy between birth cohorts

Figure 4 shows the change in the proportions of homogamous couples among all couples between birth cohorts. The prevalence of educational homogamy remains quite stable, at around 45%, across the cohorts. However, there is a change in the proportional prevalence of educational hypergamy and hypogamy: the proportion of hypergamous couples (those in which the man is more highly educated than the woman) has decreased from 25% in the 1957–1960 cohort to 17% in the 1977–1979 cohort, and respectively, the proportion of hypogamous couples (those in which the woman is more highly educated than the man) has increased from 31 to 38%. The prevalence of homogamy in social-class origins has decreased from 33% in the 1965–1968 cohort to 30% in the 1977–1979 cohort.

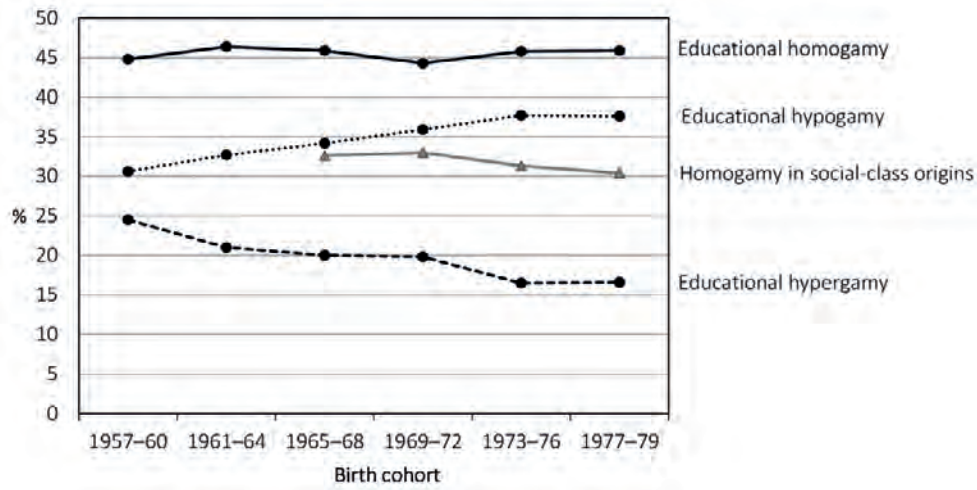

Figure 4. Changes in the prevalence of homogamy between cohorts born in 1957–1979 (homogamous couples of all couples, %)

However, these changes do not necessarily show how the actual tendency towards homogamy has changed, given that changes in percentages also reflect changes in the distributions of educational attainment and social-class origins among women and men in unions. Log-linear modelling shows changes in homogamy tendencies net of changes in the marginal distributions. Figure 5 gives the general homogamy tendencies in education and social-class origins in each birth cohort. Educational homogamy has strengthened slightly: the odds of homogamy relative to the odds of heterogamy have increased from around 1.9 in cohorts born in the late 1950s and early 1960s to around 2.1 in cohorts born in the 1970s. Homogamy in social-class origins has remained almost constant: the odds ratio for homogamy is around 1.4 in all the cohorts.

Let us now consider how educational homogamy has changed depending on the level of education (Figure 6). Two opposing trends are to be observed: a downward trend among those with a tertiary-level education, and an upward trend among those with a lower educational attainment. Homogamy has decreased substantially among people with an upper-tertiary education: the odds ratio declined steadily from around 14.0 in the two oldest cohorts to 7.1 in the youngest. A similar but less marked decline (from 2.2 to 1.8) is observable among those educated to the lower-tertiary level. In the case of cohorts born in 1957–1968, homogamy is negligible among those with an upper-secondary education, but there emerges a slight homogamy tendency in the younger cohorts (odds ratio for homogamy around 1.2). Among those with no education beyond the basic level, the odds ratio for homogamy increased from 2.3 in the two oldest cohorts to over 3.0 in the two youngest. Thus, the

small increasing trend in general educational homogamy is attributable to the strengthening homogamy among those with a low level of education, and to a growing proportion of highly educated homogamous couples among which homogamy tendency is, despite the decrease, notably strong.

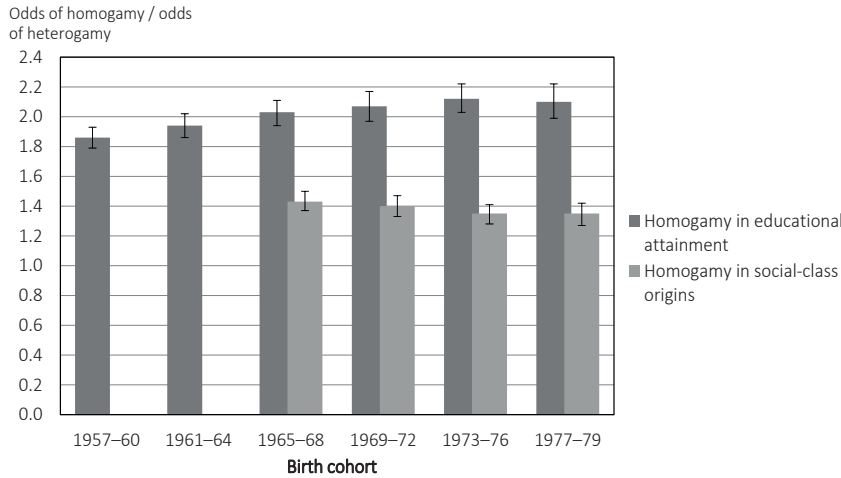

Figure 5. Changes in the general homogamy tendency in education and social-class origins (exponentiated estimates from log-linear models with 95% confidence intervals)

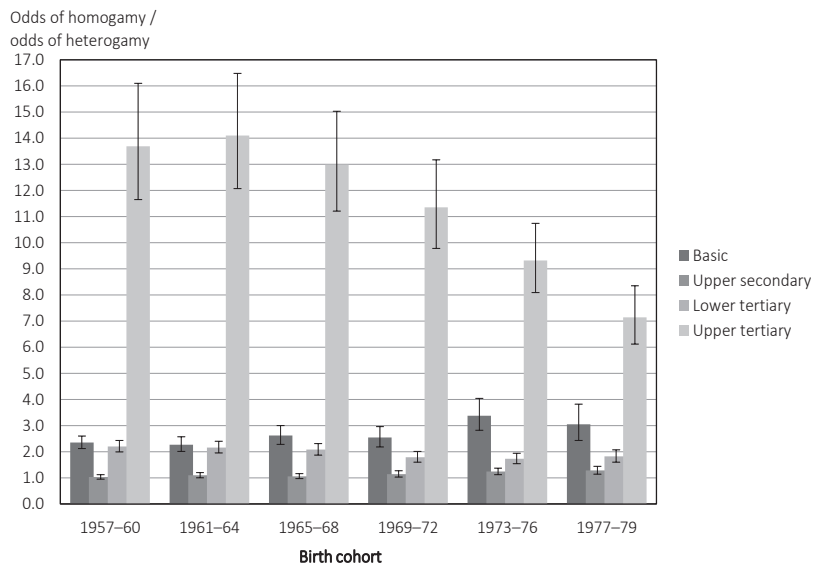

Figure 6. Changes in the homogamy tendency by educational attainment (exponentiated parameter estimates from log-linear models with 95% confidence intervals)

Figure 7 shows how the tendency of women to partner with men with a higher or lower educational level than their own has changed. The odds ratio of 1.0 in the 1957–1960 cohort indicates that these women did not tend to partner upwards or downwards with regard to education. However, women born in 1961–1964 tended to partner with less-well-educated men (odds ratio for hypergamy 0.7), and this hypogamy tendency strengthened further in the following cohorts: the odds ratio for hypergamy was as low as 0.4 in the two youngest cohorts.

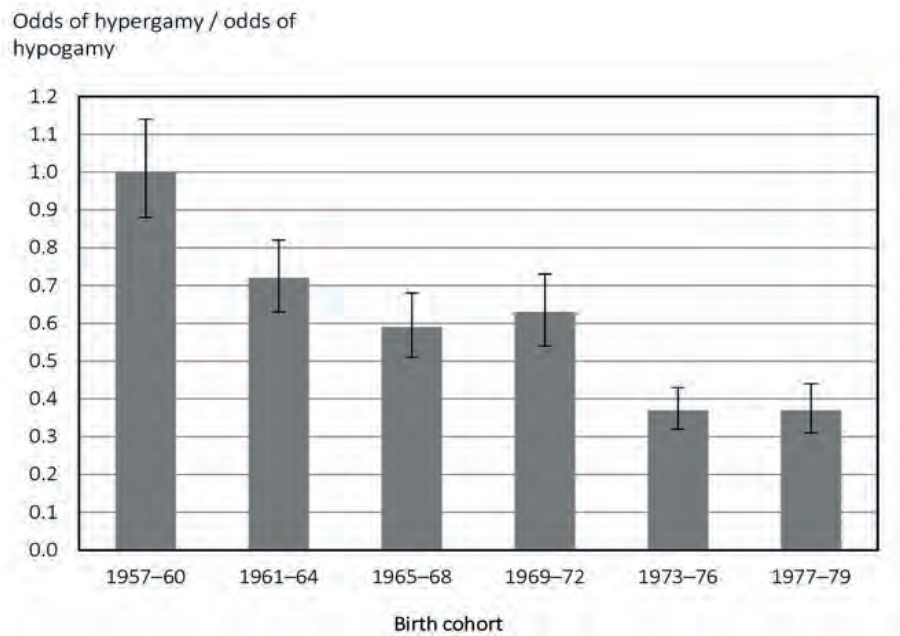

Figure 7. Changes in the educational hypergamy tendency (exponentiated parameter estimates from log-linear models with 95% confidence intervals)

Figure 8 gives the estimates of group-specific homogamy in social-class origins in each birth cohort. The only clear trend is a decline in homogamy among children of farmers: the odds ratio decreased from 3.0 in the 1965–1968 cohort to 1.9 in the 1977–1979 cohort. The odds ratio for homogamy fluctuates around 2.5 among people from upper-white-collar families, whereas homogamy remains at a relatively constant low level among the other groups.

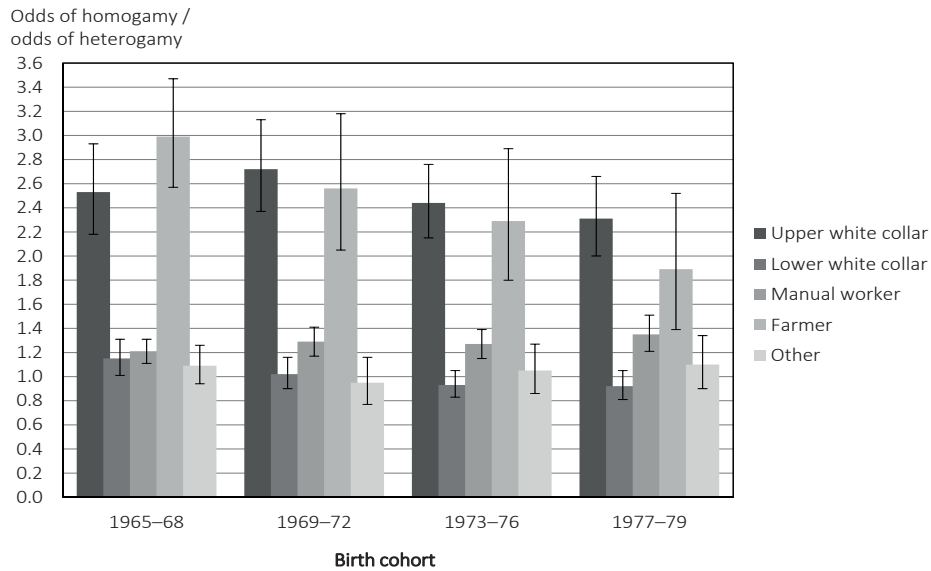

Figure 8. Changes in the homogamy tendency by social-class origins (exponentiated parameter estimates from log-linear models with 95% confidence intervals)

6.3 The effects of homogamy on cohabitation dissolution

Homogamy in social-class origins and cohabitation dissolution

Table 5 shows how the separation rate among cohabitors varies according to the partners' class backgrounds. Estimates from the main-effects model are given in the margins and those from the joint-effects model in the centre. The main effects of socio-economic origins are relatively weak. There are practically no differences in dissolution risk between the status groups among the men, and among the women only those from farmer families differ from other groups in terms of their somewhat lower risk of separation.

The likelihood-ratio test nevertheless indicates that the interaction between the partners' social-class origins is statistically significant ($p = 0.034$). The patterns predicted by the main-effects model were compared with the estimates from the joint-effects model so as to identify the cases in which homogamy or heterogamy affects the dissolution rate. The separation rates in the various combinations of the partners' socio-economic origins are mostly in line with the main effects: the hazard ratios in the columns comply with the main effects of the man's origins, and in the rows they comply with the main effects of the woman's origins. Some exceptions emerge, however. Two dissolution-promoting effects of heterogamy are detectable among women from upper-white-collar families (column 1): the separation rate is 38% higher if the partner comes from a farmer family, and 34% higher if he comes from the category "other", than if he also comes from an upper-white-collar family. According to the main effects, there should be no difference in the dissolution rates. One interactive effect is also observable among women from farmer families (column 4): there is an increased risk of dissolution when the partner comes from an upper-white-collar family. The three aforementioned interactions are also observable from the perspective of men, in other words if the hazard ratios in the rows are compared to the main effects of the female partner's social-class origins.[3]

[3] The same interactions emerge regardless of whether only the main effects of education or also the joint effects of education are controlled for. Similarly, the effects of educational differences on the dissolution rate (Table 6) are robust to the inclusion of the joint effects of social-class origins in the model. Homogamy in educational level and social-class origins thus affect the risk of cohabitation dissolution independently of one another.

Table 5. The main effects (in the margins) and the joint effects (in the centre) of parental social class on cohabitation dissolution, hazard ratios from the Cox proportional hazards models

		Female partner's parental social class					
		Upper white collar (1)	Lower white collar (2)	Manual worker (3)	Farmer (4)	Other (5)	**Main effects, male partner**
Male partner's parental social class	Upper white collar (1)	1.00[a]	0.95	0.98	1.11	1.07	1.00[a]
	Lower white collar (2)	0.91	0.93	0.94	0.95	0.95	0.95
	Manual worker (3)	0.96	1.01	0.94	0.82	1.01	0.98
	Farmer (4)	1.38	0.92	0.89	0.82	0.99	0.97
	Other (5)	1.34	1.09	0.94	0.81	1.05	1.05
	Main effects, female partner	1.00[a]	0.97	0.93 *	0.86 **	1.00	

Note: P value for the interaction between the partners' parental social classes 0.034. The hazard ratios are adjusted for the control variables (see Chapter 5.3) and the joint effects of education.
[a]Reference group.
Significance levels for the main effects: *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

Educational homogamy and cohabitation dissolution

The main effects of education on the separation rate among cohabitors are shown in the margins of Table 6: the higher the educational attainment, the lower is the risk of cohabitation dissolution. The gradient is roughly similar among women and men. Compared with basic-level education, upper-tertiary education reduces the separation risk by 38% among women and by 43% among men.

The likelihood-ratio test revealed a statistically significant interaction between the partners' educational attainments ($p = 0.004$). When the main-effects and the estimates from the joint-effects model (centre of Table 6) are compared, a large educational difference is clearly associated with an increased separation rate. Whereas the main effects predict a 43% lower risk of separation among men with an upper-tertiary as opposed to a basic

education, the reduction in the separation rate is only 15% if the female partner is educated to the basic level (column 1). Similarly, whereas the main effects estimate a 38% lower risk of separation among women educated to the upper-tertiary level as opposed to the basic level, the reduction in the separation rate is only 22% if the male partner is educated to the basic level (row 1). Less extreme forms of educational heterogamy do not substantially affect the dissolution rate. One dissolution-promoting interaction nevertheless emerges among women with a lower-tertiary education (column 3): having a partner with an upper-tertiary education versus a basic level lowers the separation rate by only 30% (1−(0.49/0.70)) instead of the 43% predicted by the main effects.

Homogamy is associated with a reduced risk of separation among cohabitors educated to the upper-tertiary level (column 4 and row 4). Although the main effects estimate a 7% lower separation risk among men educated to the upper-tertiary level than among those with lower tertiary education (1−(0.57/0.61)), a 19% lower risk than among those with an upper-secondary education (1−(0.57/0.70)), and a 43% lower risk than among those with a basic education, the reductions in separation rates are much greater if the female partner is also educated to the upper-tertiary level (column 4): 20% (1−(0.32/0.40)), 37% (1−(0.32/0.51)) and 59% (1−(0.32/0.78)), respectively. Similarly, the main effects of the woman's education predict that an upper-tertiary education reduces the risk of dissolution by 2% (1−(0.62/0.63)), 19% (1−(0.62/0.77)) and 38% compared with lower-tertiary, upper-secondary and basic education, respectively, but if the male partner has an upper-tertiary education (row 4), the respective reductions are as much as 35% (1−(0.32/0.49)), 26% (1−(0.32/0.43)) and 62% (1−(0.32/0.85)).

Table 6. The main effects (in the margins) and the joint effects (in the centre) of educational attainment on cohabitation dissolution, hazard ratios from the Cox proportional hazards models

		Female partner's educational level				
		Basic (1)	Upper secondary (2)	Lower tertiary (3)	Upper tertiary (4)	**Main effects, male partner**
Male partner's educational level	Basic (1)	1.00 [a]	0.84	0.70	0.78	1.00 [a]
	Upper secondary (2)	0.80	0.57	0.45	0.51	0.70 ***
	Lower tertiary (3)	0.63	0.52	0.41	0.40	0.61 ***
	Upper tertiary (4)	0.85	0.43	0.49	0.32	0.57 ***
	Main effects, female partner	1.00 [a]	0.77 ***	0.63 ***	0.62 ***	

Note: P value for the interaction between the partners' educational levels 0.004. Educational levels are time-dependent covariates. The hazard ratios are adjusted for the control variables (see Chapter 5.3) and the joint effects of parental social class.
[a]Reference group.
Significance levels for the main effects: *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

6.4 The effects of homogamy on the transition from cohabitation to marriage

Homogamy in social-class origins and proceeding to marriage

The main effects of the partners' class backgrounds on the likelihood of proceeding from cohabitation to marriage are given in the margins of Table 7. Among women, those from upper-white-collar families are the most likely to make the transition to marriage, whereas those from manual-worker families and from families categorized as "other" are the least likely to do so. The marriage rate among men is highest for those with a farmer-family background, and lowest for those from the group "other". Nevertheless, the differences between the groups in the propensity to marry are not vast.

According to the likelihood-ratio test, the overall interaction between the partner's social-class origins is not statistically significant (p = 0.252), hence the estimates from the joint-effects model (displayed in the centre of Table 7) conform quite well to the patterns predicted by the main effects. There are some exceptions, however. For instance, the main effects predict a 14% higher marriage rate among men from farmer families than among those from upper-white-collar families. However, the joint-effects model estimates a 32% higher marriage rate among women from upper-white-collar families (column 1) if the male partner comes from a farmer family compared with if he comes from an upper-white-collar family. Moreover, the respective advantage of having a partner with farm origins is as much as 46% among women from farmer families (column 4) (1.15/0.79).

The main effects also imply that the marriage rates of men from lower-white-collar and upper-white-collar families do not differ much. However, the hazard of marriage among women from manual-worker families (column 3) is 14% higher if the male partner has lower-white-collar origins than if he comes from an upper-white-collar family (0.84/0.74). Finally, some interactions are observable among women from the category "other" (column 5): whereas the main effects of the male partner's social-class origins imply that the marriage rate is highest among men from farmer families, among women from the group "other", the rate is highest when the male partner comes from an upper-white-collar family.[4]

[4] The interactions of social-class origins remained the same regardless of whether only the main effects or also the joint effects of education were controlled for, and vice versa. Homogamy in social-class origins and educational level thus affect the likelihood of proceeding to marriage independently of one another.

Table 7. The main effects (in the margins) and the joint effects (in the centre) of parental social class on the transition from cohabitation to marriage, hazard ratios from the Cox proportional hazards models

		Female partner's parental social class					
		Upper white collar (1)	Lower white collar (2)	Manual worker (3)	Farmer (4)	Other (5)	**Main effects, male partner**
Male partner's parental social class	Upper white collar (1)	1.00 [a]	0.90	0.74	0.79	0.94	1.00 [a]
	Lower white collar (2)	0.95	0.81	0.84	0.84	0.73	0.98
	Manual worker (3)	0.92	0.83	0.76	0.80	0.75	0.94
	Farmer (4)	1.32	1.01	0.85	1.15	0.80	1.14 *
	Other (5)	0.78	0.74	0.73	0.77	0.75	0.88 **
	Main effects, female partner	1.00 [a]	0.89 **	0.82 ***	0.89 *	0.82 ***	

Note: P value for the interaction between the partners' parental social classes 0.252. The hazard ratios are adjusted for the control variables (see Chapter 5.3) and the joint effects of education.
[a]Reference group.
Significance levels for the main effects: *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

Partner combinations that interact are also visible through the hazard ratios of the combination dummies that have been added to the main effects model (Figure 9). Hazard ratios greater than 1.00 indicate an increased marriage rate compared with what could be expected on the basis of the main effects, and hazard ratios lower than 1.00 indicate a reduced marriage rate.

The hazard ratios of the dummies confirm that homogamy increases the marriage rate only in one case – among cohabitors with farm origins (HR = 1.24). The increased marriage rate of heterogamous couples in which the female comes from an upper-white-collar family and the male from a farmer family is also observable through the dummy hazard ratio (HR = 1.22), but this interactive effect turns out to be statistically insignificant. Furthermore, the marriage rate among women from manual-worker families is statistically significantly reduced when the partner comes from an upper-white-collar family (HR = 0.86), and increases when he comes from a lower-white-collar family (HR = 1.15). The hazard ratios of the dummies also show the statistically significantly increased

marriage rate of couples in which the female comes from the category "other" and the male from an upper-white-collar family (HR = 1.22). However, the lowered likelihood of marriage among couples in which the female comes from the category "other" and the male has farm origins does not reach statistical significance (HR = 0.84). Nevertheless, the overall picture is that the interactive effects are few – the hazard ratios do not deviate much from 1.00.

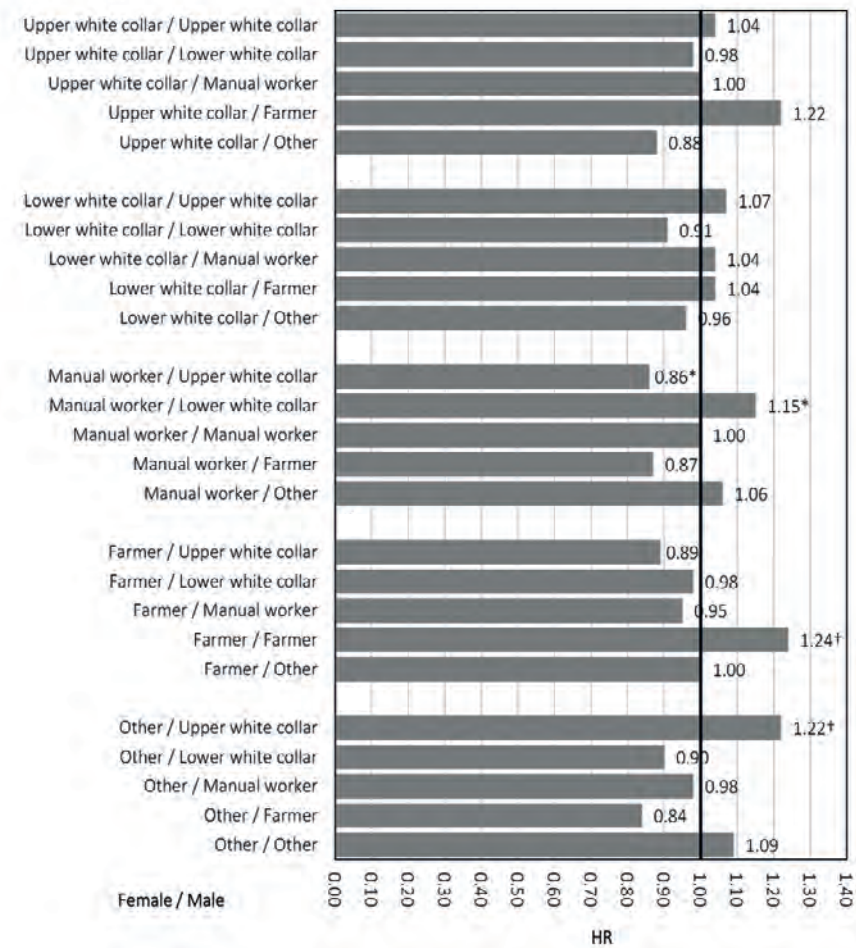

Figure 9. The interactive effects of the partners' parental social classes on the transition from cohabitation to marriage, hazard ratios (HR) from the Cox proportional hazards models

Note: The interactive effects are the hazard ratios of the combination dummies from models that include the main effects of parental social class and the combination dummy in question. If HR > 1.00, interaction increases the marriage rate; if HR < 1.00, interaction decreases the rate. The hazard ratios are adjusted for the control variables and the joint effects of educational level.

Significance levels: †$p < 0.10$, *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

Educational homogamy and proceeding to marriage

The main effects of education on the transition from cohabitation to marriage (in the margins of Table 8) show that higher educational attainment is associated with a greater likelihood of marrying among both women and men. The gradient is nevertheless steeper and more consistent among men: for instance, although the marriage rate among men with an upper-tertiary education is 17% higher than among those with a basic education, women educated to the basic and upper-secondary levels do not differ in terms of marriage propensity.

According to the likelihood-ratio test, the interaction between the partners' educational attainments is statistically significant ($p = 0.011$). The estimates from the joint-effects model show that the effects of the male partner's education often depend on the female's education, and vice versa (the centre of Table 8). There seems to be a marriage-promoting effect of homogamy among women with a basic level of education (column 1): contrary to what the main effects of the male partner's education predict, the marriage rate is higher if his education is on the basic level (HR = 1.00) than if he has an upper-secondary education (HR = 0.93). The marriage rate among extremely hypergamous couples is also higher than what could be expected on the basis of the main effects of the male's education (HR = 2.22 vs. 1.92).

Examination of the joint effects from the perspective of men again reveals an increased marriage rate among homogamous couples with a basic education: the rate is practically the same among men with a basic-level education (row 1) if the female is educated either to the basic level or to the lower-tertiary level, although the main effects predict a 33% higher marriage rate in the latter case. The marriage rate of extremely hypogamous couples – couples in which the woman is educated to the upper-tertiary level and the man to the basic level – is also relatively high (HR = 1.70): although the main effects of the female's education predict the marriage rate of women with an upper-tertiary education to be 63%, 66% (1.63/0.98) and 23% (1.63/1.33) higher, respectively, than that of women educated to the basic, upper-secondary and lower-tertiary levels, among men with a basic-level education (row 1), having a partner with an upper-tertiary education increases the marriage rate by as much as 70%, 102% (1.70/0.84) and 68% (1.70/1.01), respectively. Having a partner with an upper-tertiary education is also associated with an increased marriage rate among men with an upper-secondary education (row 2): the main effects predict that women educated to the upper-tertiary level are 63% more likely to marry than those educated to the basic level, but the advantage gained from the woman's upper-tertiary education is as much as 103% (1.89/0.93) among men educated to the upper-secondary level.

Finally, upper-tertiary-level educational homogamy seems to be associated with a lowered likelihood of marriage: although the main effects predict a 63% higher marriage rate among women with an upper-tertiary education than among those with a basic education, a 66% higher rate than among those with an upper-secondary education and a 23% higher rate than among those educated to the lower-tertiary level, among men with an upper-tertiary education (row 4) the respective advantages gained from the woman's upper-tertiary education are only 16% (2.58/2.22), 44% (2.58/1.79) and 15% (2.58/2.25).

Table 8. The main effects (in the margins) and the joint effects (in the centre) of educational attainment on the transition from cohabitation to marriage, hazard ratios from the Cox proportional hazards models

		Female partner's educational level				
		Basic (1)	Upper secondary (2)	Lower tertiary (3)	Upper tertiary (4)	**Main effects, male partner**
Male partner's educational level	Basic (1)	1.00[a]	0.84	1.01	1.70	1.00[a]
	Upper secondary (2)	0.93	0.98	1.33	1.89	1.17***
	Lower tertiary (3)	1.20	1.25	1.81	2.04	1.51***
	Upper tertiary (4)	2.22	1.79	2.25	2.58	1.92***
	Main effects, female partner	1.00[a]	0.98	1.33***	1.63***	

Note: P value for the interaction between the partners' educational levels 0.011. Educational levels are time-dependent covariates. The hazard ratios are adjusted for the control variables (see Chapter 5.3) and the joint effects of parental social class.
[a]Reference group.
Significance levels for the main effects: *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

The hazard ratios of the dummy variables show the interactive effects between the partners' educational attainments more clearly (Figure 10). The dummies indicate that homogamy statistically significantly increases the marriage rate among cohabitors with a basic education (HR = 1.30). A very small homogamy effect is also observable among those educated to the lower-tertiary level (HR = 1.11). On the other hand, homogamy statistically significantly reduces the likelihood of marriage among cohabiting couples educated to the upper-tertiary level (HR = 0.84). Heterogamy is statistically significantly

associated with a decreased marriage rate in two cases: when the female is educated to the basic level and the male to the upper-secondary level (HR = 0.83), and when the female is educated to the lower-tertiary level and the male to the basic level (HR = 0.81). The dummies confirm the increased marriage rates among extremely hypergamous (HR = 1.35) and hypogamous couples (HR = 1.21), but these effects do not reach statistical significance because of the scarcity of cohabitations between people with a basic and an upper-tertiary education. However, there is a statistically significantly increased likelihood of marriage among heterogamous couples in which the female is educated to the upper-tertiary level and the male to the upper-secondary level (HR = 1.25).

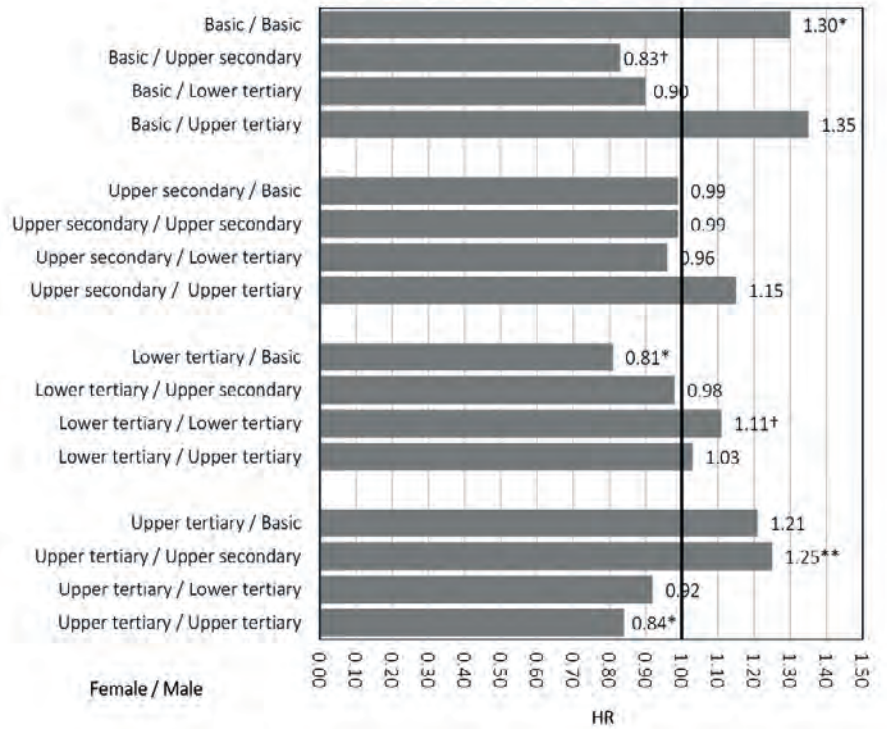

Figure 10. The interactive effects of the partners' educational attainments on the transition from cohabitation to marriage, hazard ratios (HR) from the Cox proportional hazards models

Note: The interactive effects are the hazard ratios of the combination dummies from models that include the main effects of educational level and the combination dummy in question. If HR > 1.00, interaction increases the marriage rate; if HR < 1.00, interaction decreases the rate. The hazard ratios are adjusted for the control variables and the joint effects of parental social class.

Significance levels: †$p < 0.10$, *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

7 DISCUSSION

7.1 Educational homogamy is stronger than homogamy in social-class origins

This thesis analysed socio-economic homogamy and its consequences for union stability in Finland. The objective was to examine the strength and patterns of socio-economic homogamy in couple formation and to find out how socio-economic similarity and dissimilarity between unmarried cohabiting partners affect the likelihood of separation or transition to marriage. Two dimensions of socio-economic position were in focus: individual educational attainment and the social class of the parental family. Unique register data on union formation and dissolution gave a rare opportunity to analyse patterns of partner choice in all (different-sex) unions – both marriages and cohabitations – and to examine in detail how homogamy affects the stability of cohabiting unions.

The first aim of the study was to compare the strength of homogamy with respect to education and class origins. The results show a clear tendency towards homogamy with regard to both characteristics. However, homogamy was proved to be stronger with respect to educational attainment than to social-class origins. Thus, what people become through their own orientations and choices over the life-course matters more in partner choice than their social and economic family background. This finding is in line with the results of previous studies comparing homogamy in ascribed and achieved socio-economic position (Kalmijn 1991a; Hansen 1995; Uunk et al. 1996) and the conception that individually achieved status has a stronger influence on the life-course than social origins in present-day, individualized societies (Treiman & Yip 1989; Hansen 1995). Educational differences also turned out to be more influential antecedents of cohabitation dissolution than differences in social-class origins. In addition, higher educational attainments among cohabiting partners consistently lowered the likelihood of dissolution and increased the likelihood of marriage, whereas the main effects of class background on these transitions were much weaker. These findings also highlight

the greater significance of achievement than ascription in contemporary union dynamics. The effects of class background on partner choice, union stability and other life-course outcomes may be particularly weak in a country such as Finland in which the welfare state aims to provide equal opportunities for citizens irrespective of their social background. Nonetheless, homogamy in social-class origins was not negligible, which implies that similarity of social origin still matters in partner choice.

From various theoretical perspectives it is suggested that group boundaries in terms of social-class origins have become easier to cross in couple formation over the course of modernization, whereas boundaries based on achieved status are becoming more significant (Kalmijn 1991a; Hansen 1995; Uunk et al. 1996; Solís et al. 2007; Blossfeld 2009). This led to the assumption that homogamy with regard to class background would have diminished and educational homogamy strengthened over time. Hence, the analyses also covered changes in homogamy in social origins between cohorts born in 1965 and 1979, and changes in educational homogamy between cohorts born in 1957 and 1979. However, the results show that homogamy in class background remained practically constant in the studied cohorts. There was some evidence of an increasing trend in educational homogamy, but the change was modest. Thus, it appears that despite the vast changes in the social and economic conditions of Finland during the last half of the 20th century (such as educational expansion and the transformation of the occupational structure), the overall tendency to partner homogamously with regard to class origins and education has not changed very much. The proportion of homogamous couples of all couples has also remained very stable. From this perspective it could be concluded that homogamy in achieved socio-economic position has not increased at the expense of homogamy in ascribed socio-economic status to any remarkable extent, and that social openness (or closure) in Finland has remained fairly constant.

One focal finding of the study is that educational homogamy and homogamy in social-class origins are largely independent phenomena: controlling for homogamy tendency on the other dimension did not have much of an effect on the estimates. In other words, homogamy in class background is not, to any remarkable extent, a "by-product" of educational homogamy, or vice versa. Similarly, the effects of educational homogamy on the propensity to separate or marry were independent of the effects of homogamy in socio-economic origins, and vice versa. This implies that although education and class origins are associated and both reflect an individual's position in the socio-economic hierarchy, they are distinct aspects of partner choice in contemporary Finland, and are thus by no means interchangeable indicators of socio-economic

homogamy. They rather seem to be alternative strategies for finding a partner with certain similarities in cultural resources: similar values, tastes and lifestyles grounded in the parental family can compensate for differences in education, and vice versa. In other words, it is enough to be similar in either one of these status dimensions to achieve "a common universe of discourse" (DiMaggio & Mohr 1985). Given the evidence of a stronger overlap of these two dimensions of homogamy reported in a previous study (Uunk et al. 1996), this independence may be specific to a modern Nordic society.

The setting applied in this thesis is similar to those used in previous studies that compare ascribed and achieved status homogamy: the occupation-based social class of the parental family was used as an indicator of ascribed socio-economic status, and educational attainment as an indicator of achieved status (Kalmijn 1991a; Uunk et al. 1996). Using parental education would have yielded a symmetrical measurement of ascribed and achieved status, but the data set did not include any socio-economic data on the parental families other than occupational class. Thus, the extent to which the choice of variables affects the conclusions made about the relative importance of homogamy in ascribed and achieved socio-economic status, the changes in their strength, and the extent of their overlap should be examined using data sets that comprise a more diverse selection of indicators of parental socio-economic resources.

7.2 The strength of homogamy varies between status groups

The strength of homogamy turned out to vary with the level of education and the class of origin. With regard to class origins, children of farmers and children of upper-white-collar employees were the most likely to choose a partner with a similar background, which is in line with the theoretical assumptions and the findings of previous studies (Kalmijn 1991a; Hansen 1995; Uunk et al. 1996). In contrast, people from lower-white-collar families did not show any homogamy tendency, and homogamy was quite weak among children of manual workers. Although theoretical considerations supported the expectation of a diminishing tendency to choose a partner with similar class origins, a decreasing trend in homogamy was found only among children of farmers. This could be attributable to the clear reduction in the structural opportunities for them to meet potential partners from a similar background. One reason for the relative stability of homogamy in class background is that there is little room for a decline given the weak homogamy tendency among children of lower-white-collar employees and manual workers.

The association between the level of education and the strength of homogamy turned out to be J-shaped: homogamy was strongest among individuals educated to the lowest and the highest levels, and the tendency was weak among those with an upper-secondary education. Various previous studies also report lower levels of homogamy among groups in the middle of the educational hierarchy than among those at the extremes (Uunk et al. 1996; Blackwell & Lichter 2000; Domański & Przybysz 2007; Rosenfeld 2008). Homogamy was notably strong among people with a higher university degree. The social and structural factors that contribute to homogamy thus seem to be particularly effective in this group. The cultural resources of highly educated individuals may be particularly distinct and hence their preference for similarity may be particularly strong. Persons with high educational qualifications may also be desired partners in the union market and thus do not need to partner down and can choose among themselves – and because of the ceiling effect they do not have the option to partner up. As far the structural opportunities are concerned, the settings of everyday life activities among the highly educated (such as workplaces, friendship networks, leisure activities and residential areas) may be particularly homogeneous in terms of educational composition. It has been suggested that because of their prolonged schooling, highly educated individuals tend to postpone family formation, and the union market they finally enter is relatively homogeneous compared with the market in which those who leave school and start a family earlier are active (see Blossfeld & Timm 2003; Blossfeld 2009). Moreover, the structuring of the educational system in Finland may play a role: university-level and polytechnic-level education (even in the same field) is given in separate institutions, which reduces the frequency of encounters between the respective groups.

However, the findings of this thesis indicate a decreasing homogamy tendency among highly educated individuals. This is obviously at odds with the view that educational homogamy should strengthen given that high educational qualifications increasingly constitute an advantage in modern union market, and individuals have better opportunities to meet potential partners in association with education. The weakening homogamy among the highly educated may result from the changed educational composition of the Finnish population: women are becoming increasingly more highly educated than men, thus highly educated women are finding it increasingly difficult to partner homogamously. It is also possible, for instance, that as the numbers of highly educated individuals has grown the group has become more heterogeneous and less distinctive, and hence less inclined towards in-group partner choice. In any event, from the perspective of changes in homogamy

by the level of education, the declining homogamy among the highly educated is indicative of growing social openness in Finnish society – even if people with a higher university degree still display the highest rate of homogamy.

The results of this thesis therefore imply that when opportunities for homogamy are on the decrease, highly educated Finnish women do not hesitate to partner down with regard to education – and vice versa, men do not avoid partnering with highly educated women. Our findings regarding the tendency towards educational hypergamy and hypogamy support this statement: whereas women born in the late 1950s did not tend to partner up or down with regard to education, the following female cohorts have been more and more inclined to partner with men with lower educational attainment than they have (and men tend increasingly to partner with more highly educated women). This hypogamy tendency was remarkably strong among cohorts born in the 1970s. High educational attainment thus seems to be an even more valuable asset for women than for men in the contemporary Finnish union market, which reflects the significance of the woman's socio-economic resources, education in particular, in union formation in Finland (see also Jalovaara 2012). However, it would be worth investigating whether or not men who partner with women who are more highly educated have some kind of compensatory socio-economic resources, such as high income, that mitigate the status differences.

It also turned out that homogamy has strengthened among people who have no education beyond the basic level. This could indicate that those with no schooling beyond the compulsory level are increasingly selected in terms of characteristics that are considered undesirable in a potential partner: their chances of partnering up with regard to education have become more limited, and they increasingly have to choose a partner from among themselves. Thus, the strengthening homogamy among those with a basic-level education points to a strengthening of social barriers between educational groups and to increasing selectivity and the marginalization of people with low educational attainment.

It is noteworthy that although some status groups show high rates of homogamy, the general homogamy tendencies in both education and class background are not highly strong. This is because the most homogamous groups (the most highly educated and those from farmer and upper-white-collar families) are fairly small, whereas the groups showing the weakest homogamy (those with an upper-secondary education and those from lower-white-collar and manual-worker families) are large. Thus, although homogamy is often stated to be the norm in partner selection, the results of this thesis indicate that this norm may not apply to all status groups, and point to comparatively high

social openness in Finnish society. This finding strengthens the assumption that social and cultural barriers between status groups are relatively low in Finland, and complies with the results of Domański and Przybysz (2007) and Katrňák et al. (2012) according to which educational homogamy is relatively weak in Nordic societies compared with other European countries. On the other hand, strong homogamy tendencies among the most highly educated and children of upper-white-collar employees imply that the highest strata remain closed even in a Nordic welfare state (see also Esping-Andersen & Wagner 2012).

7.3 Educational differences contribute to cohabitation dissolution

The second aim of this study was to determine how homogamy and heterogamy in class background and education affect the likelihood of ending non-marital cohabitation, through separation on the one hand or through proceeding to marriage on the other. An unusually elaborate approach was taken in the analyses: separation and marriage rates were examined in each possible combination of partner status.

The general hypothesis in the sociological literature is that social and cultural differences between partners are a potential source of conflict and thus constitute a risk for union stability. Thus, couples that are heterogamous in terms of socio-economic attributes were expected to have an increased likelihood of separating, whereas socio-economic homogamy would reduce the risk of union dissolution. However, with respect to homogamy in social-class origins, this hypothesis received little support: the only case in which heterogamy was consistently associated with an increased separation rate was when one partner came from a farmer family and the other from an upper-white-collar family. This finding is in line with the assumption that heterogamy is more likely to weaken union stability when the cultural distance between the groups is large. Given that heterogamy also increased the risk of separation when the female partner came from an upper-white-collar family and the male partner from the group "other", the hypothesis that similarity in class background stabilizes the unions of people from the upper classes in particular receives some support.

In line with expectations, educational heterogamy proved to be a relatively more significant determinant of cohabitation dissolution than homogamy in class background. The general heterogamy hypothesis applied particularly well to the most highly educated cohabitors: all the dissolution-promoting

effects of heterogamy involved cohabitors with a higher university degree, and homogamy substantially reduced the separation risk among this group. In accordance with the hypothesis that large educational differences decrease union stability to a greater extent than smaller differences, extreme educational heterogamy – one partner having a higher university degree and the other having no education beyond the basic level – clearly increased the risk of separation. Hence, the findings of the thesis suggest that shared values, lifestyles and worldviews are important in terms of union formation and dissolution particularly among highly educated people: not only is similarity in educational qualifications the norm in their partner selection, homogamy also forms the basis of enduring cohabitation. A practical implication of these results is that future analyses of educational homogamy and its effects on union stability are likely to benefit greatly from keeping upper- and lower-tertiary education as two separate categories instead of treating "tertiary" as one single category, as has often been done.

As was to be expected, given the comparatively high level of gender equality in Finland and the particularly egalitarian attitudes and practices among cohabiting couples, educational hypergamy did not lower the risk of cohabitation dissolution: on the contrary, extreme hypergamy as well as hypogamy were associated with an increased separation rate. These results are in line with the view that equal socio-economic contributions rather than male socio-economic dominance are beneficial in terms of cohabitation stability (Brines & Joyner 1999; Kalmijn et al. 2007; Jalovaara 2013). An earlier Finnish study also reported similar divorce risks among different types of educationally heterogamous married couples regardless of which partner was the more highly educated (Jalovaara 2003).

In general, higher levels of education were found to be associated with a reduced risk of separation among both men and women, which is line with the results of previous studies from the Nordic countries on the dissolution of cohabitations (Jalovaara 2013; Saarela & Finnäs 2014) and marriages (Finnäs 1997; Jalovaara 2001, 2003, 2013; Lyngstad 2004, 2006, 2011; see also Lyngstad & Jalovaara 2010). However, whereas previous Nordic studies report little or no effect of educational differences between partners on marriage stability (Hansen 1995; Finnäs 1997; Jalovaara 2003; Lyngstad 2004, 2006), the findings reported in this thesis indicate that educational heterogamy constitutes a risk factor for cohabitation dissolution. Various factors may contribute to this difference by union type. The reason why educational differences matter in cohabitations but not in marriages may relate to the less serious character of cohabitation: people may be willing to cohabit with a person they might not be willing to marry. Cohabiting couples with

large educational differences in particular might be less seriously involved in the relationship, which could explain their increased likelihood of splitting up. Respectively, very heterogamous couples who get married might be especially committed to the relationship and thus have a low probability of separating. Selection from cohabitation to marriage may play a role in other ways as well. Although the findings reported here indicate that educationally homogamous couples are not selected into marriage to any notable extent and that heterogamous couples are not generally "weeded out", which could attenuate the effects of educational differences in marriages, it could be that the heterogamous couples who marry possess some unobserved characteristics that make educational differences inconsequential in terms of marriage stability: for instance, socio-economic resources other than education or certain personality traits may compensate for the educational gap. Then again, educationally heterogamous marriages may be relatively stable because of strong social and material barriers to divorce.

7.4 Proceeding to marriage does not presume homogamy

This thesis introduced three theoretical perspectives on how homogamy in social-class origins and education might affect the likelihood that a cohabiting couple will make the transition to marriage. According to the "looser bond" perspective on cohabitation (Schoen & Weinick 1993), because marriage involves more commitment than cohabitation, and binds the partners more strongly in a family network, homogamy in socio-economic family background increases the propensity to marry, whereas educational homogamy decreases it. Proponents of the "double selection" hypothesis (Blackwell & Lichter 2000, 2004), however, suggest that cohabitation serves as a filter to weed out heterogamous couples, and through which homogamous couples progress to marriage. The implication is that homogamy in both class background and education increases the marriage rate. Finally, the similarity in the roles of marriage and cohabitation in the Nordic context (Hamplova 2009) led us to suppose that neither of these homogamy dimensions affects the propensity to marry.

The analyses indicate that homogamy and heterogamy in social-class origins are of little consequence for the couple's probability of marrying: homogamy turned out to be associated with an increased marriage rate only among the children of farmers. This finding might stem from the fact that couples in which both partners come from farming families are relatively

likely to have established or inherited a farm, and marriage provides a more secure basis for a family enterprise than cohabitation. Contrary to expectations, homogamy did not increase the likelihood of marriage among cohabitors from upper-white-collar families. Moreover, heterogamy was associated with a lowered likelihood of marriage only when the female partner came from a manual-worker family and the male partner from an upper-white-collar family. Thus, the results on class-background homogamy give only weak support to the "looser bond" and "double selection" hypotheses, according to which homogamy in social origins should increase the marriage rate. The results rather speak in favour of the similarity of cohabitation and marriage in Finland.

Educational differences between the partners played a more significant role in the transition from cohabitation to marriage. The interactions pertained fairly consistently to the lowest and the highest levels of education, but the effects of homogamy and heterogamy were not unequivocal: whether either one promoted or detracted from the marriage rate was dependent on the combination. For instance, homogamy was associated with an increased marriage rate among cohabitors with a basic level of education, but reduced the rate among those with a higher university degree. The former finding is in line with the "double selection" view, whereas the latter complies with the "looser bond" perspective. The gendered division of labour and, accordingly, educational hypergamy was expected to be associated with an increased propensity to marry among cohabitors. However, hypergamy was associated with an increased marriage rate only when the discrepancy between the partners' educational attainment was large, in other words when the female was educated to the basic level and the male had a higher university degree. Furthermore, as in the analyses of separation, the effect of extreme hypogamy turned out to be parallel. This, again, highlights the similarity in the economic roles of women and men in Finland.

All in all, none of the presented theoretical perspectives attracted clearly more support than any other. The identified educational interactions are somewhat in line with the idea that cohabitation is a looser bond than marriage in Finland, whereas the weak effects of homogamy in social-class origins point to the similarity of cohabitation and marriage. Although the logic behind the "double selection" hypothesis is intuitive, there was fairly weak support for it. The implication is that group boundaries play only a small role in the process of converting cohabitation into marriage, and that cohabitation does not, to any notable extent, serve as a stage from which homogamous couples proceed to marriage. Significantly, the results show that a detailed measurement of homogamy and heterogamy in which each partner combination constitutes a separate category is clearly advantageous over more crude

measures: whether or not socio-economic similarity or dissimilarity matters was strongly dependent on the combination in question, and the effects of heterogamy were often asymmetrical by gender.

8 CONCLUSION

The results of this thesis show that people tend to choose partners who are similar to themselves in terms of education and class background. Given the implication that advantageous and disadvantageous socio-economic conditions tend to accumulate in couple formation, socio-economic homogamy contributes to the social and economic inequality between families and households in Finnish society. The findings also confirm that educational homogamy is stronger than homogamy in social-class origins, which in turn is indicative of a modern, individualized society in which one's own orientations and achievements influence one's life-course more strongly than one's social origins. However, similarity in socio-economic position is not a major factor in partner choice in all status groups: those in the middle of the socio-economic hierarchy display only a weak homogamy tendency, whereas homogamy is noticeably strong among the most highly educated individuals. These same tendencies are also reflected in the ways in which homogamy is associated with the likelihood that a cohabiting couple will separate: similarity in class background has only little effect on the risk of separation, whereas educational homogamy clearly increases cohabitation stability among the highly educated. In sum, the thesis shows that status barriers and cultural differences are of significance in both partner choice and the stability of cohabiting unions, even in the context of a comparatively egalitarian Nordic welfare state, and that differences based on achieved status are more decisive than those based on ascribed status.

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STOCKHOLM UNIVERSITY
Dept of Sociology, Demography Unit / www.suda.su.se

Achievement Replacing Ascription? Changes in Homogamy in Education and Social Class Origins

Elina Mäenpää and Marika Jalovaara

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Achievement replacing ascription?
Changes in homogamy in education and social class origins

Elina Mäenpää
Department of Social Research, University of Helsinki

Marika Jalovaara
Department of Social Research, University of Turku

Abstract: Socioeconomic homogamy – choosing a partner from one's own socioeconomic stratum – is regarded as an indicator of status-group closure in a society. Therefore, changes in socioeconomic homogamy over time are indicative of whether social barriers between status groups are growing or weakening. Various theoretical perspectives suggest that over the course of modernization, group boundaries in terms of socioeconomic family background become easier to cross, whereas homogamy with regard to individually achieved socioeconomic position strengthens. Using Finnish register data and log-linear modelling we analyze changes in homogamy with respect to educational attainment (achieved status) in cohorts born in 1957–79, and in homogamy with respect to social class of the parental family (ascribed status) in cohorts born in 1965–79. We examine the marriages and cohabitations of 30-year-old women in each birth cohort. The results indicate that homogamy in social class origins has weakened only among children of farmers. General educational homogamy shows a small increase from the oldest to the youngest cohort, but the trends differ depending on the level of education: homogamy has strengthened among those with a low level of education, whereas it has weakened among the highly educated. The results further show that women are increasingly inclined to partner with men who are less educated than themselves. The decline in homogamy among the higher educated indicates more social openness in Finnish society, but at the same time the increase in homogamy among those with few educational resources may be a sign of increasing marginalization of this group.

Keywords: homogamy, education, social class origins, marriage, cohabitation

Introduction

Socioeconomic homogamy – similarity of partners in terms of social and economic characteristics – is considered an indicator of status-group closure, whereas heterogamy signifies that members of the different groups view each other as social equals (Kalmijn 1991a, 1998; Smits et al. 1998; Blossfeld 2009). Changes in homogamy over time are thus indicative of the direction and intensity of social change a society: homogamy trends reveal whether boundaries between status groups are becoming lower, or whether members of different groups increasingly interact among themselves. Given that co-residential partners pool and cumulate their resources, trends in socioeconomic homogamy also contribute to the development of inequality between families and households (Schwartz & Mare 2005; Blossfeld 2009). Moreover, among families with children, changes in homogamy also reflect changes in the contexts in which children are raised and in which the intergenerational transmission of social status occurs (Schwartz & Mare 2005). Cross-national comparative studies indicate that compared with other European countries, tendency towards educational homogamy is relatively weak Nordic societies (Domański & Przybysz 2007; Katrňák et al. 2012). Focusing on the question of whether and how socioeconomic homogamy has changed in the Nordic context over the past decades, this study analyzes trends in homogamy with regard to education and social class origins in Finland. The analysis of educational homogamy covers cohorts born in 1957–79, and the analysis of social class origins those born in 1965–79.

The second half of the 20th century was a time of rapid economic and social change in Finland. Up until and immediately after the Second World War the country was predominantly agrarian, but it industrialized and developed into a modern society at a fast pace: 46% of the Finnish labor force worked in agriculture and forestry in 1950, dropping to 20% by 1970 (Statistics Finland 1972). This development was accompanied by extensive migration from rural areas to cities: between 1950 and 1970 the urban population increased from one third to more than half of the population (ibid.). Post-war reconstruction was followed by active building of the welfare state. The reform of the basic education system in 1972 stipulated nine years of compulsory schooling, the aim being to provide equal educational opportunities for all children irrespective of their place of residence and social background (Pekkarinen et al. 2009). Under the previous system students were allocated to academic and vocational tracks at the age of 11, but the reform postponed this choice until the age of 16 (ibid.). Higher education also expanded in the 1960s and 1970s through the

founding of seven new universities and the development of existing ones. Although the proportion of Finnish women in paid work was among the largest in the Western world already in the post-war decades (Julkunen 1999), the 1973 Child Day Care Act which required municipalities to provide publicly funded day care for children further facilitated the combining of paid work and family life for both sexes. All in all, the birth cohorts of the 1970s grew up in a society that was socially and economically quite different from that of the 1950s. In this paper, we ask to what extent societal changes such as transformations in the class structure, educational expansion and increasing economic equality between men and women were reflected in the patterns of partnership formation. Did the significance of socioeconomic status differences in partner choice change between cohorts born in the 1950s and those born in the 1970s?

The patterns of family formation have changed considerably since the 1970s. One significant change was the emergence of non-marital cohabitation. Only one in ten of first unions among Finnish women born in 1941–43 began as cohabitations, as opposed to three out of four among those born in 1953–55 (Finnäs 1995). There was a further increase to over 90% among women born in 1962–64, and the proportion remained stable in cohorts born in the 1970s (Finnäs 1995; Jalovaara 2012). On the whole, the timing and prevalence of first-union formation did not change much in the cohorts born between the 1940s and the 1960s – more and more couples merely started their union by starting to live together without marrying first (Pitkänen & Jalovaara 2007). Cohabitation has also increasingly become a long-term alternative to marriage, and childbearing within cohabiting unions is common: currently over 40% of children in Finland are born to unmarried mothers (Statistics Finland 2013). The establishment of cohabitation as a socially accepted type of partnership has rendered young married couples a more select group than before, and therefore analyses based solely on marriages are likely to give an incomplete and potentially biased picture of the changes in partnering patterns. Given that the register data in our use contains data on the formation and dissolution of both marriages and non-marital cohabitations, we have the opportunity to examine homogamy trends in all co-residential unions.

Theoretical background

Our study examines homogamy trends in two dimension of socioeconomic status: social class origins and individual educational attainment. The former reflects an individual's ascribed status (determined through the family of origin), whereas the latter is an indicator of achieved

status (acquired through one's own actions). How might homogamy tendencies with respect to these two status dimensions have changed in the study cohorts? This question is approached here through what is known about changes in the social and demographic factors that are suggested to contribute to homogamy in the sociological literature.

First, one driving force behind socioeconomic homogamy is individual preference for a partner who shares similar values, tastes and lifestyles. Cultural similarity is preferred as it facilitates mutual understanding and confirms the partners' behaviors and worldviews (Coombs 1962; Kalmijn 1991a, 1998). Given that socioeconomic resources are correlates of tastes, values, attitudes and worldviews, cultural outlooks of the partners are more likely to match if the partners share a similar socioeconomic status. It has been suggested that the impact of parental family on adulthood values and lifestyles has declined in the course of modernization, and instead, education strongly shapes individual cultural resources, and hence partner selection decisions (Kalmijn 1991a; Hansen 1995; Blossfeld 2009). One might thus expect the significance of homogamy in social class origins to have diminished, and educational homogamy to have become more salient.

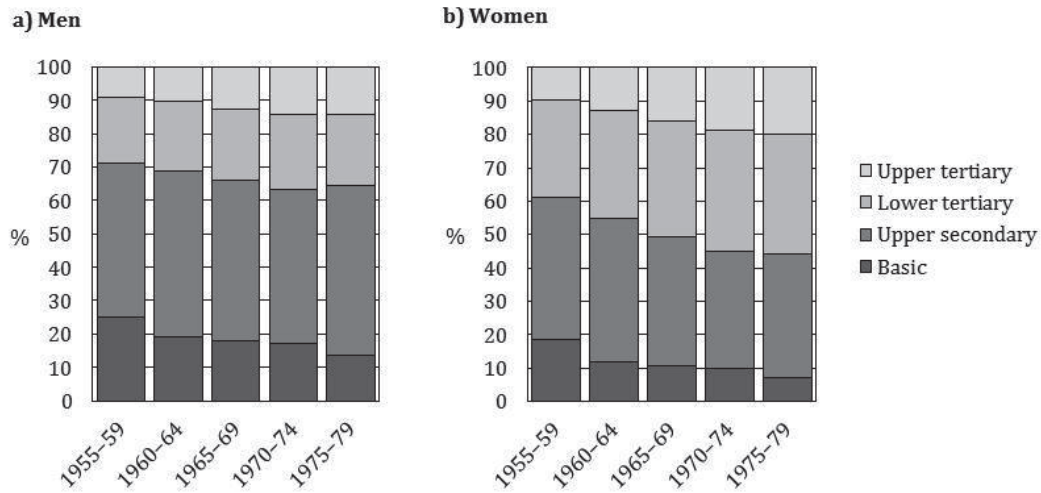
Second, emphasizing the economic rather than the cultural side of socioeconomic status, the resource-competition theory implies that people seek a partner with the maximum amount of resources (Kalmijn 1998). Socioeconomic homogamy is the outcome of a two-sided competition: given that high-status individuals are not willing to form unions with persons who have fewer resources, those in advantageous socioeconomic positions tend to partner with each other, whereas those in lower positions have to choose among themselves if they wish to partner (Kalmijn 1998; Halpin & Chan 2003; Erola et al. 2012). As education becomes the key determinant of an individual's socioeconomic resources and overrides the influence of family background on status attainment, people will increasingly focus on educational attainment rather than socioeconomic origins in their partner selection (Kalmijn 1991a; Smits et al. 1998; Blossfeld 2009). This perspective, too, implies increasing educational homogamy and declining homogamy in socioeconomic family background. What is likely to further accentuate educational homogamy is the fact that a family with two breadwinners is the social standard in Finland: as women with plentiful socioeconomic resources become more attractive to men, the tendency towards educational hypergamy – women partnering with men who are more highly educated than themselves – weakens and homogamy strengthens (Halpin & Chan 2003; Blossfeld 2009).

Third, partner selection does not depend only on individual preferences, but may also be influenced by social norms and the control of third parties such as parental families. Given

that homogamy is a means of maintaining class cultures and keeping distances between social groups, the family of origin may encourage children to partner with someone who originates from the same social class (Hansen 1995; Kalmijn 1998). In the course of modernization, however, young adults are becoming increasingly independent of their parents. As a result, parents' control over their children's partner choices is weakening; although parents may express their approval or disapproval of the relationship, in the end they have no strong sanctions to apply (or do not dare to apply them) if the choice is undesirable (Uunk et al. 1996; Kalmijn 1998; Solís et al. 2007; Blossfeld 2009). The diminishing direct impact of parental family on partner selection implies, too, that homogamy with regard to socioeconomic origins is on the decrease, and that partner selection is increasingly guided by achieved characteristics such as educational attainment (Solís et al. 2007).

Fourth, partnering patterns depend on the structural constraints of the 'union market,' in other words on the chances of meeting and interacting with potential partners from different groups. On the macro level, a large group size, a high degree of geographical concentration and an even gender distribution increase the probability of homogamy (Kalmijn 1998). Figure 1 shows the educational distributions of Finnish women and men born in 1955–79. Women are more highly educated than men even in cohorts born in the 1950s, and as educational attainment has increased more rapidly among women, the educational distributions of women and men have become increasingly dissimilar. For instance, whereas the proportion of men with a tertiary-level degree shows a rise from 29% in the 1955–59 cohort to 36% in the 1975–79 cohort, the respective increase among women is from 39% to 56%. This means that when searching for a partner, women educated to the tertiary level and men with a basic level of education are experiencing increasing difficulty in partnering homogamously (provided that a partner is sought from the home country). On the basis of this structural change we might expect declining educational homogamy and increasing hypogamy (women partnering men who are less educated than themselves). With regard to homogamy in socioeconomic origins, the transformation of the Finnish occupational structure has reduced the proportion of persons with a farmer family background and increased the proportion of those originating from white-collar families. The structural chances of homogamy have thus decreased among children of farmers, and increased among children of white-collar employees.

Figure 1. Educational attainment[a] by birth cohort among Finnish men (a) and women (b)



[a]Highest level of education achieved by 31 December 2010

Source: Register data from Statistics Finland (*n* = 194,322)

Micro-level settings in which people meet potential partners – such as educational institutions, neighborhoods and leisure activities – can inflict homogamy as well: given that these environments tend to be socially homogeneous, similar individuals often end up together (Kalmijn 1998). It can be assumed that neighborhoods tend to promote homogamy in family background, whereas schools promote educational homogamy (ibid.). Given that the time people spend in education over their life course has expanded, the chances of meeting a suitable partner in school or through social events and networks related to education have also increased, which implies growing odds in favor of educational homogamy (Mare 1991; Hansen 1995; Blossfeld 2009). Respectively, as a growing proportion of children of farmers are moving away from their childhood homes to cities to study, the likelihood of their searching for and finding a partner from their childhood environment diminishes, thereby decreasing their odds of family background homogamy.

In sum, we expect to see a decrease in homogamy with respect to socioeconomic origins in the birth cohorts under study. Although the increasing dissimilarity in educational distributions between women and men serves to impede educationally homogamous union formation, all the other changes lead us to expect an increase in educational homogamy.

Previous studies

Research on trends in educational homogamy has been carried out in various industrialized countries, the U.S. in particular. The results of several studies – including a large cross-national study (Blossfeld & Timm 2003) – indicate that educational homogamy has increased during the second half of the 20th century (Kalmijn 1991a, 1991b; Mare 1991; Uunk et al. 1996; Halpin & Chan 2003 [Ireland]; Schwartz & Mare 2005; Hou & Myles 2008; Schwartz & Graf 2009). This is in line with modernization theory and the fact that the incidence of educational 'assortative meeting' increases as the time spent in educational institutions expands. However, contradicting findings have also been reported: some studies have found declining trends (Halpin & Chan 2003 [Britain]), and others suggests relative stability (Raymo & Xie 2000; Rosenfeld 2008). Studies conducted in the Nordic countries also point to a downward trend in educational homogamy (Birkelund & Heldal 2003; Henz & Jonsson 2003). Some explanations for the inconsistent findings concerning the U.S. have been put forward. One possibility is that because changes in educational homogamy over time have been fairly subtle, the results have been sensitive to the choice of study population and method of analysis (see Hou & Myles 2008; Rosenfeld 2008). The varying findings may also reflect differences in analytical focus (Hou & Myles 2008): some studies consider overall trends while others focus on changes by educational category, or in the ease of crossing educational barriers. The choice of viewpoint is therefore significant, given that the overall development may obscure large inter-group differences (Hou & Myles 2008; Blossfeld 2009).

Although modernization theory implies weakening homogamy with respect to ascribed social status, not much is known about changes related to homogamy in socioeconomic origins, probably due to the scarcity of eligible data. In line with the theoretical views presented above, studies conducted in the U.S. (Kalmijn 1991a) and Hungary (Uunk et al. 1996) report that while educational homogamy has increased, there has been a decrease in homogamy with regard to social class origins. The data used in these studies do not extend beyond the 1970s, however, thus there is a lack of knowledge about more recent trends in homogamy with regard to socioeconomic origins.

To find out whether homogamy in individually achieved socioeconomic position has gained in importance in the Finnish society over the past decades, and whether this possible increase has been paralleled by a decrease in homogamy in ascribed socioeconomic status,

we analyze changes in homogamy with regard to both education and socioeconomic family background. To provide a comprehensive picture of the development of homogamy, we consider both overall trends as well as changes by status group. We have access to a data set derived from Finnish administrative registers. An important advantage of the data set is that it comprises not only marriages but also non-marital cohabiting unions. We thus have an excellent opportunity to determine trends in homogamy in all Finnish unions, not just marriages, which is highly important given the high prevalence of cohabitation in Finland. Register data has also more general advantages over commonly used survey data: there is no selective non-response or misreporting of the partner's characteristics, and the number of observations is comparatively large.

Data and methods

Register data on union formation and dissolution

We use a register data set compiled at Statistics Finland. The data set was formed through the linking of data from a longitudinal population register and registers of employment, educational qualifications and vital events, for instance. Our analyses are based on a 10-per-cent random sample of persons born between 1940 and 1995 who were among the population of Finland on 31 December in at least one of the years 1970, 1975, 1980, 1985 and 1987–2010. The data include union histories for the sample persons up to the end of 2009. The dates of union formation and dissolution are given to the precision of a month. Demographic and socioeconomic data on the sample persons and their partners are symmetrical, which is a major advantage in a study of homogamy. A previous version of the same data has been used to study union formation (e.g. Jalovaara 2012; Mäenpää & Jalovaara 2013), union dissolution (e.g. Jalovaara 2013), and childbearing (Hoem et al. 2013; Jalovaara & Miettinen 2013) in Finland.

Both cohabitations and marriages have been identifiable since 1987: Finnish registers contain information on the place of residence down to the specific dwelling, enabling the linkage of individuals to co-residential couples even if they are childless and unmarried. A cohabiting couple is defined here as a man and a woman registered as domiciled in the same dwelling for over 90 days, who are not married to each other, whose age difference is no more than 20 years (this rule applies only to couples without any shared children), and who are not close relatives (siblings or a parent and a child, for example). Cohabitations shorter

than 90 days are excluded given that many of them are not cohabitations in fact, but result from overlapping dates in notifications of move: the new resident might have reported moving into an apartment before the former resident has reported moving out.

The study population

We analyzed women born in Finland between 1957 and 1979 and their unions that prevailed in the month the woman turned 30 years of age. A frequently recommended approach to the question 'who partners with whom' is to analyze first unions and to measure the partners' characteristics at the time of union formation. In such a setting the observed homogamy tendencies reflect assortative union formation rather than selective union dissolution, changes in the partners' statuses (such as educational upgrading) after union formation, and assortative re-partnering (Kalmijn 1998; Schwartz & Mare 2005; Blossfeld 2009). However, this is not the optimal way to analyze educational homogamy in the case of Finland. One reason is that Finnish people, women in particular, form their first union at a fairly young age: half of women born in 1969–81 had entered a union by the age of 22 (Jalovaara 2012). This means that many women have not completed their education (tertiary studies in particular) at the time of union formation. Thus, measuring educational attainment at union entry may not give a realistic picture of partner-selection patterns. Second, many first cohabiting unions are short-lived: it is estimated that 30% of first cohabitations have dissolved within two years of entry (Jalovaara 2013). The first union may thus not have long-term implications in terms of an individual's life course. Hence, we chose to analyze cross-sections of unions involving 30-year-old women. At the age of 30, most women have completed their education, and the unions tend to be more serious: they usually involve childbearing, getting married and long-term commitment to the partner. We chose the 1957–79 cohorts because the 1957 cohort is the oldest one in the data with complete union records at the age of 30, and given that union histories extend to 2009, the latest valid birth year is 1979. We categorized these 23 birth-year cohorts into six larger cohorts as follows: 1957–60, 1961–64, 1965–68, 1969–72, 1973–76 and 1977–79.

The analysis of homogamy in social class origins is restricted to the cohorts born in 1965–79. We did this because we had to drop couples in which the partner was born before 1956 given that parental occupational class can only be inferred for persons born in 1956 or later (see variable descriptions below). This meant excluding couples with large age differences, which could bias the estimates of socioeconomic homogamy. Having a partner

who was born before 1956 is quite common among the older cohorts, and because we did not want to compromise the reliability of the estimates, we omitted these cohorts altogether from the analyses. In the analyzed cohorts, the proportion of unions that were excluded because the partner was born before 1956 varies from 3.7% in the 1965–68 cohort to 0.1% in the 1977–79 cohort. We also dropped unions in which the partner was born outside Finland (the proportion varying from 1.4% in the 1957–60 cohort to 5.1% in the 1977–79 cohort) because data on education and parental occupational class tends to be incomplete for persons born abroad.

Table 1 provides descriptive information about the study population. Around 70% of women in each cohort were in a union at the age of 30, the proportion being somewhat higher in the oldest cohort (76%). The mean age difference between the partners remains relatively stable – the male partner is, on average, 2.6 years older than the female partner. The proportion of cohabitations has increased steadily: whereas less than 20% of women born in 1957–60 who were in a union at the age of 30 were not married, cohabitations covered 43% of unions in the 1977–79 cohort.

Table 1. Descriptive statistics concerning unions of Finnish women at the age of 30, cohorts born in 1957–79

Birth cohort	**1957–60**	**1961–64**	**1965–68**	**1969–72**	**1973–76**	**1977–79**
N of women in a union at age 30 (% of total cohort[a])	12,272 (76)	11,495 (72)	10,557 (70)	8,691 (69)	9,113 (72)	6,967 (71)
N in analyses of educational homogamy	12,104	11,262	10,293	8,419	8,689	6,611
Mean age difference between partners (years; male age–female age)	2.7	2.5	2.6	2.7	2.6	2.6
Cohabiting (%)	19	26	33	38	42	43
N in analyses of homogamy in parental occupational class[b]	-	-	9,915	8,312	8,654	6,603

[a]Total cohort refers to women born in Finland who were in the population of Finland on 31 December in the year they turned 30 years of age

[b]Unions in which the male partner was born before 1956 are excluded from analyses of homogamy in parental occupational class

Measures of education and social class origins

Our data set provides data on educational qualifications and the year and month of their completion for the sample persons and their partners. These data were obtained from Statistics Finland's register of completed education and degrees. Data collected in the 1970 census forms the basis of the register, which has been updated annually ever since. We measured the educational level of both partners in the month the woman turned 30 years of age, and grouped educational qualifications in four categories. We categorized individuals with no registered post-comprehensive education as being on the *basic-level* (at most nine years of schooling). Education up to the *upper-secondary* level lasts 11–12 years and includes the matriculation examination (the final examination at the end of upper-secondary school) and certain vocational qualifications. *Lower-tertiary* education covers 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, including polytechnic and lower university degrees). *Upper-tertiary* education covers the higher-degree level (5–6 years following upper-secondary education; e.g. higher university degrees) and doctoral studies.

We measured social class origins in terms of parental occupational class, or more specifically, the occupational class of the household's reference person when the partners were children. 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. Given that the reference person's occupational class determines the occupational class for children below the age of 15, and data on occupational class is available in the register since 1970, the oldest birth cohort for which parental data can be inferred is 1956. After 1970, data is available for every fifth year, and the measures were taken when the partners were 8–14 years old, depending on their year of birth. Five statuses are distinguished: *upper-white-collar employee*, *lower-white-collar employee*, *manual worker*, *farmer*, and *other*. 'Farmer' refers to self-employed persons and employers in farming, forestry, and fishing. The residual group 'other' 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 persons 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.

Log-linear models

In order to analyze changes in homogamy across the birth cohorts we used log-linear models. These models are widely used in analyses of homogamy trends because they enable the examination of changes in the association between the partners' statuses, net of changes in the marginal distributions. A log-linear model makes no distinction between independent and dependent variables: it examines associations between categorical variables through the analysis of expected cell frequencies. We analyzed three-way tables between the male partner's status (M), the female partner's status (F) and the birth cohort (C). For educational level we had a table with 4 × 4 × 6 = 96 cells, and for parental occupational class, 5 × 5 × 4 = 100 cells. The general form of the model is the following:

$$\log\left(F_{ijk}^{MFC}\right) = \lambda + \lambda_i^M + \lambda_j^F + \lambda_k^C + \lambda_{ik}^{MC} + \lambda_{jk}^{FC} + \lambda_{ij}^{MF} + \lambda_{ijk}^{MFC}. \quad (1)$$

Here, F_{ijk}^{MFC} is the expected cell frequency, λ is the grand mean, λ_i^M, λ_j^F and λ_k^C are the marginal effects of M, F and C, λ_{ik}^{MC}, λ_{jk}^{FC} and λ_{ij}^{MF} are two-way interactions of M, F and C, and λ_{ijk}^{MFC} is the three-way interaction of M, F and C. The main interest is in the three-way interaction – in other words, the question of whether or not the association between the partners' statuses varies by cohort. Given our specific focus on trends in homogamy (partners sharing the same status), we modelled the two-way association between M and F through parameters that measure the tendency of unions to concentrate on the main diagonal.

First we examined changes in the general homogamy tendency using the *Homog* parameter, which is coded 1 for all cells on the main diagonal and zero otherwise. An exponentiated coefficient of Homog gives the odds of homogamy relative to the odds of heterogamy. Next we examined how homogamy tendency had changed among the different status groups. For this purpose we fitted a group-specific homogamy parameter *Diag* in which each cell on the main diagonal is given a separate value (1–4 in case of educational homogamy and 1–5 in case of homogamy in parental occupational class). An exponentiated coefficient can be interpreted as the odds of basic-level educational homogamy relative to the odds of educational heterogamy, for instance. We also examined the change in educational hypergamy by adding the parameter *Hyperg* to the model of general educational homogamy. This parameter is coded 1 for all cells below the main diagonal, and it shows whether women

tend to 'partner up' (odds ratio above 1.00) or 'down' (odds ratio below 1.00) with regard to education.

Interactions between the homogamy parameters and the birth cohort thus form the core of our analysis. We present the estimates of homogamy tendencies and 95% confidence bounds for them by birth cohort, and compare the statistical fit of different models. For the latter purpose we used G^2 likelihood-ratio statistics and the Bayesian information criterion (BIC). BIC adjusts the G^2 for sample size, and it penalizes complex models more heavily. The smaller the values of G^2 and BIC, the better the model fits the data. The log-linear analyses were conducted with R: A Language and Environment for Statistical Computing (R Core Team 2012).

Results

Changes in the prevalence of homogamy

We first describe changes in the percentages of homogamous couples. Appendix Tables 1 and 2 give the cross-tabulations of the partners' educational levels and parental occupational classes in different birth cohorts. The margins of the tables show the growth in educational attainment, especially among women, as well as the decrease in the prevalence of a farmer family background and the respective increase in the prevalence of a white-collar background. Table 2 gives the proportions of homogamous couples (the cells on the main diagonal in Appendix Tables 1 and 2) in each birth cohort. Given the obvious changes in the educational distributions, the level of educational homogamy remains surprisingly stable, at around 45%, throughout the cohorts. The proportions of educationally hypergamous and hypogamous couples have nonetheless changed. Even in the oldest cohort of 1957–60 it is more common for the female partner to be more highly educated than the male partner than the other way round (31% vs. 25%), and this discrepancy has further increased (38% vs. 17% in the youngest cohort). The prevalence of homogamy in parental occupational class has decreased slightly, from 33% in the cohorts born in the late 1960s to 30% in the cohorts born in the late 1970s.

Given that educational attainment is associated with socioeconomic family background, it is possible that the two dimension of homogamy are partly overlapping. Thus, we also computed the percentages of couples that are homogamous with regard to both education and parental social class (Table 2). The proportion of 'double-homogamous'

couples is 15% in each cohort. The figures are very close to the percentages that are to be expected if there is no association between educational homogamy and homogamy in social class origins: the expected proportion of 'double-homogamous' couples is 15% in the 1965–72 cohorts, and 14% in the 1973–79 cohorts (e.g. cohort 1965–68: 0.46 × 0.33 = 0.15).[1] This accords with the conclusion reached in a recent study that these two homogamy dimensions work rather independently of one another in partner selection (Mäenpää 2014).

Table 2. The prevalence of homogamy in unions of Finnish women at the age of 30, cohorts born in 1957–79

Birth cohort	**1957–60**	**1961–64**	**1965–68**	**1969–72**	**1973–76**	**1977–79**
Educational assorting (%)						
Homogamy (M = F)	45	46	46	44	46	46
Hypergamy (M > F)	25	21	20	20	16	17
Hypogamy (M < F)	31	33	34	36	38	38
Homogamy in parental occupational class (%)	-	-	33	33	31	30
Homogamy in both dimensions (%)	-	-	15	15	15	15

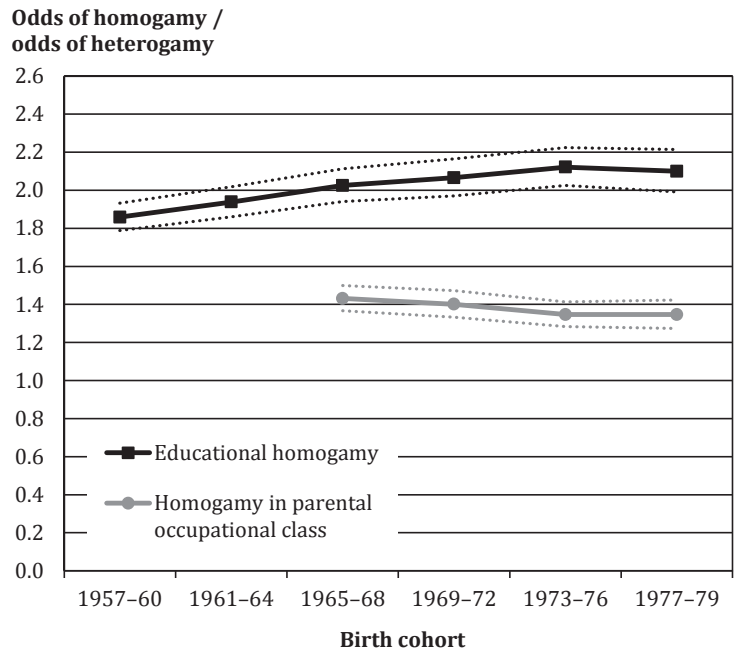
Changes in homogamy tendencies

Log-linear modelling shows how the tendency towards homogamy has changed net of changes in the marginal distributions of the partners' educational attainments and class backgrounds. First we examined the general trends in homogamy with regard to education and parental occupational class (Figure 2). In each cohort, homogamy is weaker in terms of parental occupational class than in terms of education. Educational homogamy has strengthened slightly over the birth cohorts, the odds of homogamy relative to heterogamy being less than 1.9 in the 1957–60 cohort and around 2.1 in the 1973–79 cohorts. Homogamy in parental occupational class has remained nearly constant: the odds ratio for homogamy is around 1.4 in all the studied cohorts. In the case of education, the G^2 statistics indicate that the model of changing general homogamy (M2b) provides a better model fit than the model of constant general homogamy (M2a), but according to BIC, the model of constant general

[1] The percentages of educationally homogamous couples are the same regardless of whether unions in which the male partner is born before 1956 are included or not.

homogamy fits better (Appendix Table 3). In the case of parental occupational class, both G^2 and BIC suggest that homogamy has not changed statistically significantly (Appendix Table 4, M2b vs. M2a).

Figure 2. Estimates of general homogamy in educational level[a] and parental occupational class[b] with 95% confidence bounds by birth cohort

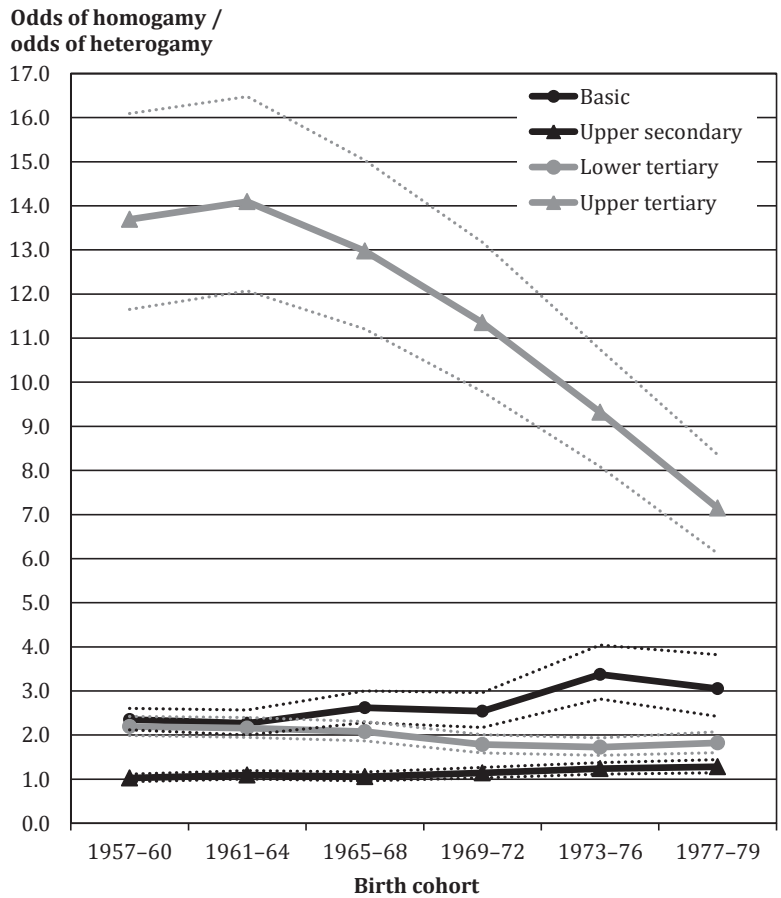


[a]Estimates from model $M^E*C + F^E*C + Homog^E*C$
[b]Estimates from model $M^P*C + F^P*C + Homog^P*C$

Figure 3 shows how educational homogamy has changed depending on the level of educational attainment. Two opposing general trends can be observed: a downward trend in the two most highly educated groups, and an upward trend in the two groups with the least education. Homogamy is by far strongest among those educated to the upper-tertiary level, but it has weakened considerably over the cohorts: the odds ratio for homogamy declined steadily from around 14.0 in the 1957–64 cohorts to 7.1 in the 1977–79 cohort. Similarly, the odds ratio for homogamy for those with a lower-tertiary level of education decreased from 2.2 in the 1957–60 cohort to around 1.8 in the 1969–79 cohorts. Homogamy is negligible among those with an upper-secondary level of education in the 1957–68 cohorts, but there

emerges a weak homogamy tendency (around 1.2) in the younger cohorts. Among those with only a basic education, odds ratio for homogamy has increased from 2.3 in the two oldest cohorts to around 3.0 in the two youngest cohorts. Thus, the general slightly increasing trend in educational homogamy is attributable to strengthening homogamy among those with a low level of education, as well as to the increasing proportion of highly educated homogamous couples (see Appendix Table 1) whose homogamy tendency is notably strong. The G^2 statistics given in Appendix Table 3 indicate that accounting for changes in group-specific homogamy (M3b) leads to a better model fit than assuming that group-specific homogamy has remained constant (M3a), whereas BIC prioritizes the model of constant group-specific homogamy.

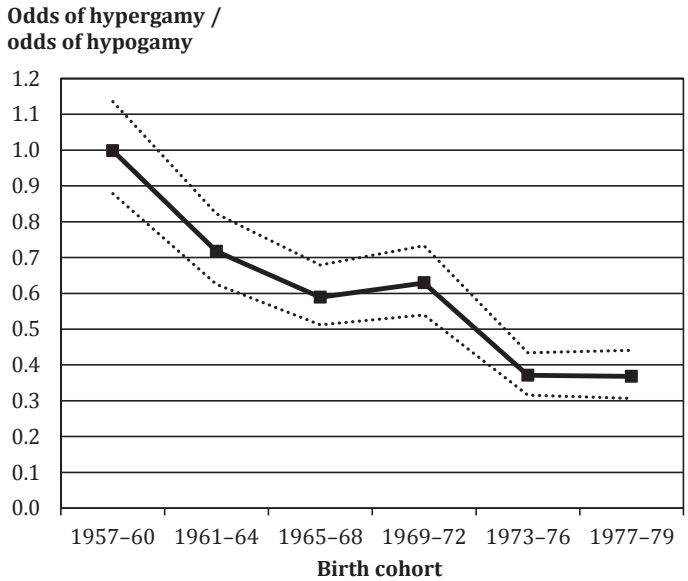
Figure 3. Estimates of group-specific educational homogamy with 95% confidence bounds by birth cohort[a]



[a]Estimates from model $M^E*C + F^E*C + Diag^E*C$

The estimates in Figure 4 indicate a considerable change in the tendency towards educational hypergamy (or hypogamy). The oldest birth cohort of women (1957–60) partnered neither 'up' nor 'down' (odds of hypergamy relative to the odds of hypogamy 1.0), but women in the next cohort (1961–64) tended to partner with lower educated men (odds ratio for hypergamy 0.7). This hypogamy tendency strengthened further in the following cohorts, with the odds ratio for hypergamy being as low as 0.4 in the two youngest cohorts. Both G^2 and BIC indicate that the model of changing hypergamy (M4c) provides a better fit than the model of constant hypergamy (M4b) (Appendix Table 3).

Figure 4. Estimate of educational hypergamy with 95% confidence bounds by birth cohort[a]

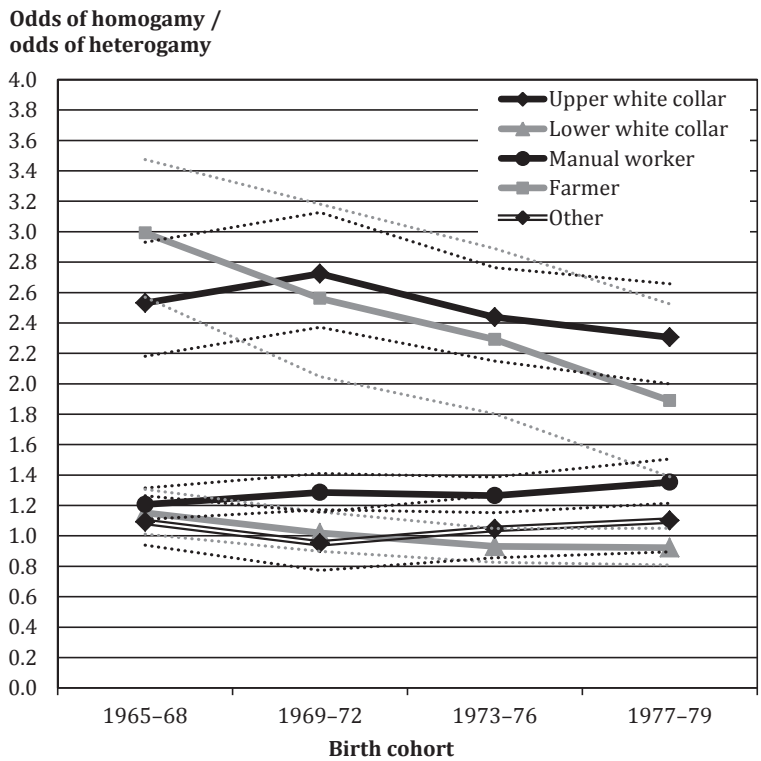


[a]Estimates from model $M^E*C + F^E*C + Homog^E*C + Hyperg^E*C$

Figure 5 shows the trends in group-specific homogamy in parental occupational class. Only two groups – children of upper-white-collar employees and children of farmers – show a clear inclination towards homogamy. Homogamy tendency has weakened among people from farmer families: the odds ratio for homogamy is 3.0 in the 1965–68 cohort, but declines to 1.9 in the 1977–79 cohort. Among those from upper-white-collar families, the

odds ratios for homogamy fluctuate around 2.5. Homogamy is at a low level and remains rather constant in all the other status groups. The G^2 statistics indicate that accounting for changes in group-specific homogamy (M3b) provides a marginally better model fit than assuming that group-specific homogamy has remained constant (M3a), whereas BIC prioritizes the model of constant group-specific homogamy (Appendix Table 4).

Figure 5. Estimates of group-specific homogamy in parental occupational class with 95% confidence bounds by birth cohort[a]



[a]Estimates from model $M^P*C + F^P*C + Diag^P*C$

Finally, we examined how the inclusion of all co-residential unions as opposed to only marriages affects the results. We thus conducted the analyses to marriages only (results not shown). It turned out that trends in homogamy are very similar irrespective of whether all unions or marriages are covered. This is because marriages outnumber cohabitations when all unions are analyzed and thus the results mostly reflect trends in marriages, and because homogamy trends are generally very similar in marriages and cohabitations. The only clear

difference is that the increase in the general educational homogamy tendency appears more notable if only marriages are included: the odds of homogamy relative to the odds of heterogamy have increased from 1.9 the oldest cohort to 2.3 in the youngest cohort. Thus, conclusions about how homogamy tendencies have changed do not in this case depend much on whether marriages or all unions are analyzed.

Discussion and conclusions

This study investigated trends in educational homogamy between cohorts born in Finland in 1957 and 1979, and in homogamy in social class origins between cohorts born in 1965 and 1979. Various sociological theories predict that over the course of modernization, group boundaries in terms of class background become easier to cross in union formation, whereas educational homogamy strengthens (Kalmijn 1991a; Hansen 1995; Uunk et al. 1996; Sólis et al. 2007; Blossfeld 2009). However, the results show that homogamy with regard to social class origins has remained practically constant in our cohorts. In the case of educational homogamy, we did find evidence of an increasing trend, but the change was modest. Thus, it appears that despite the sweeping changes in Finland's social and economic conditions from the childhood and youth years of the youngest to the oldest cohort (such as educational expansion and the transformation of the economic structure), the overall tendency to partner with a person with a similar class background or educational attainment has not changed very much. The absolute levels of homogamy also remain surprisingly stable. From this perspective one could conclude that homogamy in individually achieved socioeconomic position has not increased at the expense of homogamy in ascribed socioeconomic status to any remarkable extent, and that social openness (or closure) in Finland has remained fairly constant.

The overall trend in educational homogamy nevertheless conceals clear differences between groups: homogamy strengthened among those with a low level of education, but it weakened among those with a tertiary education. The decline in homogamy was substantial among those with a higher university degree. Thus, given that high educational qualifications could be assumed to increasingly constitute an advantage in modern union market, and individuals have better opportunities to meet potential partners in association with education – both of which should lead to increasing homogamy – why has homogamy among the more highly educated decreased? The answer may well lie in the relatively strong influence of the changed educational structure of the Finnish population on partnering patterns: because

women are increasingly more highly educated than men, highly educated women find it increasingly difficult to find a partner with a similar level of education. It is also possible that as the proportion of highly educated individuals has grown, the group has become more heterogeneous and less distinctive, and thus less stringent in terms of partner-selection criteria. In any event, it seems that when opportunities for homogamy decrease, highly educated Finnish women do not hesitate to 'partner down.' The findings related to educational hypergamy and hypogamy support this: the women in the studied cohorts were more and more inclined to choose men with lower educational attainments. Furthermore, it is shown in a recent Finnish study that the probability of union formation is higher for highly educated women than for those educated to a lower level (Jalovaara 2012). This finding, too, implies that remaining single is not a common solution among highly educated women to the increasing gender gap in education.

Similarly, given that the proportion of individuals with no education beyond the basic level has declined more slowly among men than among women, one would expect that basic-level educated men who wish to partner would increasingly need to partner outside their group. Nonetheless, the trend in homogamy among those with only a basic-level education is upward. It could be that those with no schooling beyond the compulsory level are increasingly selected in terms of characteristics that are considered undesirable in the union market; thus their chances of forming a union with a more highly educated person have become poorer, and they increasingly have to choose among themselves when searching for a partner. People with an upper-secondary level of education turned out to display no homogamy tendency in the older cohorts, but a small tendency emerged in the youngest cohorts. The weak homogamy tendency is in line with the results of previous studies showing that groups in the middle of the educational hierarchy are the least inclined towards homogamy (Uunk et al. 1996; Blackwell & Lichter 2000; Domański & Przybysz 2007; Rosenfeld 2008).

All in all, from the perspective of group-specific changes in educational homogamy, the declining tendency towards homogamy among those with an upper-tertiary education is indicative of more social openness in Finnish society. This development is at odds with the hypothesis derived from the modernization theory, according to which educational credentials and thus educational homogamy become increasingly significant in partner choice. On the other hand, what is not a good sign in terms of societal openness is the growing tendency towards homogamy among persons with no more than a basic level of education: it points to increasing selectivity and marginalization in this group. Hence,

whereas previous results from the Nordic countries imply a decrease in educational homogamy in recent decades (Henz & Jonsson 2003), our results suggest decline only among those with a tertiary education.

In line with the findings of previous studies (Kalmijn 1991a; Hansen 1995; Uunk et al. 1996) and the view that individual achievement matters more than social origins in partner selection in modern societies, homogamy in class background was weaker than educational homogamy in all the birth cohorts. Only two categories of social class origins showed a clear tendency towards homogamy: people from upper-white-collar and farmer families. Previous studies also report that these groups are particularly homogamous (Hansen 1995; Uunk et al. 1996). However, although we had good reasons to expect a clear reduction in the tendency to form a union with someone from a similar socioeconomic family background, our results indicate that homogamy in social class origins has remained relatively stable over the studied cohorts. A decreasing trend was found only among children of farmers, which could be because of the clear reduction in their structural opportunities for meeting potential partners with similar origins. One obvious reason for the general stability is the rather short 15-year cohort span: it is possible, for instance, that a clearer decline would have been observed if we had data on older cohorts. Second, given that most status groups (people from manual-worker and lower-white-collar families as well as those from the category 'Other') show no remarkable homogamy tendency, there is little room for a decline.

In conclusion, we put forward some suggestions for further research. First, this article focuses on homogamy in the strict sense: partners sharing the same status. It is well known that other patterns of association in partner selection also prevail, such as the tendency of union formation to become less frequent the larger the educational gap between two people. The next step would be to examine changes in the pattern and strength of the association in off-diagonal cells with respect to both educational level and social class origins. Evidence of changes in the propensity of union formation between persons with highly uneven educational attainments, or between individuals from upper-white-collar and manual-worker families, for instance, would give further insight into the development of boundaries between socioeconomic groups. Second, it would be worth investigating whether or not parallel or divergent trends would emerge if other indicators of socioeconomic status were used. Our focus was on parental occupational class because the data did not include other measures of socioeconomic family background. Given the contribution of homogamy to social and economic inequalities between families, it would be particularly useful to trace the development of income homogamy – in terms of both parental and individual income.

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Appendix Table 1. Distributions of partners' educational levels by birth cohort (%)

1957–60		**Female**				
		Basic	Upper sec	Lower tert	Upper tert	Total
Male	Basic	8.0	12.1	4.2	0.3	24.5
	Upper secondary	9.2	24.5	11.0	1.4	46.1
	Lower tertiary	2.1	7.9	9.2	1.7	20.8
	Upper tertiary	0.1	1.7	3.5	3.2	8.6
	Total	19.4	46.2	27.8	6.6	100
						N=12,104

1961–64		**Female**				
		Basic	Upper sec	Lower tert	Upper tert	Total
Male	Basic	4.8	11.1	4.1	0.4	20.5
	Upper secondary	6.8	27.6	13.0	2.0	49.3
	Lower tertiary	1.2	8.0	9.9	2.1	21.3
	Upper tertiary	0.1	1.8	3.1	4.1	9.0
	Total	13.0	48.5	30.1	8.5	100
						N=11,262

1965–68		**Female**				
		Basic	Upper sec	Lower tert	Upper tert	Total
Male	Basic	4.0	8.7	3.8	0.5	17.0
	Upper secondary	6.1	24.6	15.8	2.8	49.3
	Lower tertiary	1.1	7.4	11.8	2.6	22.9
	Upper tertiary	0.2	1.8	3.3	5.5	10.8
	Total	11.5	42.6	34.6	11.3	100
						N=10,293

1969–72		**Female**				
		Basic	Upper sec	Lower tert	Upper tert	Total
Male	Basic	3.7	7.2	4.4	0.5	15.7
	Upper secondary	6.5	21.1	17.2	3.3	48.1
	Lower tertiary	1.0	6.5	12.6	3.4	23.5
	Upper tertiary	0.1	1.7	4.1	6.9	12.7
	Total	11.2	36.5	38.3	14.0	100
						N=8,419

1973–76		**Female**				
		Basic	Upper sec	Lower tert	Upper tert	Total
Male	Basic	2.5	6.8	3.6	0.5	13.4
	Upper secondary	3.8	23.0	18.1	4.6	49.5
	Lower tertiary	0.7	6.4	13.0	4.2	24.3
	Upper tertiary	0.1	2.0	3.5	7.3	12.8
	Total	7.1	38.2	38.2	16.5	100
						N=8,689

1977–79		**Female**				
		Basic	Upper sec	Lower tert	Upper tert	Total
Male	Basic	2.0	7.1	3.2	0.6	12.9
	Upper secondary	3.2	23.6	17.1	5.2	49.1
	Lower tertiary	0.6	6.3	12.8	4.3	24.0
	Upper tertiary	0.1	2.3	4.1	7.5	14.0
	Total	5.8	39.3	37.2	17.6	100
						N=6,611

Appendix Table 2. Distributions of partners' parental occupational classes by birth cohort (%)

1965–68		**Female**					
		Upper w collar	Lower w collar	Manual worker	Farmer	Other	Total
Male	Upper w collar	3.1	3.0	4.1	1.0	1.7	12.8
	Lower w collar	2.7	4.0	7.4	1.4	2.8	18.4
	Manual worker	4.0	7.5	19.8	3.9	6.4	41.5
	Farmer	0.9	1.4	5.3	3.0	1.9	12.6
	Other	1.4	2.8	6.3	1.6	2.6	14.7
	Total	12.1	18.6	43.0	10.8	15.5	100
							N=9,915

1969–72		**Female**					
		Upper w collar	Lower w collar	Manual worker	Farmer	Other	Total
Male	Upper w collar	4.8	4.2	4.8	0.6	1.7	16.2
	Lower w collar	3.4	5.3	8.6	1.2	2.3	20.7
	Manual worker	4.8	9.0	20.0	2.5	4.7	41.0
	Farmer	0.7	1.8	4.3	1.4	1.2	9.4
	Other	1.7	2.7	5.8	1.1	1.5	12.7
	Total	15.4	23.0	43.5	6.7	11.4	100
							N=8,312

1973–76		**Female**					
		Upper w collar	Lower w collar	Manual worker	Farmer	Other	Total
Male	Upper w collar	5.8	4.1	5.4	1.0	2.0	18.4
	Lower w collar	4.8	5.9	8.6	1.3	2.6	23.3
	Manual worker	4.9	9.8	16.9	2.7	4.5	38.8
	Farmer	0.8	1.7	3.1	1.1	0.9	7.6
	Other	2.0	2.8	4.8	1.0	1.6	12.1
	Total	18.3	24.4	38.7	7.0	11.5	100
							N=8,654

1977–79		**Female**					
		Upper w collar	Lower w collar	Manual worker	Farmer	Other	Total
Male	Upper w collar	6.0	5.0	5.2	0.9	2.5	19.6
	Lower w collar	4.8	6.5	8.2	1.7	3.3	24.4
	Manual worker	4.9	9.2	15.2	2.6	4.8	36.7
	Farmer	0.8	1.5	2.5	0.9	1.0	6.6
	Other	1.7	3.3	4.6	1.0	2.0	12.7
	Total	18.2	25.4	35.7	7.1	13.7	100
							N=6,603

Appendix Table 3. Goodness-of-fit statistics of the log-linear models for changes in educational homogamy

Model	Specification	G^2	*BIC*	*df*	Change in model fit	ΔG^2	Δdf	*p*
M1: Baseline: no homogamy	M^E*C + F^E*C	12,211	11,620	54				
M2a: Constant general homogamy	M1 + $Homog^E$	6,707	6,126	53	1–2a	5,504	1	< .001
M3a: Constant group-specific homogamy	M1 + $Diag^E$	3,190	2,642	50	1–3a	9,021	4	< .001
M4a: Constant general homogamy and hypergamy	M1 + $Homog^E$ + $Hyperg^E$	6,455	5,885	52	2a–4a	252	1	< .001
M2b: Changing general homogamy	M1 + $Homog^E$*C	6,679	6,152	48	2a–2b	28	5	< .001
M3b: Changing group-specific homogamy	M1 + $Diag^E$*C	3,094	2,765	30	3a–3b	96	20	< .001
M4b: Changing general homogamy, constant hypergamy	M1 + $Homog^E$*C + $Hyperg^E$	6,425	5,910	47	2b–4b	254	1	< .001
M4c: Changing general homogamy and hypergamy	M1 + $Homog^E$*C + $Hyperg^E$*C	6,294	5,834	42	4b–4c	131	5	< .001

M^E = Male partner's educational level
F^E = Female partner's educational level
C = Cohort
$Homog^E$ = General homogamy parameter
$Diag^E$ = Group-specific homogamy parameter
$Hyperg^E$ = Hypergamy parameter

Appendix Table 4. Goodness-of-fit statistics of the log-linear models for changes in homogamy in parental occupational class

Model	Specification	G^2	*BIC*	*df*	Change in model fit	ΔG^2	Δdf	*p*
M1: Baseline: no homogamy	M^P*C + F^P*C	1,536	870	64				
M2a: Constant general homogamy	M1 + $Homog^P$	902	246	63	1–2a	634	1	< .001
M3a: Constant group-specific homogamy	M1 + $Diag^P$	365	-249	59	1–3a	1171	5	< .001
M2b: Changing general homogamy	M1 + $Homog^P$*C	898	272	60	2a–2b	4	3	.220
M3b: Changing group-specific homogamy	M1 + $Diag^P$*C	343	-116	44	3a–3b	22	15	.089

M^P = Male partner's parental occupational class
F^P = Female partner's parental occupational class
C = Cohort
$Homog^P$ = General homogamy parameter
$Diag^P$ = Group-specific homogamy parameter

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Research Article

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

Elina Mäenpää

Marika Jalovaara

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Research Article

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

Elina Mäenpää[1]

Marika Jalovaara[2]

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.

[1] Department of Social Research, University of Helsinki, Finland. E-mail: elina.maenpaa@helsinki.fi.
[2] Department of Social Research, University of Turku, Finland. E-mail: marika.jalovaara@utu.fi.

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.

[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.

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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.

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The effects of homogamy in socio-economic background and education on the transition from cohabitation to marriage

Elina Mäenpää
University of Helsinki, Finland

Marika Jalovaara
University of Helsinki, Finland and University of Turku, Finland

Abstract

This study explores the effects of homogamy and heterogamy in socio-economic background and educational level on the marriage rate among cohabitors. Using unique register data and the Cox proportional hazards model, we analyse marriage formation in over 20,000 cohabiting unions in Finland. The large number of observations enables an inspection of the interactive effects in all partner-status combinations. Our results show that homogamy or heterogamy in socio-economic background is of little consequence for the couple's probability of marrying; homogamy encourages marriage only among cohabitors from farmer families. With regard to education, homogamy increases the marriage rate among cohabitors with a low level of education, but reduces it among the highly educated. Whether educational heterogamy promotes, deters or has no effect on the marriage rate depends on the combination. The results emphasize the importance of a detailed measurement of homogamy and heterogamy when examining the role of group boundaries in union transitions.

Keywords

cohabitation, education, homogamy, marriage, socio-economic background

Introduction

Family formation patterns have gone through considerable changes in Western countries over the past few decades. Marriage rates have been declining since the 1970s and the mean age at marriage has risen, whereas the prevalence of non-marital cohabitation has increased (e.g. Kiernan, 2001). The Nordic

Corresponding Author:
Elina Mäenpää, Population Research Unit, Department of Social Research, University of Helsinki, P.O. Box 18, FIN-00014 University of Helsinki, Finland.
Email: elina.maenpaa@helsinki.fi

countries have been forerunners in this development, and currently there is little social distinction between cohabitation and marriage in these countries, and children are born and raised in both union types (Heuveline and Timberlake, 2004; Kiernan, 2001). Nevertheless, even in countries in which cohabitation is widespread and socially approved, people still value marriage (Kiernan, 2004), and many choose to marry eventually. This raises the question of which factors contribute to the cohabiting couple's decision of progressing to marriage, and thus how cohabitation and marriage differ from each other as union types.

A growing amount of literature has explored the effects of an individual's social and economic traits, such as education or income, on the probability of converting a cohabiting union into a marriage (e.g. Bracher and Santow, 1998; Duvander, 1999; Kalmijn and Luijkx, 2005; Kravdal, 1999; Lemmon et al., 2009; Lichter et al., 2006; Manning and Smock, 1995; Oppenheimer, 2003; Wu and Balakrishnan, 1995; Wu and Pollard, 2000). However, less is known about the extent to which the transition to marriage depends on the partners' statuses relative to each other, that is, whether the partners' characteristics interact. For instance, does similarity and dissimilarity of the partners' characteristics, in other words, homogamy and heterogamy, affect the choice to proceed from cohabitation to marriage? Is a shared socio-economic status or a shared family background, or perhaps socio-economic complementarity between the partners an incentive to marry? Is homogamy equally important for all status groups or do its effects vary by group?

An extensive social science literature focuses on the tendency towards homogamy in partner selection (e.g. Blackwell and Lichter, 2000; Burgess and Wallin, 1943; Coombs, 1962; Hamplova, 2009; Hollingshead, 1950; Kalmijn, 1991a, b; Michielutte, 1972; Schoen and Weinick, 1993; Trost, 1967; for reviews, see Blossfeld, 2009; Kalmijn, 1998). The preference for a partner with similar social characteristics has been attributed to the shared cultural resources, such as values, tastes and world-views, which facilitate mutual understanding between the partners and provide a basis for an enduring relationship (Burgess and Wallin, 1943; Coombs, 1962; Kalmijn, 1991a, 1998). People acquire their cultural resources in both the parental family and in contexts outside it, such as in educational institutions and peer groups (Kalmijn, 1991a). The importance of early cultural socialization is thought to be reflected as a preference towards homogamy in ascribed characteristics, which are assigned to one at birth (such as parental social class and ethnic background), whereas the significance of orientations and influences later in life is considered to encourage homogamy in achieved characteristics (such as educational attainment and occupational status) (Hansen, 1995; Kalmijn, 1991a). A common conclusion in studies on partner selection is that achievement has become more important while ascription has lost its salience (Hansen, 1995; Kalmijn, 1991a, b). Education in particular is seen as a decisive determinant of an individual's tastes, values and lifestyles, and therefore as an important factor in partner selection (Blossfeld, 2009; Kalmijn, 1991a).

Assortative mating patterns are thought to reflect the degree of openness of a society: a high degree of heterogamy is seen to indicate that members of different groups accept each other as social equals (Blossfeld, 2009; Kalmijn, 1991a, 1998). However, partner selection patterns depend not only on individual preferences but also on the structural opportunities to meet and interact with people from different groups. A major advantage in exploring how homogamy and heterogamy affect union transitions after the partner has been selected – proceeding from cohabitation to marriage, or divorcing, for instance – is that these associations are unaffected by the structural opportunities to meet the current partner, and can thus be considered as better indicators of the extent to which people *prefer* a partner from one's own group (see Hansen, 1995; Müller, 2003).

Our study explores the effects of homogamy in ascribed socio-economic status (parental occupational class) and in own achieved educational level on the transition from cohabitation to marriage in Finland. Finland provides an opportunity to explore the effects of homogamy in an intriguing context in which cohabitations are often marriage-like, and the welfare state aims for equality between individuals and genders. In addition, the Finnish population register is an excellent source of large, representative research data, which are valuable for the study on homogamy in particular, given that homogamy is

normative in unions and heterogamous couples tend to be rare. With an extensive register data, we were able to examine the marriage rate in each partner-status combination. The results provide new, detailed knowledge on the role of group boundaries in union transitions, and shed light on the relative importance of ascription and achievement in contemporary union-formation patterns and on the characteristics of cohabitation and marriage as union types.

Theoretical background and hypotheses

Theoretical predictions concerning the effects of homogamy on the transition from cohabitation to marriage are scant in the existing literature. However, studies comparing partner selection in cohabitation and marriage (Blackwell and Lichter, 2000; Hamplova, 2009; Schoen and Weinick, 1993) offer a basis for developing hypotheses. On the basis of three perspectives on cohabitation as a union type, we put forward three hypotheses on how homogamy in socio-economic background and educational level can affect the probability of marrying among cohabitors. The degree of support the hypotheses receive gives further insight into the differences between cohabitation and marriage in the contemporary Nordic context.

Schoen and Weinick (1993) suggest that cohabitation is a 'looser bond' than marriage: it involves less commitment, lacks the permanence of marriage, and is less likely to lead to childbearing. Because marriage more strongly binds the partners in a wider family network, ascribed characteristics such as family background and age are more influential in partner selection in marriage than in cohabitation. Cohabitors, on the other hand, are more likely to emphasize achieved status, such as educational attainment, which reflects the socio-economic ability to contribute to the relationship in the shorter term. Given the lower level of commitment, and because the safety net of the legal marriage contract is missing, cohabiting couples are also less likely to develop a gendered division of labour in the household with the male specializing in paid work and the female in domestic work (Brines and Joyner, 1999; Schoen and Weinick, 1993). Cohabitors are thus less likely than married partners to exhibit educational hypergamy (the male being more highly educated than the female), and instead expect economic contributions from both partners (Schoen and Weinick, 1993). The 'looser bond' theory originally considers how couples entering marriage differ from those entering cohabitation. In contemporary Finland, however, nine out of ten unions begin as cohabitations (Jalovaara, 2012a), and the decision to marry is often made only after a period of living together. Thus, in this context, the differences in partner preferences between cohabiting and married couples are largely manifested in the ways in which couples are selected from cohabitation to marriage.

Although cohabitation is highly institutionalized in the Nordic countries, there are indications of weaker commitment among cohabitors than among marital partners in these countries as well. Cohabiting unions have higher dissolution rates (Gähler et al., 2009; Jalovaara, 2012b; Liefbroer and Dourleijn, 2006) and lower childbearing intensities (Oláh and Bernhardt, 2008) than marriages. Furthermore, a recent survey study from Sweden and Norway (Wiik et al., 2009) reports that cohabitors are less often serious about their relationships and more often have break-up plans than married respondents. Thus, in our first hypothesis, we apply the idea of cohabitation as a 'looser bond' than marriage:

Hypothesis 1: Homogamy in socio-economic background and educational hypergamy increase the marriage rate among cohabiting couples, whereas educational homogamy decreases the marriage rate.

Blackwell and Lichter (2000) provide an alternative to the 'looser bond' perspective. Their 'double selection' hypothesis argues that people prefer a partner with similar characteristics and cultural resources in general, and homogamous couples are selected first into cohabitation and then into marriage. Thus, homogamy in ascribed as well as achieved characteristics would encourage cohabiting couples to marry. Insofar as proceeding to marriage indicates a stable union, an increased marriage rate among homogamous cohabitors is also what the widely held sociological hypothesis on the effects of homogamy and heterogamy on union dissolution implies: because of their differing values and

world-views, heterogamous couples, it is suggested, face an increased risk of breaking up, whereas homogamous couples are presumed to be more likely to stay together (e.g. Bumpass and Sweet, 1972; Finnäs, 1997; Kalmijn et al., 2005; Tzeng, 1992). Our second hypothesis is hence the following:

Hypothesis 2: Homogamy in both socio-economic background and educational level increase the cohabiting couple's probability of marrying.

However, it might be that the effects of homogamy and heterogamy are not equal across social strata. It has been argued that social distinction and hence homogamy with respect to socio-economic background is most important for the upper classes of a society (Hansen, 1995). Thus, because we have the opportunity to examine each partner combination separately, we expect homogamy to enhance the transition to marriage among those from upper-white-collar families in particular. Furthermore, insofar as homogamy is assumed to promote and heterogamy, respectively, to deter the transition to marriage, we expect that the larger the cultural distance between the groups, the greater is the marriage-deterring effect of heterogamy.

The association between homogamy and the transition from cohabitation to marriage may nevertheless be weak in the contemporary Nordic context. As Hamplova (2009) suggests, when cohabitation is highly institutionalized and marriages and cohabitations have begun to converge, there should be no differences in assortative mating patterns between these two union types. In the setting of the current study, this means that homogamy in neither ascribed nor achieved characteristics should affect the probability of transitioning to marriage. Furthermore, the level of gender equality in the Nordic countries is high. Women in Finland are currently, on average, more highly educated than men (Statistics Finland, 2010). The labour-force participation of married women in Finland is among the highest in the European Union, and, compared even with their Nordic counterparts, married Finnish women more often work full time (Mutari and Figart, 2001). Hence, marriage in Finland is relatively unlikely to foster the gendered division of labour, and it is therefore possible that hypergamy in socio-economic attributes does not promote the transition to marriage. These features of the Nordic context are the basis of our final hypothesis:

Hypothesis 3: Homogamy in socio-economic background does not affect the marriage rate among cohabiting couples, nor does educational homogamy or hypergamy.

Some studies that compare homogamy in cohabitations and marriages comply with the 'looser bond' hypothesis, in that homogamy in ascribed characteristics has been more prevalent in marriages than in cohabitations, whereas cohabiting couples have been more homogamous than married couples with respect to their achieved characteristics (Jepsen and Jepsen (2002) and Schoen and Weinick (1993) for the US; Hamplova (2009) for the Benelux countries and Southern Europe). Others, however, report that marriages are in general more homogamous than cohabitations (Blackwell and Lichter (2000) and Schwartz and Graf (2009) for the US). In line with Hypothesis 3, no differences in educational homogamy between cohabitations and marriages were observed in Sweden and Denmark (Hamplova, 2009).

Few studies on the actual transition from cohabitation to marriage include indicators of homogamy. Furthermore, they report no significant effect of homogamy in achieved characteristics such as education or earnings (Brown, 2000; Müller, 2003; Mäenpää, 2009; Sassler and McNally, 2003; Smock and Manning, 1997), or in ascribed characteristics such as religion or age (Brown, 2000; Sassler and McNally, 2003). The studies have their shortcomings, however. Some are based on relatively small numbers of observations (Brown, 2000; Sassler and McNally, 2003; Smock and Manning, 1997), which makes the results susceptible to random variation. Others examine the effect of homogamy with difference measures (Brown, 2000; Müller, 2003), which have been criticized for various theoretical and methodological reasons, including their incapability to show whether the effects of homogamy and heterogamy vary across groups (see Eeckhaut et al., 2011). A couple of studies examine the marriage rate in different combinations of partner statuses (Mäenpää, 2009; Sassler and McNally, 2003), but despite the advantage of producing more detailed knowledge it often remains unclear whether the relative marriage rate in a particular combination results from a genuine interactive effect or merely from the main effects

of the partners' positions – that is, whether a partner combination produces a marriage rate that is something other than 'the sum of its parts'. Thus, whether and how homogamy affects the transition from cohabitation to marriage remains unsettled. To our knowledge, no studies on the effects of homogamy on the marriage rate among cohabitors have been conducted in the Nordic countries.

This study extends previous research by examining how homogamy and heterogamy in educational level and parental occupational class affect the transition from cohabitation to marriage in Finland. Our use of register data allowed 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 the partner's characteristics. The large number of observations enabled a more detailed measurement of homogamy and heterogamy than in prior studies. Furthermore, we introduce a simple analytical strategy for locating the specific partner-status combinations that interact.

Data and method

Data and study population

The data are an extract from the so-called *Palapeli* research register compiled at Statistics Finland. The register covers all individuals in the population of Finland between 1970 and 2000, and data on their socio-demographic and socio-economic characteristics as well as on all their unions, partners and children have been followed up until the end of 2003. *Palapeli* was formed by linking data from the population register and for instance censuses and employment statistics by means of personal identity codes. Data on the partners' characteristics are symmetrical, which is a major advantage in the study of homogamy. The extract analysed here is an 11 per cent random 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 couples only when they have shared children, the Finnish registration system enables the inference of all cohabitations through the so-called domicile code, which identifies the dwelling in which the person lives. 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 there are shared children), and who are not siblings or a parent and a child. In the sample, the dates of events (e.g. union formation and dissolution) are presented to the precision of a month.

We selected cohabitations formed during the period 1995–2002 involving women born in 1960–1977 for the current study. During this period, 24,823 women entered a cohabiting union. About 20 per cent of them had formed more than one cohabitation, in which case the first of them was selected for the analysis. Only unions in which both partners were born in Finland were included because data on individuals born abroad are often deficient as regards time preceding immigration. This excluded 1,921 couples from the analysis. 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 people under 20 years of age are often still in education, cohabitations formed when the women were under the age of 20 were excluded ($n = 1{,}615$). The final number of cohabiting unions was 20,452.

Cohabitations were followed for transition to marriage from their start to the end of the year 2003. Couples were censored at separation,[1] at moving abroad, at either partner's death, and at the end of 2003. During the follow-up, cohabitations contributed 674,316 months at risk in total, and 31.5 per cent of the couples married ($n = 6{,}448$), 36.5 per cent separated, 0.4 per cent were censored through migration or death and 31.6 per cent still cohabited at the end of 2003.

Covariates

Socio-economic background. Socio-economic background was measured in terms of parental occupational class. This can be inferred from data on each person below the age of 15, when the household's

reference person (i.e. the person who is interpreted as having the primary responsibility for its subsistence) determines the occupational class. Occupational class is available in *Palapeli* 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. Five categories are distinguished: (1) upper white collar, (2) lower white collar, (3) manual worker, (4) farmer and (5) other. 'Farmer' refers to self-employed people and employers in farming, forestry and fishing. The residual category 'Other' includes self-employed people other than farmers, as well as students, pensioners and those with missing data on occupational class. Months at risk by the partners' parental occupational classes are shown in Table A1 in the Appendix.

Educational level. Educational level is a monthly updated time-varying covariate. The value at time *t* is the partners' educational levels in the previous month. Individuals with no post-comprehensive, non-compulsory education registered 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 certain vocational qualifications. 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 doctorate or equivalent education. Months at risk by the partners' educational levels are shown in Table A2 in the Appendix.

Control variables. We controlled for four basic factors that could have distorted the analysis of the association between homogamy and the transition to marriage. Months at risk according to these variables are given in Table 7. 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 entry into the cohabitation* is classified in five categories: (1) 20–24, (2) 25–29, (3) 30–34, (4) 35–39 and (5) 40–42 years. A couple's *place of residence* is a yearly updated time-varying covariate. The value at time *t* is the couple's place of residence at the end of the previous calendar year, categorized as follows: (1) the Helsinki metropolitan area, (2) other urban, (3) semi-urban and (4) rural. *Parent status* is a monthly updated time-varying covariate. The value at time *t* is the couple's parent status in the previous month. We formed 10 categories (see Table 7) according to whether the couple had shared children or not, whether the child was the couple's first, second or later child, and whether the woman was pregnant, the child was 0–12 months old or older than 12 months. Pregnancy was deduced from the registered birth dates, and defined as seven months preceding a birth.

Method and analytical strategy

We used the Cox proportional hazards model with time-varying covariates to analyse the transition from cohabitation to marriage. To assess the detailed effects of homogamy and heterogamy, we examined the interactive effects in all partner-status combinations. When we analysed the interactions of the partners' parental occupational classes we controlled for the combination of their educational levels, and vice versa, in order to determine the independent effects of these two dimensions of homogamy.[2] We also included the control variables introduced above in all the analyses. The results are presented as hazard ratios (HR). We describe our analytical strategy below.

We first fitted a model that included the *main effects* of each partner's position in order to see the average effects of their respective statuses on the marriage rate. These main effects serve as a baseline for evaluating whether any interactive effects between the partners' statuses exist. We then formed a *combined variable* of the partners' statuses that produced the hazard ratios of marriage in each possible partner-status combination. These hazard ratios incorporate both the main effects and the interactions of the partners' statuses, which can make it difficult to assess the presence and precise location of any

Table 1. The main effects of parental occupational class on the marriage rate among cohabitors, hazard ratios (HR) from a Cox regression model.

Parental occupational class	Female partner	Male partner
Upper white collar (ref.)	1.00	1.00
Lower white collar	0.89**	0.98
Manual worker	0.82***	0.94
Farmer	0.89*	1.14*
Other	0.82***	0.88**

Notes: The hazard ratios are adjusted for the control variables in Table 7 and the combinations of educational level. Significance levels: $^{\dagger}p < .10$, $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$.

interactions over and above the main effects. On the basis of the combined variable we could, however, estimate roughly whether the partners' statuses interacted by examining how well the effects of one partner's position in the categories of the other partner's position conformed to the main effects. We also tested whether the overall partner-status interaction term was statistically significant (likelihood-ratio test).

Finally, to overcome the problem of confusing the interactive effects with the main effects, we used *dummy variables* to locate the specific partner-status combinations that interacted and to determine the statistical significance of these interactions. We created a dummy for each combination (coded as 1 if the couple belonged to the combination in question and 0 otherwise), and added each dummy one at a time to the main-effects model, so that for each combination we had a model that included the main effects and the corresponding dummy. The hazard ratio of this dummy variable reveals *whether there is an interactive effect between these particular partner statuses after the main effects of the partners' positions have been accounted for*. A hazard ratio greater than 1.00 indicates an interactive effect which increases the marriage rate, whereas a hazard ratio smaller than 1.00 indicates that homogamy or heterogamy in this specific combination decreases the rate.

Results

Effects of homogamy and heterogamy in socio-economic background on the transition to marriage

The main effects of parental occupational class on the marriage rate among cohabitors are given in Table 1. Among women, those from upper-white-collar families are most likely to marry, whereas among men the highest marriage rate is for those with farm origins. Otherwise the differences between the groups are small.

Table 2 gives the marriage rates in the various combinations of parental occupational class. These hazard ratios conform quite well with the main effects in Table 1, although there are some exceptions. For example, among women from manual-worker families the marriage rates vary somewhat differently from what would be expected on the basis of the main effects of the male partner's parental occupational class, and among women from upper-white-collar families the marriage rate is particularly high when the partner has farm origins.

Table 3 displays the interactive effects of parental occupational class more clearly. Homogamy increases the marriage rate only among cohabitors with farm origins (hazard ratio [HR] = 1.24, $p < 0.10$). Heterogamy statistically significantly decreases the probability of marrying only when the female comes from a manual-worker family and the male from an upper-white-collar family (HR = 0.86, $p < 0.05$). Unexpectedly, heterogamy increases the marriage rate when the female comes from the category 'Other' and the male from an upper-white-collar family (HR = 1.22, $p < 0.10$), and when the

Table 2. Marriage rate among cohabitors in the various combinations of parental occupational class, hazard ratios (HR) from a Cox regression model.

Male partner's parental occupational class	Female partner's parental occupational class				
	Upper white collar	Lower white collar	Manual worker	Farmer	Other
Upper white collar	1.00 (ref.)	0.90	0.74***	0.79†	0.94
Lower white collar	0.95	0.81**	0.84*	0.84	0.73*
Manual worker	0.92	0.83**	0.76***	0.80*	0.75***
Farmer	1.32*	1.01	0.85†	1.15	0.80
Other	0.78*	0.74**	0.73***	0.77*	0.75*

Notes: The hazard ratios are adjusted for the control variables in Table 7, and the combinations of educational level. Significance levels: †p < .10, *p < .05, **p < .01, ***p < .001.

Table 3. The interactive effects of parental occupational class on the marriage rate among cohabitors, hazard ratios (HR) from the Cox regression models.

Male partner's parental occupational class	Female partner's parental occupational class				
	Upper white collar	Lower white collar	Manual worker	Farmer	Other
Upper white collar	1.04	1.07	0.86*	0.89	1.22†
Lower white collar	0.98	0.91	1.15*	0.98	0.90
Manual worker	1.00	1.04	1.00	0.95	0.98
Farmer	1.22	1.04	0.87	1.24†	0.84
Other	0.88	0.96	1.06	1.00	1.09

Notes: The interactive effects are hazard ratios of combination dummies from models that include the main effects of parental occupational class in Table 1 and the combination dummy in question. If HR > 1.00, interaction increases the marriage rate; if HR < 1.00, interaction decreases the rate. The hazard ratios are adjusted for the control variables in Table 7 and the combinations of educational level. Significance levels: †p < .10, *p < .05, **p < .01, ***p < .001.

female comes from an upper-white-collar family and the male from a farmer family (HR = 1.22, $p = 0.16$), although this latter effect fails to attain statistical significance. A similar but slighter effect is observed when the female comes from a manual-worker family and the male from a lower-white-collar family (HR = 1.15, $p < 0.05$). Nevertheless, the overall picture is that the hazard ratios of the dummies are fairly close to 1.00, and the overall interaction term of the partners' parental occupational classes is not statistically significant ($p = 0.25$).

Effects of educational homogamy and heterogamy on the transition to marriage

The main effects of education presented in Table 4 show that the marriage rate among cohabitors mainly increases with the level of education. The gradient is weaker among women than among men; the marriage rates do not, for instance, differ between women with a basic or an upper-secondary education. Previous studies consistently report higher educational level of the male partner as increasing the probability of transitioning from cohabitation to marriage (Bracher and Santow, 1998; Duvander, 1999; Kravdal, 1999; Lemmon et al., 2009; Lichter et al., 2006; Mäenpää, 2009; Oppenheimer, 2003; Wu and Pollard, 2000), and our finding that the female's educational attainment has a similar effect is consistent with previous Nordic studies (Bracher and Santow, 1998; Finnäs, 1995; Kravdal, 1999; Mäenpää, 2009).

Table 5 shows the hazard ratios of marriage in the various combinations of educational level. Among women and men with a basic education, as well as among men with an upper-tertiary education, the

Table 4. The main effects of educational level on the marriage rate among cohabitors, hazard ratios (HR) from a Cox regression model.

Educational level	Female partner	Male partner
Basic (ref.)	1.00	1.00
Upper secondary	0.98	1.17***
Lower tertiary	1.33***	1.51***
Upper tertiary	1.63***	1.92***

Notes: Educational level is a time-varying covariate. The hazard ratios are adjusted for the control variables in Table 7 and the combinations of parental occupational class. Significance levels: $^{\dagger}p < .10$, *p < .05, **p < .01, ***p < .001.

Table 5. Marriage rate among cohabitors in the various combinations of educational level, hazard ratios (HR) from a Cox regression model.

	Female partner's educational level			
Male partner's educational level	Basic	Upper secondary	Lower tertiary	Upper tertiary
Basic	1.00 (ref.)	0.84†	1.01	1.70*
Upper secondary	0.93	0.98	1.33***	1.89***
Lower tertiary	1.20	1.25*	1.81***	2.04***
Upper tertiary	2.22**	1.79***	2.25***	2.58***

Notes: The combined variable is a time-varying covariate. The hazard ratios are adjusted for the control variables in Table 7 and the combinations of parental occupational class. Significance levels: $^{\dagger}p < .10$, *p < .05, **p < .01, ***p < .001.

Table 6. The interactive effects of educational level on the marriage rate among cohabitors, hazard ratios (HR) from the Cox regression models.

	Female partner's educational level			
Male partner's educational level	Basic	Upper secondary	Lower tertiary	Upper tertiary
Basic	1.30*	0.99	0.81*	1.21
Upper secondary	0.83†	0.99	0.98	1.25**
Lower tertiary	0.90	0.96	1.11†	0.92
Upper tertiary	1.35	1.15	1.03	0.84*

Notes: The interactive effects are hazard ratios of combination dummies from models that include the main effects of educational level in Table 4 and the combination dummy in question (all time-varying covariates). If HR > 1.00, interaction increases the marriage rate; if HR < 1.00, interaction decreases the rate. The hazard ratios are adjusted for the control variables in Table 7 and the combinations of parental occupational class. Significance levels: $^{\dagger}p < .10$,*p < .05, **p < .01, ***p < .001.

marriage rates clearly deviate from the main effects in Table 4. It seems, for instance, that homogamous couples with a basic-level education marry at a higher rate than would be expected on the basis of the main effects. The overall interaction term of the partners' educational levels is also statistically significant ($p = 0.01$).

Table 6 confirms that the interactive effects almost exclusively pertain to the extremes of the educational hierarchy. Homogamy does indeed increase the marriage rate among cohabitors with a basic education (HR = 1.30, $p < 0.05$), and a very slight marriage-promoting effect is observable among those with a lower-tertiary education as well (HR = 1.11, $p < 0.10$). In contrast, homogamy reduces the marriage rate among cohabitors with an upper-tertiary education (HR = 0.84, $p < 0.05$). Extreme educational

Table 7. Months at risk and hazard ratios of marriage (HR) among cohabitors 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	0.55***
Female 4–<8 years older	35,255	5.2	0.93
Female >0–<4 years older	161,643	24.0	0.96
Male 0–<4 years older (ref.)	296,876	44.0	1.00
Male 4–<8 years older	119,759	17.8	0.96
Male 8–<12 years older	39,121	5.8	0.84*
Male 12 or more years older	9,930	1.5	0.86
Female's age at entry into the cohabitation			
20–24 years (ref.)	291,405	43.2	1.00
25–29 years	207,081	30.7	0.98
30–34 years	123,715	18.3	0.86***
35–39 years	48,692	7.2	0.86**
40–42 years	3,423	0.5	0.88
Place of residence (time-varying)			
Helsinki metropolitan area (ref.)	171,199	25.4	1.00
Other urban	329,258	48.8	1.01
Semi-urban	91,097	13.5	0.98
Rural	82,762	12.3	0.92†
Parent status (time-varying)			
No children (ref.)	473,153	70.2	1.00
No children, pregnant	26,179	3.9	2.50***
1st child 0–12 months	46,408	6.9	1.69***
1 child older than 12 months	65,570	9.7	0.92
1 child, pregnant	10,007	1.5	1.03
2nd child 0–12 months	16,128	2.4	1.50***
2 children older than 12 months	29,194	4.3	0.76**
2 or more children, pregnant	1,497	0.2	0.85
3rd or later child 0–12 months	2,344	0.3	1.63**
3 or more children older than 12 months	3,836	0.6	0.57*

Notes: The hazard ratios are adjusted for other covariates in the table, the combinations of parental occupational class, and the combinations of educational level. Significance levels: †p < .10, *p < .05, **p < .01, ***p < .001.

heterogamy increases the probability of marrying, although these effects are not statistically significant (HR = 1.35, $p = 0.26$ for extremely hypergamous couples and HR = 1.21, $p = 0.33$ for extremely hypogamous couples). Hypogamy promotes marriage also when the female is educated to the upper-tertiary level and the male to the upper-secondary level (HR = 1.25, $p < 0.01$). However, hypogamy lowers the marriage rate when the female has a lower-tertiary and the male a basic level of education (HR = 0.81, $p < 0.05$), as does hypergamy when the female has a basic and the male an upper-secondary education (HR = 0.83, $p < 0.10$).

Effects of the control variables

Table 7 shows the effects of the control variables on the marriage rate among cohabitors. Age heterogamy deters the transition to marriage when the age difference exceeds eight years, the effect being more evident when the female partner is older. The marriage rate is higher when the female was between 20

and 29 years old when the cohabiting union was formed, compared with when she was 30 years or older, which is in line with previous studies (Brown, 2000; Müller, 2003; Wu and Balakrishnan, 1995). Couples residing in rural areas are slightly less likely to marry than those living in more urban areas.

Having children and transitioning to marriage are clearly connected in the study population. The marriage rate among cohabitors has been found to increase during pregnancy (Bracher and Santow, 1998; Brown, 2000; Duvander, 1999; Finnäs, 1995; Manning, 2004; Manning and Smock, 1995; Müller, 2003; Smock and Manning, 1997), and in the present study, the first shared pregnancy in particular encourages marriage. Subsequent pregnancies only slightly increase the marriage rate, but it more clearly increases during the first year following the birth of the child. This could indicate that, in the case of the first child, normative reasons for marrying before the child is born carry more weight, whereas if the couple already has children, these motives are weaker, and practical matters may be more decisive (e.g. the wedding is postponed until the baby is born). Nevertheless, regardless of parity, as the children grow, the marriage rate decreases to even lower levels than among couples without shared children. This is in accordance with previous studies reporting that children deter the transition from cohabitation to marriage (Finnäs, 1995; Manning, 2004; Müller, 2003; Wu and Balakrishnan, 1995), and may indicate that cohabitors with children tend to be those who have chosen cohabitation as a lifestyle (see Wu and Balakrishnan, 1995).

Discussion and conclusions

This study explored the effects of homogamy and heterogamy in socio-economic background and education on the transition to marriage among over 20,000 cohabiting couples in Finland. Our aim was to determine how group boundaries between cohabiting partners in ascribed or achieved socio-economic positions affect their choice of union type. The unique and extensive register data enabled a more detailed analysis of the effects of homogamy and heterogamy than previously achieved. Furthermore, we put forward three hypotheses on the association between homogamy and the transition to marriage that were based on different views of cohabitation as a union type. The results thus provide one perspective to the differences between cohabitation and marriage in the contemporary Nordic context.

Hypothesis 1 (the 'looser bond' hypothesis) posited that because marriage involves more commitment and more strongly binds the partners in a family network than cohabitation, homogamy in socio-economic background would be beneficial in the transition to marriage. This hypothesis was supported in that homogamy increased the marriage rate among cohabitors with farm origins. We expected homogamy to encourage marriage among cohabitors from upper-white-collar families in particular, but this proved not to hold. The fact that homogamy is associated with an increased marriage rate solely among people with a farmer family background might stem from the fact that these homogamous couples are relatively likely to have established their own farm or inherited one from either partner's parents, and marriage provides a more secure basis for a family enterprise than cohabitation. Furthermore, Hypothesis 1 implied that heterogamy in socio-economic background should deter the transition to marriage, and we assumed the effect to be the more substantial the greater the social distance between the groups. For the most part, this did not apply: heterogamy decreased the marriage rate only when the female came from a manual-worker family and the male from an upper-white-collar family.

Hypothesis 1 also expected the gendered division of labour and accordingly, educational hypergamy, to increase the marriage rate among cohabitors and educational homogamy to decrease the rate. In line with this, homogamy was associated with reluctance to marry among highly educated cohabitors, the group with the highest marriage rate in the main effects model. Educational hypergamy enhanced the transition to marriage when the discrepancy between the partners' educational levels was large, that is, when the female was educated to the basic and the male to the upper-tertiary level. The effect of extreme hypogamy turned out to be parallel, and hypogamy increased the marriage rate also when the male was educated to the upper-secondary level and the female to the upper-tertiary level. Hypothesis 3,

which took account of the special features of the Nordic countries, expected that the high level of gender equality in Finland would show up in the absence of a marriage-promoting effect of hypergamy, but instead it seems to appear in these rather symmetrical effects of extreme hypergamy and hypogamy. A gender-neutral effect is not surprising, because educationally hypergamous and hypogamous married couples have also been reported to be at equal risk of divorce in Finland (Jalovaara, 2003). Nevertheless, because of the rarity of union formation between people with highly unequal educational attainments, even with as large a total number of observations as in this study the results concerning extremely heterogamous couples are statistically insignificant.

According to Hypothesis 2 (the 'double selection' hypothesis), homogamous couples in general are more likely than heterogamous couples to progress from cohabitation to marriage. Homogamy nonetheless increased the marriage rate only among cohabitors with farm origins, and among those with no education beyond the basic level. Homogamy seems to foster marriage among individuals with only a basic education, in that a previous Finnish study (Jalovaara, 2003) also found homogamy to decrease the divorce rate among this group. Hypothesis 2 also implied that differing values, attitudes and lifestyles of heterogamous couples should lower the probability of marrying, but heterogamy had surprisingly few marriage-deterring effects in terms of both socio-economic background and educational level; in the case of education, heterogamy lowered the marriage rate only when the female was educated to the lower-tertiary level and the male to the basic level, and when the female was educated to the basic level and the male to the upper-secondary level. The marriage-promoting effects of educational heterogamy outlined above suggest that in these cases the benefits of specialization outweigh the potentially detrimental effects of cultural dissimilarity.

Hypothesis 3 posited that when cohabitation is institutionalized, homogamy and heterogamy should not affect the marriage rate among cohabitors. The results on socio-economic background supported this hypothesis in that interactions between the partners' positions were few in number. Thus, cultural differences between the partners that originate from differences in the socio-economic resources of their parental families seem to be of little consequence for the probability of marrying. However, the partners' educational levels interacted in several ways, which suggests that educational differences between the partners matter instead in the decision to progress from cohabitation to marriage. The interactions fairly consistently pertained to the lowest and highest educational levels, but no coherent pattern was found in the effects of homogamy and heterogamy: as discussed above, the results contain elements in favour of both hypotheses 1 and 2, depending on the combination. The more substantial impact of educational differences compared with differences in socio-economic background nevertheless complies with the perception that achievement overrides ascription in contemporary partner selection processes (Hansen, 1995; Kalmijn, 1991a, b). The more minor relevance of ascription appeared in the case of age as well: the age difference between the partners has to be quite large to lower the probability of marrying.

Overall, none of the hypotheses received clearly more support than others. The effects of educational homogamy and heterogamy are more in line with the idea that cohabitation is a 'looser bond' than marriage in Finland, whereas the results on socio-economic background speak in favour of the similarity of cohabitation and marriage in the contemporary Nordic context. Despite the reasonable logic of the 'double selection' hypothesis, this hypothesis received fairly weak support, which is to say that cohabitation does not serve to any great extent as a stage from which homogamous couples progress to marriage. Thus, in marriages preceded by cohabitation, homogamy at the time of marriage is mainly the result of homogamous partner selection already in cohabitation, and group boundaries play only a minor role in the process of converting a cohabiting union into a marriage. It is actually quite interesting, and presumably characteristic of a comparatively individualized and egalitarian society, that although higher educational attainment clearly promotes the transition to marriage, the partner does not need to share the same level of education. The fact that barriers between educational groups are not any great obstacles to marriage formation in Finland appears also in the relatively weak tendency towards educational homogamy in Finnish marriages (Domański and Przybysz, 2007).

Moreover, our detailed analysis revealed some unexpected associations, in which heterogamy in socio-economic background increased the marriage rate. In particular, despite the statistical insignificance of the interactive effect, the high marriage rate among couples in which the female came from an upper-white-collar family and the male from a farmer family is rather odd in that the cultural distance between these groups could be expected to be quite large. One explanation might be that the men concerned came from wealthy families with large farms, and hence the partners' socio-economic backgrounds were not that dissimilar. The increased marriage rate among couples in which the female came from the category 'Other' and the male from an upper-white-collar family is also likely to result from the heterogeneity of the group 'Other'. Future research should thus examine the interactions of the partners' socio-economic backgrounds more elaborately with datasets which include additional information on the partners' parental families. In addition, all the effects of heterogamy in socio-economic background turned out to be gender-specific in that they did not appear when the genders were reversed. This suggests that similar socio-economic circumstances in childhood may have different implications for the cultural resources and hence adulthood union-formation behaviour of women and men. The differing main effects of the female and the male partners' parental occupational classes support this interpretation.

A significant contribution of this study was showing that measuring homogamy and heterogamy by only dichotomizing couples into homogamous and heterogamous groups, or even by further assorting hypergamous and hypogamous couples, may be misleading in that such groupings are likely to leave essential associations undiscovered. Large datasets and detailed classifications of homogamy and heterogamy assorting all partner-status combinations are needed to maximize the understanding of the role of group boundaries in union transitions.

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Notes

1. Although separation and marriage are competing events (one event prevents the other from happening), we treat separation as a censoring event because we do not examine here how the covariates affect the risk of separation, which is essential information if competing-risks regression is applied. Furthermore, the use of time-varying covariates is problematic in competing risks regression (see StataCorp, 2011).
2. Our results remained the same regardless of whether only the main effects or also the interactions (the combinations) of the other variable were controlled for. In other words, homogamy in educational level and parental occupational class affect the marriage rate independently of each other.

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Author biographies

Elina Mäenpää is a doctoral student at the Population Research Unit of the Department of Social Research, University of Helsinki, Finland. Her research interests include the patterns and trends of partner selection and the effects of homogamy and heterogamy on union transitions.

Marika Jalovaara obtained her doctoral degree in 2007 at the University of Helsinki and in 2012 was appointed as docent (adjunct professor) in economic sociology at the University of Turku, Finland and in demography at the University of Helsinki, Finland. She is a senior researcher at the Department of Social Research, University of Turku, and a principal investigator at the University of Helsinki. Her research mainly focuses on the formation and dissolution of cohabitations and marriages as well as childbearing, and the linkages between family dynamics and socio-economic stratification.

Appendix

Table A1. Months at risk by the cohabiting partners' parental occupational classes, *n* (above) and per cent (below in parentheses).

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

Table A2. Months at risk by the cohabiting partners' educational levels, *n* (above) and per cent (below in parentheses).

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