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Bildungsexpansion, Familieninteraktionen und die offene Gesellschaft / Expansion du système de formation, interactions familiales et la société ouverte / Educational Expansion, Family Interactions, and the Open Society

Edited by Rolf Becker, Ben Jann, and Eric Widmer

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Julie Falcon and Dominique Joye — More Gender Equality, More Homogamy? A Cohort Comparison in Six European Countries [E]

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Educational Expansion, Family Interactions, and the Open Society

Bildungsexpansion, Familieninteraktionen und die offene Gesellschaft

Expansion du système de formation, interactions familiales et la société ouverte

Rolf Becker*, Ben Jann**, and Eric Widmer***

1 Educational expansion and its consequences in Switzerland

Against the backdrop of controversial debates on economic modernization, political developments, and Cold War-era social reforms, Swiss society has (like other Western societies) experienced a remarkable expansion in its educational system since the 1960s. This expansion has included increasing educational participation and educational opportunities, and a growing demand for general education, vocational training and academic skills (Breen et al. 2009, 2010; Hadjar and Becker 2009). Although educational expansion had a lower impact and was less dynamic in Switzerland than in some other countries (Buchmann et al. 2007; Buchmann and Charles 1993), longitudinal studies based on a cohort design demonstrate that Switzerland did catch up during the last decades with respect to educational enrollment, the acquisition of higher education, and the attainment of credentials (Zangger and Becker 2016; Hadjar and Berger 2010; Pfeffer 2008). Educational expansion over the generations led to an unprecedented upgrading of qualifications in the Swiss Population (Becker and Zangger 2013). Consequently, this process led to changes in the inequality of educational opportunities with respect to social origin, ethnic background, and gender (Becker and Zangger 2013; Jann and Combet 2012; Hadjar and Berger 2010; Pfeffer 2008; Buchmann et al. 2007).

In contrast with other countries, however, theoretical and empirical research on the extent to which these structural changes can be causally attributed to educational expansion in Switzerland is not very well developed. There are striking gaps in the research regarding the educational expansion's consequences for familial and demographic processes over time. Educational expansion is often asserted to lead to changes in various fields of society such that society moves towards a more open social contract, in which individual achievement (rather than social reproduction) is deemed vital for the good of future generations. One field of particular relevance in

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this context is partnership and family formation, which can be assumed to be strongly influenced by educational transformations. This special issue therefore taps into the consequences of educational expansion for partnership and family interaction and its contributions to the openness of the Swiss society. It also includes analyses of data from a few other European countries as points of comparison.

The ideal type of open society, according to Karl Popper, is one in which "many members strive to rise socially, and to take the places of other members." In contrast, a closed society "resembles a herd or a tribe in being a semi-organic unit whose members are held together by semi-biological ties – kinship, living together, sharing common efforts, common dangers, common joys and common distress" (Popper 2012, 179). The contributions of family interactions to the openness of society are many (Widmer 2010). In some societies, the market and the state come first in the provision of welfare, whereas in other societies, the family as an institution is considered the main solidarity group for individuals (Ganjour and Widmer 2016). When this is the case, social solidarity takes on a rather local quality, which reduces the social contract's ability to deal with the increasing complexity of economic and cultural interdependences unfolding across the social spectrum in the course of modernization (Elias 2001). The consequences of such family-based collective solidarity in terms of the persistent inequalities between women and men have been stressed by previous research (Esping-Andersen 2009), but it also has consequences beyond gender inequality by leaving rich and poor, and natives and migrants, with strongly differing access to crucial resources. Another way in which family contributes to the openness or closeness of society relates to the suffusion of family ties with other interpersonal relationships, namely friendship (Allan 2008). In some societies, family members and friends are considered to belong to the same domain of close interpersonal relationships, whereas in others, sociability with kinship members, friends, and other members of personal networks are kept apart. In the latter case, the family is more weakly aligned with the general understanding of how relationships work in the present state of society.

Finally, the openness of society relates to the way in which family is formed at the time of marriage (Kalmijn 1998). Does marriage follow the lines of social reproduction, or does it contribute to a redistribution of social resources? In other words, how strongly, and in what ways, is a society affected by homogamy, or the marital association of people of similar social status or origin? The papers that follow will address this topic. The marriage market is a social institution with important consequences for the structure of society, as it creates opportunities for various social groups to open up and merge through the exchanges of partners and the constitution of families with mixed social heritages (Levi-Strauss 1969). A closed society is one in which marriage mostly happens within tight-knit social groups. In that case, marriage reinforces social inequalities created by the intergenerational transmission of resources (wealth but also cultural and social capital). Homogamy

increases the concentration of such resources among the future children born to couples at the upper end of the social stratum, and decreases the redistribution of such resources towards children of a lower social background. When children from one generation are raised for the most part by homogamous parents, the process of cultural transmission necessarily becomes heterogeneous across the social spectrum and entrenched in distinct class identities and class practices (Bernstein 2003). In other words, when homogamy is on the rise across marriage cohorts, yet another layer of social immobility – group closure and cultural divide – is imposed on the next generation of adults, therefore reducing the chances of societal openness in a Popperian sense.

2 The contributions of this special issue

Educational expansion may be expected to decrease homogamy by opening the doors of higher education to social groups barred from it. However, results from international research are mixed in this regard. It is therefore important to assess the effects of Switzerland's educational expansion on homogamy and other family interactions since the 1960s. Several papers of this special issue quantify the extent to which educational expansion is related to a decreasing, stable, or increasing rate of homogamous marriages in Switzerland. The paper by *Ravazzini, Kuhn* and *Suter* reports an increasing level of assortative mating with respect to education and wages across cohorts in Switzerland. The authors attribute this trend to low-qualified individuals. The comparative paper by *Falcon* and *Joye* finds that, in various European countries overall, there has been stability in educational homogamy across cohorts rather than a decline. This stability, however, conceals great differences with respect to labor market participation and family work arrangements within couples. Interestingly, couples in which both partners fully participate in the labor market show a higher level of homogamy than couples with more traditional family arrangements (i. e. couples in which the wife stays at home or works part-time and the husband is a full-time employee). Falcon and Joye conclude by suggesting that the increase in gender equality has created a restructuring of educational homogamy toward higher homogamy at the top. The paper by *Wise* and *Zangger* confirms that educational homogamy has been stable across birth cohorts in Switzerland. According to their analysis, educational homogamy has had only a marginal impact on earnings-based income inequality between couples, which may be due in part to the endogenous decision-making of couples concerning working time. The concentration of wealth implied by homogamous marriage may thus have been weaker than expected. *Potarca* and *Bernardi's* paper extends the inquiry of homogamy to mixed couples between migrants and the native-born. According to the status-caste exchange theory, intermarriages involve transactions in which the more highly-educated im-

migrant partners trade status for the ethnic advantage of less highly-educated native partners. Interestingly, however, according to the results of this paper, marriage has not operated as an instrument of integration between migrants and non-migrants of unequal educational status in Switzerland.

Three papers address the relations existing between educational expansion and three family practices other than marriage: remaining single, non-marital cohabitation, and divorce. *Becker* and *Jann's* paper shows that the inclination toward homogamous partnerships is most pronounced in less highly-educated groups, but that the differences between educational groups have become weaker in recent decades. According to their findings, educational expansion has been associated with the exclusion of a significant share of women (but not of men) from the marriage market. Likewise, the contribution by *Konietzka* and *Kreyenfeld,* which is based on the German microcensus, estimates a link between non-marital cohabitation and educational expansion in East and West Germany. Their investigation shows that more highly-educated women in West Germany had a higher probability of being in a nonmarital partnership rather than of being married. With an increase in the share of non-marital births, however, this association has reversed in West Germany. In this respect, there is a socio-structural convergence of West Germany towards East Germany. Finally, the paper by *Kessler* assesses whether educational expansion has led to an increasing rate of divorce in Switzerland since the 1960s. The results show that the educational gradient in partnership breakup is positive and highest for women (and, to a lesser extent, for men) among older cohorts, but is statistically non-significant for the most recent cohort. This result is important because, if heterogamous marriages were more likely to break up, a higher rate of heterogamous marriage, both ethnically and socially, would not translate into a more open society (Kalmijn 1998).

Taking all the papers together, readers will be struck by the strength of traditional family practices regarding marriage and partnership formation in contemporary Switzerland. The results of this special issue show that, despite the remarkable expansion of education and the extent of educational upgrading over the last fifty years, not much has changed in homogamy's effects in Switzerland and other European countries. The special issue shows that, like other societies, Swiss society has not achieved greater openness in the family realm as a result of an increasing exposure to higher education. We are left wondering what structural changes may achieve this end, or, alternatively, what might have happened to family structures had the educational expansion not taken place. From a methodological point of view, however, it must also be emphasized that some of the consequences of educational expansion could not be revealed for the Swiss case due to the lack of longitudinal data across long historical periods. Possibly, a longer time-horizon might be needed to uncover the societal changes brought about by the educational expansion more fully. Part of this development may still be ahead of us, as the ongoing expansion of

tertiary education can be assumed to have a significant impact on the development of partnership markets, the formation and stability of families, and consequently on demographic changes and social inequality in Switzerland. Future sociological research will reveal the degree to which Swiss society is affected by these changes.

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More Gender Equality, More Homogamy? A Cohort Comparison in Six European Countries[1]

Julie Falcon* and Dominique Joye**

Abstract: We study whether educational homogamy has increased following the rise of women's educational attainment and of egalitarian couples in France, Germany, the Netherlands, Spain, Switzerland and the United Kingdom. From the analysis of data from the European Union and Swiss Labour Force Surveys over a 15-year period (1999–2013), we observe that educational homogamy did not increase across cohorts, although we find substantial differences in the degree of homogamy according to couple arrangements.

Keywords: homogamy, couple arrangements, gender inequality, Europe

Mehr Geschlechtergleichheit, mehr Homogamie? Ein Kohortenvergleich in sechs europäischen Ländern

Zusammenfassung: Wir untersuchen, ob die Bildungshomogamie in Folge des angestiegenen Bildungsniveaus von Frauen und der Zunahme von egalitären Paaren in Frankreich, Deutschland, der Niederlande, Spanien, der Schweiz und Grossbritannien, zugenommen hat. Basierend auf den Daten der europäischen und schweizerischen Arbeitskräfteerhebungen (1999–2013), konnten wir keine Zunahme der Bildungshomogamie zwischen den Kohorten feststellen. Abhängig von der Paarkonstellation ergaben sich jedoch substantielle Unterschiede im Grad der Bildungshomogamie.

Schlüsselwörter: Homogamie, Paarkonstellationen, Geschlechterungleichheit, Europa

Plus d'égalité de genre, plus d'homogamie ? Comparaison de cohortes dans six pays européens

Résumé : Nous examinons si l'homogamie de diplôme a augmenté à la suite de l'élévation du niveau d'études des femmes et du nombre de couples égalitaires en France, en Allemagne, aux Pays-Bas, en Espagne et au Royaume-Uni. A partir de l'analyse de données des enquêtes emploi européennes et suisses sur une période de quinze années (1999–2013), nous observons que l'homogamie de diplôme n'a pas augmenté parmi les cohortes, bien qu'il existe des différences substantielles de niveau d'homogamie en fonction des configurations de couple.

Mots clés : homogamie, configurations de couple, inégalités de genre, Europe

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1 Introduction

When it comes to spouse selection, people tend to choose someone of a similar social status to their own (Blossfeld 2009; Blossfeld and Timm 2003; Kalmijn 1998; Schwartz 2013). As Bozon and Héran (1989,117) have underlined, "Cupid's arrows do not strike the social chess-board at random, but form a diagonal line, perfectly visible in the cross-tabulation of social origins of spouses." For social stratification scholars, the study of this phenomenon, known as social homogamy, constitutes a measure of the social closure or openness of a society (Weber 1978). If spouse choice becomes less based on social status, this implies that the crossing of social boundaries is easier and that a society is becoming more open. Partner choice is thus central to understanding the reproduction of social inequality as a whole (Van Bavel 2012,133).

Social homogamy is generally measured by comparing partners' educational attainment or occupational class. We adopt the former measure in this paper. With the recent structural changes, such as educational expansion and the feminization of the labour market, some scholars have maintained that homogamy has increased, especially among egalitarian couples (Blossfeld and Drobnič 2001; Blossfeld and Timm 2003). Alternative views, however, claim that *female hypergamy*, i. e. the propensity for women to marry upwards, has decreased in favour of *female hypogamy*, i. e. the propensity for women to marry downwards (Bouchet-Valat 2014). We therefore test these two competing hypotheses by assessing homogamy trends and patterns in six different European nations. The main question we aim to answer is whether homogamy has strengthened and whether this strengthening varies according to couple arrangements. This is an important issue insofar as both scenarios are likely to have very different long-term implications: under the first scenario, a child whose parents are both highly (or less) educated will cumulate (dis)advantages, whereas under the second scenario a child whose parents have different educational levels will have lower risk of accumulating either advantages or disadvantages.

We start by outlining the debates in the literature with respect to homogamy and the incomplete gender revolution. Then, we detail our research methodology before presenting the analysis. Finally, we summarize and discuss our findings.

2 The incomplete gender revolution: homogamy trends and consequences for couple arrangements

Over the past century, Western societies have witnessed considerable macro-structural changes. This is particularly true with respect to women's role in society, which has evolved dramatically. Educational expansion has not only increased access to upper secondary and higher education for all (Shavit and Blossfeld 1993; Shavit et

al. 2007), but has also led to a reversed gender gap in education, given that today more women than men graduate from higher education (Buchmann and DiPrete 2006; DiPrete and Buchmann 2013; Vincent-Lancrin 2008). In the meantime, women's access to the labour market has constantly increased (Oesch 2006). Last but not least, the traditional family model of the "married for life heterosexual couple" has declined as new family forms have emerged (Levy and Widmer 2013; Widmer 2010). However, it remains unclear how these changes have affected homogamy.

According to modernization theory (Blau and Duncan 1967, Kerr et al. 1960; Treiman 1970), the classic theoretical framework in homogamy research, the level of homogamy will vary according to the degree of industrialization and economic development, following an 'inverted U-curve' trend (Smits et al. 1998). First, in the course of the industrialization process, homogamy will increase as education becomes more important in the allocation process and consequently for partner choice. Then, at a late stage of industrialization when the level of economic development is high, homogamy decreases thanks to the rise of romantic love. Thus, following this rationale homogamy should have started to weaken in Western societies from the middle of the 20th century.

Empirical evidence is rather contradictory in this respect. Some country studies have concluded that there has been a decrease in homogamy. This is the case in France (Bouchet-Valat 2014), Great Britain (Halpin and Chan 2003), Norway (Birkelund and Heldal 2003) and Spain (Esteve and Cortina 2006). However, homogamy has increased in some other countries, most notably in Canada and in the US (Hou and Myles 2008; Schwartz and Mare 2005), as well as in Germany (Grave and Schmidt 2012), Ireland (Halpin and Chan 2003) and Switzerland (Joye and Falcon 2016; Levy et al. 1997). Another comparative study of 56 countries concluded that as a consequence of the reversed gender gap in education, female hypogamy has started to exceed female hypergamy (Esteve et al. 2012).

Both theory and empirical research nevertheless have failed to address how homogamy relates to the gendered division of labour within couples. While we have witnessed a tremendous gender equalization trend over the past 50 years, the gender revolution has remained incomplete (Esping-Andersen 2009). On the one hand, the shifting trend in gender relations from the traditional male breadwinner to the dual-earner model has generated greater symmetry between partners among recent generations. On the other hand, some asymmetry persists insofar as the division of labour between men and women within the personal sphere has largely remained unequal, even more so after the transition to parenthood (Le Goff and Levy 2016; Le Goff et al. 2009). Indeed, women still overwhelmingly hold primary responsibility for unpaid work, such as housework and childcare (Blossfeld and Drobnič 2001; Drobnič and Blossfeld 2004). As Blossfeld (2007, 284) highlights, "gender role change has been generally asymmetric, with a greater movement of women into the traditional male sphere than vice versa."

This incomplete gender revolution translates within couples into different forms of arrangements, referred to as multiple equilibrium (Esping-Andersen et al. 2013). Three types of couple arrangements can be distinguished, each describing a different degree of women's prioritization between work and family (Hakim 1996). First, the *home-centred lifestyle* defines traditional households in which women give priority to family life by focusing on raising children while men play the breadwinner role. Second, the *work-centred lifestyle* is characteristic of households in which women prioritize their careers. This couple arrangement puts women's careers on an equal footing with those of men and is often associated with childlessness. Third, households with an *adaptive lifestyle* concern couples who are in between the above configurations. This lifestyle enables women to combine both family and work thanks to their part-time involvement in paid work. Altogether, couple arrangements range from the one – usually male – earner to dual-earners and all the in-between situations of the 1.5 earners.

Couple arrangements tend to vary according to social position and across the life course. For instance, more traditional arrangements tend to be more widespread among both privileged and disadvantaged social classes (Levy et al. 1997). Numerous studies have documented that couple arrangements change after the transition to parenthood in the sense of a strengthening of the traditional division of labour between men and women (Bühlmann et al. 2010; Le Goff and Levy 2016; Le Goff et al. 2009; Widmer et al. 2012). However, couple arrangements probably depend primarily on institutional settings as arrangement choices are made first and foremost according to opportunities and constraints (Krüger and Levy 2001), rather than essentially according to individual preference (Hakim 1996). For instance, European countries display uneven shares of female labour force participation, with Southern European countries reporting lower rates of female labour force participation than Scandinavian or Continental European countries (Esping-Andersen 2009). These differences can be attributed to the diverse obstacles women face in reconciling work and family, which stem from differences in institutional settings.

Following Esping-Andersen's (1990) welfare regime typology and its extension (Ferrera 1996), different institutional settings, each conveying different degrees of gendered life courses, can be isolated. The *social-democratic regime*, typical of Scandinavian countries, encourages a gender-egalitarian division of labour thanks to state policies promoting dual-earner and dual-carer models. In contrast, under the *conservative regime*, characteristic of Continental Europe, the traditional gender division of labour is much more marked as policies favour the male breadwinner or 1.5 earner models. Under this regime, interruptions in women's careers and part-time employment are widespread after childbirth. The *family-oriented regime*, which is emblematic of Southern European countries, has a very traditional division of gender roles. In this regime, women are expected to provide care services to their families and women's labour force participation rate is particularly low. Given that

reconciling work and family is extremely difficult, women tend to choose between employment and family. Finally, the *liberal regime*, embedded in Anglo-Saxon countries, provides minimal support to families and relies on the market. As a consequence, female labour force participation tends to be relatively high in order to buy welfare services.

From this standpoint, our research aims to assess whether homogamy has increased over time, whether homogamy affects couple arrangements and whether there are cross-national differences according to the welfare regime. We first build on two competing hypotheses regarding homogamy trends. On the one hand, we could expect homogamy to have decreased in favour of an increase in female hypogamy (H1a). On the other hand, we could expect homogamy to have increased, in particular at the top of the social structure (H1b). We then expect to observe that each type of couple arrangement displays a different degree of homogamy. Although, the causality between homogamy and couple arrangements remains an open question, it is likely that spouse selection constitutes an important predictor of future couple arrangements. Furthermore, insofar as spouse selection and future couple arrangements are likely to be shaped by individuals' gender norms, analysing homogamy and couple arrangements as a configuration, rather than disentangling a strict causal mechanism, will provide insights into the context of the gendered division of labour at the couple level. Increasing gender equality on the labour market and the reversed gender gap in educational attainment are likely to have consequences for homogamy and the division of labour within couples. Because they have invested lots of time and energy in tertiary education, highly educated women tend to become less incline to giving up full time employment, especially after childbirth. As a consequence, to ensure that they can pursue full time employment, these women will be more likely to opt for an egalitarian couple arrangement. To do so, they will be more likely to select a partner with same level of education, or lower. Thus, we hypothesize that egalitarian couples will show higher levels of homogamy among tertiary education graduates and of female hypogamy (H2). Last but not least, given that welfare states moderate gender inequality to different extents, the degree of homogamy should vary cross-nationally. The inclination towards gender equality has indeed developed for a far longer time period in *social-democratic regime* countries than for instance in the *conservative regime* countries. Therefore, we expect countries to share a common pattern of homogamy but with different degrees of intensity according to their welfare regimes: in gender egalitarian countries homogamy should be relatively high, whereas in gender traditional countries homogamy should be relatively low (H3).

3 Methodology

Because we are interested in couple arrangements, i. e. whether couples[2] are composed of two earners, one earner or 1.5 earners, our analysis focuses on educational homogamy rather than on occupational homogamy. We use the EU Labour Force Survey[3] and the Swiss Labour Force Survey[4] over a 15-year period[5] (1999–2013) to carry out the analysis. We focus on six countries, namely Switzerland (CH), Germany (DE), Spain (ES), France (FR), the Netherlands (NL) and the United Kingdom (UK). These countries reflect to different extents the conservative (CH, GE, FR, NL), family-oriented (ES) and liberal (UK) regimes. We were unfortunately unable to include a country from the social-democratic regime because of the structure of Labour Force Surveys in Scandinavian countries: it is impossible to reconstruct couples as these surveys are drawn on individuals rather than on households.

We focus on couples in which the woman was aged between 30 and 49 years old at the time of the survey. This age range corresponds more or less to the age at which couples are most likely to live with children. Moreover, as the gendered division of labour intensifies after transition to parenthood (Bühlmann et al. 2010; Le Goff and Levy 2016; Le Goff et al. 2009), differences in gender norms according to couple configuration should be the most visible during this life course phase. We also excluded couples in their fifties as the probability of divorce increases with age as a result of a longer exposure to separation risks, but also because divorce risk is likely to diverge between homogamous and heterogamous couples. We then pooled the data and divided them into six birth cohorts, defined according to women's age. Of course, given the structure of our analysis, not all cohorts are analysed at the same age (see Appendix 1). Furthermore, it is worth mentioning that as the age variable in the EU Labour Force Survey is coded in five-year age intervals rather than as a continuous measure, the cohorts we measure are not mutually exclusive: the first cohort is composed of people born between 1950 and 1958 and the second of people born between 1955 and 1963. The same applies to the four subsequent cohorts. Thus, cohorts' boundaries are a little blurred in that we have a three-year redundancy between each cohort. Despite these limitations, our research design still enables us to draw temporal trends across cohorts because we are working at

2 We make no distinction between married and cohabitating couples and we exclude homosexual couples given the gendered focus of our analysis.

3 This study is based on data from Eurostat, European Union Labour Force Survey microdata, 1999–2013 (CD December 2015). The responsibility for all conclusions drawn from the data lies entirely with the authors.

4 These data were made available by the Swiss Federal Statistical Office.

5 We restrict the analysis to this 15-year period because the EU Labour Force Survey data does not contain a harmonized variable of education before 1998. Furthermore, there was an important reform of the EU Labour Force Surveys in 1998. As a consequence, there are fewer data harmonization issues starting from 1999.

an aggregated level. The cohort labels are as follows: 1952–1956; 1957–1961; 1962–1966; 1967–1971; 1972–1976; 1977–1981.

To measure educational homogamy, we compare partners' educational attainment. Education is measured using the ISCED 1997 classification (Schneider 2008). We group educational categories into four groups:

1. Lower secondary education or below, corresponding to ISCED 0, 1, and 2.
2. Upper secondary education includes educational programmes, coded in ISCED
3. Post-secondary/tertiary vocational education, composed of ISCED 4 and 5b.
4. Tertiary general education, for all degrees coded in ISCED 5a and 6.

The ISCED classification provides a harmonized measure of educational levels across countries. It must however be underlined that the comparability of educational levels is never as straightforward as it seems (Schneider et al. 2016). The countries we selected have quite different educational systems, with countries such as the UK having a rather linear system and countries such as Germany, the Netherlands and Switzerland having a dual educational system (i. e. both general and vocational tracks in parallel). This implies that in some countries one educational level can display considerable heterogeneity. As a consequence, the boundaries between some educational levels can be a little blurred in some countries, depending on how authorities classify a given educational title. This is particularly the case for post-secondary education and some tertiary degrees. Nevertheless, given that we could not preform the analysis with a different educational classification with the data used, we are unable to control for this potential measurement problem, inducing probably more imprecision in the measure rather than systematic bias.

Couples that have the same educational attainment are homogamous, whereas those with different educational attainment are heterogamous. Homogamy within the first and the second educational categories is qualified as *homogamy at the bottom*, whereas homogamy within the third and fourth educational categories is defined as *homogamy at the top*. We distinguish within heterogamous couples those in which the man has a higher educational level than the woman, described as female hypergamy. In contrast, female hypogamy defines the reverse situation, i. e. where the woman has a higher educational level than the man.

We made a cross-tabulation of couples' employment status to construct a couple arrangements variable (see Appendix 2). Employment status is defined in three categories according to whether individuals are working full time, part time or have no job. We distinguish between (1) *symmetrical* or 'egalitarian' couples, with the same employment status; (2) *partly asymmetrical* couples, namely couples whose employment status is slightly dissimilar (for instance full-time/part-time); (3) *fully asymmetrical* couples, reflecting so called 'traditional couples', where one works full time and the other one has no job. This typology does not fully reflect concepts of dual earners, male breadwinner and 1.5 earners as it contains, for instance, "female

breadwinner couples" and couples in which the woman works full time and the man part time. However, it has the advantage of not excluding any couple, in particular these "outsider couples." Furthermore, these situations remain the minority and ultimately, symmetrical couples are predominantly composed of dual earners, partly asymmetrical couples of couples in which the man works full time and the women part time and fully asymmetrical couples of couples corresponding to the male breadwinner model (see Appendix 3). Thus, this typology of couple arrangements should reflect quite closely what we want to analyse.

In addition to the calculation of absolute homogamy rates, we applied log-linear models to measure relative homogamy. This modelling technique, widely used in social mobility research, uses the odds ratio statistic to measure the intrinsic association between two or more categorical variables. Applied to the analysis of educational homogamy, this method addresses the problem of the structural differences in the marginal distribution of partners' education. It measures the chances of forming a union with someone with a specific educational level, relative to a person's own educational level. The basic principle of log-linear models is to fit different models to the data, making different assumptions regarding the strength and the pattern of the association between some categorical variables in a contingency table. The main idea is to find the model that provides the closest fit to the data. Then, depending on the assumption made in the model, we can draw conclusions with respect to the strength and pattern of homogamy.

For this research, we fitted log-linear models on a four-way contingency table, cross-classifying birth cohorts (C), couple arrangements (A), men's education (M) and women's education (W). The first model, known as the conditional independence model, assumes that men's and women's educational attainment are independent and is written as follows:

$$\log(m_{ijkl}) = \lambda + \lambda_i^A + \lambda_j^C + \lambda_k^M + \lambda_l^W + \lambda_{ij}^{AC} + \lambda_{ik}^{AM} + \lambda_{il}^{AW} + \lambda_{jk}^{CM} + \lambda_{jl}^{CW} + \lambda_{ijk}^{ACM} + \lambda_{ijl}^{ACW} \quad (1)$$

It assumes that couples are formed totally at random, i. e. regardless of partners' educational attainment. This is the baseline model. The second model is known as the constant association model:

$$\log(m_{ijkl}) = \lambda + \lambda_i^A + \lambda_j^C + \lambda_k^M + \lambda_l^W + \lambda_{ij}^{AC} + \lambda_{ik}^{AM} + \lambda_{il}^{AW} + \lambda_{jk}^{CM} + \lambda_{jl}^{CW} + \lambda_{ijk}^{ACM} + \lambda_{ijl}^{ACW} + \lambda_{kl}^{MW} \quad (2)$$

This posits that there is an association between partners' educational attainment and that this association is constant across cohorts and across couple arrangements. Then, we fitted the uniform difference model – known as the Unidiff model (Erikson and Goldthorpe 1992; Xie 1992). This model assumes that the strength of the

association between partners' educational attainment varies log-multiplicatively according to a third variable (here respectively cohorts and couple arrangements), while assuming that the homogamy pattern remains stable. Highly parsimonious, this model is able to detect significant difference in terms of trends, at the cost of modelling uniformity in terms of patterns. We tested two combinations of this model, which are written as follows:

$$\log(m_{ijkl}) = \lambda + \lambda_i^A + \lambda_j^C + \lambda_k^M + \lambda_l^W + \lambda_{ij}^{AC} + \lambda_{ik}^{AM} + \lambda_{il}^{AW} + \lambda_{jk}^{CM} + \lambda_{jl}^{CW} + \lambda_{ijk}^{ACM} + \lambda_{ijl}^{ACW} + \beta c\psi od \quad (3)$$

$$\log(m_{ijkl}) = \lambda + \lambda_i^A + \lambda_j^C + \lambda_k^M + \lambda_l^W + \lambda_{ij}^{AC} + \lambda_{ik}^{AM} + \lambda_{il}^{AW} + \lambda_{jk}^{CM} + \lambda_{jl}^{CW} + \lambda_{ijk}^{ACM} + \lambda_{ijl}^{ACW} + \beta a\psi od \quad (4)$$

The third model tests whether educational homogamy changes across cohorts and the fourth model whether educational homogamy varies across couple arrangements. In other words, these models assume that educational homogamy increased or decreased across cohorts (model 3) and that it is stronger or lower according to couple arrangements (model 4). Inspecting the Unidiff parameters enables us to assess in which direction homogamy varies: if the Unidiff parameters are under/over 1, this implies that homogamy is lower/greater than in the reference category (i. e. 1).

In a last set of models, we also modelled the association pattern of educational homogamy. We fitted three different topological log-linear models, each conveying a different assumption concerning the homogamy pattern. In general terms, these models can be written as follows:

$$low(m_{ijkl}) = \lambda + \lambda_i^A + \lambda_j^C + \lambda_k^M + \lambda_l^W + \lambda_{ij}^{AC} + \lambda_{ik}^{AM} + \lambda_{il}^{AW} + \lambda_{jk}^{CM} + \lambda_{jl}^{CW} + \lambda_{ijk}^{ACM} + \lambda_{ijl}^{ACW} + \lambda_{a(kl)}^{matrix} \quad (5)$$

where the term *matrix* refers to topological matrices fitted to the data (for detail of matrices, see Figure 1). The first matrix is called *homogamy*. It specifies that the entire association between partners' educational attainment is captured on the main diagonal, but that the homogamy association differs for each educational level. The second topological log-linear model is called *crossing* and is actually composed of three matrices. It models three different barriers to be crossed between opposite educational categories: (1) a barrier between graduates of lower secondary education or below and graduates of higher levels; (2) a barrier between secondary education graduates and post-secondary/tertiary education graduates; (3) a barrier between tertiary general education and other graduates. The third and last model is the *symmetry* model. It posits that the educational homogamy pattern is symmetrical between men and women and that each pair of cells of the table has a different degree of association.

Figure 1 Matrix details for topological log-linear models

Homogamy model

$$\begin{pmatrix} 1 & 0 & 0 & 0 \\ 0 & 2 & 0 & 0 \\ 0 & 0 & 3 & 0 \\ 0 & 0 & 0 & 4 \end{pmatrix}$$

Crossing model

$$\begin{pmatrix} 0 & 1 & 1 & 1 \\ 1 & 0 & 0 & 0 \\ 1 & 0 & 0 & 0 \\ 1 & 0 & 0 & 0 \end{pmatrix} \begin{pmatrix} 0 & 0 & 1 & 1 \\ 0 & 0 & 1 & 1 \\ 1 & 1 & 0 & 0 \\ 1 & 1 & 0 & 0 \end{pmatrix} \begin{pmatrix} 0 & 0 & 0 & 1 \\ 0 & 0 & 0 & 1 \\ 0 & 0 & 0 & 1 \\ 1 & 1 & 1 & 0 \end{pmatrix}$$

Symmetry model

$$\begin{pmatrix} 0 & 1 & 3 & 6 \\ 1 & 0 & 2 & 5 \\ 3 & 2 & 0 & 4 \\ 6 & 5 & 4 & 0 \end{pmatrix}$$

Last but not least, we assess the models' goodness of fit by looking at the BIC statistic (Raftery 1995): the lower the BIC, the more parsimonious the model. This analysis was undertaken using R and LEM software (R Core Team 2016; Vermunt 1997).

4 Analysis

We first start with some descriptive statistics on country differences in the distribution of educational expansion and couple arrangements. Then, we analyse absolute and relative educational homogamy across cohorts and couple arrangements. We mention which result relates to which hypothesis by indicating the hypothesis label in the text between brackets and discuss thoroughly whether they are corroborated or not in the conclusion.

4.1 Cross-national differences and structural changes across cohorts

The educational distribution among couples has evolved considerably across cohorts in all six countries (see Figure in Appendix 4). We observe a decrease in the share of graduates from secondary education or below and an increase in the share of graduates from tertiary education. This trend is widespread in each country, although it happened at different paces and to different extents. The share of tertiary education graduates in the Netherlands and the UK has always ranged across the highest levels, whereas in France and Spain, these shares have increased more sharply for the cohorts born after 1966. Furthermore, we observe that the share of women graduating from tertiary education has outpaced that of men over cohorts in all countries, although this trend is more recent in Germany and Switzerland than in France, Spain and the UK. One last interesting thing worth noting is that graduation shares have converged across countries for men but not for women.

Couple arrangements vary greatly according to country (see Table in Appendix 3). France has the highest share of symmetrical couples (50%), followed by Spain (44%) and the UK (42%). However, Spain also shows the highest share of fully asymmetrical couples (42%), making Spain the most "extreme" case out of the six countries studied in terms of couple arrangements. Switzerland also has

one of the highest shares of fully asymmetrical couples (35%). Partly asymmetrical couples are the most widespread in the Netherlands (62%), followed by Switzerland (42%), Germany (39%) and the UK (38%).

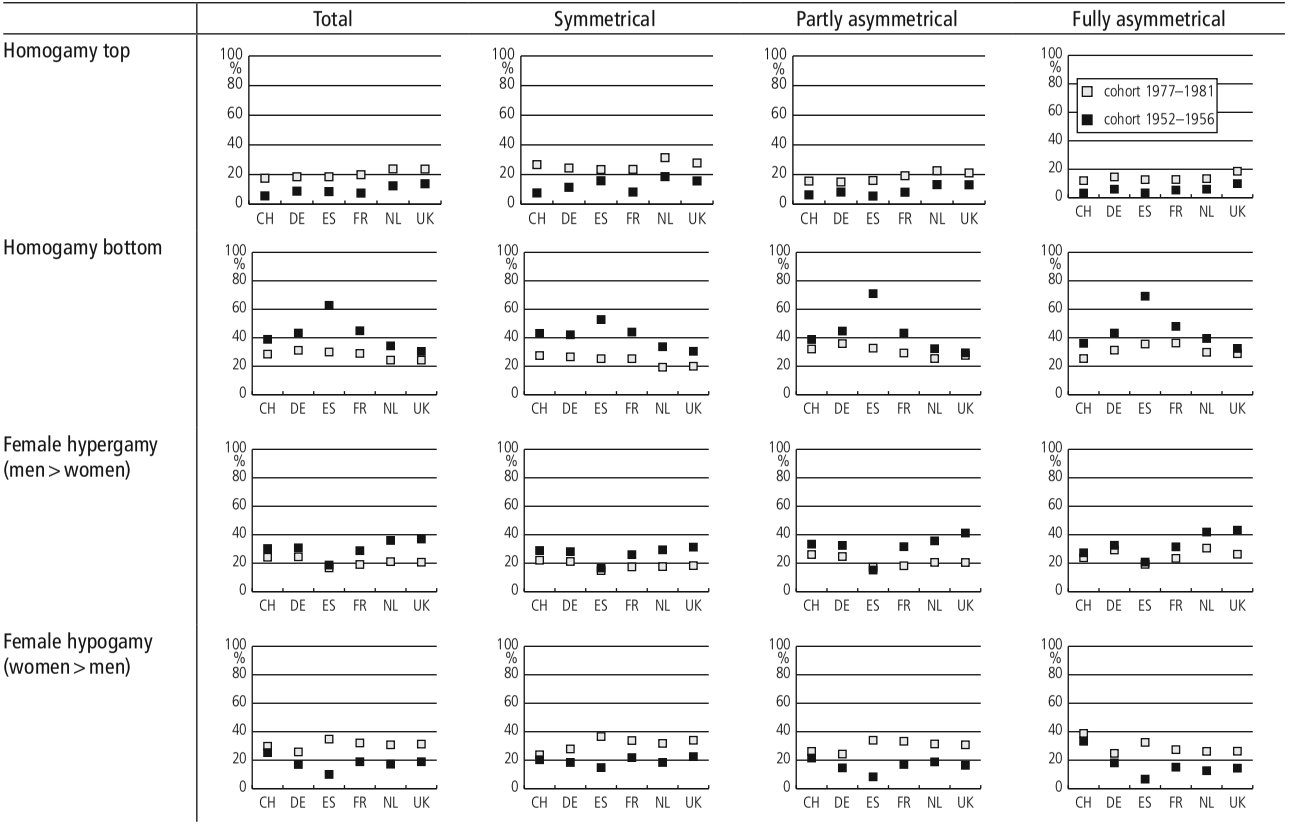
If we had to make a ranking of the six countries from the most traditional to least traditional, it would probably be organized as follows: Spain, the Netherlands, Switzerland, Germany, the UK and France. Of course, these countries' variations reflect national specificities. For instance, in Germany, the Netherlands and Switzerland, it is possible to live comfortably on 1.5 incomes, whereas this is less the case in France and the UK. Furthermore, in Spain it is particularly difficult to reconcile work and family life, which explains why we observe this high share of fully asymmetrical couples. However, trends across cohorts in couple arrangements show that the share of fully asymmetrical couples has decreased in Spain, while shares of partly asymmetrical and symmetrical couples have increased. This means that couple arrangements in Spain have been moving away from the traditional male breadwinner model over recent decades. In the other countries, however, couple arrangements have remained stable insofar as no major trend across cohorts is revealed.

4.2 Absolute educational homogamy trends

We depict absolute educational homogamy rates in Figure 2 for the first and the last birth cohorts in the six countries and according to couple arrangements. We first of all observe that educational homogamy at the top has increased and educational homogamy at the bottom has decreased (H1b). These trends are widespread in each country, although homogamy at the bottom still predominates over homogamy at the top – the gap between both has decreased. When we look at differences according to couple arrangements, we see that these evolutions touch all couple configurations. In this regard, structural changes have not been diffused only in one couple configuration in particular. We nevertheless see that symmetrical couples display higher levels of homogamy at the top and asymmetrical couples higher levels of homogamy at the bottom (H2). What is also noteworthy is that cross-national differences in the homogamy rate are actually quite low (H3): for all countries, homogamy at the top accounts for about 20% and homogamy at the bottom for about 30% in the youngest cohort. When put together (see Figure in Appendix 5), homogamy rates display a very high stability over cohorts (H1a/H1b). Only in Spain do homogamy rates decrease considerably across cohorts (from 71% to 49%) to converge with those of other countries.

From the investigation of heterogamy trends (see second part of Figure 2), we see that female hypergamy across cohorts has decreased while female hypogamy has increased (H1a). Female hypogamy has even become the norm as in the most recent cohort there is more female hypogamy than female hypergamy. Thus, women now "dominate" in heterogamous couples – in educational terms at least. Again, this trend is not characteristic of one particular couple configuration; it affects the entire

Figure 2 Homogamy trends across cohorts according to couple arrangements



population. We nevertheless observe some small differences in the representation of female hyper- and hypogamy according to couple configuration (H2). Indeed, fully asymmetrical couples exhibit slightly higher rates of female hypergamy and asymmetrical couples slightly lower rates of female hypogamy. These trends are true for all countries, with the exception of Switzerland where fully asymmetrical couples display higher levels of female hypogamy.

Altogether, we observe that more equal – or symmetrical – couples are more widespread among couples in which both have tertiary education or the woman has a higher educational level than the man (H2), although this trend is not systematic, as the Swiss case shows. However, we further notice that structural changes, namely increased homogamy at the top and increased female hypogamy, affect all types of couple arrangements. Does the analysis of relative homogamy reveal similar trends?

4.3 Relative homogamy

We first analyse whether homogamy has increased across cohorts in relative terms. Then we look at whether couple arrangements display different degrees of homogamy. Finally, we assess the shape of the homogamy pattern by fitting a set of topological log-linear models to the data. The models fitted are displayed in Table 1.

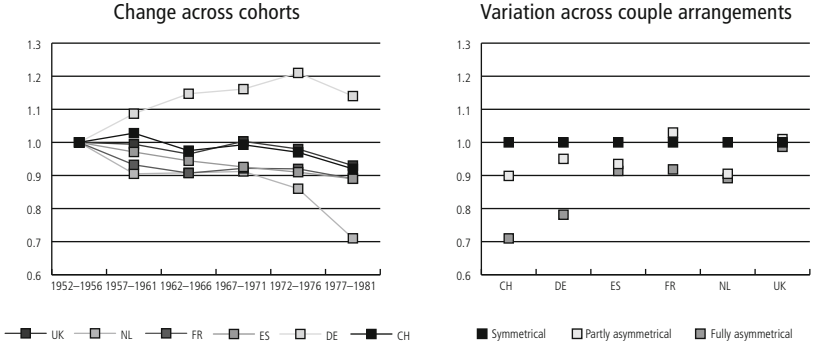
Trends across cohorts (assessment of H1a/H1b/H3). In countries such as Germany, Spain and the Netherlands, the Unidiff model (M3) adjusts better to the data than does the constant association model (M2). Thus, it seems that in these countries there has been some change in the degree of homogamy over cohorts. In contrast, in France, the UK and Switzerland, the constant association model has to be preferred. Nevertheless, when looking at the Unidiff parameters, which are displayed in the left panel of Figure 3, we observe that in most countries homogamy has remained relatively stable. At best, it has slightly decreased across cohorts rather than increased, although these trends tend to not be large. For the Netherlands, however, we observe in the last cohort a strong decreasing homogamy trend. At this stage, we are unable to conclude whether this trend will last over time or whether this is, for instance, an age effect. Of all countries, Germany is a special case. This is the only country where educational homogamy has increased across cohorts. This trend is particularly sharp.

Trends across couple arrangements (assessment of H2/H3). We notice for all countries but one that couple arrangements show different degrees of homogamy, given that the Unidiff model (M4) must be preferred quasi systematically to the constant association model (M2). As can be seen from the right panel in Figure 3, which displays corresponding Unidiff parameters for partly and fully asymmetrical couples compared to symmetrical couples, in the UK there is hardly any difference in couple arrangements' degree of educational homogamy. In contrast, in all other countries, asymmetrical couples show lower levels of homogamy compared to symmetrical couples. This implies that homogamy is higher within egalitarian couples.

Table 1 Log-linear models fitted to the data

		df	CH (N = 231 333)		DE (N = 529 961)		ES (N = 416 454)		FR (N = 1 255 161)		NL (N = 374 541)		UK (N = 179 514)	
			L2	BIC	L2	BIC	L2	BIC	L2	BIC	L2	BIC	L2	BIC
M1	Conditional independence	162	51 220	49 219	112 293	110 157	140 179	138 083	388 428	386 153	79 626	77 547	45 689	43 729
M2	Constant association	153	4 408	2 519	2 394	377	1 250	–730	4 458	2 309	1 232	–732	482	–1 369
M3	Unidiff cohort	148	4 375	2 547	2 092	141	1 171	–744	4 354	2 276	1 073	–826	467	–1 324
M4	Unidiff couple arrangement	151	3 703	1 838	1 369	–621	1 065	–889	3 909	1 789	1 109	–828	480	–1 347
M5a	Homogamy	158	12 634	10 682	13 490	11 408	7574	5 530	90 813	88 594	7 619	5 591	6 507	4 595
M5b	Crossing	159	11 326	9 363	4 232	2 136	5 264	3 207	11 137	8 903	6 289	4 249	1 848	–76
M5c	Symmetry	156	10 533	8 607	4 146	2 090	1 528	–490	4 752	2 562	1 451	–551	714	–1 173
M6	M5a+ M5c x couple arrangement	132	7 225	5 446	2 837	939	1 277	–586	3 622	1 600	1 085	–763	582	–1 161

Figure 3 Parameters for Unidiff log-linear models across cohorts (M3, left panel) and across couple arrangements (M4, right panel)



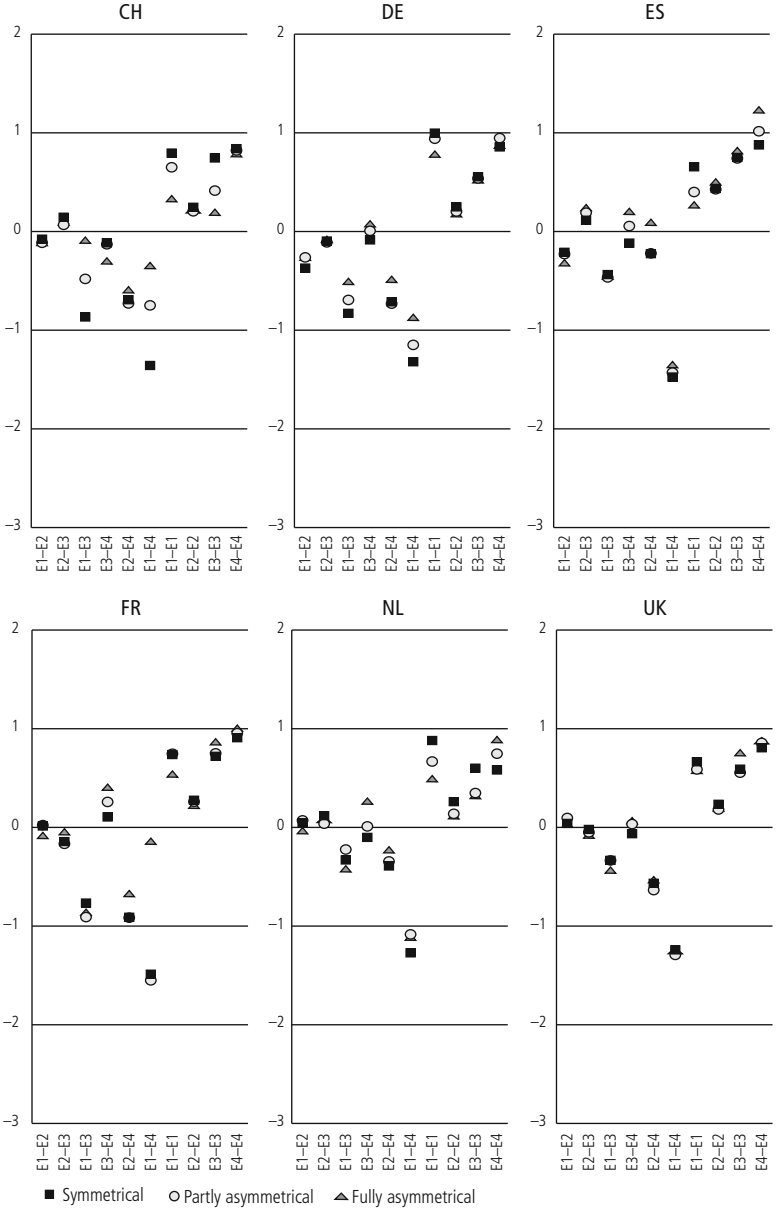
Note: Symmetrical couples are the reference category (i.e. 1) for the graph on the right panel.

The gap between symmetrical and fully asymmetrical couples is particularly great in Germany and Switzerland. These countries are known for being particularly gender traditional; thus, differences in couples might be more extreme in these countries. In France, Spain and the Netherlands, homogamy differences are relatively lower.

Finally, it is worth noting that in France partly asymmetrical couples display slightly higher levels of educational homogamy than symmetrical couples.

Homogamy patterns (assessment of H1a/H1b/H2/H3). For all countries, the homogamy pattern is characterized by symmetry (M5c), rather than by essentially homogamy on the main diagonal (M5a) or by the crossing of some educational barriers (M5b). This means that the observed increase in female hypogamy is primarily driven by structural changes, while in relative terms spouse selection remains equally similar irrespective of whether this is the man or the woman who has the highest level of education. We further put in a last model (M6) the diagonal model (M5a) together with the symmetry model (M5c) and allow parameters to vary according to couple arrangements, to see whether the homogamy pattern differs with couple configuration. For all countries, with the exception of the UK, we find that this model makes a significant improvement. This implies that the homogamy pattern tends to vary according to couple arrangement. From Figure 4, which displays the corresponding parameters of the homogamy pattern, we observe that overall homogamy dominates over heterogamy, as all homogamy parameters are positive whereas most heterogamy parameters are negative. Homogamy tends to be stronger among graduates of lower secondary education or below (E1–E1) and of tertiary general education (E4–E4). When it comes to heterogamy, it is less unlikely between close educational levels, for instance between graduates of lower secondary education or below and upper secondary education (E1–E2). In contrast, it is much more unlikely between graduates of lower secondary education or below and tertiary education graduates, particularly from the general track (E1–E3 and E1–E4). Nevertheless, these general trends show variation according to couple arrangement to some degree. Homogamy tends to be higher among symmetrical couples and lower among fully asymmetrical couples that have graduated from lower secondary education or below (E1–E1). It is also higher among symmetrical couples with post-secondary/tertiary vocational education (E3–E3) in the Netherlands and Switzerland. Interestingly, in the Netherlands and Spain, we also observe that homogamy among tertiary general education graduates (E4–E4) is more widespread within fully asymmetrical couples. Thus, homogamy at the top in these countries fosters a gender traditional division of labour within couples. In all other cases, no important difference in the degree of homogamy according to couple arrangements is uncovered. With respect to heterogamous configurations, we mostly observe some sharp differences in terms of couple arrangements between extreme educational categories (E1–E3 and E1–E4) in Germany and Switzerland: in these cases, heterogamy is more likely among fully asymmetrical couples and more unlikely among symmetrical couples. Overall, heterogamy tends to be more common among fully asymmetrical couples. All in all, we observe a great degree of commonality in relative homogamy between the six countries studied: (1) a generally constant homogamy trend across cohorts; (2) a higher degree of homogamy among egalitarian couples, especially at the bot-

Figure 4 Homogamy pattern according to couple arrangements (parameters for model M6)



tom (E1–E1); (3) an overall homogamy pattern which is symmetrical (i. e. equally similar irrespective of whether it is the man or the woman who has the highest level of education).

5 Discussion and conclusion

When it comes to the issue of gender equality within couples, different aspects can be considered: equality in terms of education, through homogamy, but also equality in the way in which partners engage in the job market. This research aimed to assess trends and variations in both domains – educational homogamy and couple arrangements – over time in six European countries, namely France, Germany, the Netherlands, Spain, Switzerland and the UK. With this approach, we look beyond the classic analysis of educational homogamy by analysing how this phenomenon relates to the gendered division of labour within couples. Addressing this issue is relevant in the context of macro-structural changes that Western societies have witnessed over the past century, in particular when it comes to gender relations. Not only has an increasing share of women become active in the labour market, but also the likelihood of graduating from higher education has become higher for women compared to men (DiPrete and Buchmann 2013; Oesch 2006).

The analysis of homogamy together with the various couple arrangements sheds light on the paradoxical consequences of an increase in homogamy for inequality. On the one hand, at the macro level, this implies that social barriers become more difficult to cross and that social fluidity potentially decreases. On the other hand, at the couple level, this likely generates more equality between partners. There is thus a tension between the vertical and horizontal dimensions of inequality, which we highlight in this article.

We tested two competing hypotheses with regard to trends over time in educational homogamy: either a decrease in educational homogamy in favour of an increase in female hypogamy (H1a), or an increase in educational homogamy, in particular at the top of the social structure (H1b). Furthermore, we hypothesized that the degree of educational homogamy would vary according to couple arrangements: egalitarian couples would show a higher degree of homogamy at the top of the social structure and of female hypogamy as women in these couples are likely to be highly educated (H2). Finally, we expected some cross-national variations, with higher levels of educational homogamy in more gender egalitarian countries and lower levels of educational homogamy in more gender traditional countries (H3). To test these hypotheses, we analysed absolute and relative educational homogamy using the EU and the Swiss Labour Force Surveys data over the period 1999–2013.

Through a cohort analysis, we show that educational homogamy has mostly remained stable over time, both in absolute and relative terms, in spite of the fact

that the share of women graduating from tertiary education outpaced men's share across cohorts in all six countries. In absolute terms, we observe a great stability in shares of homogamous couples, which represent about 50% of couples. We nevertheless observe changes in the composition of homogamy. Across cohorts, homogamy between tertiary education graduates has increased, whereas homogamy between graduates of lower educational levels has decreased. In the 1977–1981 birth cohort, these shares represent 20% and 30% respectively. We also observe that female hypergamy, i. e. the propensity for women to marry upwards, decreased in favour of female hypogamy, i. e. the propensity for women to marry downwards. Thus, in the most recent cohort, women are more likely to have a higher level of education than their partners. This rise in female hypogamy is nevertheless essentially driven by structural changes. Indeed, the analysis of relative homogamy reveals that the homogamy pattern in all six countries is essentially symmetrical. This means that heterogamy does not depend on the partner's gender: in relative terms, spouse selection based on educational attainment is essentially identical for men and women, regardless of whether it is the man or the woman who has a higher level of education.

We also find that educational homogamy displays a high degree of stability across cohorts in relative terms: at best, educational homogamy has tended to decrease slightly rather than increase, although these trends are not statistically significant in most countries. However, two exceptions must be underlined: (1) the Netherlands shows a decrease in educational homogamy in the last cohort and (2) Germany displays a marked increasing educational homogamy trend across cohorts. While this last finding may seem puzzling as we do not see why Germany should be a special case, especially in comparison to similar countries such as the Netherlands and Switzerland, this finding is actually in line with previous research (Grave and Schmidt 2012). An alternative explanation for the deviations of the Netherlands and Germany from other countries could also be found in the way educational attainment is measured in these countries through the ISCED classification (Schröder and Ganzeboom 2014). We are nevertheless unable to test this possible bias at this point.

From this standpoint, our first competing hypotheses (H1a and H1b) are neither totally accepted nor rejected. While we find neither a decrease nor an increase in educational homogamy across cohorts, we find an increase in female hypogamy and in homogamy at the top of the social structure in absolute terms. Yet these compositional changes in observed educational homogamy have been essentially driven by structural changes, as the analysis of relative trends shows.

Our analysis reveals some heterogeneity in the educational homogamy pattern according to couple arrangements in both absolute and relative terms. We defined three sets of couple arrangement (Esping-Andersen et al. 2013; Hakim 1996): (1) symmetrical couples, corresponding to a work-centred lifestyle for women, where usually both partners are in full-time employment; (2) partly asymmetrical couples, corresponding to an adaptative lifestyle for women, where usually the man works

full-time and the woman part-time; (3) fully asymmetrical couples, corresponding to a home-centred lifestyle for women, where usually the man works full-time and the women does not work. In absolute terms, we observe that symmetrical couples show slightly higher levels of homogamy within tertiary education graduates, whereas asymmetrical couples display higher levels of homogamy within graduates of lower education levels. Furthermore, female hypergamy tends to be slightly more common among fully asymmetrical couples and female hypogamy less common within asymmetrical couples. Regarding differences in relative terms, symmetrical couples tend to exhibit higher levels of homogamy in all countries and asymmetrical couples lower levels of homogamy. Interestingly, further statistical modelling reveals that homogamy is more pronounced among symmetrical couples that have graduated from lower secondary education or below compared to fully asymmetrical couples, whereas no sharp difference in the degree of homogamy according to couple arrangements is observed among couples with tertiary education. We also find that heterogamy is less unlikely among fully asymmetrical couples.

These findings led us to partly reject assumptions made in the second hypothesis (H2), which stated that egalitarian couples would display higher levels of homogamy among tertiary education graduates and of female hypogamy. First, with regard to female hyper- and hypogamy according to couple arrangements, we do not observe strong differences. Second, apparently contradictory findings are uncovered when it comes to homogamy. While in absolute terms egalitarian couples do indeed display higher levels of homogamy when both partners have tertiary education, in relative terms homogamous couples that graduated from lower secondary education or below are more likely to be in an egalitarian couple arrangement than a traditional one. In other words, while it is true that homogamy at the top is more widespread among egalitarian couples, net of structural changes couples that are homogamous at the bottom are more likely to participate equally in the labour market, rather than unequally. In contrast, when it comes to homogamy at the top in relative terms, no big difference according to types of couple arrangements is uncovered. These findings illustrate that the most disadvantaged couples do not face the same opportunities and constraints when it comes to couple arrangement choice as other couples.

Finally, our last hypothesis (H3) is partly rejected, as we do not find strong and systematic cross-national differences in educational homogamy between the most and the less gender egalitarian countries. In all countries, homogamy rates amount to about 50%, with the exception of Spain where we observe a converging trend over time: homogamy rates decreased from 70% to 50% across cohorts. Nor do we find strong cross-national differences in relative educational homogamy trends over time. However, some differences arise in terms of homogamy according to couple arrangements. In Germany and Switzerland, asymmetrical couples display lower levels of homogamy. It is in these two countries that heterogamy at the extremes displays the greatest difference in terms of couple arrangements (less likely within

egalitarian couples and more likely within traditional couples). By contrast, in the Netherlands and Spain, we observe that homogamy among tertiary general education graduates is higher among traditional couple configurations, whereas in France and the UK levels of homogamy are relatively similar regardless of couple arrangements. Thus, it seems that in gender traditional countries, there are more differences in homogamy levels between the different couple configurations than in more gender egalitarian countries.

To summarize, while there have been important changes in women's roles in European societies over the past decades, these changes have not fostered educational homogamy. Overall, we find that both in absolute and relative terms educational homogamy rates display a high degree of stability. Yet, when looking in greater detail, we do find an increase in homogamy between highly educated individuals. Furthermore, although this trend is widespread among all couple configurations, it is more pronounced among egalitarian couples. However, the analysis of relative homogamy reveals that, while homogamy is more likely among egalitarian couples, homogamous couples with low levels of education are more likely to be in an egalitarian rather than in a traditional couple configuration. In contrast, for homogamous couples with higher levels of education, little difference in terms of couple arrangement is uncovered. Last but not least, we find little evidence of cross-national differences in homogamy trends, even though we observe that in the Netherlands and Spain homogamous couples with tertiary general education are more likely to be in a traditional couple configuration, and that in Germany and Switzerland variations in homogamy patterns according to couple arrangements are higher than in other countries. It remains unclear whether these trends relate to welfare regime differences or to the differential timing of the diffusion of gender equality between countries.

We thus arrive at quite challenging conclusions: while gender equality has increased overall in terms of couple arrangements, the degree of educational homogamy has not increased but rather remained constant. This implies that horizontal inequality between men and women has decreased at the couple level, whereas vertical inequality in terms of social barriers has been maintained at the macro level. These findings seem to indicate that the increase in gender equality has created a restructuring of educational homogamy rather than a growth in educational homogamy. Our analysis also underlines that the type of homogamy seems to have an influence on couple arrangement possibilities: the most disadvantaged couples in terms of educational attainment have fewer possibilities than other couples, because of the constraints they face, presumably in terms of labour market opportunities and economic resources. Better-off couples have, on the contrary, more couple arrangement leeway and thus are 'freer' to decide for which arrangement to opt for. This 'choice' dimension is something that has been neglected by the homogamy literature so far. Thus, future research will have to address this aspect, potentially

by mobilizing the intersectionality research framework, as well as by analysing how these couple arrangements develop over the life course. Country differences should also be analysed in the light of the availability of childcare facilities, which is likely to affect couple arrangements, but also potentially homogamy in the first place.

It is nevertheless important to stress that gender inequality constitutes only one aspect of the system of inequality. Paradoxically, a decrease in horizontal inequality (i. e. here gender inequality) can also imply a reinforcement of vertical inequality (i. e. here class inequality). This is one more argument for a systemic discussion of inequality and social differentiation in contemporary Europe to fully address issues of social justice.

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7 Appendix

Appendix 1 Construction of cohorts according to age intervals

Cohort (age)	32 (30–34)	37 (35–39)	42 (40–44)	47 (45–49)
1952–1956 (1950–1958)				X
1957–1961 (1955–1963)			X	X
1962–1966 (1960–1968)		X	X	X
1967–1971 (1965–1973)	X	X	X	
1972–1976 (1970–1978)	X	X		
1977–1981 (1975–1983)	X			

Appendix 2 Cross-tabulation of couples' employment status and couple arrangements variable

	Woman full-time work	Woman part-time work	Woman no job
Man full-time work	symmetrical	partly asymmetrical	fully asymmetrical
Man part-time work	partly asymmetrical	symmetrical	partly asymmetrical
Man no job	fully asymmetrical	partly asymmetrical	symmetrical

Appendix 3 Composition detail of couple arrangements for each country (in %)

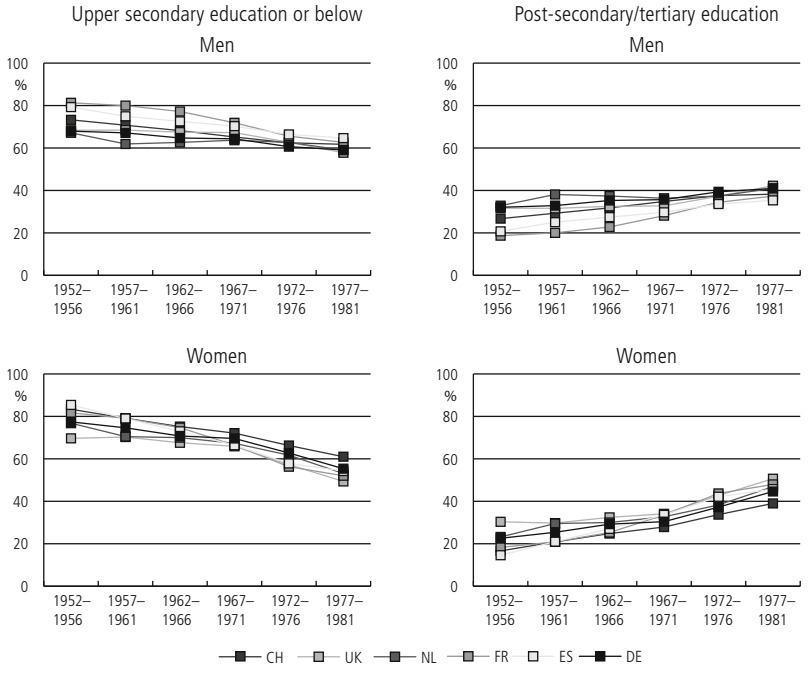
	Switzerland (CH)						Germany (DE)						Spain (ES)					
	1952–1956	1957–1961	1962–1966	1967–1971	1972–1976	1977–1981	1952–1956	1957–1961	1962–1966	1967–1971	1972–1976	1977–1981	1952–1956	1957–1961	1962–1966	1967–1971	1972–1976	1977–1981
Symmetrical	23.1	22.6	22.2	22.4	24.7	28.4	37.3	34.7	33.6	34.8	33.8	38.3	39.6	43.6	44.5	43.2	45.1	48.8
man W full-time – woman W full-time	15.3	14.9	15.2	16.2	18.5	22.4	28.2	26.9	26.4	27.4	26.2	31.4	31.1	37.1	39.0	38.3	40.4	40.1
man W part-time – woman W part-time	2.1	2.6	2.5	2.5	2.9	2.8	1.1	1.3	1.6	1.5	1.8	2.0	0.2	0.3	0.3	0.4	0.5	0.7
man no job – woman no job	5.6	5.2	4.5	3.7	3.3	3.2	8.0	6.5	5.6	5.9	5.7	4.9	8.4	6.3	5.2	4.5	4.1	8.1
Partly asymmetrical	42.2	42.3	43.6	42.0	39.8	37.1	34.1	38.7	40.9	37.9	39.9	36.7	7.9	12.2	13.8	16.1	18.0	18.4
man W full-time – woman W part-time	32.3	31.9	32.9	33.0	32.1	29.6	25.1	29.7	32.4	30.3	32.0	28.6	6.2	10.1	11.4	13.5	15.0	13.0
man W part-time – woman no job	0.7	0.8	0.9	0.9	0.9	1.0	0.7	0.8	0.9	1.0	1.5	1.9	0.3	0.5	0.5	0.6	0.7	1.1
man W part-time – woman W full-time	1.1	1.0	1.1	1.2	1.3	1.6	1.4	1.4	1.6	1.5	1.7	2.1	0.4	0.6	0.8	0.9	1.0	1.3
man W no job – woman W part-time	8.2	8.6	8.7	6.9	5.4	5.0	7.0	6.8	6.1	5.2	4.7	4.0	1.0	1.1	1.1	1.2	1.3	3.0
Fully asymmetrical	34.7	35.1	34.2	35.6	35.5	34.5	28.5	26.6	25.5	27.2	26.3	25.0	52.5	44.2	41.7	40.7	36.9	32.8
man W full-time – woman no job	21.7	23.6	23.3	25.7	25.9	22.8	18.1	18.2	18.7	20.7	21.5	20.0	48.6	40.3	37.9	37.5	33.3	25.3
man W no job – woman W full-time	13.0	11.6	10.9	9.9	9.6	11.7	10.5	8.4	6.8	6.5	4.8	4.9	3.9	3.8	3.7	3.2	3.6	7.5

Continuation of Appendix 3 on the next page.

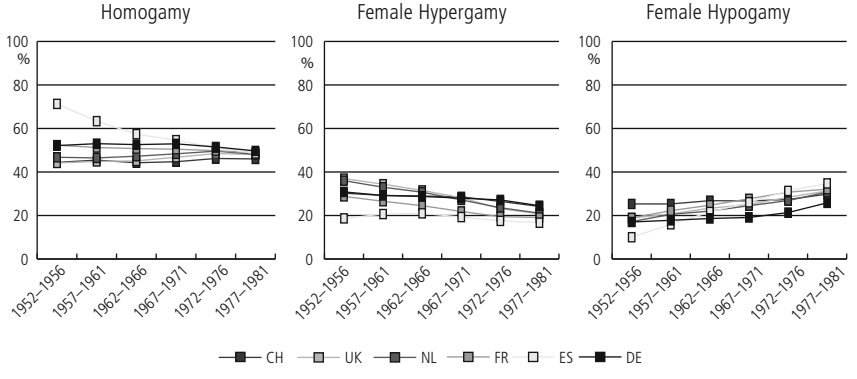
Continuation of Appendix 3.

	France (FR)						The Netherlands (NL)						United Kingdom (UK)					
	1952–1956	1957–1961	1962–1966	1967–1971	1972–1976	1977–1981	1952–1956	1957–1961	1962–1966	1967–1971	1972–1976	1977–1981	1952–1956	1957–1961	1962–1966	1967–1971	1972–1976	1977–1981
Symmetrical	49.8	50.3	49.9	49.4	50.1	51.4	18.5	18.5	17.8	19.4	23.4	28.0	45.7	43.9	40.4	40.6	42.7	46.2
man W full-time – woman W full-time	43.0	44.6	44.6	44.5	45.3	45.6	8.2	7.6	8.1	9.5	14.1	16.8	37.9	37.5	34.6	34.9	36.9	39.4
man W part-time – woman W part-time	0.7	0.9	1.1	1.0	0.9	1.0	6.7	8.1	7.8	8.1	7.5	8.9	1.3	1.1	1.1	1.0	1.1	1.3
man no job – woman no job	6.1	4.7	4.2	3.8	3.9	4.9	3.6	2.8	1.9	1.7	1.8	2.3	6.5	5.3	4.7	4.6	4.7	5.4
Partly asymmetrical	24.1	27.0	28.8	29.0	26.3	23.9	57.3	61.9	62.9	61.5	60.3	58.3	37.4	39.3	40.3	38.1	35.3	31.5
man W full-time – woman W part-time	20.0	22.7	24.3	24.9	22.3	19.4	50.0	54.8	56.7	56.1	54.9	49.8	32.4	35.1	36.1	33.9	30.7	25.4
man W part-time – woman no job	0.7	0.6	0.7	0.7	0.9	1.3	2.4	1.8	1.5	1.5	1.3	1.8	0.8	0.8	0.9	1.2	1.4	2.1
man W part-time – woman W full-time	1.2	1.3	1.5	1.5	1.5	1.6	1.5	1.9	1.9	2.0	2.1	3.1	1.5	1.5	1.5	1.3	1.6	1.8
man W no job – woman W part-time	2.3	2.5	2.3	1.8	1.6	1.6	3.4	3.5	2.7	2.0	2.0	3.5	2.8	1.9	1.8	1.7	1.7	2.2
Fully asymmetrical	26.1	22.7	21.3	21.7	23.6	24.6	24.2	19.6	19.3	19.1	16.4	13.7	16.9	16.8	19.2	21.3	22.0	22.3
man W full-time – woman no job	21.3	17.2	16.8	18.2	20.3	20.8	22.7	18.2	18.0	17.9	15.2	11.3	13.1	13.8	16.4	19.0	19.5	18.5
man W no job – woman W full-time	4.8	5.6	4.6	3.4	3.3	3.8	1.4	1.5	1.3	1.2	1.2	2.3	3.8	3.0	2.9	2.3	2.5	3.8

Appendix 4 Trends in educational expansion



Appendix 5 Homogamy trends across cohorts



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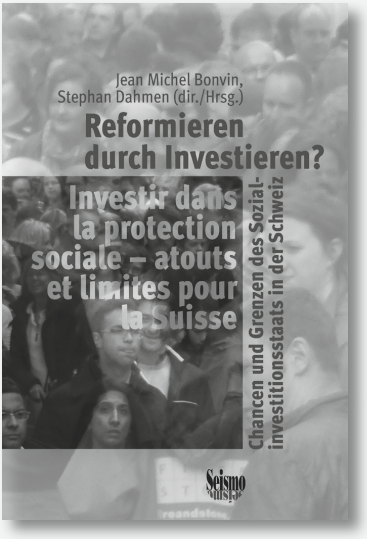

Jean Michel Bonvin
Stephan Dahmen (dir./Hrsg.)

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L'Etat d'investissement social se présente comme une stratégie de réforme de l'Etat social en vue de répondre aux nombreuses critiques auxquelles il est actuellement soumis. La conversion des États sociaux européens à l'investissement social vise ainsi à restaurer leur légitimité et à relever les défis démographiques et économiques posés aux États sociaux contemporains. Suivant les partisans de cette conception, la réorientation des dépenses sociales vers l'investissement dans la formation et le développement du capital humain – notamment en facilitant l'accès à l'emploi, en accroissant les investissements dans les enfants et en privilégiant une nouvelle conception de la politique sociale comme facteur productif – permettra de réduire les inégalités sociales et de contribuer à la viabilité des États sociaux contemporains. Cet ouvrage examine la forme prise par l'investissement social en Suisse et les effets qui en résultent. Il discute de manière analytique et critique les fondements idéologiques et les implications pratiques de la stratégie de l'investissement social.

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Als Antwort auf den zunehmenden Druck, mit dem sich der Sozialstaat konfrontiert sieht, hat sich das Konzept sozialer Investitionen als Reformstrategie entwickelt. Der sozialinvestive Umbau europäischer Wohlfahrtsstaaten verspricht sowohl Antworten auf drängende Legitimationsfragen als auch auf gegenwärtige demografische und ökonomische Herausforderungen des Wohlfahrtstaates zu liefern. Die Neuausrichtung der Ausgaben des Sozialstaates auf Investitionen in Humankapital, etwa durch die Verbesserung des Zugangs zu Beschäftigung, den Ausbau der Investitionen in Kinder und eine konsequente Neubestimmung von Sozialpolitik als Produktivfaktor ermögliche es sowohl bestehende soziale Ungleichheiten zu reduzieren als auch die Nachhaltigkeit moderner Wohlfahrtstaaten zu gewährleisten. Welche Ausprägungen hat das Sozialinvestitionsparadigma in der Schweiz angenommen und welche Auswirkungen ergeben sich aus dem sozialinvestiven Umbau des Sozialstaates? Das Buch liefert eine kritische Analyse und diskutiert die ideologischen Grundlagen und praktischen Implikationen sozialer Investitionen.

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Seismo

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Educational Expansion and Homogamy. An Analysis of the Consequences of Educational Upgrading for Assortative Mating in Switzerland

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Abstract: We analyze the changing relationship between education and assortative mating over the course of educational expansion in Switzerland between 1970 and 2000. The overall rate of educationally homogamous partnerships has remained rather stable, while partnerlessness increased and became less educationally selective. An analysis taking the opportunity structure into account reveals that the inclination toward educationally homogamous partnerships is most pronounced in lower educational groups, but that the differences between educational groups decreased over time.

Keywords: educational expansion, educational homogamy, census, social stratification

Bildungsexpansion und Homogamie. Eine Analyse der Auswirkungen von Höherqualifikation auf die Partnerwahl in der Schweiz

Zusammenfassung: Für die Schweiz wird mit Zensusdaten untersucht, wie sich der Zusammenhang zwischen Bildung und Partnerwahl zwischen 1970 und 2000 im Zuge der Bildungsexpansion gewandelt hat. Die Rate bildungshomogamer Partnerschaften blieb insgesamt relativ stabil, während Partnerlosigkeit zunahm und sich zwischen den Bildungsgruppen tendenziell anglich. Eine um die Gelegenheitsstruktur bereinigte Analyse zeigt, dass die Neigung für homogame Partnerschaften in den unteren Bildungsgruppen am stärksten ausgeprägt ist, die Unterschiede zwischen den Bildungsgruppen jedoch über die Zeit abgenommen haben.

Schlüsselwörter: Bildungsexpansion, Bildungshomogamie, Zensus, soziale Ungleichheit

Expansion du système de formation et homogamie – analyse de l'impact des qualifications supérieures sur le choix du partenaire en Suisse

Résumé : Cet article analyse l'évolution du lien entre formation et choix du partenaire entre 1970 et 2000 au cours de l'expansion du système de formation en Suisse. Le taux de partenariats caractérisés par une homogamie de formation est resté relativement stable dans l'ensemble, tandis que le taux de personnes vivant sans partenaire a augmenté et est devenu moins dépendant du niveau de formation. Une analyse tenant compte des opportunités différentielles révèle que le penchant pour l'homogamie est plus fort dans les groupes au niveau de formation inférieur, mais que l'écart entre les groupes de formation a diminué au cours des années.

Mots-clés : expansion du système de formation, homogamie de formation, recensement de la population, inégalité sociale

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1 Introduction

Over the course of the educational expansion since the middle of the 20th century, many societies experienced far-reaching changes in social structure (Hadjar and Becker 2009), particularly with respect to educational behavior (Müller 1998). Across cohorts, increased participation in continuing and higher education and remaining longer in the educational system led both to a gradually increasing level of qualification in the population (Breen et al. 2010, 2009) and to different life choices in the course of extended educational opportunities (Mayer and Blossfeld 1990). These developments included postponing marriage and family formation (Blossfeld and Huninik 1991; Diekmann 1990), changing opportunities in the partnership and marriage market (Blossfeld 2009; Schwartz and Mare 2012), increased partnerlessness and childlessness (Konietzka and Kreyenfeld 2014; Huinink 2000), and socio-structural changes in marital stability (Diekmann and Schmidheiny 2001; Klein and Kopp 1999). Educational expansion has impacted the frequency, structure, and timing of these life events (Mayer 1996).

Switzerland may be a special case in terms of the expected and unexpected consequences of educational expansion for demographic processes. This is due to peculiarities in its process of educational expansion (Becker and Zangger 2013) and its specific social structures and inequalities (Jann and Combet 2012). Educational expansion was slower in Switzerland than in other Western European countries (Hadjar and Berger 2010; Pfeffer 2008; Buchmann et al. 2007; Blossfeld and Shavit 1993). As a result of educational expansion, the social inequality of educational opportunities was marginally reduced in Switzerland (Becker and Zangger 2013) compared with other Western European countries (Breen et al. 2010 2009), and the intergenerational transmission of educational attainment and class decreased slightly (Jann and Combet 2012). Nevertheless, largely, educational reproduction (Zangger and Becker 2016) and social mobility have been stable (Falcon 2016). Furthermore, although female labor force participation increased over the course of the educational expansion and the tertiarization of the occupational and economic structures, a gendered division of labor continues to prevail in private households, a phenomenon which has been described as "modernized traditionalism" (Levy 2013, 236).

In contrast, there are no reliable findings for Switzerland as to whether educational expansion was associated with an increased importance of the educational system in the partnership and marriage market, as was found for other Western European countries (Schwartz and Mare 2012; Blossfeld 2009; Blossfeld and Timm 2003). There are a few cross-sectional studies available for Switzerland, which report a distinctively pronounced educational homogamy (Katrnak et al. 2012; Domanski

and Przybysz 2007; Smits et al. 1998).[1] However, these analyses consider neither the changes in marriage patterns nor the consequences of educational expansion for the choice of a partner or for marriage behavior in the Swiss population.

Changes in partnership search and marriage opportunities can be expected, because women were disproportionately impacted by the educational expansion. In terms of the acquisition of higher education, women have not only caught up with men (Zangger and Becker 2016); they have overtaken them (Imdorf and Hupka-Brunner 2015; Becker et al. 2013). Given the sporadic nature of these analyses for Switzerland, it is unclear whether the gender-specific educational upgrading in general (and the reversal of gender-specific educational chances and the changed work behavior of women on the job market in particular) have led to changes in education-specific marriage patterns, for example by increasing the bargaining power of women (Schwartz and Han 2014). While in the past parents invested in the education of their daughters to prepare them for the marriage market (Breen et al. 2010), following educational expansion it might be that women invest more in their education to further their careers (Imdorf and Hupka-Brunner 2015, 261), to foster economic independence in case of separation, divorce, or widowhood, to optimize the compatibility of family and work (Levy 2013) or, more generally, to shape their lives independently of a partner (Becker 2014; DiPrete and Buchmann 2013).

Answers to these questions are interesting from a socio-structural point of view, because the extent of educational homogamy and the structural change of educational heterogamy in the course of educational expansion provide additional information about the reproduction of social inequality (Blossfeld 2009; Mare 1991). Such indicators can be interpreted as evidence of the openness of a society's structure (Blau et al. 1982).[2] In the same way as the educational expansion occurred through birth cohorts, better educated women and men may be the cultural carriers of the changes in partnership markets and the social structure of education-specific marriages, and (concomitantly) of changes in the openness of societies. Since particularly women – despite the continued horizontal segregation of educational opportunities and benefits by gender (Imdorf and Hupka-Brunner 2015) – have profited from the educational expansion in Switzerland, the rate of educational homogamy probably increased (more for women than for men) because of the shift of their negotiating power in their partnerships and in the marriage market (Diekmann 1990). Tertiary vocational and especially university education may be an important asset on a part-

1 "Educational homogamy" or "homogamy" refers to the fact that individuals with a certain educational level marry partners with the same educational level. The choice of a partner with a different educational level is called "heterogamy." "Hypergamy" is present if a woman marries a man with a higher educational level, while "hypogamy" means that a woman marries a man with a lower educational level.

2 They can also demonstrate the socio-structural changes in life courses in general, and in family-demographic processes such as partnership, marriage, separation, divorce, or family formation in particular. This allows one to reconstruct the change in the social structures in the sense of a differentiated social history of societies.

nership market that is structured increasingly by the educational system. However, whether the educational expansion in Switzerland led to a social closure or opening of the partnership and marriage markets is a question that has yet to be answered empirically (see Blossfeld 2009).

The objective of the present contribution is therefore to describe the changes in educational homogamy across birth cohorts over the course of the educational expansion in the second half of the 20th century. The socio-historical process of educational expansion and changing educational homogamy is illustrated using a cohort design based on data from the Swiss censuses of 1970, 1980, 1990 and 2000. Indirectly, the idea is to ascertain whether the educational system has gained in importance as a partnership market in Switzerland, and to identify the extent to which educational upgrading led to social closure or opening in assortative mating. Finally, we are interested in whether women disproportionately profited from this development. Findings on the latter question are sociologically relevant because they provide empirical evidence for changes in the bargaining power of the sexes in the partnership and marriage markets.

The article is structured as follows: The second section focuses on the state of research and the theoretical background; the third contains a description of the data and variables; the fourth covers the empirical findings; and the fifth includes a summary and concluding discussion.

2 State of research and theoretical background

Sociological research regarding the relationship between education and the choice of a partner, between educational expansion and marital age, and between the educational system and the partnership market, has a long tradition (Schwartz 2013; Blossfeld 2009; Kalmijn 1998; Blau 1977). Findings vary greatly, depending on the data and the design of the analyses, as well as on the observed countries and historical periods. For example, older international comparative studies document a close connection between the educational level and the choice of a partner (Ultee and Luijx 1990; Kalmijn 1991), and the gender-specific differences of this connection (Schwartz and Han 2014; Schwartz and Mare 2012). In this literature, educational homogamy is emphasized repeatedly as a structural characteristic of modern societies. With respect to heterogamy, typical findings are that women usually marry men with the next higher educational level, while men prefer women with a lower education (Wirth 1996). Men with less education tend to remain single, and women are seldom partnered with men of less education (Lichter et al. 1995; Blossfeld and Timm 1997). Seen in this way, the partnership and marriage markets are characterized by a social, cultural, and economic closure based on the educational success and educational attainment of the potential partners. The attractiveness of people who

are successful in the educational system also correlates with their expected economic success and future lifestyle (Arum et al. 2008).

Educational expansion, according to the available evidence (Blossfeld 2009), shifted the average age at first marriage because of the longer time spent in the educational system (structural effect in terms of a delayed timing of the first marriage)[3] and also affected the prevalence of educational homogamy (level effect in terms of normative preferences for a partner with same education).[4] The findings with respect to the historical trends of educational homogamy, however, are inconsistent, and the conclusions are mixed (Schwartz 2013). On the one hand, the findings show long trends of modernization with declining homogamy rates and an increased opening of social structures (Ultee and Luijx 1990). On the other hand, for individual countries – for instance, the United States or West Germany – increasing rates of homogamy have been found, particularly at higher educational levels (Schwartz and Mare 2005). Furthermore, different developments are reported for the same country, depending on the cross-sectional trend data or longitudinal data in use. While Blossfeld (2009), Timm (2006), and Blossfeld and Timm (1997) report a rising educational homogamy for successive birth cohorts in Germany based on life course data, Wirth (1996) finds relatively constant rates of educational homogamy over time by means of comparative-static micro-census data. Klein (2000) also concludes that the homogamy rates decline if both sexes profit from educational expansion, specifically in West Germany (see Becker 2014). Domanski and Przybysz (2007) find high rates of educational homogamy in Switzerland based on cross-sectional data from the European Social Survey for 2004–2005, but do not say whether this is a consequence of educational expansion. Switzerland appears to be a country with low mobility rates as well as a limited openness and opening of the class structure, even in the recent past (Falcon 2016; Jann and Combet 2012).

3 The postponement of marital age caused by the educational expansion, and/or the longer period spent in the educational system, is sociologically interesting because marital age is a key socio-demographic factor that is interrelated with various other social and demographic variables (as argued, for instance, by Diekmann 1990). For example, marital age correlates with birth rate and affects the gap between generations, the risk of divorce, the date when the children move out of the parents' home, career behavior, the income distribution, and the distribution of household sizes. Marital age also impacts on the educational system, the housing market, the job market, and government welfare systems. In general, the shift of partnership age and marriage age has far-reaching effects on various events and transitions in the life course of adults and their children (Arum et al. 2008: 108).

4 According to Swiss official statistics, between 1950 and the beginning of the 1970s the average marital age fell from 26 to 24 years among women and from 28 to 26.5 years among men, but then increased until 2014 to 29 years for women and 32 years for men. Although the actual change is overestimated, using period rather than cohort estimates (Huinink 1995), this development can be interpreted as a consequence of educational expansion. Considered from a life history perspective, however, the shift in marital age also has consequences for the measurement and interpretation of changes in educational homogamy. One could argue that changes in homogamy could best be observed by comparing people at the time when they leave the educational system, not necessarily by comparing them at the same age (Timm 2006; Blossfeld and Timm 2003; 1997; Schwartz and Mare 2012).

The high intergenerational reproduction of education (that is, the low educational mobility between the generations) may be one reason why the rate of educational homogamy is very pronounced, for example when compared to 28 other countries analyzed by Katrnak et al. (2012). Furthermore, the women's declining hyper- and hypogamy rates are accompanied by a rising stability of educationally homogamous marriages, while heterogamous marriages (particularly if the woman has the higher education) are unstable (Schwartz and Han 2014). This finding for the USA is confirmed for Switzerland by Diekmann and Schmidheiny (2001).

Empirical studies agree that, due to educational expansion, the educational system – compared with the workplace, the neighborhood, family networks, or clubs (Kalmijn and Flap 2001) – has become the most important marriage market (Blossfeld and Timm 2003; Kalmijn 1991, 791). Its importance extends not only to direct opportunity structures (Mare 1991), according to which potential spouses meet in the classroom, but also to indirectly selective opportunities through extra-curricular social areas, such as social networks, neighborhoods, and workplaces. The patterns of educational homogamy, however, are determined primarily by the vertical dimension of the educational levels (Mare 1991, 15–16) such that the educational system structurally and normatively organizes educationally segregated partnership markets and homogamous partner choice. Educational expansion has significantly increased the chances that partners of a similar age and education find one another in the educational system or on other markets after completing their education. Above all, the changing economic role of women (Blossfeld 2009) makes their educational level and career ever more important for finding a "match" on the marriage markets, both within and outside the educational system. Nevertheless, as mentioned above, this "structural effect" operates alongside a "level effect" (Blossfeld and Huinink 1991), according to which homogamy norms still have considerable relevance for partner choice and marriage patterns (Huinink 2000, 217). Equally important is the norm in most capitalist countries to marry and establish a family only after having completed education. These norms did not become invalid due to the increase in the quality of women's human capital investments (Blossfeld 2009).

Nielsen and Svarer (2009), for instance, argue that values (e. g. with respect to the qualifications of the children, the stability of marriage, and the labor force participation of women), norms (e. g. that marriage should only occur after the completion of education) and preferences for educational homogamy (e. g. when educationally similar people appear more attractive) are shaped by education (cf. also Kalmijn 1991, 790). In addition, the non-random choice of partner due to the preference and systematic search for a similar partner (for example, a partner of the same educational level) is reinforced by the opportunities for meeting such a partner in the educational system (*matching hypothesis*). At the same time, the educational system offers an arena for competition for the most attractive partners, who, as a minimum, have the same educational level (*competition hypothesis*) (Schwartz 2013;

Klein 2000). In both cases, homogamy will be the predominant resulting partnership if the education of the sexes is distributed evenly, if better educated economically active women do not forgo a relationship because they see no additional benefit in the traditional division of labor in the private household, and if those wanting to get married do not suspect that there are better options left among the "singles" (Blossfeld and Timm 1997). In the case of an uneven educational distribution, differences become more likely, but partnerships will still form among those with relatively close educational levels. Furthermore, differences are strengthened by the fact that men typically marry at a somewhat older age than women. Coupled with the postponement of marriage until after completion of education, this means that the marriage market can become increasingly difficult for highly educated women across their life course (Huinink 2000).

This means that the educational expansion leads to a change in the socio-structural conditions mentioned by Blau (1977), according to which, apart from the age distribution and the sex ratio in consecutive birth cohorts, the educational distribution of marriageable women and men (which changes over time) affects the chance of meeting and getting to know a potential partner with the preferred characteristics. The educational expansion thus shapes the way in which individual decision-making takes place by systematically and arithmetically changing the opportunities and restrictions on the societal marriage market. Therefore, due to structurally conditioned social segregation in the marriage market, the educational expansion – apart from the normative rules and individual preferences embedded into the opportunity structures – probably also has a direct effect on behavior regarding partner choice and marriage patterns. With the changes in gender-specific educational distributions and benefits, ongoing in Switzerland and a direct consequence of the educational expansion, the traditional education gradient between marriage partners (i. e., the man having a higher educational level than the woman) will probably decline in the succession of the birth cohorts. With the rising number of better educated women, homogamous partnerships become more likely if the choice of a partner and the demands on a partnership are structured by similarities in the characteristics of the partners (Klein 2000). In this process, as demonstrated by significant empirical evidence (Blossfeld 2009), better educated women, depending on the options on the marriage market, would often rather remain single than choose a less educated man, while less educated men without potential partners generally have the lowest chances on the partnership and marriage market. In the course of the educational expansion, therefore, partnerlessness should be particularly observable among these men.

To summarize: education is, regarding the choice of a partner and marriage, an indicator for sociocultural preferences and socioeconomic success. Concerning cultural preferences, Kalmijn (1998, 412) concludes that the competition between men and women with the same educational level has intensified over the course

of the educational expansion and with the increase in numbers of highly educated women. Better educated women who are more likely to be economically active and who fetch comparatively higher educational benefits on the labor market are particularly attractive for more highly educated men because of their socioeconomic resources. According to Kalmijn (1991), given the opportunity structures and the increased attractiveness of better-educated women on the marriage market, an increasing educational homogamy can be expected, especially at higher educational levels. Therefore, with continued educational expansion, a cohort differentiation of increasing educational homogamy in the younger cohorts should be observed.

Overall, the educational system is considered a very efficient marriage market (Nielsen and Svarer 2009, 1067). With the density of potential partners at different educational levels (cf. Blau et al. 1982), and based on comparatively fewer frictions than in other local marriage markets, the search costs and the uncertainties associated with the choice of partner are significantly reduced. However, one cannot simply jump to the conclusion that the increased importance of the educational system as a marriage market has replaced the strategic role of the marriage for maintaining the intergenerational status of women in the sense of the *status attainment hypothesis* (Smits et al. 1998) in favor of "romantic love" (*general openness hypothesis* according to Smits 2003, 256) (cf. Ultee and Luijkx 1990). According to a study carried out by Arum et al. (2008), well-educated women would rather marry partners with strong income potential and a higher education level, while qualified men prefer women from families with a higher status (see also Blossfeld 2009).

The social mechanisms described above should have been strengthened by the sustained educational expansion in a modern society like Switzerland. Increasing educational homogamy can be expected to intensify the social inequality of the chances on the partnership and marriage market. In contrast, it should also contribute to the reinforcement of socially unequal educational opportunities in subsequent generations of children via socially selective marriage and family formation (see Hillmert 2012; Becker 2009). For example, Hillmert (2012) shows that a large part of the intergenerational reproduction of educational attainment can be attributed to sociodemographic processes such as educationally homogamous marriage and family formation by the parents and grandparents. This could be another explanation for the rather hesitant educational expansion and moderate decline in educational inequalities across successive generations in Switzerland.

3 Data, variables and methodical approach

3.1 Database

The empirical analyses are based on harmonized data from the Swiss census in 1970, 1980, 1990 and 2000 (see Stamm and Lamprecht 2005).[5] Because of the large number of cases and the timespan, these censuses allow a differentiated analysis of the consequences of the educational expansion for the partnership patterns of women and men in different age groups. The census covers all persons and households of Swiss residents (residence is determined by the economic and civil domicile). Because data is collected on both household structures and on all household members, married couples, single people, and cohabitation can be identified, together with other characteristics, such as gender, educational level, and date of birth. It is thus possible to trace the presumed consequences of the educational expansion in Switzerland for family-demographic processes in the second half of the 20th century.

Even though census data are cross-sectional, the dynamics of the processes of change can be illustrated by distinguishing birth cohorts. Only a comparative-static analysis of the civil statuses "married" versus "not married," or of the partnership status, is however possible. For example, no differentiation is possible between first marriage and remarriage. For a more dynamic analysis of different partnership and marriage episodes, event-history data would be required (cf. Blossfeld and Timm 1997). Despite these methodological limitations, the census data are well suited for a differentiated analysis of the relationship between educational expansion and education-specific partnership patterns across cohorts. Due to a high degree of standardization, comparability of variables, and a large number of observations, precise results on the relevant developments can be obtained. Note that all analyses below are based on complete population data. As such, we do not present confidence intervals or other measures of statistical precision.

3.2 Analytical population

Our analyses are limited to persons aged 25 to 64 years.[6] An overview of the size of the analyzed population in the different years is given in Table A1 in the Appendix. To avoid the distorting influence of a declining tendency to marry, which is not necessarily associated with a declining likelihood to form a partnership, we record for these persons whether they live in a partnership or not, irrespective of their civil status. However, both for married persons and persons living in a consensual partnership, couples can only be identified if both partners live in the same house-

5 Replication materials for our analysis are available from https://ideas.repec.org/p/bss/wpaper/25.html.

6 We use persons, not partnerships, as the units of analysis, because those without partners must also be included. We therefore examine all persons aged 25 to 64 years to see whether a partnership was present at the time of the census and, if so, to record the relevant information about the respective partner. No age restriction is imposed when identifying the partners.

hold. Partnerships can be formed in the census based on the recorded information on the positions of the household members within the household. In each couple household, one person is identified as the head of household and/or reference person, along with a partner. This information does not depend on whether the persons are married to each other.[7] A further division into married and unmarried couples would be possible on the basis of the data, but this distinction is not applied in the analyses below because, as indicated above, we are interested in educational homogamy across all (permanent) partnerships, irrespective of civil status.

The representation of partnerships in the census data is incomplete. As indicated, partnerships between persons living in different households cannot be identified. Conversely, for certain household settings, even partnerships within a household cannot or can only partially be identified. An example is households composed of several couples. In general, in such cases only one couple is identified and the other persons are recorded as being partnerless. There might also be households in which the two persons making up the partnership do not include the reference person of the household. Such couples can be identified only if they are the parents or in-laws of the reference person. To simplify matters, we assume in such cases that a couple exists if there are exactly two parents of different gender in the household who are both married. Overall, due to a pluralization of living arrangements, it could be that partnerships within households are increasingly under-reported over time. In any case, the effect on our results should be negligible.

3.3 Dependent and independent variables

The main variables are the *partnership status* (0/1) and the *highest educational attainment* of the target person and its partner. As indicated above, we can only identify partnerships if both partners live in the same household; people with a stable relationship with a person outside the household are treated as single. Furthermore, following the usual conventions and considering the lack of details in the collected data, a distinction is made between the following educational levels: (1) compulsory schooling or less, (2) professional certificate at the secondary level II, (3) general education certificate at the secondary level II, (4) professional tertiary certificate and (5) academic tertiary certificate (including certificates from universities of applied sciences).[8]

7 One limitation is that consensual couples do not seem to have been recorded in the 1970 census, presumably because households containing a consensual couple were rare at that time. This implies that the increase in the proportion of persons without a partner was probably somewhat more pronounced between 1970 and 1980 than indicated in the results below, particularly for the younger cohorts.

8 Educational attainment is unknown for a minority of observed individuals (Table A1 in the Appendix). For the classification of the highest educational attainment, we use the harmonized variable HABGB (highest attainment gross) of Chaze (2005), which should be comparable over time for the age groups analyzed here (see also Chaze et al. 2005). Alternatively, the variable

On the basis of a comparison of the educational levels of the two people in a partnership, a *homogamy variable* is also formed with the following categories: (1) The target person has a higher educational attainment than the partner; (2) both partners have the same educational attainment; (3) the target person has a lower educational attainment than the partner. For some observations, the value of the homogamy variable cannot be determined due to lack of information on the educational level for at least one of the partners (see Table A1 in the Appendix). Since in Switzerland mixed-sex partnerships are still the rule, all analyses are done separately by gender.

To isolate *cohort effects*, all analyses are separated by *age groups*, using five-year intervals (25–29-year-olds, 30–34-year-olds, etc.). By combining year of birth, partnership status, and educational level, the cohort design allows one to determine the impact of educational expansion on the choice of a partner and marriage patterns (Timm 2006; Blossfeld and Timm 1997; Diekmann 1990). Because one cannot link observations across censuses, it is not possible to follow individuals over time, considering the dynamics of the processes of partner choice and other family-demographic processes.

3.4 Methodical approach

In the empirical part, the changes in educational distribution as well as educational homogamy are represented over time according to the categories of the homogamy variable described above. In a further step, an attempt is made to isolate structural influences on educational homogamy, that is, influences of the changing marginal distributions due to educational expansion. For this purpose, we first calculate the *observed homogamy* or *gross homogamy H* as

$$H = \frac{\sum_j N_{jj}}{N}$$

with N as the size of the population (number of partnerships) and N_{jj}, $j = 1, \ldots, 5$ as the number of partnerships in which both partners have educational level j (diagonal cells in a cross table of the educational levels of both partners). Next, we calculate the *extent of random homogamy C* that would be expected if the partners were matched randomly (among the people who were in a partnership at that time) as

$$C = \frac{\sum_j \frac{N_{j.} * N_{.j}}{N}}{N}$$

HABGN (highest attainment net) could also be used. Both variables lead to virtually the same result for the analyses below.

with $N_{j.}$ as the number of target persons with educational level j and $N_{.j}$ as the number of potential partners with that educational level. The educational expansion has a direct structural effect on the random homogamy C, because it leads to a change in the marginal distributions.

Taking into consideration the *highest possible homogamy M* given the marginal distributions (or, conversely, the minimally necessary heterogamy),

$$M = \frac{N - \frac{\sum_j |N_{j.} - N_{.j}|}{2}}{N}$$

it is then possible to calculate to what extent the available "homogamy potential" (i. e. the difference between the highest possible homogamy M and the randomly expected homogamy C) is exhausted by the actually occurring homogamy (*relative homogamy* or *net homogamy R*):

$$R = \frac{H - C}{M - C}$$

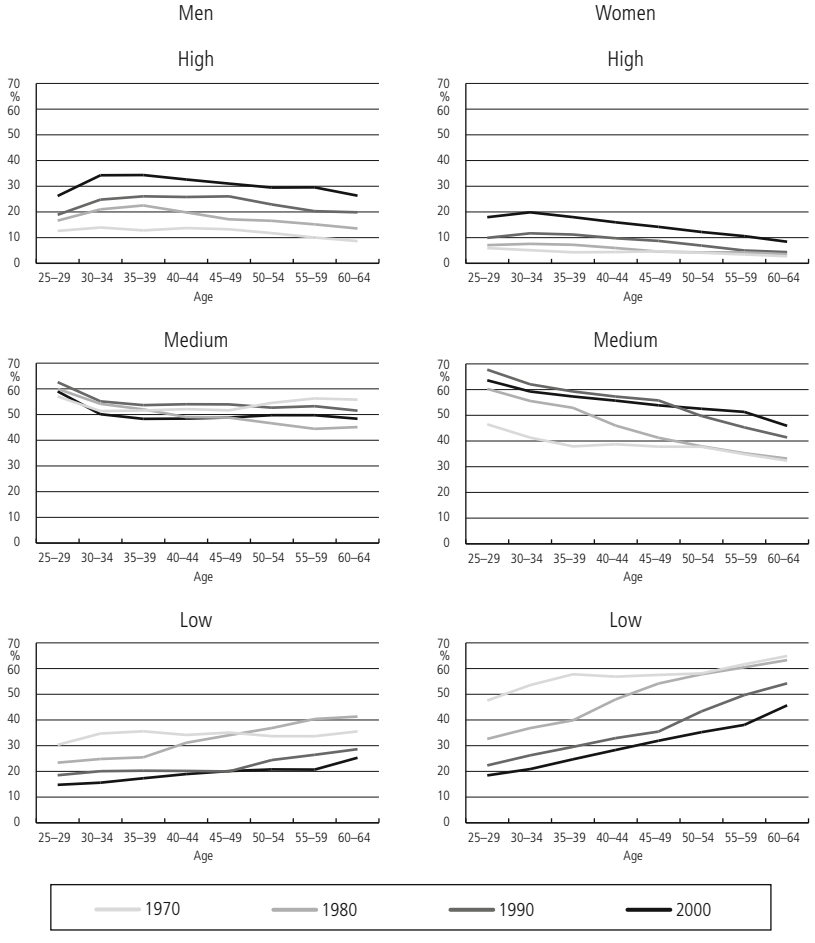
Tracing these measures – H, C, M (or $1 - M$) and R – over time (period and cohort) reveals the extent to which the changes in observed homogamy are a consequence of purely structural effects, and the extent to which there are additional changes in the inclination to form educationally homogamous partnerships that are not due to structural effects. Note that the described method focuses on how the rate of *agreement* between the educational levels of the partners in couples changed over time. A supplementary approach that is often followed in the literature would be to analyze how the strength of the *association* between the partners' educational levels changed in general, irrespective of whether the levels coincide or not. Log-linear models are often used for this type of analysis. We focus here on the first approach, because it more closely resembles the conceptual idea of educational homogeneity within partnerships. The second approach, aiming at the strength of association rather than the strength of agreement, would make more sense when (for example) analyzing intergenerational educational mobility.

4 Empirical results

4.1 Educational expansion in Switzerland in the second half of the 20th century

First, we briefly present results on the extent of the educational expansion in Switzerland. Figure 1 shows the distribution of an educational variable reduced to three categories (high: tertiary education, medium: post-compulsory secondary education, low: compulsory schooling or less) by gender, five-year age groups and

Figure 1 Educational distribution by gender, age and year



survey year. Changes over time become evident by a vertical comparison of the displayed curves. For example, in 1970, 14 percent of 30–34-year-old men had a tertiary education. In 2000, this share had risen to 34 percent. Over all age groups, there was an expansion of tertiary education for men from slightly more than 10 percent to about 30 percent. Similarly, there was also a significant increase in tertiary education for women, although the rise started later and was concentrated more among the younger age groups.

At the other end of the educational scale, the share of people without post-compulsory education (compulsory schooling or less) declined significantly for both men and women. No clear trends are discernible for men in the medium educational category, while the share of women of medium education increased significantly, particularly between 1970 and 1990.

In sum, the changes for men can be described as follows: strong expansion of the share of tertiary education coupled with a strong decline of those without post-compulsory education in all age groups during the entire period. For women, there was a strong expansion of upper secondary certificates and a simultaneous decline in the number of women without post-compulsory education across all age groups, mostly between 1970 and 1990, and a somewhat delayed expansion of tertiary education after 1980, particularly among younger age groups.

4.2 Changes in partnership and educational homogamy

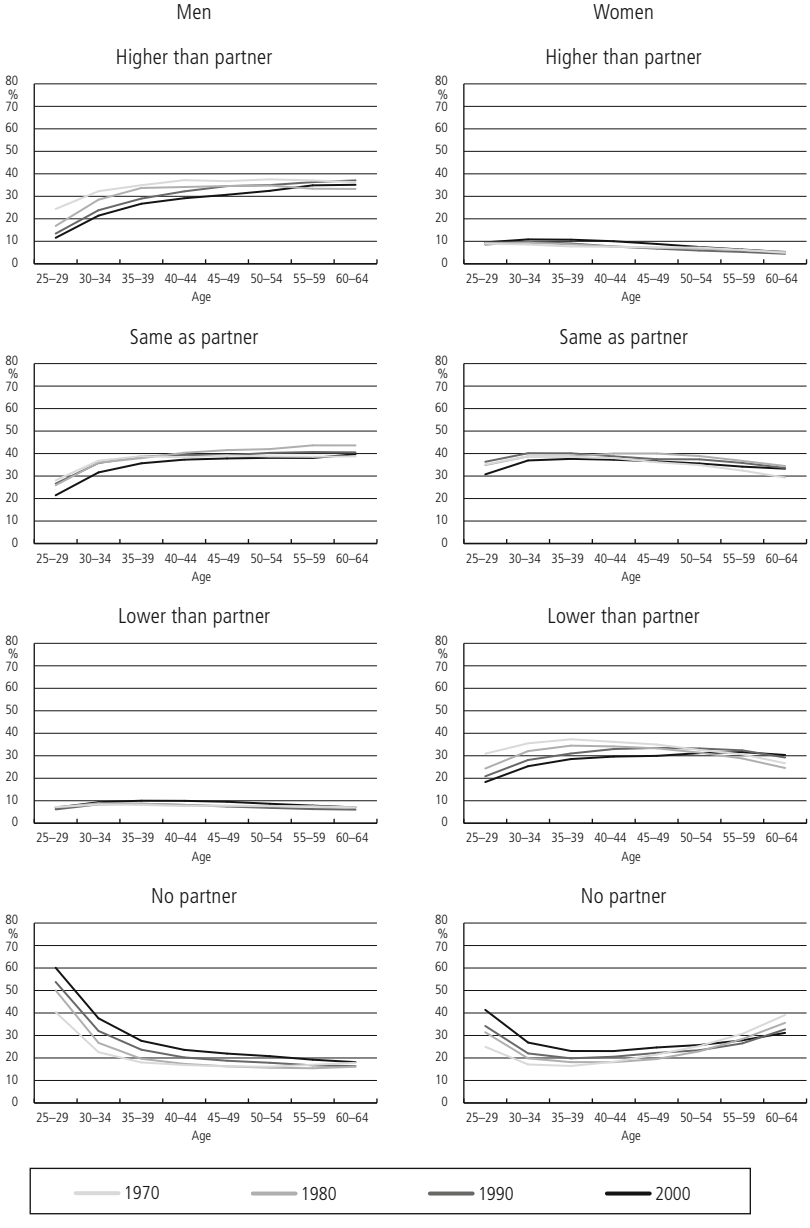
How has the likelihood changed of having a partner with a similar educational background? As can be seen in Figure 2, the rate of partnerlessness has increased notably for men over time in all age groups (for example, men aged 40–44 years show an increase in partnerlessness from 16.9 percent in 1970 to 23.6 percent in 2000). In part this might be an artifact of a greater under-reporting of household-internal partnerships in more recent years, due to the pluralization of the household types. More plausible, however, is the interpretation that household-internal partnerships have indeed declined substantially. The reason might be that there has been an overall decline in the ratio of partnership bonds over time (at least partially because of increased divorce rates). Another possible reason could be that relationships have shifted toward partnerships across households ("living apart together"), perhaps because of tax advantages. Both phenomena probably contribute to the decrease in partnerships observed in the census data.

An increase in partnerlessness over the decades can also be observed for women, although only among younger age groups, as older women experienced a simultaneous decline in widowhood (see Figure A1 in the Appendix). Because of the relative increase of the life expectancy for men, one can even see a net decline in partnerlessness among women aged around 60 between 1970 and 2000.

Concerning educational homogamy, Figure 2 shows that partnerships in which the man has a higher educational level than the woman (hypergamy) declined noticeably due to the educational expansion, at least in the younger age groups (as evident in the topmost subgraph for men and in the third subgraph for women).[9]

9 Observations for which the homogamy variable is undetermined (due to lack of information on educational attainment for at least one of the partners; see Table A1 in the Appendix) have been excluded from the results in Figure 2. Excluding these observations reduces the number of people with a partner in the data, and thus inflates the proportion of partnerless people. To avoid such a bias and preserve the proportion of partnerless people at its true level, we proportionally rescaled the results from the homogamy variable. The correction is based on the assumption that

Figure 2 Educational homogamy and partnerlessness (living without a partner in the same household) by gender, age, and year



By contrast, partnerships in which the woman has a higher educational level than the man (hypogamy) increased slightly (which can, however, barely be seen in the diagrams, because the frequency of such configurations is still low). The number of couples in a relationship of educational homogamy also increased slightly between 1970 and 1980. However, a reversal of the trend is discernible between 1980 and 2000. In 2000, as a result, a slightly smaller share of persons is in an educationally homogamous partnership than was the case in 1970, at least in the younger age groups.

Overall, the changes in homogamy, hypergamy, and hypogamy during the 30-year period are moderate. Larger shifts, however, are disclosed when examining the rates by educational level (Figures 3, 4, and 5).

Figure 3 shows the changes for persons of a high educational level (tertiary education). While in 1970 approximately 80 percent of the highly educated middle-aged men were in a hypergamous partnership, this share declined by the year 2000 to approximately 60 percent. In turn, the share of highly educated middle-aged men in an educationally homogamous partnership increased from about 10 percent to 20 percent. This is a direct consequence of the expansion of the number of women educated at a higher level. In other words, as a result of the equalization of the educational distributions, fewer men were forced to "marry down" in 2000 than was the case in 1970.

Furthermore, across all age groups, there is also a noticeable increase in partnerlessness for highly educated men. For highly educated women, the trends are less clear. The proportion of highly educated women with a less educated partner always ranged between 20 and 30 percent in all age-groups. That is, like men, a substantial share of highly educated women had partners with less education, but at the same time the share of highly educated women in an educationally homogamous partnership increased significantly, primarily between 1970 and 1980. The most striking result, however, is the relatively large share of highly educated women without a partner. In the middle-aged groups, this share amounts to about 30 to 40 percent. This phenomenon is likely due to the persisting traditional division of family roles and the unsatisfactory compatibility between family and work, which may make it unattractive for highly educated women to form or maintain a permanent partnership (see Imdorf and Hupka-Brunner 2015; Levy 2013). It should be noted, however, that this kind of partnerlessness has receded slightly over the years, except for the youngest age groups.

Men of a medium educational level (Figure 4) have similar trends to men of a high educational level. While in 1970 approximately half of the middle-aged men of a medium educational level lived in a hypergamous partnership, this share

the excluded observations are uninformative (missing at random). That is, we assume that the distribution of the homogamy variable is the same between the excluded observations and the observations for which we have complete data.

Figure 3 Educational homogamy and partnerlessness (living without a partner in the same household) for persons of high educational attainment by gender, age and year

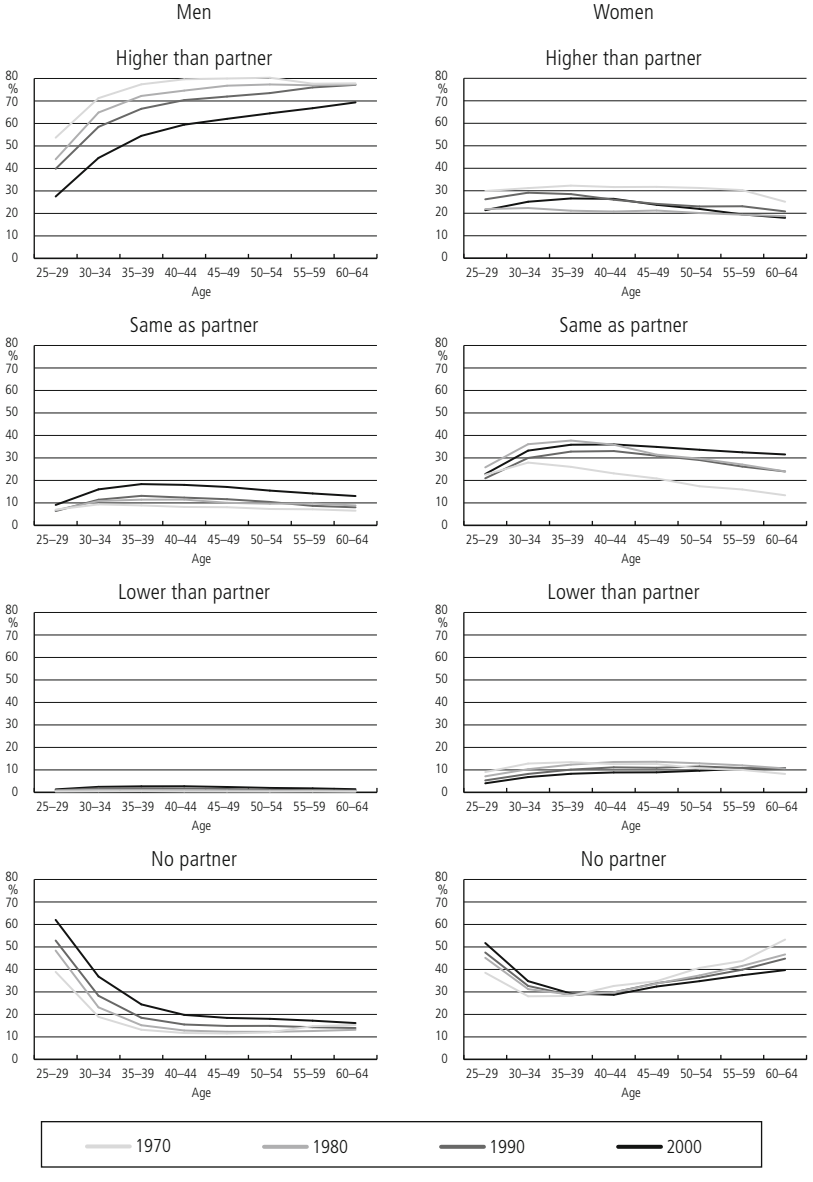


Figure 4 Educational homogamy and partnerlessness (living without a partner in the same household) for persons of intermediate educational attainment by gender, age and year

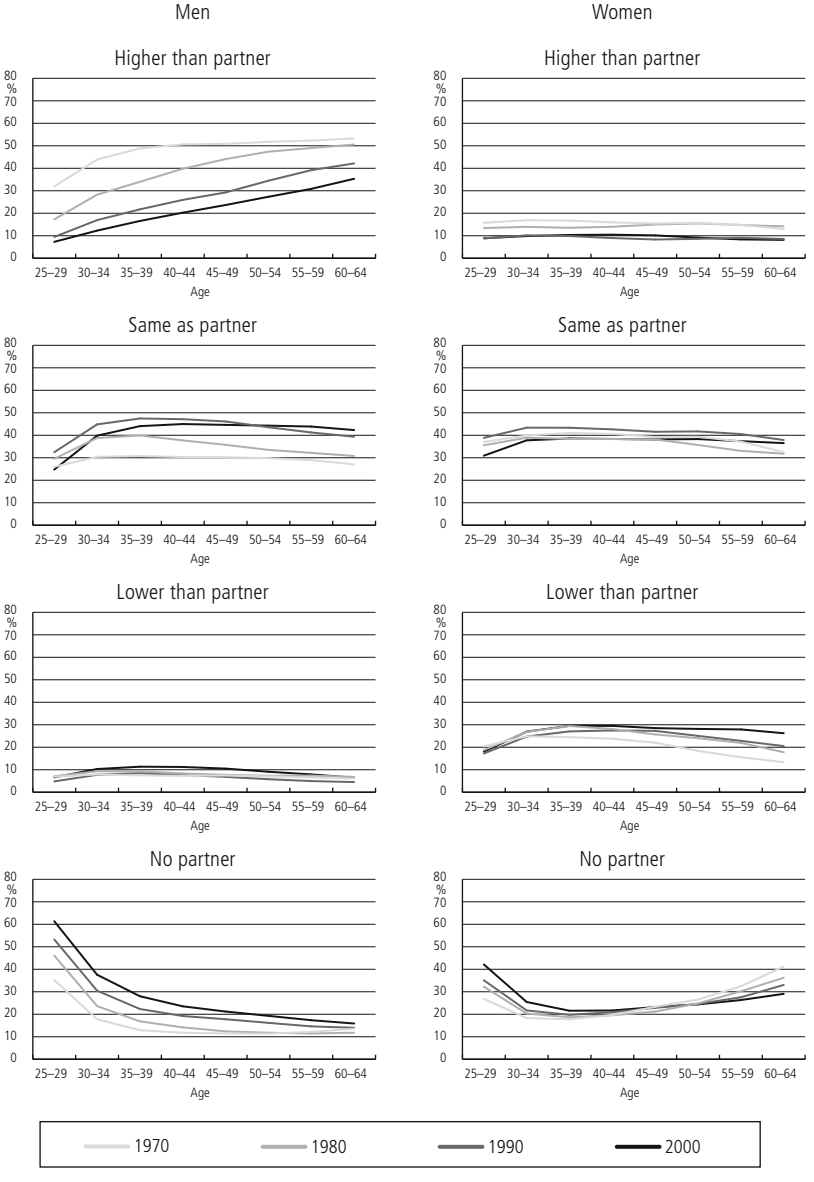
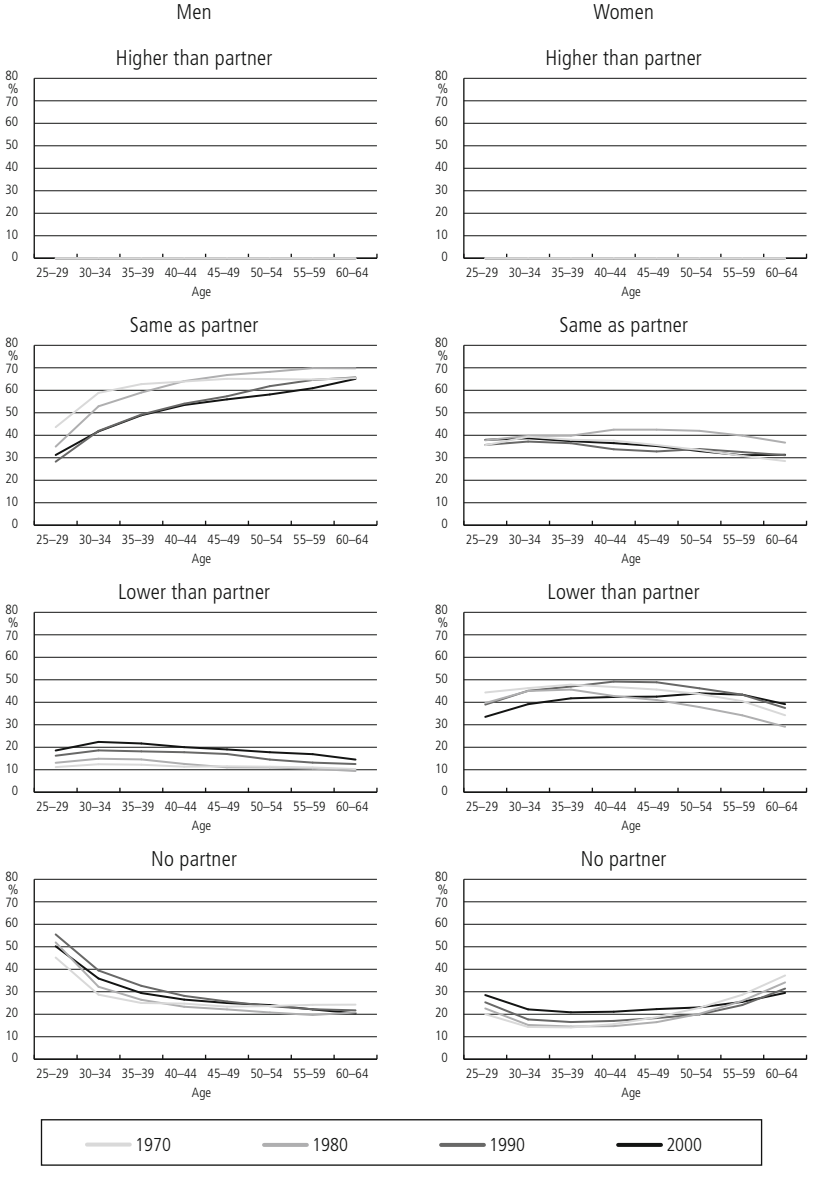


Figure 5 Educational homogamy and partnerlessness (living without a partner in the same household) for persons of low educational attainment by gender, age and year



dropped dramatically to between 10 and 30 percent in 2000. By contrast, except for the youngest age group, the share of men of medium education living in an educationally homogamous partnership increased from 30 percent to approximately 45 percent. Furthermore, we also see a slight increase in hypogamous partnerships, and (much more pronounced) in partnerlessness (in the middle-aged groups, this share increased from a little over 10 percent to more than 20 percent). A more mixed picture emerges for women of a medium educational level. The share of these women who lived in a homogamous relationship remained relatively stable (approximately 40 percent), while relationships with a less educated partner trended down, and relationships with a more educated partner trended up. Partnerlessness among women of a medium educational level was significantly lower than among highly educated women, although there has been a slight convergence over time.

Finally, Figure 5 displays the changes for persons of low education. Educational homogamy among men in this group has declined substantially in the course of educational expansion (in middle-aged groups, from almost 65 percent to approximately 55 percent), while the share of men in a relationship with a more educated woman increased accordingly. Partnerlessness increased much less among men of low education than among men with a high or medium education. Except for the youngest age groups, however, partnerlessness is still most pronounced among men of a low educational level.

Interesting in this context is the comparison with women. While there is a negative relationship between educational level and partnerlessness among men, the situation for women is exactly the opposite. For both genders, however, the relationship has weakened over time, so that overall one can speak of a certain convergence. For example, a significant increase in partnerlessness can be observed for most age groups of women of a low educational level, who in 1970 were least affected by partnerlessness.

4.3 Structural effects of the educational expansion

We now turn to the question regarding the extent to which the observed changes in educational homogamy are due to purely structural effects as a result of the educational expansion. Partnerless persons are omitted from the analysis: that is, only persons who were in a relationship at the time of the census are considered as potential partners (i. e., it is assumed that partnerless persons are not available for the partner market). This assumption is made for methodical reasons, to be able to determine the relevant marginal distributions. Although it is possible that changes in education-specific mating behavior have effects on the pool of potential partners, it is unclear how such effects could be incorporated into the analysis. In essence, a sophisticated dynamic partner choice model would be required that distinguishes between partnerlessness due to lack of a potential partner with a desired educational level and partnerlessness due to other reasons. Developing such a model would

exceed the scope of the current article; nor do we see how such a model could be implemented based on census data. As such, however, we do not expect the results from a more refined analysis to be fundamentally different from the results presented below, because partnerlessness can have many reasons and only some of them will be related to the dynamics of education-specific mating.

Figure 6 shows the development of gross (observed) homogamy, random homogamy, minimum heterogamy and net (relative) homogamy (see the definition of these quantities in Section 3) for women and men of different ages over time. The results are almost identical for women and men due to the symmetry of affairs: differences only come about because women and men do not only form partnerships with people of approximately the same age.

As we have already seen, the observed homogamy has not changed much overall. About half of all partnerships in all age groups are educationally homogamous (see the topmost subgraphs). From 1970 to 1980 or 1990, observed homogamy slightly increased, after which we again see a slight reduction. It can also be observed that the homogamy that would be expected under random matching declined somewhat due to a shift in the marginal distributions of the educational levels for women and men during the educational expansion, particularly between 1990 and 2000 (from about 35 percent to approximately 30 percent). This means that, based on purely structural changes in the educational distributions, somewhat fewer educationally homogamous couples could be expected in 2000 than in 1990.

The minimum necessary heterogamy given the marginal distributions – that is, the share of couples with a heterogeneous education that remains if one forms as many homogeneous couples as possible – has also declined over the entire period. Since the educational distributions of men and women have become similar over time, it has become ever easier for as many people as possible to find a partner with the same educational level. Since these two structural effects partially offset each other (fewer homogeneous couples in case of random matching, coupled with a higher potential for homogeneous couples), the net homogamy corrected for the structural effects shows a picture quite similar to that for the *de facto* observed gross homogamy. Between 1970 and 2000, there was no great change overall, or at best a marginal increase, in homogamy.

To provide a more differentiated picture, Figures 7, 8 and 9 again show results broken down by educational level. Overall, one can see an increase in the share of homogamous partnerships among men with high or medium education (see the topmost subgraphs in Figures 7 and 8) as well as among women with a higher level of education (see the topmost subgraph in Figure 7). For men of low education, educational homogamy has declined (see the topmost subgraph in Figure 9), while no clear trends are visible for women of a medium or low educational level (see the topmost subgraphs in Figures 8 and 9).

Figure 6 Breakdown of educational homogamy by gender, age and year

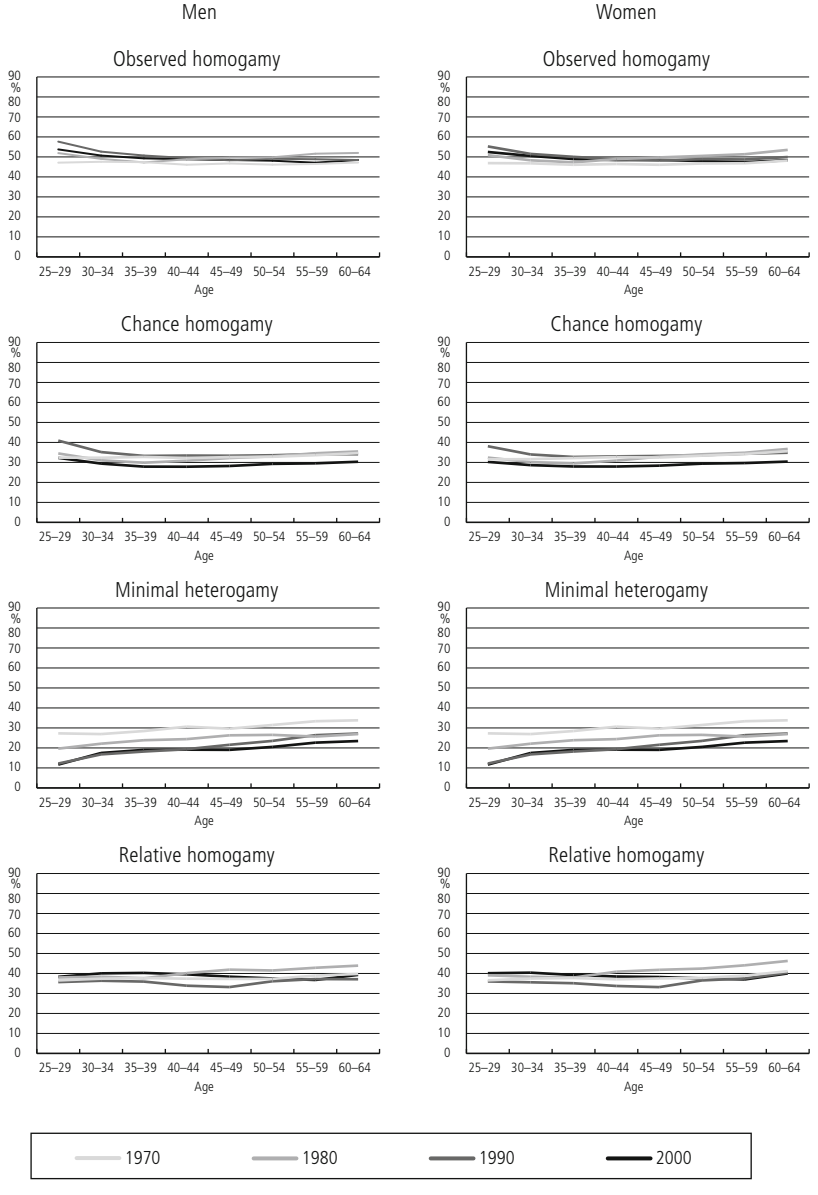


Figure 7 Breakdown of educational homogamy for persons of high education by gender, age and year

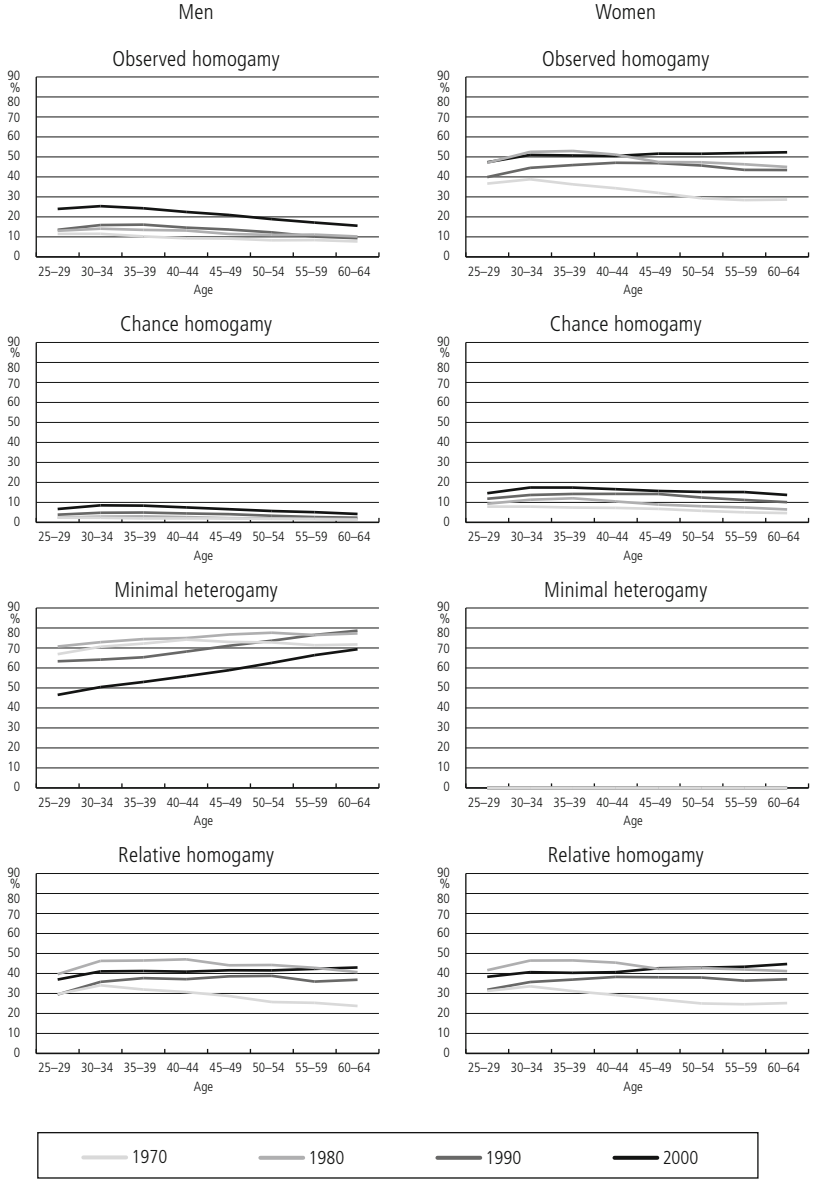


Figure 8 Breakdown of educational homogamy for persons of medium education by gender, age and year

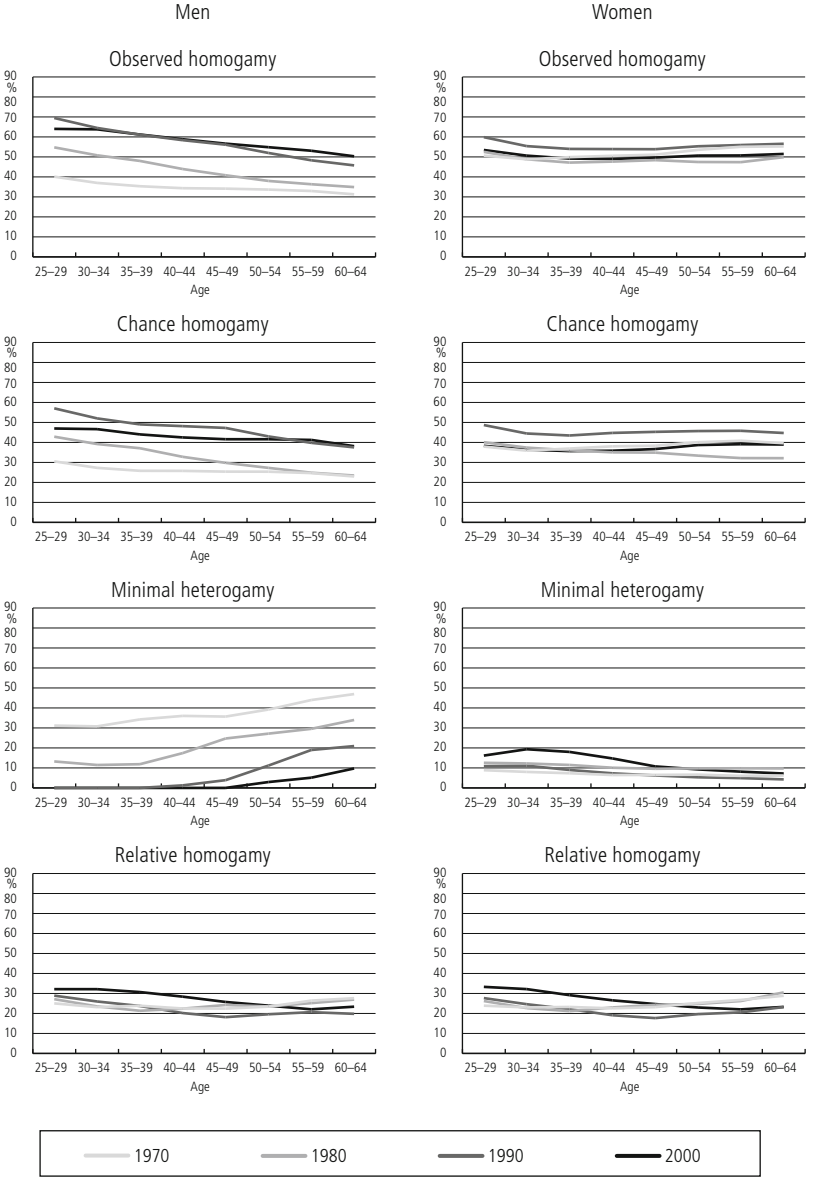
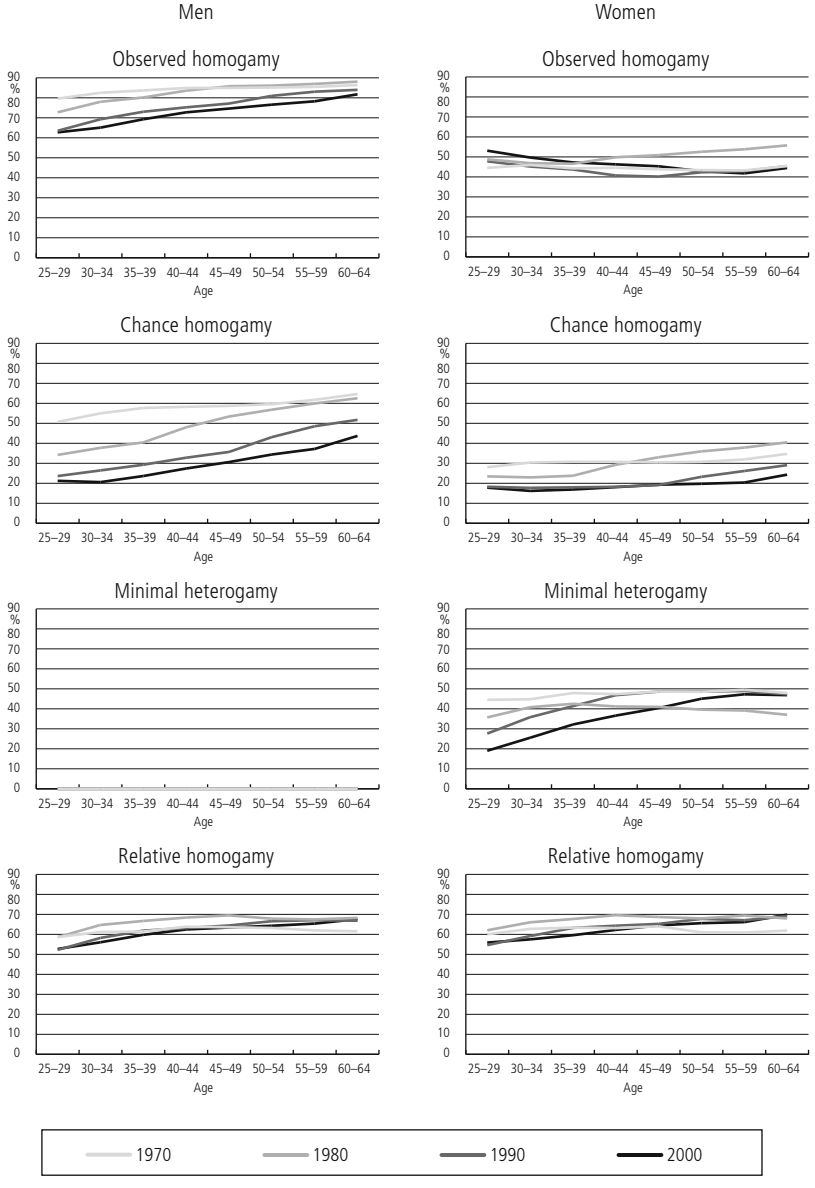


Figure 9 Breakdown of educational homogamy for persons of low education by gender, age and year



The observed changes seem largely due to structural effects. In the three cases in which an increase in educational homogamy occurred (men and women of high education; men of medium education), randomly expected homogamy has increased, and minimally necessary heterogamy has declined. That is, both structural effects were such that homogeneous partnerships became more likely. Accordingly, the trends in net homogamy, corrected for the structural effects, are substantially less pronounced than the trends in observed homogamy for these groups.[10]

For highly educated women and men, a substantial increase in the tendency towards homogamy can only be observed between 1970 and 1980 after taking the structural effects into account. After that, the situation has remained stable. Among men of medium education, there was a certain increase in the tendency towards homogamy in the younger age groups (mostly between 1990 and 2000), whereas for the older age groups relative homogamy somewhat declined (mostly between 1980 and 1990). Similarly, the decline of observed homogamy among men of low education was accompanied by a decline in randomly expected homogamy, so that here also only minor changes in net homogamy remained across the whole period.

In sum, it could be concluded that the observed changes in educational homogamy are due in large part to changes in the opportunity structures that are associated with a shift in the educational distributions in the course of educational expansion. No clear indication of a change in partner choice behavior can be found independently of structural effects in the data. Nonetheless, it is sociologically interesting to see that structurally adjusted partner choice behavior seems to differ between the educational groups. Net homogamy, which measures how much the observed homogamy exceeds what one would expect under random matching of partners, is highest for people of low education (about 60 percent). People of medium education reach the lowest values (20 to 30 percent). People of high education are located in between (around 40 percent). For persons of low education, the inclination to take their cue from their own group when choosing a partner thus seems highest, while it seems to be lowest among persons of medium education.

5 Summary and discussion

This article described the effects of the educational expansion on marriage markets and education-related partnership patterns for Switzerland in the second half of the 20th century. The assumption was that the peculiarities of the comparatively moderate course of the educational expansion (Blossfeld and Shavit 1993), the slow changes in social structures and social inequality (Jann and Combet 2012), and the continuing traditional division of labor in private households (Levy 2013) in the face of the

10 That the values for net homogamy are nearly identical for men and women, despite some large differences in observed gross homogamy, is a logical consequence of the structural correction.

increasing labor force participation of women (Imdorf and Hupka-Brunner 2015), all made Switzerland a special case in terms of the consequences of the educational expansion for demographic and family-demographic processes. It was therefore of special interest to examine, by means of census data for the total population, whether the upgrading across the birth cohorts resulted in a gradual social opening of the marriage and partnership markets and thus lead to a greater educational heterogamy of the couples, or whether traditional marriage patterns persisted, possibly coupled with an increase in homogamy among highly educated women and men and a greater disadvantage for persons of low education on the partnership market.

The census data allowed a step-by-step reconstruction of the theoretically assumed processes for the relation between educational expansion and partnership patterns for selected age groups. On the one hand, the empirical findings do not yield any clear trends in support of the social closure or opening of the partnership and marriage markets in Switzerland. In international comparison, Switzerland is a special case in this respect. On the other hand, interesting differential developments were uncovered. For example, partnerlessness (defined as not living with a partner in the same household) has increased among women and men of prime marriage age. This is particularly true for men of medium or high educational levels, whereas for women the effect can mostly be observed at lower educational levels, but not among the highly educated. Despite these trends, which lead to some convergence in the sex-specific educational gradients in partnerlessness, partnerlessness is still most prevalent among less educated men and more educated women. One potential reason is that men of a low educational level (and therefore a low average income) are particularly unattractive on the partnership and marriage markets, while highly educated women are less inclined to form steady relationships because their high economic and social independence is at odds with traditional family roles. However, note that, contrary to expectation, the negative relationship between partnerlessness and education for men and the positive relationship between partnerlessness and education for women have weakened over time. Furthermore, there are differential trends in homogamy depending on gender and on the educational level. Homogamy has increased substantially for highly educated women and men, as well as for men with a medium level education, whereas a noticeable decline in homogamy can be observed for men with a low level of education. Moreover, as expected due to the educational catch-up of women, hypergamy in men has declined in favor of hypogamy and homogamy. There are thus indications that women have profited more in this regard from the educational expansion than men. In these developments, Switzerland does follow the development patterns of other modern societies, albeit not as strongly as, for instance, in Germany.

If the structural effects of the educational expansion are taken into account, there was no noticeable change, or at best a marginally increased inclination toward homogamy across all educational levels between 1970 and 2000. The observed

changes in educational homogamy therefore seem to be mostly due to changes in the opportunity structures associated with a shift of the educational distributions over the course of the educational expansion. However, the structurally adjusted partner choice behavior differs between the educational groups. Net homogamy is highest for less educated persons, and lowest for persons of medium education, while the highly educated are positioned between these two educational groups. The social closure is therefore highest for the groups that did not participate in the educational expansion, while the marriage market for the middle and higher educational groups is socially more open. In this sense one can talk of a polarized partner market, with a stronger closure at the lower end of the educational scale and a relative openness in the middle educational layers. The degree of polarization, however, slightly decreased over time, as there were moderate positive trends in net homogamy among the highly educated (primarily between 1970 and 1980) and among persons with a medium-level education (primarily between 1990 and 2000), whereas net homogamy remained rather stable for persons of low education.

One must assume that the norms of homogamy are still widespread and enshrined just as strongly in the Swiss social structure as the gender-typical division of labor in private households. Further analyses from the life course perspective, with event-oriented prospective panel data for successive age groups, are necessary to evaluate these issues empirically in more detail (see Blossfeld 2009; Blossfeld and Timm 2003;1997). For example, it is not possible to differentiate between a first marriage and remarriage based on census data. Additional analyses with up-to-date longitudinal data for Switzerland are necessary to determine whether the sustained educational expansion also promotes educational homogamy in cases when people remarry.

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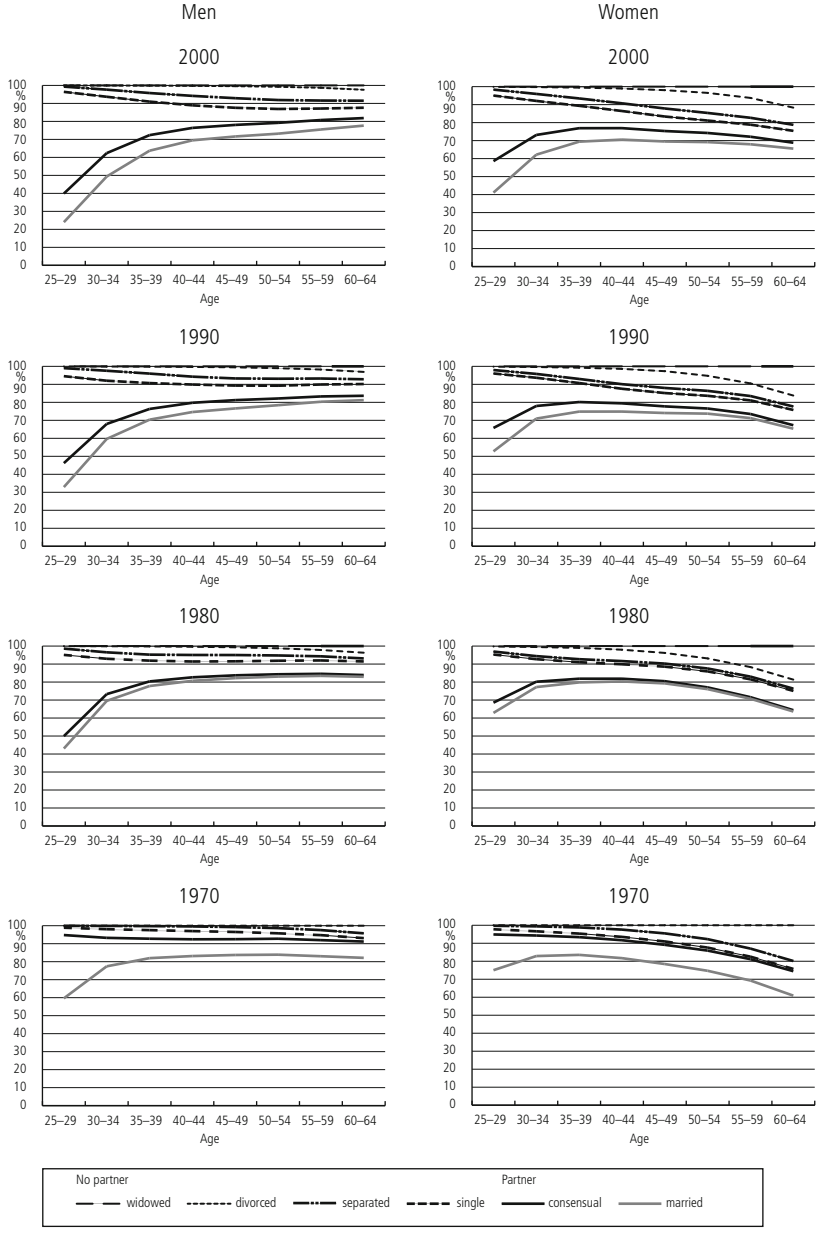
7 Appendix

Table A1 Number of observations (population aged 25–64 years), by educational level and partnership status

	1970		1980		1990		2000	
	N	%	N	%	N	%	N	%
Total	3 025 803	100.0	3 201 572	100.0	3 681 257	100.0	3 951 740	100.0
By education								
Low educational level	1 311 073	43.3	1 208 926	37.8	1 026 176	27.9	899 079	22.8
Medium educational level	1 337 846	44.2	1 494 846	46.7	2 023 358	55.0	1 969 286	49.8
High educational level	242 264	8.0	368 445	11.5	586 487	15.9	857 688	21.7
Unknown educational level	134 620	4.4	129 355	4.0	45 236	1.2	225 687	5.7
By partnership status								
Living without a partner	688 340	22.7	753 929	23.5	954 749	25.9	1 117 053	28.3
Living with a partner								
Homogamy determinable	2 213 089	73.1	2 341 445	73.1	2 684 449	72.9	2 651 606	67.1
Homogamy undetermined	124 374	4.1	106 198	3.3	42 059	1.1	183 081	4.6

Figure A1 Cumulative distribution of partnership status (living with or without a partner in the same household) by gender, age, and year



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Delphine Gardey is a professor of contemporary history and director of the Institute of Gender Studies at the University of Geneva. She works on the history and sociology of the relations between gender, work, and technology, but also of bodies, gender and politics. Her recent book offers a material and gendered history of the French National Assembly.

Cynthia Kraus is a philosopher and a senior lecturer in gender studies and the social studies of science and medicine at the University of Lausanne. She works from an interdisciplinary perspective on the dynamics between laboratory research and clinical practice, professional and lay expertise, knowledge production and political action.

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Educational Sorting in Mixed Marriages in Switzerland

Gina Potarca* and Laura Bernardi**

Abstract: According to status-caste exchange theory, intermarriages involve transactions in which higher educated immigrants trade status for the ethnic advantage of the less-educated native partners. Looking at 2 836 currently married Swiss immigrants, we find that the highly skilled "exchange" their status only when pairing with a medium-educated native. Results also show that younger cohorts of immigrants are more likely to choose hypogamy when marrying a same-origin immigrant than when partnering a native.

Keywords: intermarriage, status-caste exchange, educational hypogamy

Bildungssortierung in Mischehen in der Schweiz

Zusammenfassung: Laut Status-caste exchange Theorien, tauschen höher gebildete Einwanderer ihren Status zugunsten der Gruppenzugehörigkeit ihrer einheimischen PartnerInnen ein. Basierend auf einer Studie von 2 836 verheirateten MigrantInnen in der Schweiz, zeigen wir, dass hochqualifizierte Personen nur dann Bildungsgrenzen überschreiten, wenn sie mit einheimischen PartnerInnen mittleren Bildungstandes eine Paarbeziehung eingehen. Zudem wählen jüngere Kohorten weniger hypogame Beziehungen, wenn ihre LebensgefährtInnen der gleichen Herkunftsgruppe entstammen.

Schlüsselwörter: Mischehen, status-caste exchange, Bildungshypogamie

Les caractéristiques éducatives des conjoints dans les mariages mixtes en Suisse

Résumé : Selon la théorie du status-caste exchange, les mariages mixtes impliquent des transactions dans lesquelles les migrants plus diplômés échangent leur statut social contre l'avantage ethnique de leur partenaire natif moins diplômé. En étudiant 2 836 migrants mariés en Suisse, nous trouvons que ceux plus diplômés «échangent» leur statut seulement avec des natifs de niveau d'instruction moyen. De plus, les migrants des cohortes récentes choisissent l'union hypogamique plus souvent lorsque le partenaire a la même origine ethnique que lorsqu'il est natif.

Mots clés : mariages mixtes, status-caste exchange, hypogamie selon le niveau d'instruction

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1 Introduction

With upward immigration flows, and growing opportunities for inter-ethnic contacts, recent decades have made romantic encounters between people of different origins increasingly more likely to occur (Lanzieri 2012). One of the central theoretical standpoints devoted to the understanding of mixed marriage patterns is the status-caste exchange theory (Davis 1941; Merton 1941). Its proponents suggest that given balanced opportunities for interaction, immigrants' chances of marrying natives hinge on their level of qualifications, with highly educated immigrants being able to "trade" human capital in exchange for natives' ethnic advantage. It is also frequently assumed that entering marriage with a native member of the host country represents the utmost proof of integration for newcomers (Alba and Nee 2003; Gordon 1964). Identifying the factors that could increase immigrants' chances of integration via (inter)marriage with natives are therefore of particular interest. Education in general is recognized as one of the most important criteria in partner selection, invariably considered a marker of labour market returns (Kalmijn 1994). A high level of education represents one of the most valued qualities on the marriage market (Becker 1981; Oppenheimer 1988), signalling not only economic well-being, but also a given level of cultural capital and lifestyle (Halpin and Chan 2003; Hou and Miles 2008; Mare 1991).

Despite the importance of discerning how marital choices for an ethnically exogamous (i. e., different-origin) versus endogamous (i. e., same-origin) spouse intersect with education, empirical evidence is limited, and most often applied to the U.S. (e. g. Fu 2001; Oian 1997). The validity of status-caste exchange has not been evaluated in a national context with a remarkably large share of foreign-origin residents with high educational credentials, such as Switzerland (OECD 2015). With many new arrivals in the last 10–15 years and the inflow of highly skilled workers from the member countries of the European Union, Switzerland's immigrant population has been diversifying, particularly in terms of educational qualifications (Liebig et al. 2012). It remains unclear however how these transformations impacted marital patterns, especially immigrants' chances of (inter)marrying a native, across cohorts and generation type. It could be likely that the growing population of highly skilled newcomers would make immigrants' choice for a same-origin and similarly highly educated partner more viable, thus challenging the assumptions of status-caste exchange theory, particularly the proposition of an immutable preference for matching with natives.

Furthermore, Switzerland is one of the few Western European countries where, despite overall educational expansion (Schofer and Meyer 2005), the gender gap reversal in education is yet to be observed (De Hauw et al. 2015), and traditional gender roles are persistently visible (Kanji and Hupka-Brunner 2015; Levy et al. 2002). Despite a global trend towards a growing number of marriages in which

the wife is better educated than her husband (Esteve et al. 2013; Schwartz and Mare 2005), female hypogamous unions (i. e., women marrying men with a lower educational level than their own) are modestly increasing in rate and remain broadly uncommon in Switzerland (Branger 2014). Whether or not immigrant women with higher education could barter their superior level of schooling and act as innovators of educational marital sorting in such a particular context, is yet to be clarified. Finally, previous studies have also fallen short in assessing the role of the specific national origin of immigrants with respect to the status-caste exchange hypothesis (Choi et al. 2012). We predict strong inter-origin group differences in its validation given wide variation in the returns to education among different immigrant groups (Liebig et al. 2012).

In this study, we ask whether immigrants increase their chances of having a Swiss native spouse by means of a higher educational attainment. Using recent and comprehensive data from the 2013 Family and Generations Survey and a sample of 2 836 immigrant respondents, we engage in a series of multinomial logistic regression models meant to examine educational matching in exogamous versus endogamous marriages, across gender, origin group, generation type, and cohort group. In doing so, we propose theoretical hypotheses based on the status-caste exchange perspective, and we complement it with arguments related to cultural distance (Hofstede 2001), the role of preferences, opportunities and third parties in intermarriage (Kalmijn 1998), as well as changing gender norms in educational sorting (Esteve et al. 2013). Given that the most pivotal intermarriage types where exchanges between one partner's educational capital and the other's nativity advantage, are the ones between immigrants and natives, we focus on this particular marital configuration and leave aside mixed unions that do not involve a native spouse.

2 Background

2.1 Mixed partnerships in Switzerland

Despite Switzerland's sizeable share of immigrant population and the increasing prevalence of partnerships between individuals with immigrant background and Swiss natives (Ossipow and Waldis 2003), the patterns related to mixed unions in Switzerland have rarely been explored but for a few studies. Notwithstanding different data sources and different national origin classifications, previous research found evidence of an ethnically segregated and hierarchical (inter)marriage market, with consistent inequalities across different immigrant groups. A recent study (Potarca and Bernardi 2016) found that immigrants from bordering European countries (i. e., Germany, France, Austria) have the highest chances of getting and staying married with Swiss natives, whereas those from ex-Yugoslavia and Turkey have both lower probabilities of intermarrying and higher chances of divorcing their native spouse.

Southern Europeans occupy an intermediate ranking with equally low chances of intermarrying natives, but a greater likelihood of marriage survival compared to ex-Yugoslavs and Turks (ib.). Kohler (2012) also reveals low intermarriage (with natives) rates among Turkish immigrant women, as well as those from non-Western non-European regions (e. g., South and Central Asia, Middle East, and Maghreb), rates that get even more reduced for the second generation and for younger cohorts. Nevertheless, the same study shows that Southern European immigrant women are increasingly more likely to have a native partner if they belong to the second as opposed to the first generation (ib). All in all, research agrees on the following: first, the privileged status of EU immigrants on the (inter)marriage market, who are most often highly skilled, better employed, and share language and cultural affinities to the native Swiss (Lagana et al. 2014; Liebig et al. 2012); and second, the disadvantaged position of ex-Yugoslavs and Turks, who are repeatedly linked to high ethnic endogamy patterns, as well as comparatively poorer socio-economic integration outcomes (Fibbi et al. 2015; Kohler 2012; Potarca and Bernardi 2016; Wanner et al. 2005).

2.2 Status-caste exchange theory

Notwithstanding the ethnic hierarchies within the Swiss marriage market as well as in other Western contexts (e. g., Dribe and Lundh 2011; Kalmijn and van Tubergen 2010), previous research also found that higher education can offset the importance of ethnicity/ national origin as social boundary in mate selection (Choi et al. 2012). This means that better educated immigrants have higher propensities of marrying natives than their lower educated counterparts, and that their level of studies often surpasses the level of their native spouse (Trilla et al. 2008; Guetto and Azzolini 2015; Maffioli et al. 2014). These findings align to the predictions of status-caste exchange theory (Davis 1941; Merton 1941). As previously mentioned, this theoretical standpoint proposes that mixed unions involve an intrinsic exchange in which both partners trade status characteristics. Introduced with reference to the black – white racial divide in the U.S., the theory predicts that lower educated whites would be more open towards partnering a black person, provided the latter possesses higher educational endowments in exchange for the higher racial status of the former. Based on the same reasoning, better-educated blacks would have higher chances of having a white spouse than lower educated blacks, because they are able to barter their superior level of schooling with the high racial status of their white partner. Moreover, higher educated minority members would generally be more prone towards dating out-group members given that higher education is usually associated with better integration, an increase in interracial/ interethnic contact, and a decrease in in-group favouritism (Lieberson and Waters 1988). Symmetrically, the perception that native members hold with respect to higher educated immigrants would also be more positive compared to that held towards the lower educated.

Despite certain rebuttals (Hou and Myles 2013; Kalmijn and Van Tubergen 2006; Rosenfeld 2005), and polemics regarding the most appropriate method to capture empirical proof of these theoretical claims (Gullickson and Fu 2010; Kalmijn 2010; Rosenfeld 2010), multiple studies confirm status exchanges in marital unions in the U.S., specifically between Hispanics and whites (Fu 2001; Qian 1997), and between blacks and whites, particularly black men and white women (Fu 2001; Gullickson 2006; Kalmijn 1993; Qian 1997; Schoen and Cheng 2006; Schoen and Wooldredge 1989). There is also evidence for status exchange theory for black/ white intermarriage in Brazil (Gullickson and Torche 2014), immigrant men married to native women in the U.S. and partially in Australia (Choi et al. 2012), as well as immigrants married to natives in Italy (Guetto and Azzolini 2015; Maffioli et al. 2014) or Spain (Trilla et al. 2008).

Based on both theoretical arguments and empirical proofs, we would expect that in Switzerland, similar to other national contexts, *immigrants would be more likely to have a native rather than a same-origin spouse if they marry down on education* (i. e., have a higher level of qualifications than their partner). This should be *particularly the case for immigrant men* given the historically dominant and normative pattern of female educational hypergamy (i. e., women marrying men with a higher educational level than their own) in assortative mating (Blossfeld 2009). In recent years, against the background of the expansion of higher education and the reversal of the gender gap in schooling[1] in most middle- and high-income countries (Buchmann and DiPrete 2006; Hausmann et al. 2009), there has been a gradual decrease in hypergamous marriages and a rise in educational hypogamy (Bouchet-Valat 2015; Esteve et al. 2013; Grow and van Bavel 2015; Schwartz and Mare 2005). Despite these trends, couples in which the wife has the educational advantage should still be regarded as non-normative particularly in a context with a strong male breadwinner tradition such as Switzerland (Kanji and Hupka-Brunner 2015). Moreover, certain studies indicate that in Switzerland immigrant women have lower returns on education in the labour market than both Swiss women and immigrant men (Epple et al. 2015; Liebig et al. 2012; Riaño and Baghdadi 2007). This would suggest that highly trained immigrant women might not have as much "status" to be exchanged with "caste" in intermarriage compared to their male peers, and that lower educated native men might be reluctant to marry them to begin with.

2.3 Origin group differences

Furthermore, we expect substantial origin group differences in the occurrence of status-caste exchange in mixed marriages. Our expectations are based on the distinctive degrees of socio-economic integration of immigrants and on the level of their cultural distance from the native mainstream (Hofstede 2001), which shape both partnering preferences in the search process and the anticipated evaluation by

1 Women outperforming men in tertiary educational attainment.

third parties of one's choice to intermarry (Kalmijn 1998). As previously outlined, ex-Yugoslavs and Turks represent the group that fares the worst in the Swiss marriage market. We predict that for this particular sub-segment of the immigrant population, higher levels of qualifications would bring little to no advantage in the propensity to marry a native. This means that pairings of better educated ex-Yugoslavs and Turks married to lower educated natives would be less likely to occur. There are several reasons that can be put forward. First, previous research revealed a striking education-employment mismatch for highly educated immigrants originating from lower-income countries, with a large share of them being in jobs that do not correspond to their skills and experience, even when having been formally trained in Switzerland (Liebig et al. 2012). Second, the different religion and patriarchal practices and norms among Turks and ex-Yugoslavs (Alba 2005; Lievens 1998) may produce a too wide cultural distance for the native Swiss to cross when engaging in personal interaction with members from these immigrant groups. Riaño (2011) also observes that the ethnic discourse behind immigration policies in Switzerland portrays non-EU immigrants married to Swiss natives in a non-favourable light, invoking their insufficient language skills and overall greater incongruence with the native culture, irrespective of the level of training. The greater cultural distance, whether real (i. e., determined by differences in norms and religion) or perceived (i. e., derived from the state discourse on immigrants), that separates ex-Yugoslavs and Turks from Swiss natives is likely to shape natives' low preferences for marrying a partner from this immigrant group (Carol 2013). At the same time, cultural distance is also likely to guide the expected negative appraisal of such union by third parties (Carol 2016), regardless of immigrants' socio-economic integration. The higher education of ex-Yugoslavs and Turks would thus signal little social prestige to be traded with natives' ethnic advantage.

Conversely, immigrants from neighbouring Western European countries, particularly recent ones, are more often employed in higher-paying and highly-skilled occupations, enjoying better returns on education (Liebig et al. 2012). In this case, higher education is a more reliable measure of economic success and thus a commodity with higher chances to be traded in return for natives' greater ethnic prestige. To sum up, we anticipate that *compared to their Western European peers, higher educated immigrants from ex-Yugoslavia and Turkey would be less likely to exchange status for caste* (i. e., to partner down when marrying a native spouse) given that higher education does not have sufficient relevance for labour market success, and it does not cancel out large cultural gaps. We would also expect these differences to play out stronger for immigrant women from Former Yugoslavia and Turkey than for men. Traditional and patriarchal gender norms (Yüksel-Kaptanoğlu and Ergöçmen 2014) may add to Muslim women's practice to stay away from non-traditional unions in which the man does not hold the educational advantage. Previous research shows that Muslim marriages are indeed highly hypergamous (Muttarak and Testa 2015).

Finally, we expect Southern European immigrants to classify in-between the previous two groups given a better cultural match to the natives than ex-Yugoslavs and Turks, but lower socio-economic performance compared to the Western Europeans.

2.4 Generation type and cohort variation

We furthermore anticipate that compared to first generation immigrants, *proof for exchange theory should be particularly noticeable for new generations of immigrants (i. e., descendants of immigrants)*. Previous research indicates that naturalized immigrant youth have greater gains from high educational credentials than other individuals with migratory background, and even than the native Swiss (Fibbi et al. 2007).

Finally, we also expect birth cohort variation in educational patterns of different-origin versus same-origin marriages. Younger cohorts in general have also been associated with greater financial returns to schooling (e. g., Hamil-Luker 2005). Whether or not better skilled younger generations of immigrants would be more often linked to status-caste exchange in intermarriage compared to older cohorts is difficult to predict, as the greater signalling power of high educational credentials (and subsequent growing demand by natives for high-value mates with higher education) could be offset by the rise in immigrant population and relative group size in recent years. Under conditions of "replenished" minority populations (Jiménez 2008), higher educated immigrants would have better chances of matching with a similarly educated co-ethnic and a lesser need to trade their education for ethnic status. Therefore, given increased opportunities of getting in contact with in-group members, one could expect that *higher educated immigrants from recent cohorts are more likely to match with a similarly educated in-group partner*, instead of trading their superior level of schooling for the high ethnic status of a lower educated native partner. In this case, the role of mating opportunities (Kalmijn 1998), indirectly tested via cohort effects, would thus override the forces of status-caste exchange and become the prevailing theoretical explanation for observed intermarriage patterns.

3 Data and methods

3.1 Data

We make use of data from the 2013 Family and Generations Survey (originally *Enquête sur les familles et les générations (EFG 2013)*), carried out by the Federal Statistical Office (FSO) with a target population of 15 to 79 years old permanent residents in Switzerland. The *EFG* was designed to inform both scholarship and policy on the current state of families and inter-generational relations in Switzerland (for more details, see Potarca and Bernardi 2016).

The sample covers native Swiss, migrants with an annual or a permanent residence permit for at least twelve months (Permit B or C), and foreign citizens

with a short-term residence permit (Permit L) for a cumulative length of stay of at least twelve months. Excluded categories are international civil servants, diplomats and their family members, and foreign citizens seeking asylum (Permit F or N). The survey was conducted in either German (Standard German or Swiss German), French or Italian. Selected persons who do did not speak any of the proposed languages did not participate in the survey. Among the initial sample of respondents with foreign background (n = 5 463), we selected a sub-sample of participants who declared being in a marital union at the time of survey (n = 3 151). Through listwise deletion, we also excluded cases with inconsistencies in reporting dates of partnership transitions, or with missing information on either one of our variables of interest, as well as respondents born post-1990 (i. e., between 15 to 23 years old), given small numbers and a higher likelihood of not having started their marital career. This led to a final analytical sample of 2 836 currently married immigrant respondents.

3.2 Variable measurement

The dependent variable used in the analysis is type of current marriage, which was created based on both respondent's and their spouse's national origin.

First, *respondent's origin and generation type* were computed based on official FSO guidelines, and made use of extensive information on current nationality, nationality at birth, country of birth, both parents' country of birth, and whether childhood was mostly spent in Switzerland or abroad. If at least one parent was born abroad and the respondents migrated to Switzerland after the age of 16, they are coded as "first generation" and assigned the specific origin of the country of the foreign-born parent (or of the mother, in case both parents were foreign-born). If at least one parent was born abroad and respondents came to reside in Switzerland between the ages of six and 16, they are coded as "1.5 generation" and are given the foreign-born parent's/ mother's country of birth as origin category. If at least one parent was born abroad and they came to reside in Switzerland before the age of six (or were born in Switzerland), respondents are coded as "second generation" and receive foreign-born parent's/ mother's country of birth as origin. The three-category measurement of immigrant generation is in accordance to previous categorizations in intermarriage studies (e. g., González-Ferrer 2006). It is meant to distinguish between individuals who were subject to different migration experiences and acculturation processes: those who migrated as (young) adults (i. e., first generation), those who experienced migration during middle childhood and adolescence (i. e., 1.5 generation), and finally those that are native-born or that migrated during early childhood (i. e., second generation).

Second, *current spouse's origin* is only measured via the following variables: current nationality, nationality at birth (either Swiss or foreign), and country of birth.[2]

2 Supplementary analyses available from authors, in which both respondent's and spouse's origin categorization was constructed using the same coding scheme (i. e., based on information on

If the spouse is currently a Swiss national and had Swiss or double nationality at birth, irrespective of country of birth, he/ she is categorized as "native." If partners have a non-Swiss nationality at birth, then information on country of birth is used as measure of their specific immigrant origin.

We distinguish between five *origin* groups (for the current spouses, and five origin groups for respondents, for whom the categorization excludes the "Swiss native" option), as follows: 1) Swiss natives, 2) Western Europeans (from Germany, France or Austria), 3) ex-Yugoslavs and Turks, 4), Southern Europeans (originating from Italy, Spain, Portugal or Greece) and 5) others.

Building on the information outlined above, we code *type of union* as "endogamous" if respondent's and spouse's origin coincide, or "exogamous" if their origins are different. Among the latter, we further distinguish between two types of exogamous marital unions: with natives and with immigrants from another ethnic group than their own.

For *education*, we differentiated between three highest levels of education achieved: low education (i. e., no formal training, unfinished or completed compulsory education), which is taken as reference category; medium education (i. e., vocational or general post-compulsory secondary education); and high education (i. e., vocational or academic tertiary education). Based on both partners' education, we construct the main independent variable gauging spouses' educational sorting and differentiating between three types of unions, as follows: 1) the immigrant respondent has a lower level of education than their native spouse; 2) the two partners share the same educational level (i. e., homogamy); and 3) the immigrant respondent has a higher level of education than their native spouse.

Furthermore, *gender* is dichotomous variable with 0 signifying "male" (reference) and 1 "female." We also distinguish between five *cohort* groups, namely respondents born: 1) before 1950, 2) between 1951–1960, 3) 1961–1970, 4) 1971–1980, and 5) 1981–1990.

Control variables include: age at marriage (with categories: 1) below 20, 2) 21–30, 3) 31–40, and 4) over 40), spouses' age difference (which differentiates between: 1) age homogamy, meaning that the spouses share the same age or that the difference is less than 3 years, 2) partner is older, and 3) the respondent is older), a dummy variable measuring whether marriage occurred after migration, a binary variable indicating whether the respondent has been being previously married or

current nationality, nationality at birth (either Swiss or foreign), and country of birth only, thus discarding information on actual nationality at birth and parents' country of birth for respondents) reveal very similar results to the findings described later in the paper. Nevertheless, we prefer to keep different criteria for defining respondent's and spouse's origin in order to maximize the information contained in the sample. Using the same categorization scheme for the respondent as for the spouse also underestimates the number of Swiss-born immigrants and therefore reduces our sample size.

not, linguistic region (with categories: German[3], French, and Italian), and number of children in the household.

3.3 Analytical approach

We first report descriptive results, namely a cross-tabulation of educational sorting by marriage type, divided by gender. To test our hypotheses, we then follow with the estimation of a multinomial logistic regression analysis that examines the probability of having an exogamous Swiss spouse, or an exogamous non-Swiss spouse, versus an endogamous one (i. e., reference category) among immigrant respondents. As previously mentioned, we distinguish between exogamous unions involving a native spouse and exogamous marriages involving an immigrant belonging to another national origin group. We however only focus on the comparison between endogamous unions and exogamous unions with a native spouse. The key covariate is the educational sorting between immigrant respondents and their spouse. To inspect differences between men and women, between various origin groups, generation type, and cohort groups, we also fit a series of models with interaction terms. Based on these specifications, we estimate and plot predicted probabilities or contrasts of predicted probabilities of having a native versus same-origin spouse by relevant factors, at averaged values of all covariates. To account for non-response biases, the data included in all analyses are adjusted with the weight *wtelpers*. The weights take into account marital status (married or not), nationality (Swiss or not), sex, age groups, and (groups of) cantons of residence. Weights were further calibrated to correspond to the permanent resident population of Switzerland aged 15–79 in the year 2013.

Although log-linear models would have had the advantage of accounting for marginal distributions and have in fact been frequently used in empirical studies of intermarriage, particularly in the U.S. (e. g., Qian and Lichter 2007), the method is subject to on-going controversies (Gullickson and Fu 2010; Kalmijn 2010; Rosenfeld 2005; 2010). Scholars are still in disagreement regarding the correct way to design model specification (e. g., which parameter to choose to capture status-caste exchange effects, which other relevant parameters shall be included) or model selection (i. e., which is the best fitted model to be chosen). Furthermore, log-linear models require large samples and do not favour the inclusion of a high number of covariates. Given both the size of our dataset (i. e., $N = 2\,836$) and the theoretical focus on moderation by multiple factors (i. e., gender, origin group, generation type, birth cohort), our distinct analytical choice is optimal. Testing status-caste exchange theory by means of multinomial logit models has recently gained ground (e. g., Hou and Myles 2013), also because such method ensures a smoother computation

3 The very few cases of respondents in the Romansch linguistic region were recoded into the German category.

process and a clearer interpretation of results. Our model specification[4] resembles the one used by Guetto and Azzolini (2015) in their study of status-caste exchange in migrant women-native men marriages in Italy. As opposed to them, we examine both migrant women-native men and migrant men-native women marital unions. Nevertheless, we could not investigate status-caste exchange in intermarriage from the perspective of natives as well, given that the sample size of exogamous unions among native respondents is too small to warrant a detailed examination of educational sorting (e. g., $n = 6$ native men married to immigrant women originating from former Yugoslavia and Turkey).

4 Results

4.1 Descriptive results

Table 1 reports the descriptive statistics for the immigrants' sample both as a generic group and by origin. The exogamy with native rate in the total sample is 29.2%, reaching 42.1% among Western Europeans and only 8.5% among ex-Yugoslavs and Turks. The latter are also the least likely to be part of an educational homogamous marriage, the more likely to be men, younger, marry at an earlier age, and have on average a higher number of children. Western Europeans are positively selected with respect to formal training, with 49.7% of them having higher education, as opposed to Southern Europeans, who are more likely to be lower educated, or ex-Yugoslavs and Turks, who more often hold a medium-level educational degree. The sample is comprised of 74.1% first generation immigrants. Western Europeans are particularly numerous (80.7%) within this category, while Southern Europeans are more common than other groups in the second generation cluster (29.5% versus 18.3% for the larger sample).

Table 2 displays weighted percentages of educational sorting by marital union type and gender. The figures provide a crude assessment of how frequent mixed marriages in which immigrants marry down are. We notice that, on one side, immigrant men are often part of exogamous unions with native women in which they are more educated than their wife (33.9% versus 27.4% in endogamous unions). Immigrant women on the other side are more frequently trading down on education in endogamous unions (19.0%) than in exogamous unions with a native spouse (13.8%). In fact, immigrant women are much more likely to marry up in exogamous unions with natives (29.2%) than in both endogamous (19.6%) and exogamous unions with other immigrants (12.5%). In the case of both men

4 We could not replicate the study design of Hou and Myles (2013), who model the probability of intermarriage based on marital sorting while accounting for both spouses' educational level and migration background, given the lack of information on partners' migration history in early life (i. e., which generation type they belong to). In our models, we focus on the perspective of the respondent only, for whom we have all relevant information.

Table 1 Summary statistics of main variables

	Total sample (%)	Western Europe (%)	Ex-Yugoslavia and Turkey (%)	Southern Europe (%)	Others (%)
Type of marriage					
Endogamy	51.0	36.7	73.0	66.2	29.9
Exogamous (with native)	29.2	42.1	8.5	20.7	41.6
Exogamous (with other immigrant)	19.9	21.2	18.4	13.2	28.5
Educational sorting					
Marry up	23.1	20.9	31.5	21.9	21.3
Homogamy	60.2	62.6	49.2	61.6	63.0
Marry down	16.8	16.6	19.3	16.5	15.7
Gender					
Male	49.3	48.8	57.3	51.3	42.0
Female	50.7	51.2	42.7	48.7	58.0
Education					
Low	22.4	5.8	21.6	41.2	13.4
Medium	42.4	44.5	57.8	39.8	33.9
High	35.2	49.7	20.7	19.0	52.7
Generation type					
First generation	74.1	80.7	71.0	62.7	85.3
1.5 generation	7.6	3.9	17.4	7.9	4.4
Second generation	18.3	15.4	11.6	29.5	10.3
Birth cohort					
1940–1949	10.9	18.3	4.1	11.5	7.6
1950–1959	17.1	19.6	9.3	20.9	15.1
1960–1969	29.2	32.9	25.2	31.1	25.9
1970–1979	28.1	22.8	27.8	26.5	35.3
1980–1989	14.7	6.4	33.5	10.1	16.2
Age at marriage					
Below 20	8.9	3.9	16.4	13.0	3.1
21–30	59.0	51.4	66.4	63.3	55.9
31–40	23.9	31.2	13.1	17.7	32.1
Over 40	8.3	13.5	4.2	6.0	8.9
Spouses' age difference					
Age homogamy	53.8	54.7	57.5	57.3	45.6
Partner older	23.7	21.7	18.0	21.0	33.1
Respondent older	22.5	23.6	24.5	21.7	21.3
Married post-migration	78.0	71.8	77.7	82.8	77.7
Previously married	9.5	12.7	8.2	6.3	11.7
Linguistic region					
German	63.7	75.2	80.9	50.4	59.5
French	29.5	23.4	14.0	35.3	37.4
Italian	6.9	1.4	5.1	14.3	3.1
	Mean (standard deviation)				
Number of children in household	1.17 (0.02)	0.95 (0.05)	1.56 (0.07)	1.14 (0.04)	1.19 (0.05)
N (unweighted)	2836	649	392	1076	719
% row	100.0	22.9	13.8	37.9	25.4

Source: EFG Family and Generations Survey (2013). Weighted data by wtelpers.

Table 2 Distribution of educational sorting by marriage type and gender

	Endogamy	Exogamous (with native)	Exogamous (with other immigrant)	Total
Male immigrants (unweighted n = 1 363)				
Marry up	11.1	14.4	11.5	12.0
Homogamy	61.6	51.8	60.0	58.8
Marry down	27.4	33.9	28.5	29.2
	100.0	100.0	100.0	100.0
Female immigrants (unweighted n = 1 473)				
Marry up	19.6	29.2	12.5	21.4
Homogamy	61.4	57.0	69.6	61.5
Marry down	19.0	13.8	17.9	17.0
	100.0	100.0	100.0	100.0

Source: EFG Family and Generations Survey (2013). Weighted data by wtelpers.

Table 3 Distribution of marital status by educational level and gender

	Low	Medium	High	Total
Male immigrants (unweighted n = 1 770)				
No partner	17.4	29.7	28.3	26.8
Endogamy	64.4	37.0	31.5	40.0
Exogamous (with native)	9.6	19.4	20.8	18.1
Exogamous (with other immigrant)	8.6	13.9	19.5	15.1
	100.0	100.0	100.0	100.0
Female immigrants (unweighted n = 1 913)				
No partner	12.9	23.9	32.7	24.8
Endogamy	61.0	33.3	23.9	35.7
Exogamous (with native)	17.9	29.3	24.1	25.1
Exogamous (with other immigrant)	8.3	13.6	19.2	14.5
	100.0	100.0	100.0	100.0

Source: EFG Family and Generations Survey (2013). Weighted data by wtelpers.

and women, educational endogamy is the most likely to occur across all three types of unions, but the extent of this happening is the smallest among intermarriages with natives. To briefly check whether selection into marriage occurs differently for highly educated versus lower educated immigrants, Table 3 shows the distribution

of marital status by educational level and gender for a sample that also includes the non-married. The percentages illustrate that whereas highly educated immigrant men are almost as likely as their medium educated counterparts to be unmarried at the time of the survey, highly educated immigrant women are slightly more likely to have no marital partner compared to low and medium educated women. The lower educated in general seem to be over-represented in marriage. When it comes to selection into exogamy (with natives), it is the medium and highly educated immigrant men and women that are more often to report a native spouse, while in endogamous arrangements, it is the lower educated that are over-represented.

4.2 Multivariate results

Table 4 reports the relative risk ratios[5] of a multinomial logistic regression model that examines, having endogamous marriage as reference, the probability of having a native spouse (left panel), and the probability of having a partner from another immigrant group (right panel), while controlling for various factors. We mainly focus, as previously noted, on results corresponding to marriages with native partners. The reader recalls that we first hypothesized that the likelihood of an immigrant being married to a native rather than a co-national is highest among those couples in which the immigrant is more educated than their spouse. To assess this hypothesis, we look at the estimates of Model 1, which includes the main effect of educational sorting. Results show the complete opposite of our expectation, with immigrants that are more educated than their partner having a significantly lower likelihood of having a native spouse. To investigate whether this applies to both men and women, Model 2 adds an interaction between educational sorting and gender. Findings indicate no significant gender differences in the probability of status-caste exchange occurring.

For the sake of confirming that the theory of status-caste exchange does not receive any support in the context of Swiss intermarriages, we further estimate a model that includes a more detailed measure of the educational mixing of the couple, one that differentiates between nine educational constellations, based on all nine possible combinations between the respondent's and their partner's educational level. Figure 1 plots the predicted probabilities and 95% confidence intervals of having a native spouse as opposed to a same-origin one, based on the model just described. The graph shows that, for both genders, marriages involving a native spouse are most likely to happen when the immigrant respondent has a low level of education and their native partner has a medium level (i. e., the opposite of status-caste exchange), but also when the immigrant respondent is highly trained while the native partner has a medium educational level (i. e., evidence for status-caste exchange). We also notice that mixed unions are also more probable between similarly educated partners

5 A relative risk ratio higher than 1 suggests an increased risk, while a value lower than 1 reflects a reduced risk.

Table 4 Multinomial logit results for type of marriage among immigrants (endogamous = reference category), N = 2 836

	Exogamous (with native)				Exogamous (with other immigrant)			
	Model 1		Model 2 (Model 1 + gender interaction)		Model 1		Model 2 (Model 1 + gender interaction)	
	RRR	S.E.	RRR	S.E.	RRR	S.E.	RRR	S.E.
Educational sorting (Marry up = ref.)								
Homogamy	0.369***	(0.201)	0.355**	(0.349)	0.806	(0.227)	0.546	(0.312)
Marry down	0.334***	(0.246)	0.388*	(0.380)	0.601	(0.283)	0.450*	(0.364)
Gender (male = ref.)								
Female	1.463*	(0.149)	1.461	(0.374)	1.195	(0.167)	0.673	(0.402)
Educational sorting × gender interaction								
Homogamy × female			1.118	(0.403)			2.033	(0.427)
Marry down × female			0.724	(0.447)			1.648	(0.472)
Educational level (low = ref.)								
Medium	2.663***	(0.203)	2.657***	(0.203)	2.089***	(0.221)	2.055**	(0.223)
Low	3.162***	(0.249)	3.114***	(0.248)	3.001***	(0.265)	2.945***	(0.268)
Generation (first generation = ref.)								
1.5 generation	2.269***	(0.221)	2.261***	(0.222)	1.649	(0.281)	1.642	(0.282)
Second generation	4.467***	(0.183)	4.410***	(0.183)	2.598***	(0.207)	2.581***	(0.207)
Origin (Western Europe = ref.)								
Former Yugoslavia & Turkey	0.122***	(0.304)	0.122***	(0.305)	0.688	(0.276)	0.675	(0.278)
Southern Europe	0.193***	(0.181)	0.195***	(0.184)	0.388***	(0.235)	0.379***	(0.237)
Others	1.538*	(0.180)	1.541*	(0.180)	1.890**	(0.198)	1.864**	(0.198)
Birth cohort (Before 1950 = ref.)								
1951–1960	0.719	(0.211)	0.72	(0.212)	0.758	(0.245)	0.758	(0.245)
1961–1970	0.460***	(0.216)	0.468***	(0.216)	0.629	(0.251)	0.624	(0.251)
1971–1980	0.314***	(0.238)	0.321***	(0.239)	0.681	(0.261)	0.674	(0.262)
1981–1990	0.284***	(0.280)	0.295***	(0.281)	0.427**	(0.321)	0.418**	(0.322)

Continuation of table 4 on the next page.

Continuation of table 4.

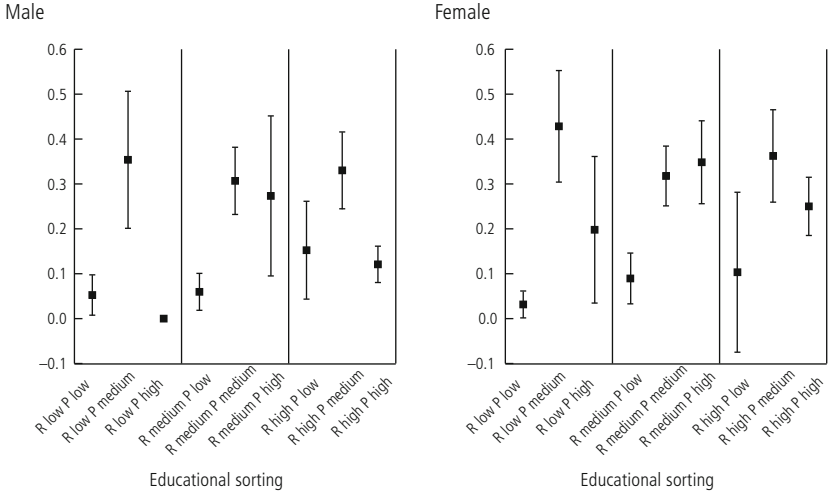
	Exogamous (with native)				Exogamous (with other immigrant)			
	Model 1		Model 2 (Model 1 + gender interaction)		Model 1		Model 2 (Model 1 + gender interaction)	
	RRR	S.E.	RRR	S.E.	RRR	S.E.	RRR	S.E.
Age at marriage (below 20 = ref.)								
21–30	3.195***	(0.319)	3.154***	(0.317)	2.692**	(0.335)	2.665**	(0.335)
31–40	4.826***	(0.342)	4.834***	(0.340)	4.476***	(0.358)	4.416***	(0.357)
Over 40	4.405***	(0.417)	4.420***	(0.415)	7.633***	(0.433)	7.627***	(0.432)
Spouses' age difference (age homogamy = ref.)								
Partner older	1.233	(0.160)	1.24	(0.161)	1.087	(0.187)	1.091	(0.187)
Respondent older	0.882	(0.201)	0.872	(0.201)	0.946	(0.180)	0.928	(0.181)
Married post-migration	9.275***	(0.253)	9.283***	(0.253)	1.779**	(0.191)	1.782**	(0.191)
Previously married	0.965	(0.249)	0.961	(0.248)	1	(0.260)	1.008	(0.260)
Linguistic region (German = ref.)								
French	1.014	(0.148)	1.027	(0.148)	1.203	(0.142)	1.206	(0.142)
Italian	1.901***	(0.173)	1.897***	(0.174)	1.16	(0.208)	1.15	(0.207)
Number of children in household	0.913	(0.075)	0.912	(0.075)	1.021	(0.075)	1.022	(0.075)
Constant	0.064***	(0.469)	0.063***	(0.524)	0.065***	(0.429)	0.095***	(0.498)
McFadden's R^2	0.198		0.200		0.198		0.200	
Log-likelihood	–891 140.568		–889 674.482		–891 140.568		–889 674.482	

Source: EFG Family and Generations Survey (2013). Weighted data by wtelpers.
Notes: RRR = relative risk ratios; S.E. = standard errors.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

if their level of education is medium (for both men and women), and only in the case of immigrant women married to native men, when both partners are highly educated. Finally, a high chance of mixed marriage is also observed for couples in which the immigrant wife has medium education, while the native husband has higher education (i. e., the opposite of status-caste exchange, but in alignment with traditional gender role expectations). All in all, these additional results uphold the limited evidence of exchanges between partners' educational and ethnic prestige occurring in mixed marriages in Switzerland.

Furthermore, we anticipated substantial inter-origin group differences, with higher

Figure 1 Predicted probabilities of having a native (versus same-origin) spouse among immigrant men and women, by educational constellations (95% confidence interval)



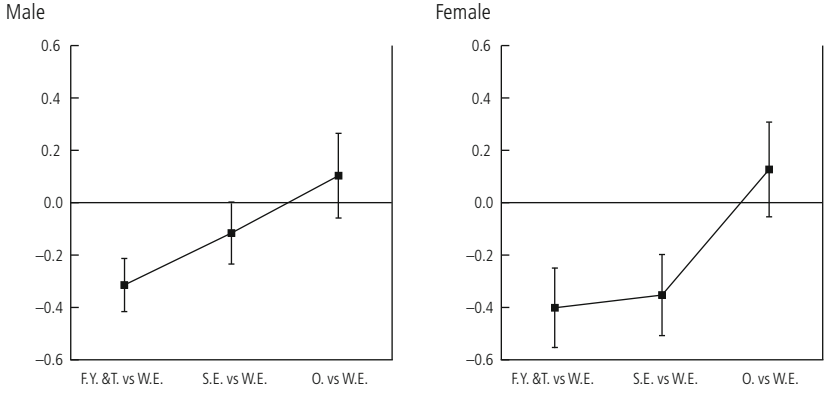
Notes: R = respondent (immigrant), P = partner (native).
The predicted probability for mixed unions involving a low-educated immigrant man and a high-educated native woman is 0 given the lack of such unions among observed cases.
Based on a multinomial logistic regression model of type of marriage (endogamous as baseline category) with an interaction between gender and educational constellations, controlling for origin group, generation type, birth cohort, age at marriage, spouses' age difference, whether married post-migration, whether previously married, linguistic region, and number of children in household.

educated immigrants from Former Yugoslavia and Turkey expected to be less likely to marry down when partnering a native, compared to Western Europeans, particularly among women. To better assess and visualize the hypothesized differences, Figure 2 contrasts the predicted probabilities of having a native spouse (versus a same-origin one) among immigrant men and women marrying down by group of origin. If the 95% confidence interval does not cross the 0 reference line, then the difference between origin groups is significant. We notice that compared to Western European

immigrants, those from former Yugoslavia and Turkey are significantly less likely to marry down, irrespective of their gender,[6] when having a native spouse. This confirms our initial expectation according to which relatively higher education among this particular immigrant group is a poor signal of success in the marriage market and is of little use in increasing intermarriage chances. Also as expected, Southern Europeans hold an intermediate position, being less likely to engage in status-caste exchange than the Western Europeans (the contrast being significant for women only), but more likely so than ex-Yugoslavs and Turks.[7]

We also put forward the hypothesis that status-caste exchange would be more apparent

Figure 2 Origin group contrasts of predicted probabilities of having a native (versus same-origin) spouse among immigrant men and women marrying down (95% confidence interval)



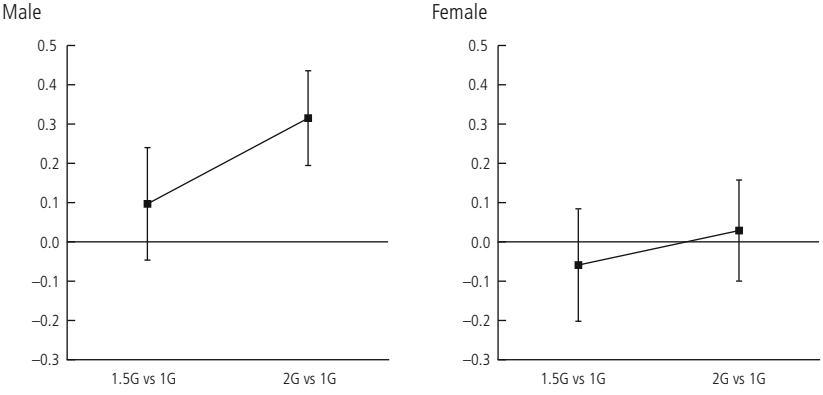
Notes: F. Y. & T. = former Yugoslavs and Turks, W. E. = Western Europeans, S. E. = Southern Europeans, O. = others.
Based on a multinomial logistic regression model of type of marriage (endogamous as baseline category) with an interaction between educational sorting, gender, and immigrant group, controlling for respondent's education, generation type, birth cohort, age at marriage, spouses' age difference, whether married post-migration, whether previously married, linguistic region, and number of children in household.

among subsequent generations of immigrants than those from the first generation. Figure 3 indicates that this is the case particularly for male immigrants belonging to the second generation. Immigrant women from the second generation are only slightly more likely to marry down compared to first generation women, but the difference is not significant. We also do not observe a significant contrast between 1.5 generation and first generation immigrants.

6 As anticipated, the contrast is slightly larger for women than for men, but the difference between genders is non-significant.

7 The contrast is significant for men only, as additional analyses with Southern Europeans as reference category indicate.

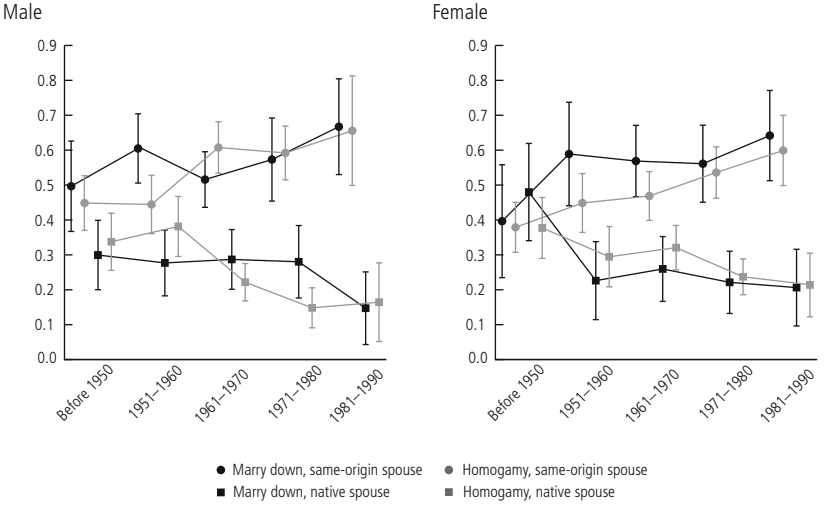
Figure 3 Generation type contrasts of predicted probabilities of having a native (versus same-origin) spouse among immigrant men and women marrying down (95% confidence interval)



Notes: 1G = first generation, 1.5G = 1.5 generation, 2G = second generation.
Based on a multinomial logistic regression model of type of marriage (endogamous as baseline category) with an interaction between educational sorting, gender, and generation type, controlling for, respondent's education, immigrant group, birth cohort, age at marriage, spouses' age difference, whether married post-migration, whether previously married, linguistic region, and number of children in household.

Finally, we contended that, with increasing returns on education and rising immigrant populations over the years, better trained younger cohorts of immigrants would prefer to marry a similarly educated same-origin partner than trade down on education for the ethnic advantage of a native spouse. To investigate these specific inter-cohort difference, we plotted predicted probabilities of having a native or a same-origin spouse by birth cohort among immigrant men and women that either marry down or homogamously (Figure 4). The graph shows that couples with both ethnic and educational positive sorting (i. e., having a same-origin spouse with a similar level of education) are indeed more likely to be seen among younger generations, to the detriment of mixed couples in which the immigrant spouse is more educated than the native one. The results hold for both men and women. A supplementary graph (not shown here) plots cohort-specific contrasts of predicted probabilities of having a native spouse among immigrants marrying down. It shows that the youngest cohort of immigrant men (i. e., born in the 80s) is significantly less likely to marry down when pairing with a native in comparison to most older cohorts, whereas the youngest cohort of immigrant women is only significantly less likely to exchange higher education for ethnic status, compared to the oldest cohort (i. e., those born before 1950). Therefore, the lower probability of marrying down in intermarriage among younger immigrants is part of a recent trend for men, and a longer on-going trend for women.

Figure 4 Predicted probabilities of having a native or a same-origin spouse among immigrant men and women marrying down or homogamously, by birth cohort (95% confidence interval)



Notes: Based on a multinomial logistic regression model of type of marriage (endogamous as baseline category) with an interaction between educational sorting, gender, and birth cohort, controlling for respondent's education, immigrant group, generation type, age at marriage, spouses' age difference, whether married post-migration, whether previously married, linguistic region, and number of children in household.

5 Conclusion and discussion

In this study we inquired whether higher educational credentials could operate as instrument of immigrant integration in the marriage market of a country known for its traditional gender values, and its large share of highly skilled immigrant workers. Based on the assumptions of the status-caste exchange theory (Davis 1941; Merton 1941) and looking at prevailing marriages reported in the 2013 Family and Generations Survey data set, we proposed that better educated immigrants are more likely to match with partners belonging to the native majority group because they can compensate for their lower ethnic/ nativity status with their educational status advantage. We also explored this hypothesis across gender, immigrant group, generation type, or cohort group.

The evidence against status-caste exchange in marriages between an immigrant and a Swiss native partner aligns with studies contesting the legitimacy of such theoretical view (e. g., Rosenfeld 2005), particularly outside of the U.S. (e. g., Hou and Miles 2008). The few encounters in which trading between a partner's education and the other's ethnic advantage do seem to occur are those between a highly

educated immigrant and a medium educated native. Marital unions in which the immigrant spouse is medium educated and the native spouse has lower education are not equally probable. This shows that the crossing of educational boundaries in ethnic mixing in Switzerland is likely to result only when the distance between partners' educational levels is not too large, and only when the immigrant partner has high educational credentials. For neither immigrant men, nor immigrant women, high-level education does not increase the chances of being married to a native with low education with whom to barter "status" for "caste." The advantages that could result from marrying a native partner do not seem to justify the crossing of such large educational gap. This undermines an inherent assumption within the status-caste exchange theory, which asserts that "whiteness" (in the U.S.) and native origin (in the European context) prevail as utmost preference on the marriage market, and that given the opportunity, being matched to a majority member would be an incontestable first choice. Our results illustrate that highly skilled immigrants would rather follow pathways towards integration that occur outside the confines of (inter)marriage with Swiss natives if the educational distance between partners is too great. The findings thus refute the status-caste exchange theory in its classical form (i. e., the highly educated minority member trading status for the "caste" advantage of the lower educated majority member) and propose a downplayed version of status-caste exchange, in which trading is more likely to happen with a medium educated native partner.

The reason behind status-caste exchange occurring in marriages between highly educated immigrants and medium educated natives might lie in the marginal distribution of education in the population. In Switzerland graduating from programmes at the upper secondary level is highly common, while relatively fewer people are just with a low level of education or hold a tertiary education. In addition, Switzerland has one of the highest employment rates among OECD countries for 25–34 year-olds with vocational training (OECD 2016). As a consequence, Swiss natives with medium education are not only more frequent potential candidates on the marriage market, but also possess a relatively high socioeconomic status. Furthermore, the difference in employment rate between the highly educated and the medium educated is much smaller compared to the differential between the medium educated and the lower educated (ib.). This could also justify why status-caste exchange is observed between the highly educated migrants and the medium educated natives, and not between the medium educated migrants and the low educated natives.

There are also important origin group differences in the educational sorting of intermarriage, which echo the ethnic hierarchization broadly observed in the Swiss marriage market (Potarca and Bernardi 2016). Western Europeans, who are more culturally similar and whose qualifications fit the Swiss labour market better (Lagana et al. 2014), are more prone to marry down, particularly women, in comparison to both Southern Europeans and immigrants from ex-Yugoslavia and Turkey. This pos-

sibly occurs given that in their context of origin, hypogamous couples are no longer exceptional or stigmatized (e. g., Bouchet-Valat 2015; Grow and van Bavel 2015). The higher-educated immigrants from former Yugoslavia and Turkey are the least likely to marry down when marrying a native. There are two possible explanations that could shed light on the partnering practices of these immigrant minorities. On the one hand, as we hypothesised, education in this group may simply not constitute an advantage on the marriage market because it does not translate into sufficient labour market returns to allow for a status-caste exchange. A lower educated native would not gain from marrying a higher educated immigrant that is more culturally distant and at the same time cannot compensate such distance with economic or social status advantages. On the other hand, a higher educated ex-Yugoslav or Turk may represent only a small and select number within a group that is usually reported to show a lower average level of education compared to all other immigrant groups in Switzerland (Liebig et al. 2012). Compared to immigrants belonging to a mostly highly educated group (e. g., Western Europeans), the meaning of having high educational credentials could thus be different for well-trained ex-Yugoslavs or Turks, who might hold an elite status within their group. This position may deter them from compromising on cultural distance by marrying down to a native, and instead choose a co-ethnic spouse with a comparable level of education. Future research could try to directly test these assumptions by accounting for the marginal distribution of education across groups.

The investigation of differences across generation type confirmed that second generation immigrants are more likely to marry down when intermarrying compared to the first generation, suggesting that their better integration translates into higher education acting as a better signal of success. Nonetheless, this finding only holds for men. A supplementary analysis looking at the full spectrum of educational sorting among second generation women shows that the pairings that are more likely to lead to mixed marriages are those between second generation immigrant women matched to better educated native men. These marriage configurations reproduce more closely the educational sorting characterizing Swiss partnerships (Branger 2014): women marring upward, and men marrying downward. A better integration therefore means conformity towards a rather conservative hypergamic pairing among spouses. It is an open question whether educational hypogamy would spread in Switzerland as it has in other Western countries (Esteve et al. 2013; Schwartz and Mare 2005), or whether such tendency will be driven by first generation immigrant groups, who are more likely to engage in such coupling (in either endogamous or exogamous arrangements). In the context of conservative family practices and policies, Swiss immigrants may play the role of innovators introducing non-normative partnership practices. To answer this inquiry, future studies should also compare immigrants' educational matching in endogamous unions to those of natives' endogamous unions.

Our results also show that younger cohorts of better-educated migrants progressively withdraw from the culturally costly mixed marriage choice, and prefer to marry an in-group mate that shares their level of education. We also notice that whereas marrying down to a lesser-educated same-origin partner is more likely among the youngest cohort of both immigrant men and women, having a lower educated native spouse is less likely. Being willing to trade down on education in endogamous arrangements as opposed to exogamous marriages illustrates that as opposed to older cohorts, for younger ones, it is more challenging to cross both types of boundaries (i. e., ethnic origin and education) in partner selection. In line with the previous discussion, we strongly contend that it is migrant-migrant marriages among younger cohorts that are driving demographic change towards normalizing hypogamy, while intermarriages seem to persistently discourage non-traditional educational sorting.

There are certain limitations to our study that require comment. First, we acknowledge the complexity of factors influencing marital decisions and the possibility that the patterns observed in this study do not necessarily reflect the genuine preferences of higher educated immigrants, as they could also conceal the influence of opportunities in the marriage market or the preferences of the native Swiss for traditional and endogamous partnerships. Nevertheless, we consider the investigation of cohort differences as a partial indirect signal of how increased opportunities for in-group contact in recent years steered higher educated immigrants away from intermarriages in which they would marry down. Furthermore, both attitudinal and behavioural research indicates that younger cohorts of Swiss natives are increasingly open towards intermarrying (Carol 2013; Potarca and Bernardi 2016), meaning that our findings are more likely a manifestation of the endogamous preferences of well-educated immigrants than those of natives.

Second, the sample size did not allow us to explore detailed educational constellations for each origin group and by gender, or inter-cohort differences by origin group. Against the background of increasing marital unions formed across ethnic/nativity lines, we hope data collected in the future to include a larger size of mixed marriages in general. The size of our sample constrained us to use broad rather than detailed educational and origin group categories. With respect to educational qualifications, we also did not possess information on whether first generation immigrant respondents (i. e., the ones more often having foreign education) were declaring an educational level that reflects credentials achieved in their country of origin, or the highest degree recognized in Switzerland. Nevertheless, given that the item measuring the highest educational level does not specifically ask respondents with foreign background to translate their degree to the Swiss educational system, we assume that the answer reflects the highest educational credential in general, regardless of where this was obtained. With reference to the categorization of origin group, we acknowledge that grouping respondents from Ex-Yugoslavia and Turkey into a single category does not account for their heterogeneous background; yet, these immigrant

groups are often treated as one group both in research and in the public discourse (e. g., Liebig et al. 2012). For the sake of comparability with previous studies, and to avoid issues related to small cell size (e. g., only $n = 7$ Turkish respondents are in an exogamous marriage with a native), we also align to this practice.

Third, as previously hinted to, given the use of cross-sectional data, we were unable to test whether pre-marriage education or actual economic success measured in earnings' level or occupational prestige causally led to the observed (inter)marital choices. Fourth, we did not have data on pre-marriage language skills to be included as a means to control with more precise indicators the cultural distance between origin groups and Swiss natives. The inclusion of a variable measuring language difficulty during the interview (as assessed by the interviewer) in supplementary analyses does not however alter our current findings.

Despite caveats, our study and its findings raise the issue of better understanding the role of cultural (mis)match in mixed unions where the combination of educational levels vary between spouses. Finally, as an additional recommendation for future research, we encourage the examination of educational sorting in intermarriage for other outcomes, such as marital satisfaction or risk of marital dissolution. Future scholarship could therefore seek to understand if the rarely observed hypogamous intermarriages are also linked to greater relationship dysfunction, or a greater probability of divorce.

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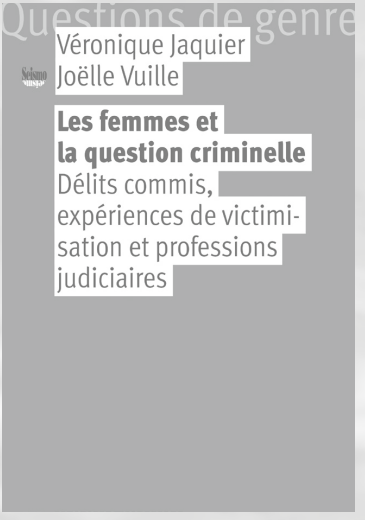
Seismo Questions de genre

Véronique Jaquier, Joëlle Vuille

Les femmes et la question criminelle

Délits commis, expériences de victimisation et professions judiciaire

Délinquantes, victimes et professionnelles de la justice : cet ouvrage examine ce qui réunit et distingue les expériences des femmes face à la criminalité, et ce qui les différencie de celles des hommes. Il retrace d'abord l'apparition des perspectives féministes en criminologie, sous l'angle des rapports entre sexe, genre et science. Déconstruisant les stéréotypes de la délinquance féminine, il en décrit les diverses formes, des plus communes (vol, délinquance routière) aux plus « extraordinaires » (homicide, crime organisé). Sont ensuite discutées les violences conjugales et sexuelles envers les femmes, leurs impacts sur la santé et les politiques publiques qui s'y rapportent. L'ouvrage examine enfin le rôle que jouent les femmes dans le contrôle social de la délinquance. Premier ouvrage en français à proposer un tel panorama, il décrit les multiples façons d'intégrer une perspective de genre à la recherche et à la pratique criminologiques.



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The Influence of Educational Expansion on Partnership Stability: A Cohort Study of First Partnerships in Switzerland[1]

Dorian Kessler*

Abstract: This study examines the association between educational attainment and separation risks in marital or non-marital first partnerships to query the extent to which educational expansion has affected trends in partnership stability. Because the educational gradient in separation changed from being positive for women (and, to a lesser extent, for men) to being statistically non-significant at the same time as educational expansion took place, the latter can only serve as a minor explanation of the exceptional rise in breakup rates in Switzerland.

Keywords: educational expansion, educational gradient, cohabitation, separation, divorce

Der Einfluss der Bildungsexpansion auf Partnerschaftsstabilität: Eine Kohortenstudie zu ersten Partnerschaften in der Schweiz

Zusammenfassung: Um den Einfluss der Bildungsexpansion auf Partnerschaftsstabilität einzuschätzen, untersucht diese Studie den Zusammenhang zwischen dem Bildungsniveau und dem Trennungsrisiko in ehelichen oder nichtehelichen ersten Partnerschaften. Da sich der Bildungsgradient im Trennungsrisiko für Frauen (und, auf einem geringeren Niveau, für Männer) im Zuge der Bildungsexpansion von einem positiven auf ein statistisch nicht-signifikantes Niveau gesenkt hatte, ist letztere keine wesentliche Erklärung für die starke Zunahme der Trennungsraten in der Schweiz.

Schlüsselwörter: Bildungsexpansion, Bildungsgradient, Kohabitation, Trennung, Scheidung

L'influence de l'expansion de l'éducation sur la stabilité des couples : une étude de cohortes de premiers couples en Suisse

Résumé : Pour estimer l'impact de l'expansion de l'éducation sur la stabilité des couples, cette étude analyse l'association entre le niveau de formation et les séparations de couples mariés ou en cohabitation non-maritale. Comme le gradient de l'éducation dans les séparations a diminué d'un niveau positif pour les femmes (et dans une moindre mesure pour les hommes) à un niveau statistiquement non-significatif durant l'expansion de l'éducation, celle-ci n'est pas une explication importante pour la hausse exceptionnelle des taux de séparation en Suisse.

Mots-clés : expansion de l'éducation, gradient d'éducation, cohabitation, séparation, divorce

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1 Introduction

Educational expansion figures prominently in accounts of rising divorce rates (Diekmann and Schmidheiny 2001; Lesthaeghe and Neels 2002; Arránz Becker 2015; Wagner et al. 2015) even though the micro-level association between educational attainment and the dissolution of intimate partnerships remains ambiguous. While socio-economic resources have been found to be a good predictor of the quality and stability of partnerships (Conger et al. 2010; Jalovaara 2012b; Williams et al. 2015), there are important caveats. For one, the advantages accruing from education can also make separation easier: the cultural resources and social opportunities that highly educated men and women have access to can give them a superior ability to cope with the consequences of a breakup, thereby making it more feasible (Leopold and Leopold 2016). For another, economic models suggest that the benefits deriving from higher educational attainment are subject to a gender divide: the increased resources foster partnership stability with respect to men's educational attainment, but lower the stability of partnerships involving highly educated women insofar as their professional obligations diminish their contributions to the couple's household work (Becker 1981). Determining the influence that educational expansion has had on partnership stability thus hinges on whether *educational attainment is associated with higher or lower rates of partnership breakup* and, because women experienced more significant increases in educational attainment (OECD 2016), whether the *association differs between men and women.* The first part of this article addresses these two issues on the basis of a sample of first partnerships that formed between 1935 and 2007.

Educational expansion can only explain increasing partnership breakup rates if greater individual educational attainment increases the risk of separation *and* if this positive educational gradient has remained stable over time. However, a large and growing line of research stresses that the association between educational attainment and partnership behavior depends upon the social and historical context (Teachman 2002; de Graaf and Kalmijn 2006; Härkönen and Dronkers 2006; Martin 2006; Bernardi and Martínez-Pastor 2011; Kalmijn 2013; Matysiak et al. 2014; Puur et al. 2016). The working assumption of this article is that three different factors have contributed to lowering the initially positive educational gradient of first partnership breakups. First, groups of differing educational status have become more similar with respect to attitudes on partnership behavior. Second, increasing social acceptance of separation has led to larger increases in breakup rates among the less educated than among the more educated. Third, while the first two processes hold for both genders, the changes have been more pronounced for women than for men. Taking these assumptions as points of departure, the second part of the article examines whether during the social change that accompanied educational expansion *the educational gradient of partnership breakup changed from being positive*

to being neutral or negative; and, if so, whether this change was more pronounced for women's educational attainment. Finally, the extent to which increases in men's and women's educational attainment can serve as an explanation for historical changes in partnership stability is then quantified in light of the empirical results shown in the first and the second part.

The crucial question is, *would the probability of partnership breakup be lower for today's couples if the increase in educational attainment had not taken place?* Yet, a coherent answer to this question requires taking another development into account. At a time when marriage rates are decreasing and there is a growing tendency to postpone marriage, a comprehensive picture of trends in first partnership breakups cannot ignore the steadily rising trend of nonmarital cohabitation (NMC) (Härkönen 2015). Since NMCs involve a lower level of formal commitment and a lower exit cost than marriages, the rising number of NMCs is likely to have contributed to the overall increase in partnership instability (Jalovaara 2012b). That the rise of NMC has coincided with educational expansion is also unlikely to be purely accidental. While highly educated (and often affluent) individuals, particularly men (Xie et al. 2003), may represent more attractive potential marriage partners (Jalovaara 2012a), their better ability to cope with separation and the uncertainties accompanying partnerships that form during the course of long educational trajectories, may also entail that they are more likely to remain unmarried in their first partnerships (Nazio and Blossfeld 2003; Ní Bhrolcháin and Beaujouan 2013). Thus, in effect, if highly educated individuals are more likely to live in NMCs in first partnerships, the rise in NMC can be presumed to have reinforced the role of educational expansion in increasing partnership instability. Conversely, if lesser educated individuals are more likely to live in NMCs, the role of educational expansion in partnership instability can be presumed to have been mitigated by increases in NMC.

In terms of NMC, Switzerland seems a particularly instructive case. While in 1979 half of the cantons prescribed penalties for nonmarital cohabiters, by 1996 NMC had been legalized in every canton. By providing a comprehensive picture of trends in first partnership separation for marital and non-marital unions alike, this study aims to enrich existing research on the impact of educational expansion (Wagner et al. 2015). It also tests the robustness of the results found by Härkönen and Dronkers (2006), who concluded that there was no change in the educational gradient for divorce among Swiss women. The "gender revolution" in Switzerland has been comparatively mild (Levy et al. 2002; Goldscheider et al. 2015), with a large part of the increase in women's employment being attributed to part-time jobs (Liechti 2014). Nevertheless, by considering the effects of men's and women's education independently, this study helps to discern the relative importance of changes in the educational gradient of separation that are specific to women as well as those which are less gender specific.

2 Exchange-theoretic and economic explanations of educational expansion and partnership stability

Educational attainment is linked to the criteria that exchange-theoretic and economic models of the micro-level mechanisms of partnership behavior consider relevant for partnership stability: *partnership quality,* the *opportunity structures* individuals face when considering breaking up and the *investments* individuals make in the relationship (Becker et al. 1977; Lewis and Spanier 1979; Rusbult 1983; Arránz Becker 2015). Looking at the arguments related to each of these criteria more closely is instructive for the development of theoretical expectations on the influence of educational expansion on partnership stability.

There is a branch of research that consistently associates higher *partnership quality* with more affluent social groups (Conger et al. 2010). Studies in this vein argue that a higher living standard and social status (Jalovaara 2012b), later matches (Kuperberg 2014) and higher levels of personal satisfaction and well-being (Amato and Rogers 1997) are skewed towards more educated groups and associated with higher partnership satisfaction and stability. Better educated individuals, moreover, are thought to be more likely to enter partnerships from educationally homogenous partner markets such as universities (Schwartz and Mare 2005), making them more likely to perceive their partnerships as satisfying (insofar as they share a greater range of common interests and behaviors with their partners) (Arránz Becker 2015). Economic arguments used to explain why education could *lower* partnership satisfaction, on the other hand, focus firmly on *women's* education. Because women, even if they are well-educated, often earn less than their husbands, such arguments posit that couples attain the highest levels of utility if men specialize in a career while women specialize in housework, where they have a comparative advantage (Becker 1981). Since the opportunity cost of remaining out of the labor market is higher for well educated women than it is for less educated women, the probability that one of the partners will specialize in household work is diminished for couples in which the woman holds a higher degree. As a consequence, this partnership dynamic delivers lower gains to the couple and heightens their risk of separation (Becker et al. 1978).

Opportunity structures, i. e. alternatives to continuing a partnership, mitigate the barriers to separation (Arránz Becker 2015). A higher level of education makes the transition following a breakup easier insofar as a couple's economic, cultural and social resources reduce the immediate and more distant consequences of separation. People with higher levels of education have been shown, for instance, to more readily overcome the economic consequences of divorce (Leopold and Leopold 2016), to experience lower drops in social support in the aftermath of separation (Kalmijn and Uunk 2007) and to encounter less difficulties re-partnering after separation (cf. Ivanova et al. 2013).

Micro-level models lead to conflicting assumptions on the role that educational attainment plays in the transition from cohabitation to marriage (Ní Bhrolcháin and Beaujouan 2013; Maslauskaitė and Baublytė 2015). It is clear that marriage, as a form of *partnership investment,* complicates separation just as material (e. g., shared homeownership) or immaterial (e. g., children) (Wagner et al. 2015) investments do (Kopp 2010; Rusbult 1983). What is less clear is how the probability to marry is affected by being well educated. On the one hand, socio-economic resources can help to speed up transitions from cohabitation to marriage (Jalovaara 2012a), particularly for men (Xie et al. 2003). On the other, the extensive time required to complete their education makes it more likely that highly educated individuals enter first partnerships during the course of their studies. Since NMC allows for greater flexibility than marriage it may be seen as a preferable option for couples who have not yet established their professional careers (Nazio and Blossfeld 2003; Ní Bhrolcháin and Beaujouan 2013).

In sum, exchange-theoretic and economic models of partnership stability paradoxically place individuals with more education at both a higher and a lower risk of partnership breakup than individuals with less education. To resolve this paradox within the parameters of such theories entails choosing among the following mutually exclusive hypotheses. *Either* the link between education and partnership stability is mainly determined by higher marriage rates and partnership quality, in which case *less educated individuals are more likely to end a first partnership than more educated ones (H1a)*, and *educational expansion has contributed to more stable partnerships*. *Or* the link is mainly determined by the uncertainty of longer educational trajectories and attractive alternatives to continuing the partnership, in which case *individuals with a higher level of education are more likely to end a first partnership than less educated ones (H1b)*. Lastly, economic models lead to the hypothesis that *higher educational attainment among women more strongly increases separation risks than higher educational attainment among men (H1c)*. Hence, H1b suggests that *educational expansion has decreased partnership stability* and H1c that this influence mainly originates from women's increase in educational attainment, given its more substantial *and* influential nature.

3 Social change and education-specific breakup rates

The second part of this article turns to accounts that suggest that the balance between the contradictory hypotheses above critically depends upon the social context (cf. Härkönen and Dronkers 2006; Kalmijn 2013), i. e. the normative and economic environments that influence the formation, institutionalization, maintenance and separation of partnerships (Arránz Becker 2015). This perspective is used here to examine how changes in *compositional differences* between educational groups and

education-specific behaviors in partnerships have altered the role educational expansion has played in changing partnership stability. These changes are expected to have been intertwined with the gender revolution (Goldscheider et al. 2015) and concomitant *changes in gender relations*.

Research suggests that there has been a gradual convergence in the composition of different educational groups regarding characteristics related to partnership behavior. Alongside the sheer numerical increase of higher educated groups, that is, there has been a change in the attitudinal composition of these groups. In the US, for instance, the reported attitudes in favor of divorce decreased among highly educated and increased among lowly educated young adult women between 1970 and 2000 (Martin and Parashar 2006). Whether the *economic status* of educational groups has converged over the same time, however, is a more controversial question. Although educational groups seem to have become more similar in their occupational prestige (Klein 2015), the association between educational attainment and occupational class seems relatively rigid (Bukodi et al. 2016).

A second point has to do with the interconnections between the diffusion of new forms of partnership behavior, their social acceptance and the *adaptation of these behaviors by lower educational groups*. A central principle of scholarship on the diffusion of innovation is that barriers to new forms of behavior are greatest at the early stages of their diffusion (Rogers 2003). The boundaries that can serve to hinder the advance of new forms of behavior emerge in part from uncertainty about a given behavior's advantages and disadvantages, which, in turn, may reinforce certain socially shared valuations. Several studies have applied these ideas to partnership behaviors to argue that the level of diffusion of NMC or divorce exercises an influence on its social acceptance (Liefbroer and Dourleijn 2006; Soons and Kalmijn 2009; Kalmijn 2010; Schnor 2014; Verbakel 2012). The level of social acceptance, in turn, is believed to influence the partnership behavior of less educated groups (de Graaf and Kalmijn 2006). When NMC and divorce are associated with high social or legal disapproval (as, e. g., evidenced by prohibition laws or complicated legal procedures), it is likely that NMC and divorce are limited to those groups which are most able to deal with social or legal disapproval. The power and resources stemming from educational attainment foster greater abilities to deal with social sanctions and legal impediments (Matysiak et al. 2014). When such impediments are prevalent, therefore, less educated individuals can be expected to be less likely to live in NMC, or to divorce once they have married. As the diffusion of NMC and divorce increases and social hurdles are lessened, however, these groups become more likely to adopt such behaviors (Härkönen and Dronkers 2006; Bernardi and Martínez-Pastor 2011; Ní Bhrolcháin and Beaujouan 2013; Maslauskaitė and Baublytė 2015; Puur et al. 2016).

Reductions in the compositional and behavioral differences between educational groups are also related to changes in the roles women play within partnerships. There

are four main theories that address the question of how *changes in gender relations* have contributed to modifying the association between level of education and partnership breakup. One suggests that with the *normalization of women's participation in the labor market* women in lower educational strata have also come to be more likely to be gainfully employed (Liechti 2014). This, in turn, has lowered differentials in the abilities of women from various educational strata to cope with separations; and it has potentially made NMC and divorce more of an option for less educated women (Härkönen and Dronkers 2006; Matysiak et al. 2014). A second focuses on gender differences in educational expansion. In Switzerland, as well as in many other countries, the increase in educational attainment over the last few decades was more pronounced for women than for men (OECD, 2016). Due to the *leveling of gender ratios within higher educational groups*, increases in educational homogamy can be expected to have been particularly pronounced among the upper echelon of the educational distribution (Diekmann and Schmidheiny 2001; Schwartz and Mare 2005). This trend can be posited to have increased the partnership stability of those with higher levels of education (Arránz Becker 2015). A third builds on the idea that traditional gender norms prevent men from contributing to the couple's housework even if the female partner outearn them (Grunow et al. 2007). Because highly educated women are more often the primary contributors in their household than less educated women, their satisfaction with their partnerships has particularly benefited from a decline of such norms. Finally, a fourth argument emerges from the influence of *gender norms on partnership instability*. At a time when women's labor market participation was lowly valued, couples in which the woman held a high educational degree and was engaged in the labor market were unlikely to receive much social support. As norms and behaviors became adapted towards more egalitarian arrangements, however, women's education and economic independence have received more social support, making them less of a threat to the stability of partnerships (Matysiak et al. 2014; Schwartz and Han 2014; Killewald 2016). Despite their differing points of emphasis, where all arguments centering on social change generally tend to agree is that the association between educational achievement and partnership breakup has become less important in recent decades.

Since decreasing social and legal hurdles to NMC and divorce are expected to have increased breakup rates among lower social strata, and increased homogamy is expected to have particularly decreased breakup rates among higher social strata, *I hypothesize that the educational gradient in partnership breakup was positive among the older cohorts and has steadily decreased since (H2a).* Changes in the labor market position of lesser educated women, the increasingly egalitarian partnerships of highly educated women and the higher social acceptance of their consistently higher labor market engagement, however, lead to the further hypothesis that *the level of the initial positive educational gradient as well as its subsequent decrease have been more pronounced for women than for men (H2b).* It is probable that these processes were

reinforced by a convergence of educational groups with respect to their attitudes on partnership behavior.

Table 1 presents an overview of the hypotheses derived from exchange-theoretic and economic models and social-theoretical accounts. The first row lists their predictions concerning the association between education and partnership breakup, as well as their gender- and cohort-specificity. The second row presents the implications of the hypotheses for two contrary scenarios that illustrate the influence of educational expansion on partnership breakup: (A) how much the probability of breakup would change for a recent cohort given a scenario in which it had the same (lower) levels of education as older cohorts, and (B) how much the probability of breakup would change for an older cohort if it had had the same (higher) levels of education as more recent cohorts. H1a and H1b predict an inverted effect for the two scenarios: if, for example, education is positively associated with breakup (H1b), in scenario A the recent cohort would have a lower probability of breakup than observed, while the older cohort in scenario B would have a higher probability of breakup. Under H2a and H2b, on the other hand, only scenario B makes a difference: since educational level does not exert an influence over the recent cohort, changes in its educational distribution have no consequences for partnership stability.

Table 1 Overview of hypotheses and their consequences for standardization scenarios

	Exchange-theoretic and economic models		Social-theoretical accounts
Association between education and partnership breakup	H1a: –	H1b: + H1c: ++ for women	Older cohort: H2a: + H2b: ++ for women Recent cohort: H2a: 0 H2b: women 0
Difference in breakup probability: scenario vs. observed			
Scenario A: recent cohort with education of older cohort	higher	lower	no change
Scenario B: older cohort with education of recent cohort	lower	higher	higher

4 Sample and measures

The analyses draw on the combined data from four Swiss surveys that retrospectively assessed partnership histories: The Family and Fertility Survey (1994 and 1995, henceforth FFS), the biographical surveys from the first (2001/2002, SHPI) and the third (2013 and 2014, SHPIII) sample of the Swiss Household Panel and the

Inquiry on Families and Generations (2013, IFG). Population universes always refer to the Swiss population in the sample year. Results are reweighted to adjust for survey design (all surveys) and non-response bias (SHP) (FSO, 2015; FORS, 2014, 2015). Weights were normed such that each survey is represented in first partnership cohorts according to its actual representation in specific cohorts and such that observations keep their relative importance with respect to other observations of the same survey. Statistical inference thus parts from the assumption that all partnerships in a given cohort are random draws from these cohorts.[2]

Based on data plausibility and the comparability between cohorts and datasets, several restrictions were made. First of all, partnerships are restricted to *first significant heterosexual partnerships*[3], *no matter their timing* in the life course. Significance is marked by entering either into a common household or direct marriage. Less significant forms of relationships, such as dating partnerships, are not considered. Two types of first partnerships are distinguished: *first NMCs and first marital partnerships.* NMCs are cohabitations with an intimate partner that never turned into marriages, and first marital partnerships are either cohabitations with an intimate partner that led to marriage (premarital cohabitations, PMC) or marriages that preceded or coincided with the start of cohabitation (direct marriages). A core problem with this binary distinction is that the shorter a given cohort is observed (i. e. the shorter the time between survey and formation year), the higher is the share of NMCs that will eventually turn into marriages. In order to reduce this bias, I excluded 2 196 first partnerships that had been observed less than 6 years at the moment of the survey.[4] Another 191 observations were excluded due to the restriction of the age at formation to 15 to 45.[5] Finally, 138 cases were excluded due to lack of information on the variables used (see below). The analyses in this article thus draw on a total sample of 23 310 first partnerships formed between 1935 and 2007, of which 18 722 were marriages and 4 588 NMCs.

The main dependent variable is the *duration of first partnership,* measured in number of years. Duration is calculated as the difference between the calendar year in which the first partnership ended (or the year of the survey if the observation is right-censored) minus the calendar year of formation. The moment of formation is defined either as the year the couple moved in together, or the year of marriage, depending on which event happened first. The end of a marital relationship is defined either as the separation from the spouse (IFG, FFS), or a change in civil

2 Results base on the assumption that underrepresentation of the oldest cohorts due to age restrictions in surveys (IFG), mortality or emigration does not affect the hypothesized associations.

3 Homosexual partnerships have, if identifiable, been excluded (IFG, FFS). In the IFG, this concerns 0.6% of all first partnerships.

4 The general conclusions of the article are robust to larger (e. g., 8 years) or shorter minimal observation periods.

5 45 was chosen as the upper limit in order to decrease bias to due mortality among older cohorts.

status (SHPI, SHPIII[6]). The end of a NMC is the dissolution of the relationship with a co-resident partner (IFG), or the end of the common household with the partner (FFS, SHPI, SHPIII).[7]

Trends in historical time are approximated with *first partnership cohorts*. Cohorts are comprised of first partnerships that were formed in the same historical time period. Depending on the type of analysis, I chose different cohort group widths.

Educational attainment was measured in terms of the number of years of education and was recoded from given information on the highest diplomas achieved by respondents.[8] This type of recoding implies constant, linear effects on the separation risks of an additional year of education and ignores qualitative differences between diplomas with identical duration. *Educational homogamy* is measured by whether partners fall into the same educational category and is restricted to respondents of the IFG. The analyses that refer to education as a categorical variable are supplemented with information on category definitions.

Educational attainment relates to many other dimensions that affect marriage or separation decisions. To reduce the mediating effects of these correlates, estimates are controlled for three factors that are associated with partnership breakup. *Age at formation* measures the age at which the respondent entered the partnership. Research shows that the risk of separation is lower for couples that formed at older ages, which is true for NMCs, PMCs and direct marriages. An important interpretation of this finding relates it to ongoing personal development and the associated likelihood of mismatches for young couples (Kuperberg 2014). *Parenthood* is measured according to whether the respondent has had his or her first child during or prior to the relationship. It can be assumed that parenthood during the partnership fosters relational stability, as it represents a form of investment in the partnership (Wagner et al. 2015). The relationship is less clear when the child was born before the partnership started, since this can indicate that a person other than the one the respondent entered the partnership with is the co-parent. *Parental separation* is measured according to whether the respondent's parents are separated. Parental separation has been shown to decrease the likelihood of marriage (Erola et al. 2012) and to increase the risks of separation (Diekmann and Schmidheiny 2013).

6 Strongly deviating from official numbers on "legal separations," most endings of marital relationships in SHPI and SHPIII were reported as "legal separations" and not as "divorces." This suggests that respondents had often reported the end of marital relationships as a change in civil status.

7 For the SHPI it is not possible to exclude endings of NMC due to death of partner.

8 Highest education achieved was translated into years of education using the information of the Federal Office of Statistics for 1997: "No diploma" 8 years; «Obligatorische Schule» 9 years; «Anlehre» 9.75 years; «Handelsschule/Haushaltslehrjahr» 10 years; «Berufslehre» 10.5 years; «Diplommittelschule» 11.5 years; «Vollzeitberufsschule, Berufsmaturität, Meisterdiplom/Fachausweis» 12 years; «gymnasiale Maturität, Techniker-/Fachschule» 12.5 years; «höhere Fachschule/HTL/HWV» 15 years; «Uni/Hochschule» 17.5 years; "Others" 9 years (Jann and Engelhardt 2008, 47).

5 Educational expansion, the spread of NMC, and changes in cohort characteristics

Table 2 reports the characteristics of consecutive cohorts in the sample. Educational expansion is reflected in an average increase of 2.6 years of schooling for women and 1.5 years for men between the oldest and the youngest cohort. The most striking change in the other characteristics of the cohorts is the increase in NMC. While around 95% of first partnerships formed before the 1970s led to marriage, this share has sunk strongly in the more recent cohorts. Among all cohabitations formed in the year 2000, only 61% had become marital by 2013. In most cohorts, individuals with tertiary education showed the *highest tendency to remain unmarried in first partnerships*. This pattern is in line with the idea that the most educated groups, possibly due to their extended educational trajectories, less frequently institutionalize their first partnerships with marriage. However, theoretical predictions from diffusion models that declare a decrease in the educational gradient do not hold for the spread of NMC in Switzerland (cf. Ní Bhrolcháin and Beaujouan 2013). Although the level of educational differentials varies between cohorts, the most highly educated individuals consistently showed the highest ages at formation, the lowest rates of fertility in first partnerships and the largest share of individuals who experienced parental separations. In all but the most recent cohort, moreover, they had the lowest share of educational homogamy. In line with the predicted effect of leveling gender ratios in institutions of higher education, increases in educational homogamy were strongest among upper educational groups.

Table 2 Changes in characteristics across cohorts of first partnerships

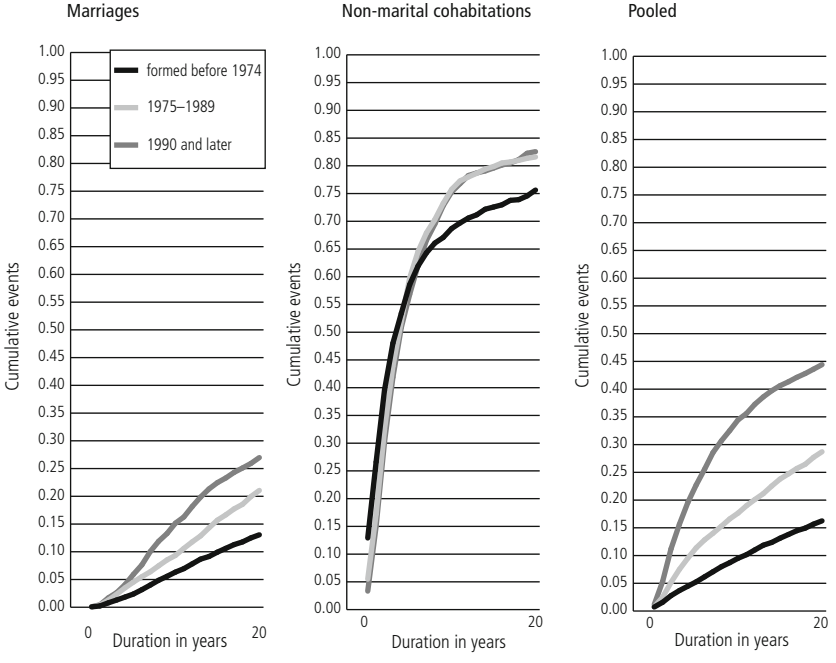
	Years of education, average		Share NMC, %			Age at formation, average years			Has a child before or after formation, %			Experienced parental separation, %			Share homogamous in education, %			N, total
	Women	Men	L	M	H	L	M	H	L	M	H	L	M	H	L	M	H	
Before	10.4	11.6	3	5	2	24	25	26	81	78	81	3	3	5	65	41	13	1 009
1960s	10.7	11.9	4	4	7	23	24	25	87	84	81	3	5	6	65	54	39	3 380
1970s	11.2	12.1	7	8	14	23	24	25	86	80	76	5	7	7	61	64	42	5 162
1980s	11.5	12.3	10	15	17	24	25	26	84	76	69	10	10	12	63	64	45	6 117
1990s	12.3	12.8	20	29	36	25	26	27	71	63	56	7	17	16	64	61	51	4 713
2000s	13.0	13.1	22	42	42	27	26	28	71	55	51	18	20	22	54	59	59	2 929

Notes: L = less than vocational degree (< 10.5 years of education), M = vocational or general education (> 10.4 and < 12.6), H = higher vocational or tertiary degree (> 12.5). Numbers on educational homogamy based on IFG only.

6 The influence of educational expansion on partnership breakups

First partnerships have become less stable in Switzerland (see Figure 1). While only 13% of marital partnerships formed before 1975 separated within the first 20 years of marriage, this share more than doubled to 27% for those formed after 1989. NMCs, meanwhile, have become slightly more stable across cohorts during the initial years of partnerships. In the longer run, however, NMCs remain far less stable than marriages: in the most recent cohort 82% of couples living in NMC dissolved before reaching 20 years together compared to 76% in the oldest cohort. Hence, NMC is clearly and consistently less stable than marriage, and the overall increase in separation rates is stronger when accounting for unmarried cohabitation. This becomes clear when comparing increases in separation rates between marital partnerships and the pooled sample: with an increase from 16% to 44%, the rise in the rate of breakup after 20 years is considerably steeper in the pooled sample.

Figure 1 Cumulative separations for three cohorts – married, NMC, and pooled



Notes: Solid line = formed before 1974; short dashed = 1975–1989; long dashed = 1990 and later.

What role has the expansion in individual educational attainment played in the overall trends in partnership stability? To answer this question, I estimated Royston-Parmar flexible parametric models of the log cumulative hazard function of breakups of first partnerships in the pooled sample. This type of survival regression is advantageous because it allows for the direct modelling of different shapes of cumulative hazard functions for NMC and marriages using time-dependent dummies for the type of partnership (Royston and Lambert 2011), which strongly improves the fit of the model.

The results are presented in three parts. In the first, Table 3 contains coefficients from varying models: a first model including cohort dummies, educational attainment and control covariates (age at formation, formation before and after the birth of the first child, and parental separation) (Model 1); an identical model testing for gender differences in the coefficient for educational attainment (Model 2); a model including time-dependent effects of NMC (Model 3); and the same model including a dummy for educational homogamy (Model 4). In the second part, Figure 2a and 2b reveal the dynamics underlying the average-across-cohort effects of educational attainment based on gender-specific cohort-education interactions (see Table 4 appendix). The third part (Figure 3) distills this information and compares observed and standardized trends in the predicted probabilities of partnership breakups (Klein, 2005). One comparison is of the predicted probability of breakup for the 1960's cohort with their given distribution of education to two scenarios in which their distribution is reweighted to that of the 1980s and the 2000s, respectively. The second comparison, conversely, is of the level for the 2000's cohort to two scenarios in which it assumes the educational distribution of the 1980s and 1960s, respectively.

On average across all cohorts, education was positively but moderately associated with partnership breakup: in opposition to H1a but confirming H1b, an additional year of education increased the cumulative hazard function of breakup by 3.4% ($p \leq 0.001$, Model 1); this overall coefficient was driven by the higher coefficient for women's education (5.5%, $p \leq 0.001$); and in support of H1c, gender differences were significant ($p \leq 0.001$, Model 2). Accounting for NMC (Model 3) strongly flattens the trend of cohort dummies, which underlines the importance of NMC for increasing breakup rates. NMC's contribution to the higher average breakup rates among more highly educated strata is also supported by the further reduction of the already small average coefficient of education than in model 1. Estimated coefficients for control variables and educational homogamy (Model 4) are in line with expectations: having experienced parental separation and having had a child before the partnership started increased the risk of separation; while being older at the time of formation, having a child during the partnership and being in an educationally homogamous partnership reduced it.

Table 3 Covariate effects on the cumulative hazard function of separation of pooled first partnerships

	1) Cohorts, controls and education	2) Gender interaction	3) NMC	4) Educational homogamy
Before 1960s: reference (1970s)	0.458*** (0.0496)	0.462*** (0.0500)	0.620*** (0.0641)	0.506*** (0.0984)
1960s	0.720*** (0.0406)	0.721*** (0.0407)	0.803*** (0.0446)	0.610*** (0.0497)
1980s	1.465*** (0.0659)	1.462*** (0.0658)	1.312*** (0.0576)	1.383*** (0.0845)
1990s	2.123*** (0.102)	2.110*** (0.101)	1.494*** (0.0732)	1.709*** (0.113)
2000s	2.349*** (0.138)	2.322*** (0.137)	1.224** (0.0762)	1.729*** (0.143)
Education overall	1.034*** (0.00554)		1.023*** (0.00536)	1.015* (0.00716)
Education women		1.055*** (0.00721)		
Education x men		0.962*** (0.00985)		
Educational homogamy				0.595*** (0.0255)
NMC vs. marriage: p0			9.243*** (0.591)	9.693*** (0.798)
Time-v. effect: NMC x p25			0.380*** (0.0327)	0.519*** (0.0579)
Time-v. effect: NMC x p50			0.891 (0.0647)	1.144 (0.112)
Time-v. effect: NMC x p75			0.965 (0.0332)	0.926 (0.0430)
Time-v. effect: NMC x p100			0.942*** (0.0119)	0.965 (0.0184)
Age at formation	0.946*** (0.00361)	0.946*** (0.00360)	0.958*** (0.00331)	0.963*** (0.00428)
Had child before formation	2.936*** (0.258)	2.953*** (0.260)	2.585*** (0.232)	2.401*** (0.304)
Child during partnership (time-varying)	0.262*** (0.00909)	0.263*** (0.00910)	0.430*** (0.0186)	0.457*** (0.0249)
Parental separation	1.458*** (0.0641)	1.456*** (0.0640)	1.267*** (0.0552)	1.206** (0.0748)
Constant: p0	0.137*** (0.0101)	0.138*** (0.0102)	0.0636*** (0.00576)	0.0804*** (0.00684)

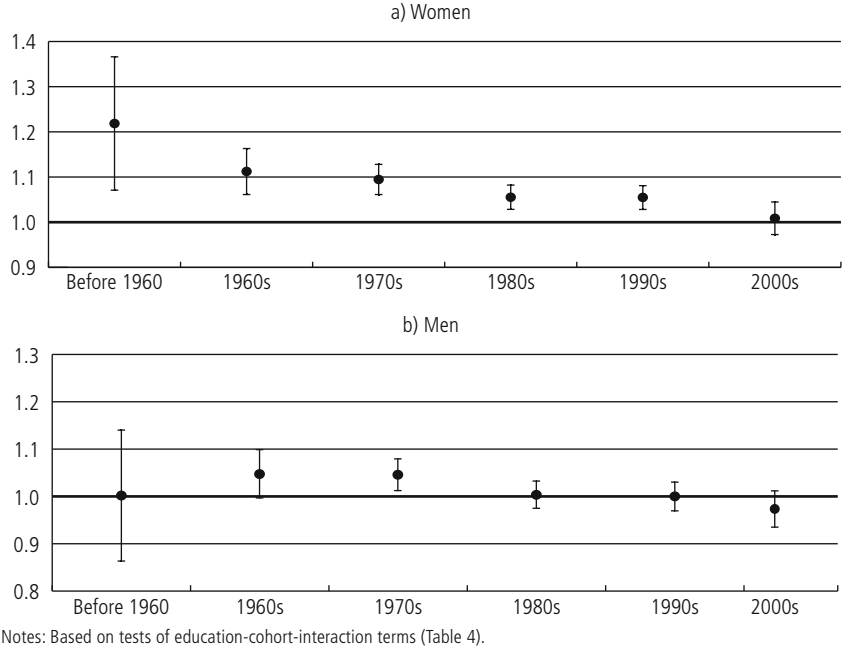
Continuation of table 3 on the next page.

Continuation of table 3.

	1) Cohorts, controls and education	2) Gender interaction	3) NMC	4) Educational homogamy
Internal knot 1: p25	5.452*** (0.115)	5.454*** (0.115)	10.51*** (0.874)	10.30*** (1.059)
Internal knot 2: p50	1.595*** (0.0262)	1.594*** (0.0262)	1.962*** (0.138)	1.877*** (0.171)
Internal knot 3: p75	0.950*** (0.00931)	0.950*** (0.00932)	0.993 (0.0324)	1.015 (0.0426)
External knot: p100	1.036*** (0.00600)	1.036*** (0.00600)	1.061*** (0.0111)	1.060*** (0.0147)
AIC	37 650.6	37 629.8	33 349.0	17 851.4
N splited episodes	33 834	33 834	33 834	17 512
N events	7 081	7 081	7 081	3 822
N responents	23 310	23 310	23 310	12 274

Notes: Reported are exponentiated coefficients indicating the factor by which the cumulative hazard functions change with the covariate. The effect of having a child during the partnership is time-varying using the method of episode splitting. Model 4 is restricted to respondents in the IFG. All other models include dummies for data source (not reported). * $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$, Standard errors in parentheses. Table created with esttab (Jann 2007).

Figure 2 Coefficient of education by cohort and 95% confidence intervals

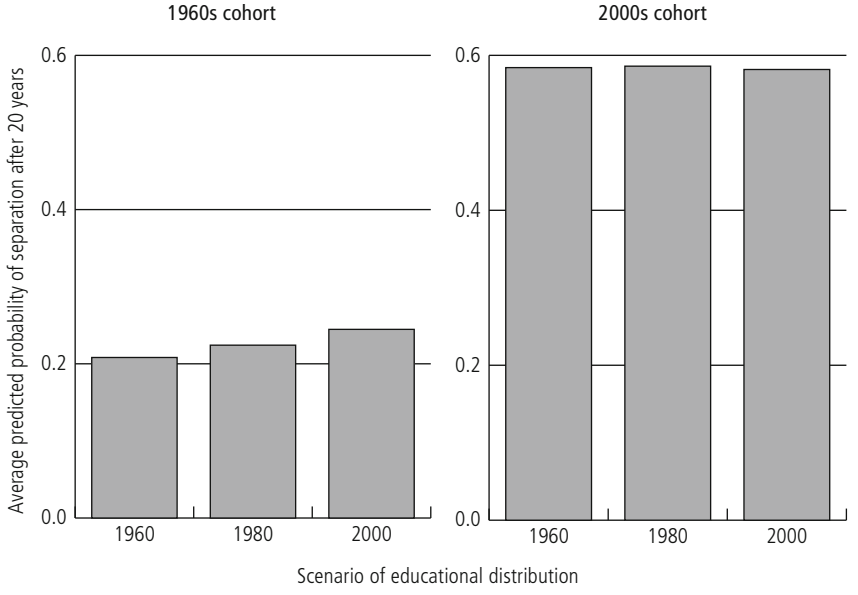


Notes: Based on tests of education-cohort-interaction terms (Table 4).

Figure 2a and 2b illustrate the effects of an additional year of schooling for women and men by ten-year-formation cohorts. Decreasing educational differentials in breakup rates for both men and women caused the effects of an additional year of schooling to tend towards one, indicating no association. More specifically, the effects of education shifted from being positive on a statistically significant level to being statistically non-significant. This supports the hypothesis of a positive educational gradient at earlier levels of diffusion and a less positive gradient in a context where divorce and NMC have become more prevalent (H2a). Although this general pattern also holds for men[9] (the strongest positive effect for men was in the 1970s cohort and decreased thereafter), it is more pronounced and consistent for women (H2b).

A summary of the relevance of these shifts to the overall trend in breakup behavior can be seen in Figure 3. The probability of separation for the 2000s' cohort

Figure 3 Predicted probability of separation by cohorts and standardization scenarios



Notes: Predicted separation probabilities based on model 2 with three-way interactions between educational categories (years of education split at 10, 11.5, 12, and 15), cohort dummies and gender. 1960s cohort – 1960 and 2000s cohort – 2000 bars display predictions calculated from observed distributions of education. Standardizations of educational distribution based on inverse probability weights calculated from a logit model of the probability of being in reference cohort vs. being in comparison cohort (1960 vs. 1980 and 2000, 2000 vs. 1980 and 1960) on interactions between gender and education (same educational categories as in model on separations).

9 The pattern also holds for men when adjusting for their partner's education (based on IFG only, not reported).

was nearly three times higher than for the 1960s' cohort in all standardization scenarios. This points to the relatively low overall importance of individual educational attainment for partnership stability. Nevertheless, the different scenarios illustrate the relevance of changes in education-specific breakup behavior. Education played a considerable role in partnership breakup rates in the 1960s: the adjustment of the 1960s' cohort's educational distribution to that of the 2000s' cohort is associated with an increase in its average predicted probability of breakup from 0.208 to 0.245. On the other hand, reweighting the educational distribution of the 2000s' cohort hardly changes average predictions. Since education had a moderately negative effect on separation rates in the youngest cohort, the probability of partnership breakup would even have been slightly higher than observed (0.584 vs. 0.582) if its members had only attained the distribution of education found in the 1960s' cohort.

7 Conclusions and relevance

In examining the impact that the expansion of men's and women's educational attainment has had on the stability of first partnerships in Switzerland the present article found that the overall association between educational attainment and the rate of partnership breakup was positive but moderate (H1b) and that the coefficient was significantly higher for women (H1c) who also experienced more significant increases in educational attainment. The results suggest that part of this overall positive educational gradient is explained by the greater percentage of highly educated individuals in NMC.

However, educational expansion would only be liable for the heightened instability of first partnerships if higher levels of education predicted higher rates of partnership breakup *and* if this influence remained constant throughout the entire period of educational expansion. The study's crucial finding is that partnership breakup rates would *not* lie substantially lower today if couples had remained at the much lower levels of education seen in previous cohorts. The results suggest that at the same time as individual educational attainment increased, the association between education and partnership breakup weakened, thus mitigating the effect of educational expansion. Indeed, in contradiction to previous research on women's education and divorce in Switzerland (Härkönen and Dronkers 2006), the association between educational attainment and partnership breakup changed from positive for the older cohorts to a non-significant level for the youngest cohorts (H2a).

The potential indirect effects of educational expansion on trends in partnership instability, such as how increasing educational levels may have changed partnership behavior by influencing social norms and structures (cf. Lesthaeghe and Neels 2002; Vitali et al. 2015), are beyond the purview of this article. The main conclusion it reaches is that as long as educational expansion is understood simply as the de facto

rise in individual educational attainment, it does little to explain the drastic increase in partnership breakup rates. One of this study's contributions is thereby to affirm and strengthen the findings of previous research on the influence that increased education has had on the rise in marital dissolution (Wagner et al. 2015). Yet, its insight into the influence of the rise in NMC has (arguably) greater implications for the ongoing investigation of trends in partnership instability. If future research seeks to understand potential changes in the consistently high rates of breakup found in NMC, it will need to devote continued attention to the behavior and composition of cohabiting couples (cf. Schnor 2014).

The consequences separations have for the individuals involved is what makes trends in partnership separation particularly significant (Arránz Becker 2015). Educational differentials in partnership breakup matter because educational attainment stands for a diverse set of resources that help individuals cope with separation. This study has only *described* the trends regarding educational differentials in partnership breakups without explicitly testing the mechanisms behind them. Nevertheless, two results can serve as an impetus for further research to more closely examine the relationship between education and partnership instability.

The first relates to the importance of the rise in NMC for separation trends. In opposition to conventional diffusion models, the greater percentage of highly educated people living in NMC has not declined during the course of NMC's proliferation. Educational differentials in NMC have even increased: among the most recent cohorts, it is the least educated who lag most strongly behind the trend towards NMC. Since pooling NMCs and marriages together rather than considering marriages alone reveals a greater instability of partnerships among more highly educated individuals, future research should examine whether the higher tendency towards cohabitation among better educated couples in Switzerland is independent of the type of NMC. Are couples with high levels of education only more likely to remain unmarried in first partnerships that overlap with educational trajectories, or does this also hold for more meaningful childbearing unions that mostly tend to form later in life (cf. Schnor and Jalovaara 2017)?

The second result concerns the reasons behind the change in the educational gradient of separation that are suggested by the separate examination of changes in the coefficients for women's and men's educational achievement. The initially higher positive gradient for women and its stronger decrease (H2b) emphasizes the relevance of gender-specific explanations (Matysiak et al. 2014). However, since the general pattern in Switzerland is comparable between genders – unlike in Italy, for instance (Salvini and Vignoli 2011) – gender-neutral explanations also seem relevant. For instance, pointing to the importance of *opportunity structures*, many studies have stressed the role played by social and cultural aspects of family change (e.g., Härkönen and Dronkers 2006). Seen from this perspective, educational gra-

dients in partnership breakup decreased because the unhappy couples among the least educated became more likely to separate once social constraints had weakened.

I'd like to close this article by suggesting that future research expand its focus on the factors that determine educational differences in partnership breakup by taking into account their influence on *partnership quality* and *partnership investments*. For instance, in the wake of educational expansion, educational homogamy mainly increased among the most educated, thereby decreasing their separation risks. To what extent was this risk reduction due to higher partnership satisfaction? An equally stabilizing role could be played by men's increasing contributions in the domestic sphere, which are likewise most widely dispersed among the most educated (Grunow et al. 2007; Goldscheider et al. 2015). Conversely, the difficult economic conditions that afflict some segments of moderately and lowly educated groups may contribute to the share of troubled partnerships among them (Williams et al. 2015) and reduce their likeliness of marrying.

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9 Appendix

Table 4 Gender-specific coefficients underlying the model for Figures 2a and 2b

	1) Women	2) Men
Before 1960s: reference (1970s)	0.496*** (0.0768)	0.541*** (0.0937)
1960s	0.742*** (0.0557)	0.734*** (0.0659)
1980s	1.439*** (0.0795)	1.490*** (0.111)
1990s	2.007*** (0.124)	2.245*** (0.170)
2000s	2.403*** (0.185)	2.517*** (0.231)
Education: 1970s	1.095*** (0.0170)	1.046** (0.0174)
Education x Before 1960s	1.113 (0.0710)	0.958 (0.0691)
Education x 1960s	1.016 (0.0284)	1.002 (0.0294)
Education x 1980s	0.964 (0.0194)	0.960 (0.0214)

Continuation of table 4 on the next page.

Continuation of table 4.

	1) Women	2) Men
Education x 1990s	0.963 (0.0193)	0.956* (0.0217)
Education x 2000s	0.921*** (0.0220)	0.931** (0.0243)
Age at formation	0.940*** (0.00492)	0.949*** (0.00542)
Had child before formation	2.782*** (0.303)	3.254*** (0.471)
Child during partnership (time-varying)	0.286*** (0.0124)	0.237*** (0.0130)
Parental separation	1.599*** (0.0880)	1.302*** (0.0921)
Constant: p0	0.130*** (0.0101)	0.148*** (0.0192)
Internal knot 1: p25	5.494*** (0.157)	5.460*** (0.171)
Internal knot 2: p50	1.576*** (0.0350)	1.621*** (0.0404)
Internal knot 3: p75	0.953*** (0.0122)	0.944*** (0.0143)
External knot: p100	1.036*** (0.00766)	1.037*** (0.00928)
AIC	19 680.6	17 912.1
N splited episodes	18 844	14 990
N events	4 004	3 077
N responents	12 986	10 324

Notes: Reported are exponentiated coefficients indicating the factor by which the cumulative hazard functions change with the covariate. The effect of having a child during the partnership is time-varying using the method of episode splitting. Both models include dummies for data source (not reported). * $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$. Standard errors in parentheses. Table created with esttab (Jann 2007).

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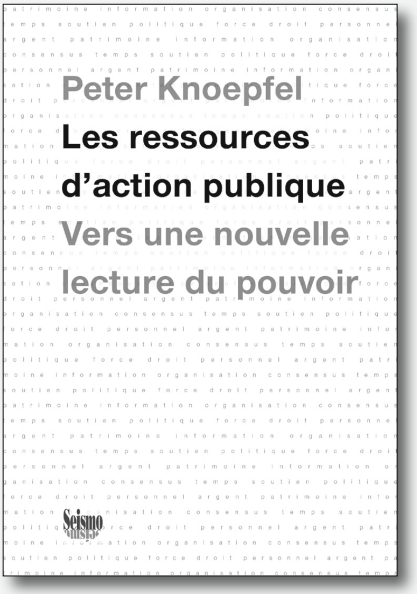

Peter Knoepfel

Les ressources d'action publique

Vers une nouvelle lecture du pouvoir

324 pages, ISBN 978-2-88351-080-7, SFr. 48.—/Euro 43.—

Qui dit politique publique, dit échanges de ressources entre acteurs. Et qui dit échange de ressources, dit partage du pouvoir entre acteurs publics et acteurs privés. Or, la définition de ces ressources, leurs modalités de mobilisation ou leur aptitude à être échangées ont été très peu étudiées jusqu'ici. La présente monographie propose une typologie approfondie des dix ressources d'action publique actuellement connues, et est illustrée par de nombreuses situations rencontrées quotidiennement dans la pratique des politiques publiques. Cette monographie expose ainsi, ressource par ressource, la palette de ses usages possibles, par les acteurs politico-administratifs aussi bien que les groupes cibles et les bénéficiaires des politiques publiques. Cet ouvrage aborde les situations de disponibilité ou de manque de ressources, les usages par phase (notamment dans la mise en œuvre) et les échanges de ressources entre acteurs, en vue d'obtenir des résultats favorables à leurs intérêts et/ou à leurs valeurs. Le texte propose aussi des pistes à suivre en vue d'un usage durable des ressources d'action publique. Il donne enfin quelques conseils pratiques aux chercheurs qui analysent les politiques publiques, mais aussi aux praticiens qui se consacrent à la gestion de « budgets ressourciels », dans l'administration publique aussi bien que dans les organisations du secteur privé ou les ONG.

Peter Knoepfel (1949), docteur en droit, professeur honoraire à l'IDHEAP (Université de Lausanne), professeur honoraire à l'Université Taras Shevchenko de Kiev, coauteur du livre « Analyse et pilotage des politiques publiques » (avec Corinne Larrue et Frédéric Varone) et auteur de nombreuses monographies et articles scientifiques sur des questions conceptuelles de l'analyse des politiques publiques, des politiques environnementales et du développement durable. Il est également président du Conseil de sanu durabilitas – Fondation suisse pour le développement durable.

Seismo

Swiss Journal of Sociology, 43 (3), 2017, 567–586

Do Opposites Attract? Educational Assortative Mating and Dynamics of Wage Homogamy in Switzerland, 1992–2014

Laura Ravazzini*, Ursina Kuhn**, and Christian Suter***

Abstract: This paper addresses homogamy and assortative mating in Switzerland. The empirical analysis monitors trends for education and hourly wages using the Swiss Labour Force Survey and the Swiss Household Panel. The analysis disentangles the effects of educational expansion from mating patterns and incorporates not only couples, but also singles. Results show an increasing level of assortative mating both for education and for wages. For wage homogamy, selection is more important than adaptation.

Keywords: educational expansion, assortative mating, hourly wages, homogamy; cohabitation

Ziehen sich Gegensätze an? Bildungs- und Lohnhomogamie in der Schweiz und ihre Veränderung zwischen 1992 und 2014

Zusammenfassung: Dieser Beitrag thematisiert die Bildungs- und Lohnhomogamie bei der Partnerwahl in der Schweiz. Die empirische Analyse beschreibt die Veränderungen anhand der Daten der Arbeitskräfteerhebung und des Schweizer Haushalt-Panels. Die Analyse berücksichtigt sowohl Paare als auch Singles und unterscheidet zwischen Auswirkungen der Bildungsexpansion und der Partnerwahl. Die Resultate zeigen eine Zunahme der positionsgleichen Partnerwahl bei der Bildung und bei den Löhnen. Für die Lohnhomogamie sind Selektionseffekte stärker als Anpassungseffekte.

Schlüsselwörter: Bildungsexpansion, Homogamie, assortative mating, Lohnniveau, Kohabitation

Les opposés s'attirent-ils ? L'appariement sélectif selon le niveau l'éducation et les dynamiques d'homogamie de revenu en Suisse, 1992–2014

Résumé : Cet article porte sur l'homogamie et l'appariement sélectif en Suisse. L'analyse empirique s'appuie sur l'évolution des niveaux d'éducation et des salaires horaires à partir de l'Enquête suisse sur la population active et le Panel suisse de ménages.
L'analyse distingue les effets de l'expansion scolaire des effets de l'appariement sélectif en incorporant les célibataires. Les résultats montrent un niveau croissant d'appariement sélectif selon le niveau d'éducation et les revenus. En outre, la sélection est plus importante que l'adaptation.

Mots-clés : expansion scolaire, appariement sélectif, salaires horaires, homogamie, cohabitation

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1 Introduction

Marrying someone similar to ourselves is a phenomenon that social scientists call assortative mating. Assortative mating is based on one or more factors including ethnicity, parental background, religion, and migration status and results in homogamy. While absolute homogamy refers to the share of homogenous couples, assortative mating refers to a preference to choose a similar partner over other possible partners. At the societal level, assortative mating is used as an indicator of stratification and it can be seen as a form of group closure and of social immobility (Kalmijn 1998).

In this paper, we focus on socio-economic aspects of assortative mating in Switzerland by analysing education and hourly wages. Assortative mating can contribute to the transmission of economic status (Kremer 1997; Chadwick and Solon 2002; Black and Devereux 2011) and can be a potential driver of income inequality because societies in which similar earners intermarry are more unequal than those in which high earners marry low earners (Esping-Andersen 2007; Schwartz 2010; 2013). Education is an important factor that affects the social status of individuals and consequently the level of economic inequalities (Sweeney and Cancian 2004). Due to educational expansion, the meaning of education and its role for mating patterns is likely to have changed over time (Blossfeld 2009; Schwartz and Mare 2005). An example is the cliché of doctors who formerly married nurses and who are now more likely to marry other doctors (Esping-Andersen and Myles 2011). The rising wage dispersion among graduates (Lemieux 2006; Budría and Telhado 2011) might also imply that the signalling effect of tertiary education in terms of earnings and social status has declined over time.

The literature on assortative mating points to several issues to solve. First, not only marital preferences, but also the probability of finding a partner in the first place needs to be considered (Breen and Salazar 2010). The exclusion of singles from the analysis might therefore miss important changes in assortative mating. Second, the distinction of educational levels is not sufficient to measure homogamy in socio-economic status.[1] For this reason, researchers should also investigate other relevant characteristics (Schwartz 2013). Third, most papers on economic assortative mating analyse annual earnings, which are determined not only by hourly wage, but also by labour supply (Dribe and Nystedt 2013). Because labour market participation and the number of hours worked is a joint decision within couples, annual earnings are problematic indicators for studying assortative mating (Pestel 2016; Frémeaux and Lefranc 2015). Fourth, many women do not participate in the labour market and thus earn nothing. Because labour force participation is related to the level of earnings, the omission of inactive individuals will induce bias. Rich data are required

1 For example, the detailed educational levels in the SHP (pooled sample 2000–2014) explain only 15% of the variation of men's hourly wages and 10% of the variation of men's realised yearly earnings. For women, the explained variances amount to 12 and 15 %, respectively.

for a good imputation model of hourly wages. Finally, it is difficult to disentangle to what extent earning differences between partners are due to selection into couples rather than to adaptation to the partner (Nakosteen et al. 2004).

Our contribution addresses these issues and applies them to the Swiss case. We first assess the evolution of absolute homogamy and educational assortative mating using the Swiss Labour Force Survey 1992–2014 and then move to homogamy in hourly wages using the Swiss Household Panel 2000–2014. To the best of our knowledge, information on homogamy in Switzerland remains scarce, outdated and limited to educational levels. In this country, there has been considerable educational expansion, which increased the share of tertiary-educated individuals from 8% in 1992 to 27% in 2014 for working-age women and from 23% to 45% for working-age men. Even though the educational expansion has been relatively slow in Switzerland, women in younger cohorts have meanwhile reached men in terms of education (Becker and Zangger 2013).

Besides providing evidence on Switzerland, we contribute to the previous literature on the topic in two respects. First, the use of panel data helps to distinguish effects from intra-couple decisions (adaptation) from effects from assortative mating (selection). Second, we specifically model the relationship between educational homogamy and wage homogamy.

This paper is organised as follows. After presenting the theoretical framework (Section 2) and providing a literature review on the topic (Section 3), it describes the data and the methodology (Section 4) and the empirical results (Section 5). Section 6 concludes by highlighting the main results and discussing the consequences of assortative mating on inequalities more generally.

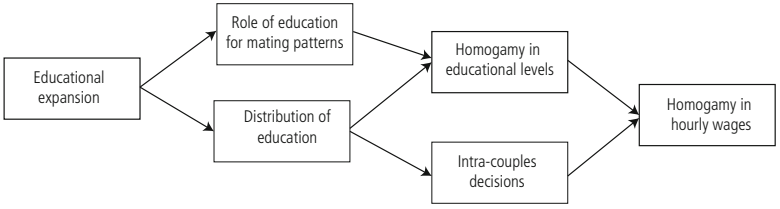
2 Theoretical framework and previous literature

Figure 1 summarises the theoretical framework that will guide our analysis and illustrates the multiple connections between educational expansion, educational homogamy, and homogamy in hourly wages. Even if not shown in the Figure, there might be differences between population groups. We will now explain the different links in more detail. We refer to homogamy as a similarity of partners with respect to the absolute level of education or wages. Assortative mating reflects the preference to choose a similar partner over other partners and thus relates to the ranking in education or in the wage distribution.

2.1 Assortative mating and education

There are many potential and mostly unconscious reasons why people tend to choose a similar partner and these reasons range from values and social expectations to overlapping social networks (Kalmijn 1998). Regarding education, individuals

Figure 1 Theoretical framework on the link between educational expansion, educational assortative mating and homogamy in hourly wages



may choose a partner with the same educational level because they share the same interests, communicate in a similar way, or because they meet each other more frequently (e. g. at university or at the workplace). In addition to these similarities, highly educated partners might be preferred because education is linked to higher income and ability. The degree of educational assortative mating can be interpreted as the importance given to education in the selection of the partner.

Educational expansion might affect educational homogamy through two different processes: by the alteration of the marginal distribution of educational levels and by the change in preferences for the suitable partner. Even when preferences and mating patterns remain constant, more tertiary educated individuals translate into more couples in which both partners have a tertiary education degree. The change in preferences is what interests us the most.

There are different theories that claim that the role of education in the selection of the partner has changed over time. The technical change hypothesis advanced by economists attributes a rising importance of education for mating patterns because skill-based technological change and deindustrialisation have lowered the demand for low-qualified labour and increased the demand for high-qualified labour. Some commentators have concluded that these economic processes have deepened the earning differences between low and high-educated individuals (Förster 2000). Similarly, the status attainment hypothesis used in sociology postulates that modernisation gives more importance to achieved characteristics such as education than to ascribed characteristics such as ethnicity or social origin (Schwartz 2013; Goode 1963).

The conflict theory of Collins (1971) proposes another theoretical argument for the weakening importance of education in mating patterns. If education is a positional good, educational expansion might reduce the signalling effect of tertiary education for high social status, prestige and cultural capital. Having a tertiary education has indeed another meaning for new generations than for older ones. Prestige or cultural capital might no longer be the products of popular universities, but of few elitist institutions. This means that stratification might have shifted from between

educational level to within tertiary education. Several empirical studies confirm the role of education as a positional good (Trostel et al. 2002; Leuven et al. 2004). If individuals do no longer distinguish themselves because of their educational level, this raises the question on whether education might be replaced or complemented by other signals for social status (Schwartz 2013).

Theories taking into account the gender-bias in the educational expansion propose additional arguments. Women's changing role in society and employment has made them more similar to men in terms of social status and earnings. Gender asymmetries in mating preferences might have weakened in parallel. In gender-traditional societies, women have incentives to choose a partner with a high educational level and good employment prospects (Brines 1994). On the one hand, partner's social status might have become less important for women because they have become more independent (Fernandez et al. 2005). If this is the case, women should show a rising tendency to marry down and a lower tendency to marry up. On the other hand, partner's education and employment prospects might have become more relevant for men because their spouses contribute more strongly to household income. This process would result in more assortative mating over time. Some studies indeed find that women's economic characteristics have become more important for assortative mating (Kalmijn 1994; Mare 1991; Sweeney and Cancian 2004).

Overall, empirical studies show that educational homogamy is widespread (Blossfeld and Timm 2003), but trends over time differ and show mixed results (see also Blossfeld 2009 for a literature review on the topic). Some contributions find that homophily[2] (McPherson et al. 2001) and assortative mating have increased over time (Hou and Myles 2008 for Canada and the US). Others register stable levels of assortative mating (Breen and Salazar 2011) or differences between countries (Kalmijn 1998). Ultee and Luijkx (1990), Smits et al. (1998, 2000) and Hu and Qian (2016) explain country differences with the level of societal openness and development of the countries.

Research about the Swiss situation is particularly scarce. Schumacher and Lorenzetti (2005) document occupational homogamy between 1909 and 1928 in Winterthur and revealed particularly high levels among managers and unskilled factory workers. Studies that use more recent survey data and three educational levels report 68% of homogamous couples in 1994 (Diekmann and Schmidheiny 2001) and 63% in 2008 Bühlmann and Schmid Botkine (2012, 32–33). Also using three educational levels, the Swiss Federal Statistical Office (SFSO 2016, 59) registers 56% of couples with the same educational level in 1990, 55% in 2000 and 58% in 2010–2014.

2 Homophily is the tendency of individuals to befriend with similar others.

2.2 Assortative mating and wages

Homogamy in wages is closely related to educational homogamy. Considering substantial returns to education (Balestra and Backes-Gellner 2017), homogamy in education should translate into homogamy in wages. We therefore expect that couples with the same level of education are more homogenous in terms of wages compared to other couples. There is wide empirical evidence of homogamy in earnings (Zimmer 1996; Nakosteen et al. 2004). In OECD countries, this homogamy has increased over time with 40% of all couples currently having similar earnings compared to only 33% in the 1990s (Keeley 2015).

An important difference between education and hourly wage is that the latter is less stable over time. Winkler, McBride and Andrews (2005) identified that for 30% of educationally homogamous couples in the USA, wage advantages have alternated between the man and the woman over the life course. Similarly, interpretations of wage homogamy need to take into account that not only assortative mating, but also the effects that occur after the formation of the couple influence the level of homogamy. In particular, labour supply decisions and the division of tasks within couples alter wage homogamy over the duration of the relationship.

3 Methods and data

We use data from the Swiss Labour Force Survey (SLFS) and the Swiss Household Panel (SHP). The main advantages of the SLFS are the availability of data since 1991 and the presence of new samples of considerable size every year. Because the SLFS lacks information on partner's income, we use data of the SHP for the analysis on hourly wages. The SHP follows households on a yearly basis and includes three samples (SHP I since 1999, SHP II since 2004, SHP III since 2013). Potential drawbacks are the limited sample size, the underrepresentation of immigrants and attrition (see Tillmann et al. 2016 for details). To show the evolution over the longest time span available, we show results for 2000 and 2014 for the SHP and for 1992, 2000 and 2014 for the SLFS.[3] The sample is composed of cohabiting heterosexual couples of the main working age range (25–64).[4] In the first part of the analysis, we also include singles into the sample to take into account the selection into partnership.[5] People who are unable to work have been excluded from the analysis

3 Due to data unreliability, we did not use data from the first year of data collection (1991 in the SLFS, 1999 in the SHP).

4 The sample of homosexual couples (8–33 per year) is too small to be analysed separately. In addition to this, it is not possible to include this group in cross-tabulations that distinguish between men and women.

5 Individuals having a non-cohabiting partner are considered as singles (35% of all individuals living alone say they have a non-cohabiting partner). Because these individuals might live with others, we do not refer to them as single households.

and weights are used for descriptive statistics. For the SLFS, the sample amounts to 13 170 households in 1992 and 57 604 households in 2014. For the SHP, the sample amounts to 3 343 in 2000 and to 5 497 in 2014.

Previous literature on educational assortative mating has relied mostly on cross tabulations (Breen and Salzar 2010) and log-linear models (Ultee and Luijkx 1990). Studies on similarity in earnings use mostly correlations (Nakosteen et al. 2004; Grotti and Scherer 2016). As a way to control for factors that determine earnings (e. g. education, age, experience, region or disability status), researchers often use residuals from spouses' wage regressions. In this paper, we do not follow this approach for two reasons. First, correlation coefficients are global measures, which cannot distinguish homogeneity at different points of the distribution (i. e. at the top or at the bottom of the distribution). Second, potential selection effects are ignored because correlations cannot be computed for singles. Third, it is complex to test how other factors influence wage homogamy, such as adaptation during the relationship or educational homogamy.

To overcome this shortcoming, we propose an alternative empirical approach divided in three parts. In the first part, we monitor educational assortative mating using cross-tabulations that consider three educational levels (lower secondary, upper secondary and tertiary)[6] and distinguish singles and couples. We apply the same method for hourly wages in the second part of the analysis and consider three different wage levels (lowest third, intermediate third, and highest third). The approach is here slightly different because group sizes change over time for education, but are constant by definition for wage levels. In the third part, we look at homogamy in hourly wages in more detail using regression models. This analysis has a double aim. First, it shows the relation between educational homogamy and wage homogamy. Second, it tests the effect of intra-couple decisions (adaptation) during the partnership.

Hourly wages have been computed at the basis of monthly wages and weekly working hours. Missing values have been imputed not only for all working individuals (13% of men and 15.8% of women participating in the individual interview), but also for non-active individuals (5.9% of men and 21% of women participating in individual interview) to estimate their earning capacity. This is important to measure assortative mating independently from the individual decision to work or not. The SHP provides a very good basis for such imputations because it includes information on earnings from other years and detailed information on the last job held by inactive individuals. We used a sequential procedure for imputation. If information on hourly wage of an individual was available in a previous wave, we used this former value taking account of inflation. Among active individuals, such

6 These classes correspond to ISCED 2A for lower secondary, ISCED 3A-C and 4A-C for upper secondary and ISCED 5A-B and ISCED 6 for tertiary education. Unfortunately, finer distinctions in educational levels are not possible for long-term comparisons with the SLFS data, which distinguishes between Bachelor and Master Degrees only starting from 2010.

information was available in 51% of cases. Among inactive individuals, we could use hourly wage from a previous interview in 29% of cases. If no such information was available, we used information from the next wave (11% of individuals with missing hourly wage and 4% of inactive individuals). The remaining missing information has been imputed using the iterative algorithm from "mi impute chained" in Stata for men and women separately. The regression included many variables on the employment situation from the current or previous job (self-employment, ISCO code, hierarchical position, economic sector), as well as region, education, age, civil status, children, residence permit and fluency in national languages. The mean observed hourly wage over all panel years is 40.4 CHF (standard deviation 21.1), the mean imputed hourly wage for inactive individuals is 33.7 CHF (standard deviation 18.8) and the mean imputed hourly wage for active individuals with missing information amounts to 38.9 CHF (standard deviation 20.5). This confirms that individuals with a low wage potential are more likely to be inactive. The R-squared for the imputation of hourly wage is 0.35 for men and 0.28 for women. In addition to this, we have top-coded wages to 12 000 CHF per week to exclude implausible values.

4 Results

4.1 Educational expansion 1992–2014

Table 1 shows the proportions of women and men according to three educational levels in 1992, 2000 and 2014. The proportion of tertiary educated women started from a low level (8% in 1992) and touched 27% in 2014, whereas the proportion of tertiary educated men departed from a much higher level (23% in 1992) and reached 47% in 2014. Given this difference in starting levels, the proportion of tertiary educated women more than tripled over the years, whereas the proportion of tertiary educated men just doubled. If we analyse relative growth, we can conclude that the educational expansion of the last twenty years was gender-biased with more women acquiring tertiary education. However, if we look at absolute change in percentage points, we notice that the proportion of men with tertiary education increased by 23 percentage points, whereas the proportion of women only by 19. Absolute changes indicate an almost gender-neutral expansion. It is important to remark that absolute changes are more independent from the cumulative effect of education over generations than relative changes. We can therefore say that this large expansion changed the distribution of education for the entire population. By 2014, almost half of all men, independently from their age, had a tertiary education degree, contrarily to less than one third of all women. Table 1 illustrates how this important educational expansion happened mainly after 2000s. From 1992 to

Table 1 Proportion of household types according to their educational levels, 1992 and 2014

	Women lower secondary	Women upper secondary	Women tertiary	Single men	Proportions of men
1992					
Men lower secondary	7.86	4.54	0.28	1.03	15.19
Men upper secondary	12.96	36.15	2.27	4.51	61.93
Men tertiary	1.69	13.21	3.13	2.61	22.88
Single women	1.92	6.30	1.53	0.00	
Proportions of women	26.60	65.54	7.85		100.00
2000					
Men lower secondary	8.49	4.11	0.29	0.95	15.51
Men upper secondary	9.36	36.11	2.54	5.08	59.47
Men tertiary	1.22	13.63	4.37	3.12	25.02
Single women	1.91	6.92	1.89	0.00	
Proportions of women	23.10	66.88	10.01		100.00
2014					
Men lower secondary	8.11	4.54	0.88	1.06	9.97
Men upper secondary	6.40	27.10	6.55	4.84	45.42
Men tertiary	1.46	12.47	12.66	4.76	44.60
Single women	1.07	4.38	3.72	0.00	
Proportions of women	19.07	54.28	26.65		100.00

Sources: Authors' computations with the SLFS 1992 (N = 13 170), 2000 (N = 17 711) and 2014 (N = 57 604).
Notes: Missing women correspond to single men and vice versa for missing men.

2000, the proportion of tertiary educated women and men increased by slightly more than 2 percentage points. All the rest of the expansion happened after this period.[7]

4.2 Absolute educational homogamy

Homogamous couples are illustrated on the diagonal that corresponds to the intersection of equal educational levels. We notice that due to educational expansion, homogamous couples in which both spouses have a tertiary education have increased strongly from around 3% of all household types in 1992 to almost 13% in 2014. As illustrated before, this increase has been much more pronounced in the 2000s than in the 1990s. Although clearly decreasing, the predominant household type remains composed by upper-secondary educated couples (36% in 1992 and 27% in 2014). Low educated couples, where both spouses have completed at best lower secondary education, compose only around 8% of all household types. An additional analysis on socio-demographic characteristics (not shown in Table 1), reveals that

7 Even if we report only three years, the expansion has been linear, but faster in the 1990s compared to the 2000s.

migrants can be found mainly in tertiary educated couples (approximately 63% of these couples have at least one person with a foreign nationality) and among single low educated men (46% of all single low educated men). Low educated women living alone have a rather different profile, as they are older than the average.

Summing the percentages on the diagonal, we reckon that homogamous couples constitute 48% of all households in 2014, which is 1 percentage point higher than in 1992. Among couples only, we find 68% of homogamy, which is close to previous findings in Switzerland with survey data and three educational levels (Diekmann and Schmidheiny 2001; Bühlmann and Schmid Botkine 2012). Women who marry up in terms of education, have become less frequent over time (from 28 to 20% of all household types), whereas women who marry down are almost symmetrically increasing (from 7% to 12% of all household types). Turning to singles, we observe that the share of highly educated singles is slightly increasing, but the number of all singles has only augmented by 1 percentage point (from 18 to 19%).

The percentages presented in Table 1 refer to absolute homogamy and cannot be interpreted in terms of mating preferences (Liu and Lu 2006). In particular, the increase in homogamy at the tertiary educational level could simply be a consequence of educational expansion rather than of changing mating patterns. Similarly, there could be more tertiary educated singles because the chances of tertiary educated individuals to remain single have increased, or because there are more tertiary educated individuals in the population. In the next section, we move to assortative mating to disentangle these two effects.

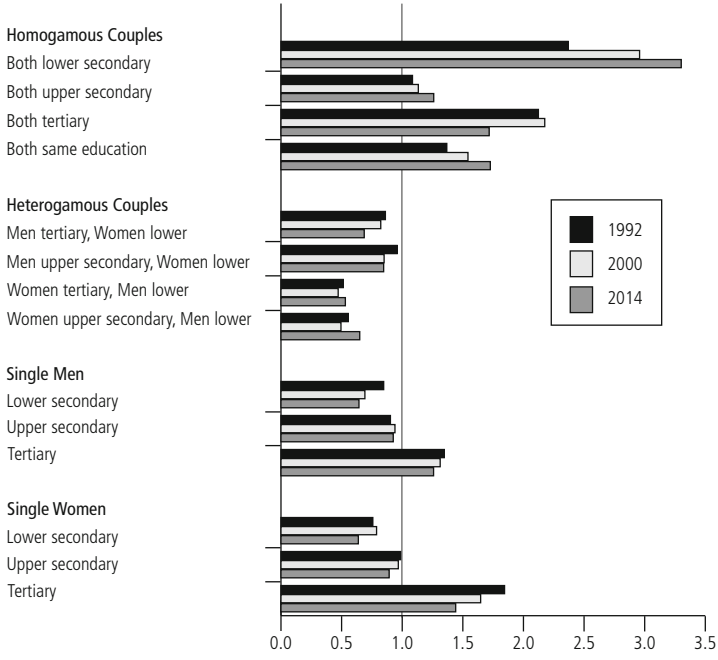
4.3 Educational assortative mating

In order to properly isolate the effect of marital preferences from educational expansion, we display assortative mating, measured by relative frequencies (observed frequencies divided by expected frequencies) in Figure 2. The expected frequency is a simulated distribution assuming a mating pattern that is random by education. The expected frequencies are proportionally adjusted to keep the (impossible) case where both women and men are single empty (structural zero). If the relative probability is one, it means that the educational level of the partner is not related to couples formation. If the relative probability is larger than one, a household type (e. g. a homogamous household) is overrepresented in comparison to independence of educational levels.

Results show a strong overrepresentation of couples with the same educational level, in particular for low educated individuals. Considering all homogenous couples according to a weighted average, we see that sorting on education has become more important over time. The probability of having a partner with the same educational level relative to having a partner with a different educational level has risen from 1.37 in 1992 to 1.54 in 2000 and to 1.74 in 2014. For 1992, this means that the observed probability of having a partner with the same education is 37% higher

than it would be under a mating pattern that is independent from education. There are however compensatory effects among educational levels. The probability for assortative mating has declined for tertiary educated individuals (by 0.4 points), whereas it has increased for upper secondary educated (by 0.2 points) and for low educated (by almost 1 point) individuals.[8] The overall increase of homogamy over time found in Table 1 can thus mostly be attributed to stronger assortative mating among low educated individuals rather than among university graduates. The

Figure 2 Relative probability of single and couple household by education



Sources: Authors' computations with the SLFS 1992 (N = 13 170), 2000 (N = 17 711), 2014 (N = 57 604).
Notes: For each type of couple, probabilities higher (lower) than one indicated an overrepresentation (underrepresentation) with respect to independence of educational levels for couple formation.

8 Literature on mobility often refers to odds ratios rather than to probabilities. The odds ratio for low educated individuals to have a partner with the same education have increased from 5.7 in 1992 to 10.7 in 2014 (relative to the probability to have a partner with another educational level or having no partners). The odds ratio for individuals with upper secondary education to have a partner with the same educational level has increased from 1.5 to 2.4 and the odds ratios for tertiary educated individuals have increased only marginally from 3.3 to 3.5. This method does not take into account the change in the marginal distribution of educational levels, which is the reason why the odds ratios for tertiary educated individuals do not decline.

lower assortative mating among tertiary educated individuals does not necessarily reflect declining homophily, but might also be the result of tertiary education having become a large and heterogeneous group. This process is unlikely to reflect positive mating preferences among low educated individuals (Smits 2003), but rather a segregation of a small disadvantaged group that has lower probabilities for social mobility through marriage.[9]

It is also interesting to look at the evolution in hypergamy and hypogamy. The fact that the probability for women to marry up has become less frequent and the probability for men to marry up (or women to marry down) more frequent suggests indeed that men's and women's preferences for partner's education have become more similar over time. Low educated individuals, however, are not more likely to remain single than what they were before. On the contrary, they are less likely to form single households.

Besides homogenous couples, tertiary educated singles are the only other household type that is overrepresented. In particular, women with tertiary education are likely to form single households (relative probability of 1.44 in 2014 compared to 1.26 for men). Interestingly, this tendency has declined over time, which could suggest a better reconciliation between work and family for highly educated women. The decline of single households could also be due to an increase in cohabitation patters. Some decades ago, couples cohabitated only when they married. Nowadays, cohabitation is more socially accepted before or as a substitute for marriage.

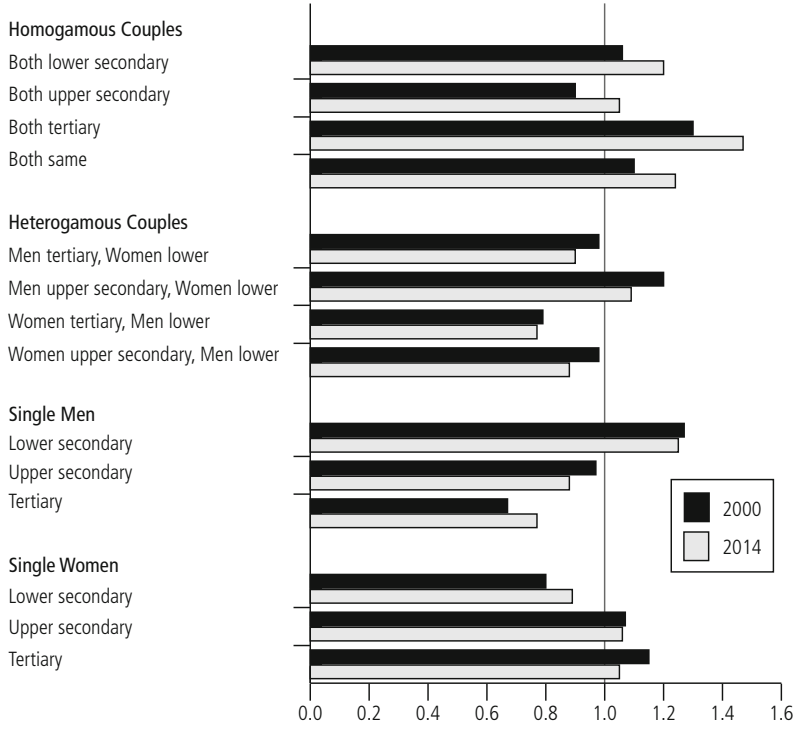
4.4 Assortative mating in hourly wages 2000–2014

To measure assortative mating in hourly wages, we use the samples from the SHP in 2000 and 2014. We distinguish three wage categories (low, intermediate and high wage) of equal size (tertiles) for women and men.[10] Because the marginal distribution in the cross-tabulations remains stable over time (always 33.3%), we directly address relative probabilities for each category. The cross tabulation presented in Figure 3 illustrates that there is assortative mating in the lower third and in the upper third of the (hourly) wage distribution. Moreover, assortative mating in each earning category has increased between 2000 and 2014. Averaging over the three wage categories, the relative probability has risen from 1.11% to 1.24%. Although lower than for educational groups, assortative mating is considerable, particularly because we are likely to underestimate its extent for two reasons. One is that measurement errors in hourly wages are frequent and the other is that adaptation to the partner masks part of the effect. Another interesting point in comparison to education is

9 In 2014, this group was composed by 36% of migrants and the average age of the group was not significantly higher than for other groups. This highlights that the segregation of this group is not likely to be linked to a generational or a migratory phenomenon.

10 For men, the cut-offs are at 34.4 CHF per hour and 47.2 CHF per hour in 2000 (34.2 CHF and 46.8 CHF in 2014). For women, the cut-offs are at 25.8 CHF per hour and 36 CHF per hour in 2000 (26.6 CHF and 37.2 CHF in 2014).

Figure 3 Relative probability of single and couple households by hourly wage



Sources: Authors' computations with the SHP 2000 (N = 3 362), 2014 (N = 4 769).

that assortative mating in earnings has not only increased in the lower part of the distribution, but to a similar extent also in the upper part. The analysis using correlation coefficients comes to a consistent conclusion (Kuhn and Ravazzini 2017). The rank-order correlation (Spearman correlation) is positive for hourly wages and increases slightly over time.

In addition to assortative mating, wage levels are also associated with being single. In particular, men with the lowest hourly wages have a considerably higher probability of being single (relative probability of 1.25 in 2014) than men with intermediate and high wages (relative probability of 0.88 and 0.77 in 2000). Another interesting comparison is the gender differences over the two time points. In 2000, the relationship between remaining single and the wage level was negative for men and positive for women. Even if differences remain, by 2014, men and women have become more similar in this respect. In particular, high earning women have become less likely to be single and high earning men more likely to be single.

Even if these changes over time are interesting, we cannot interpret them in terms of assortative mating because of potential adaptation effects that occur during the relationship (most importantly through the division of labour). For example, wage similarity might have increased over time because women and men pay more attention to wages (or wage potential) when choosing their partner, or because double earner couples with a similar wage progression for both spouses have become more frequent. Additional analyses are thus needed to better disentangle these effects.

4.5 The link between educational homogamy and wage homogamy

Having addressed homogamy and assortative mating in education and in hourly wages in the previous sections, we now look at whether there is a link between educational assortative mating and wage homogamy. In contrast to the previous empirical analyses, we take couples as units of analysis and use the ratio of their hourly wage as dependent variable to measure homogamy. We always divide the lower hourly wage by the higher average wage of the two partners, irrespectively of whether the woman or the man earns more per hour (in 74% of couples, the man has a higher hourly wage than his partner). The value of this ratio ranges between 0 and 1 (mean = 0.65, standard deviation = 0.21). Therefore, positive coefficients in the regression model mean higher wage homogeneity and negative coefficients higher wage heterogeneity. Note that this measure captures similarity in earnings (absolute position) rather than similarity in the wage distribution (relative position).[11]

We estimate two different models. The first model is a pooled linear regression (OLS) with clustered standard errors to account for repeated observations per couple.[12] The second model analyses only couples during their first year of cohabitation. The wage homogamy in this sub-population can then be interpreted as a result of assortative mating. This is in line with Ultee, Dessens and Jansen (1988, 113), who state that "what really counts as a test for assortative mating are data for occupation at time of marriage." We include the following variables in the regression models: education of the couple, age (three categories of men's age), a binary variable indicating age homogamy (within 5 years), as well as duration of the partnership in the first model.[13] Even though the models explain only a small part (3.8% and 4.2%) of the variation in wage homogamy, they illustrate some interesting patterns.[14]

11 We are aware that the dependent variable has considerable measurement errors because of the ratio. Although estimators are unbiased when measurement error is in the dependent variable, standard errors will be overestimated. Some coefficients might therefore be insignificant even if there is a true underlying relationship.

12 We do not use individual fixed effect panel models because they cannot capture the effect of assortative mating and education, which are time-invariant for individuals.

13 Considering the measurement error and the limited number of observations in the second model, we did not include other control variables into the model.

14 These OLS models do not directly show the extent of wage homogamy. To test whether age and education explain the relationship between partner's hourly wages, we looked at correlations of predicted wages of men and women including their age, age squared and education. For couples who just moved together, this correlation amounts to 0.09 with control variables compared to

Table 2 Panel regression models on ratio of hourly wage within couples, 1999–2014

	Model 1		Model 2	
Education				
Both lower secondary (ref.)	0	–	0	–
Both upper secondary	–0.009	(–0.94)	0.042	(1.25)
Both tertiary	0.008	(0.77)	0.037	(1.08)
Men tertiary, Women lower	–0.063**	(–6.34)	0.008	(0.24)
Men upper secondary, Women lower	–0.033**	(–3.05)	–0.020	(–0.50)
Women tertiary, Men lower	0.029**	(2.62)	0.071*	(2.03)
Women upper secondary, Men lower	0.020	(1.55)	0.014	(0.34)
Age				
Man 25–38 years (ref.)	0	–	0	–
Man 39–52 years	–0.034**	(–7.19)	–0.047**	(–3.67)
Man 53–64 years	–0.036**	(–5.24)	–0.048**	(–2.64)
Women of similar age (within 5 years)	0.014**	(2.62)	0.032**	(2.74)
Partnership duration	–0.002**	(–7.06)		
Constant	0.722**	(69.29)	0.662**	(19.35)
Observations	36 726		1 315	
R^2	0.038		0.042	

Sources: Authors' computations with the SHP 1999–2014. Notes: The dependent variable is defined as the lower hourly wage divided by the higher hourly wave of the two partners; T-statistics in parentheses **, * indicate significant coefficients at the 5% and at the 1% level respectively.

The first model reveals that homogamy in education and homogamy in hourly wages are related. Interestingly, the group with the most similar wages does not consist of couples with the same education, but of couples where only the woman has a tertiary education degree. As this effect is significant also in the second model, we can interpret this in terms of assortative mating. Tertiary educated women who choose a partner with a lower educational level tend to choose a partner with a relatively high wage level. The same does not apply to tertiary educated men who choose a partner with a lower educational level. The large wage-gap of these couples can be explained by a traditional division of labour rather than by a low wage level when the partners moved together. This interpretation is based on the fact that this effect is significant in the first, but not in the second model. The hypothesis that says that educational homogamy is related to homogamy in hourly wage is therefore supported only in comparison to couples where women marry up, but

0.15 without controls. For all couples, the correlation amounts to 0.07 with control variables and to 0.11 without control variables. This shows that sorting on wage levels is not just a by-product of education and age.

not in comparison to couples where women marry down. Furthermore, there is no significant difference by educational level among educationally homogamous couples.

Apart from education, also age plays a role for wage homogamy in general and homogamy during the first year of cohabitation (as age effects are significant in both models). Younger couples have more similar hourly wages than older couples.[15] Whether this is a life-cycle or a cohort effect has to remain open. What is clear is that wage homogamy is increased by age homogamy.

Finally, the first model includes the duration of the relationship and reveals a divergence of wage homogamy of 0.2 points per year of partnership. Wages of partners are thus most similar when they meet and then diverge over time. Possible reasons for this are divergent career-path due to the division of labour. The negative effect of adaptation on wage homogamy is an important point to note because it suggests that observed wage homogeneity is the result of assortative mating (or selection), rather than of adaptation. The effect of assortative mating on wage homogamy is therefore stronger than what is suggested in Figure 3.

5 Conclusions

This study broaches the subject of socio-economic assortative mating in the context of educational expansion. The Swiss Labour Force Survey is used to assess the evolution of educational homogamy and assortative mating and the Swiss Household Panel is used to analyse assortative mating in earnings capacities within couples. Results show increasing assortative mating both for educational levels from 1991 to 2014 and for wages homogamy from 2000 to 2014. Looking more in detail, we see compensatory effects between people with different educational levels. The share of tertiary educated couples among all households has sharply increased from 3% in 1992 to 13% in 2014, whereas the probability of an individual with tertiary education to be with a tertiary educated partner has declined. Educational expansion rather than changing mating patterns is responsible for the increasing number of highly educated couples. At the same time, homogenous couples with low education present a relatively constant population share (around 8% of the total population), but this type of assortative mating has become more pronounced over time. Low educated individuals have become a more segregated group in terms of marital patterns and this might expose them to a higher social and economic vulnerability. This evidence deserves further investigation in future studies. We have also found that the probability to remain single has declined in particular for tertiary educated individuals and most strongly for tertiary educated women.

Even though assortative mating among tertiary educated individuals has declined over time, this does not imply that assortative mating in hourly wages has

15 Results are similar when the age group of the women rather than the man is used.

also weakened in the upper part of the distribution. Our second analysis has indeed shown that assortative mating in hourly wages has not only increased among low earners, but also among high earners. For education, this suggests that individuals with a tertiary education degree have become more heterogeneous and that tertiary education alone has become a less selective characteristic for mating patterns. The signalling effect of education in terms of socio-economic importance seems to have weakened, but other criteria of selectivity play an important role. It remains an open question to establish to what extent selectivity has moved within tertiary education according to the type of university, the type of degree or the field of study.

A difficulty for wage homogamy is that it reflects not only assortative mating, but also (labour-supply) decisions and adaptations taken during the relationship. Using information from the Swiss Household Panel and regression models, we have found that similarity in wages is the result of selection into couples rather than of influences between partners. This conclusion is drawn from the fact wage homogamy declines over the duration of the relationship. In addition to this, we have found that educational homogamy is associated with wage homogamy. Couples where the woman married up show the highest wage gap within couples, and couples where the man married up show the lowest wage gap within couples. Homogamous couples with tertiary education do not show a higher homogamy in earnings than other homogamous couples.

Overall, economic homogeneity has important consequences for inequalities in society. Shrinking inequalities within households might lead to rising inequalities between households. With increased homogamy at the top and at the bottom of the distribution, we found support for wage polarisation. Even if these results appear worrisome from the perspective of inequality at the societal level, further research shows that consequences of assortative mating in Switzerland are small and have not lead to rising income inequality (Kuhn and Ravazzini 2017).

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Educational Homogamy and Inter-Couple Income Inequality: Linking Demographic and Socio-Economic Consequences of Educational Expansion in Germany and Switzerland

Ramsey Wise* and Christoph Zangger**

Abstract: How is educational expansion associated with increased educational homogamy and income inequality? Using SOEP and SHP panel data, we randomly match couples and compare the resulting income distribution to the observed one. Educational homogamy thereby has had only a marginal impact on earnings-based income inequality between couples, which is largely due to the endogenous decision-making of couples concerning working time.

Keywords: educational homogamy, educational expansion, income inequality, labor supply

Bildungshomogamie und Einkommensungleichheit zwischen Paarhaushalten: Demographische und sozioökonomische Konsequenzen der Bildungsexpansion in Deutschland und der Schweiz

Zusammenfassung: Inwiefern geht die Bildungsexpansion mit erhöhter Bildungshomogamie und Einkommensungleichheit einher? Mittels Paneldaten des SOEP und des SHP vergleichen wir die Einkommensungleichheit zufällig erstellter Paarhaushalte mit der beobachteten Verteilung. Die Bildungshomogamie hatte dabei jedoch nur einen marginalen Einfluss auf die Einkommensungleichheit zwischen Paarhaushalten und ist weitgehend auf deren endogene Erwerbsentscheidungen zurückführbar.

Schlüsselwörter: Bildungshomogamie, Bildungsexpansion, Einkommensungleichheit, Arbeitskräfteangebot

Homogamie éducative et inégalité des revenus entre couples : Les conséquences démographiques et socio-économique de l'expansion du système de formation en Allemagne et en Suisse

Résumé : Est-ce que l'expansion du système de formation s'accompagne d'une augmentation de l'homogamie éducative et de l'inégalité des revenus? Par recours aux données des panels SOEP et PSM, nous comparons la distribution des revenus de couples choisis aléatoirement avec la distribution observée. L' homohamie éducative n'a toutefois qu'un effet marginal sur l'inégalité des revenus entre les couples, reflétant la décision endogène des couples concernant leurs heures travaillées.

Mots-clés : homogamie éducative , expansion du système de formation , inégalité des revenus , offre du travail

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1 Introduction

Women have particularly benefited from educational expansion in most European countries, including Germany and Switzerland (Becker and Zangger 2013; Breen et al. 2010; Hadjar and Becker 2009). The ensuing increase in female human capital has further translated into higher employment rates of women in these countries (Blossfeld and Hakim 1997; Blossfeld and Hofmeister 2006; van der Lippe and van Dijk 2002). Although these trends positively signal the weakening of gender inequalities in some areas, they may also contribute to socio-economic inequalities in others, especially if these trends have strengthened educational homogamy, or the increased similarity between the human capital resources of couples. More precisely, we aim to evaluate whether changes in the level of educational homogamy, in the course of educational expansion, corresponds with rising inter-couple income inequality across birth cohorts.

Although the relationship between educational expansion and educational homogamy is extensively discussed in the literature (e. g., Blossfeld and Timm 2003; Harkness 2013; Schwartz 2013), few studies have linked these socio-demographic trends to rising income inequality in recent years. Most studies interested in socio-demographic explanations have attributed rising income inequality to changes in household structure, specifically with references to the increase of single households (e. g., Esping-Andersen 2007; Kollmeyer 2013; Western et al. 2008). Only a few studies have empirically tested whether there is a relationship between educational homogamy and rising income inequality (for examples, see Breen and Salazar 2011; Schwartz 2010; Cancian and Reed 1999; Breen and Salazar 2010; Breen and Andersen 2012; Dribe and Nystedt 2013; Pestel 2015; Spitzenpfeil and Andress 2014). The vast majority of these studies, however, have only focused on countries that are typically characterized as dual-earner countries (i. e. Anglo-Saxon or Scandinavian countries, see Spitzenpfeil and Andress 2014).

While most studies on educational expansion have by far focused only on *either* socio-demographic or socio-economic consequences, we link the two interrelated concepts to identify whether increased female human capital and educational homogamy are associated with rising income inequality in Germany and Switzerland. To our knowledge, this is the first comparative study to empirically test the relationship between homogamy and inter-couple income inequality. We selected Germany and Switzerland as they are traditionally considered as ideal male breadwinner countries (Pfau-Effinger 2012) with a strong emphasis on vocational training (Crouch et al. 2001). In addition, many of the macro-economic explanations for rising income inequalities, such as increased unemployment, are expected to have little effect on income inequality in these countries as demonstrated by comparatively low and stable unemployment levels in recent years (Grabka and

Kuhn 2012). Consequently, we are able to focus on socio-demographic changes contributing to inter-couple income inequality.

To understand the relationship between educational expansion, educational homogamy and inter-couple income inequality, we ask whether the growing source of female human capital has influenced individual partner preferences. For individuals who select into partnership, we ask whether partner preferences have strengthened educational homogamy over time. To this end, we first assess whether the association of partners' human capital endowments has amplified across birth cohorts (Blossfeld and Timm 2003; Kalmijn 1998; Mare 1991; Schwartz and Mare 2005; Breen and Salazar 2010).

In a second step, we assess whether educational homogamy has impacted inter-couple income inequality dynamics. To this end, we randomly match individuals in the sample so as to construct relevant counterfactuals to the observed couples. If observed couples select partners based on similar educational endowments (i. e. educational homogamy), then the randomly matched couples remove the effect of partnering choices. In principle, this analytical strategy allows for us to assess the effect of educational homogamy on inter-couple income inequality by comparing the levels of inequality using Gini coefficients for the observed couples with that of the randomly matched couples.

At the same time, annual income reflects both earnings capacity and labor supply (Pestel 2015). As demonstrated in previous studies, intra-couple behavioral decisions concerning employment are closely tied to partners' educational and economic resources (Drobnič and Blossfeld 2004; Peichl et al. 2012; Kollmeyer 2013). Especially for traditionally male breadwinner countries, we expect that partnering choices are extremely likely to further influence female labor supply. Hence, randomly matching couples is not alone sufficient because the labor supply of partners in a household is endogenous. To this end, we thirdly assess whether the difference in levels of inequality would be greater between the observed and randomly matched couples after adjusting labor supply to what it would be if couples were randomly matched. By doing so, we are able to isolate the independent effect of educational homogamy on income inequality across birth cohorts (Aslaksen et al. 2005).

Furthermore, we expect that labor supply could potentially offset or reinforce the effect of educational homogamy on income inequality. For example, educational homogamy is only assumed to increase if highly educated couples, and conversely low educated couples, are matched accordingly and both partners fully utilize their human capital. If so, female labor supply can be viewed as reinforcing income inequality between correspondingly high and low earnings couples. However, if highly educated women rely on the earnings potential of their husband and reduce their labor supply, this is extremely likely to offset the effect of educational homogamy. By investigating these interrelated dynamics, the results of this study pose profound

implications for concerning the unforeseen consequences of educational expansion with regards to a potential trade-off between gender inequality and income inequality.

The following sections are outlined as follows. In Section 2, we present theoretical considerations concerning marital markets and behavioral choices concerning female labor supply in order to derive hypotheses about potential consequences for inter-couple income inequality. In Section 3, we discuss operationalization and comparability of the data used for our analyses, and we provide an overview of our methodological approach. In Section 4, we present descriptive results comparing educational and employment participation for each country across birth cohorts. We then compare educational homogamy with inter-couple income inequality trends, highlighting differences between the observed sample, our randomly matched sample and a simulated sample where we also adjust for labor supply. Section 5 discusses socio-economic implications of these results for both countries.

2 Theoretical considerations

Our premise is that educational expansion has altered the distribution of human capital, especially among women. To what extent this trend is associated with changes in partner preferences is the first question that this study aims to answer. To this end, we firstly turn to theories concerning the relationship between partner preferences and educational homogamy in the course of educational expansion. Secondly, we provide hypotheses concerning the expected relationship between educational homogamy and income inequality, with further discussion of gender differences regarding labor supply of couples.

2.1 Educational expansion and partner preferences

Numerous studies have shown that individuals do not marry at random. On the contrary, partner selection is based on individual preferences, which are largely influenced by socialization processes and overlapping social networks (Blossfeld and Timm 2003; Kalmijn 1998; Mare 1991; Waldfogel 1997). Educational homogamy reflects these preferences, as individuals tend to favor partners with a similar educational background and economic resources (Blossfeld and Drobnič 2001; Blossfeld and Timm 2003; Kalmijn 1998; Mare 1991; Schwartz and Mare 2005). Socialization processes occurring within post-secondary educational institution settings are one explanation for homogenous preferences. As Mare (1991) notes, the prolongation of education increases the opportunities to mate with someone of a similar educational level.

Furthermore, marital matching theories build upon this assumption, arguing that prolonged educational settings improve marriage market opportunities (Becker 1981). First, prolonged educational settings provide greater opportunities to find a

partner. Second, socialization within this setting increases the likelihood for preferring a partner with similar educational and socio-economic resources. Finally, the gained human capital from this setting is extremely likely to optimally positioned highly educated individuals within the distribution of partner candidates (Lewis and Oppenheimer 2000; Lichter et al. 1995).

This perspective has two implications that are central to our research. If women select partners of similar educational background, we firstly hypothesize that educational homogamy is strengthened across birth cohorts as consequence of increasing female human capital (H1a). As women have particularly gained from educational expansion in recent decades, we secondly hypothesize that any changes related to educational homogamy are primarily driven by a decrease in women marrying upwards, and conversely, a decrease in men marrying downwards (H1b).

2.2 Educational homogamy and inter-couple income inequality

Although previous studies attribute much of rising income inequality between households to the increase of single households (Esping-Andersen 2007; Kollmeyer 2013; Western et al. 2008), our study focuses solely on the income inequality between couples. More precisely, we are primarily interested in whether educational homogamy increases differences in the income distribution between couples. As educational homogamy reduces the level of intra-couple income redistribution, inter-couple income inequality is increased (Aslaksen et al. 2005; Schwartz 2010).

To test this assumption, we compare the Gini coefficients of observed couples with randomly matched couples. If observed couples select partners based on similar educational endowments (i. e. educational homogamy), then the randomly matched couples remove the effect of partnering choices. Thus, we hypothesize that the observed inter-couple income inequality is higher than if couples were partnered randomly (H2a).

Against the backdrop of educational expansion, we further expect the effect of educational homogamy on income inequality to amplify across birth cohorts. As women increase their human capital at an aggregate level, the association between partners' educational endowments should strengthen. Moreover, this is extremely likely to correspond with increasing differences in household incomes of high and low earnings couples. Hence, we hypothesize that inter-couple income inequality is increasingly higher for younger birth cohorts, as a reflection of increased homogamy following educational expansion (H2b)

As income is a reflection of both earnings potential and labor supply, this perspective is partially based on the assumption that individuals optimally utilize their human capital resources on the labor market (Becker 1964). However, individual decisions concerning employment and work time are directly linked to family strategies to maximize household utility (Becker 1981). From life course research, Elder (1994) coined the term "linked lives" to describe complex interrelationships

across work and family domains. If both individuals in the household do not intend to maximize their labor force utility, then there is no reason to expect educational homogamy to be associated with a high correlation in earnings between partners (Breen et al. 2010; Breen and Salazar 2011; Schwartz 2013).

For Germany and Switzerland, female employment patterns are largely dependent on household composition and partners' earnings, regardless of the individual earnings potential derived from human capital (Blossfeld and Drobnič 2001; Drobnič and Blossfeld 2004; Kollmeyer 2013). As male breadwinner countries, these countries exhibit lower employment rates of women than for men, with a large share of married women employed only part-time (Gottschalk and Danziger 2005; Gottschalk and Smeeding 1997; Harkness 2013; Juhn and Murphy 1997). Because female labor supply has been shown in these countries as reduced proportionally to partners' earnings (Kollmeyer 2013), we expect gender differences with regards to time allocation for domestic work and paid labor to weaken the observed effect of educational homogamy on inter-couple income inequality.

Following Pestel (2015), we first account for differences in (female) labor supply across households in order to assess the effect of educational homogamy on inter-couple income inequality. Given the expected association of partners' income on labor supply in male breadwinner countries, we hypothesize that the observed labor supply weakens the total effect of educational homogamy on inter-couple income inequality (H3). If this is correct, a trade-off between the utilization of female human capital independent of partners' earnings is extremely likely to increase income inequality.

2.3 Case selection and hypothesized differences

The case selection of Germany and Switzerland for our analysis allows us to conduct a similar systems comparative approach, as these countries demonstrate relatively similar socio-demographic and macro-economic trends for the years observed (Grabka and Kuhn 2012). More precisely, both countries are typically modeled as traditional male breadwinner countries, although this aspect has weakened in recent years as women have increased their human capital, and subsequently, their labor supply (Blossfeld and Hakim 1997; van der Lippe and van Dijk 2001).

With respect to educational expansion, perhaps the most striking trend is female participation in higher education. With roughly a quarter of women in Germany and a third of women in Switzerland holding a tertiary degree, the once persistent gender gap in higher education has become virtually eliminated for younger cohorts (see Appendix 4). Interestingly, vocational participation rates have been relatively high and stable in both countries, especially as credentials necessary to enter female-typical occupations (e. g., nursing or social services) are received at vocational schools (Haasler and Gottschall 2015; Smyth and Steinmetz 2008).

With regards to labor force participation, both countries demonstrate an increase in employment rates, although rates are slightly higher in Switzerland than in Germany (see Appendix 4). For women who are employed, part-time employment rates are particularly pronounced in Germany, where women holding a part-time position are often considered as supplementary earners (Daly and Scheiwe 2010; Levy et al. 2007; Giesselmann and Lohmann 2008).

Despite increases in both female human capital and labor force participation for these countries, gender differences still persist, especially with regards to work-time and pay (Keck and Saraceno 2013; Mandel and Semyonov 2005). Due to socio-structural similarities between these countries, we expect our hypotheses to apply to both countries. Because of these additional differences in the levels of female labor force participation between countries, however, we hypothesize that the effect of educational homogamy on inter-couple income inequality to be more pronounced in Switzerland than in Germany (H4).

3 Data and methods

In this paper, we analyze demographic and socio-economic consequences of educational expansion in Germany and Switzerland using longitudinal data provided by the German Socio-Economic Panel (SOEP) and the Swiss Household Panel (SHP).[1] More expressly, we estimate the effect of educational homogamy on inter-couple income inequality across birth cohorts by constructing counterfactual couples via random matching (see Hryshko et al. 2015). To this end, we restrict our data to the working age population with a slightly higher lower age cut-off in order to account for individuals still in education (i. e. ages 25–65).

The two data sources offer the advantage of not only including rich information about the employment status, working hours and economic resources of individuals and their partners, but also regarding relevant demographic variables such as age, gender and education. In this analysis, the latter variable is defined by three categories: general schooling, vocational education and higher education. Additionally, tenure, the number of children and migration background were used as controls in further analyses. A complete list of variables and their operationalization for comparability is provided in Appendix 1, with summary statistics of variables provided for both data sets in Appendix 2 and 3.

As we are primarily interested in describing to what extent income inequality has increased in response to increased educational homogamy, we address three

1 Since the two panels differ with regard to the covered time period, we construct a pooled dataset including all waves from 1999 to 2013 for both panels in order to make the analyses comparable. However, this pooling also implies that all analyses using data across years need to account for multiple observations of the same individual. This is done in the present context by using cluster robust standard errors.

methodological issues related to 1) the structural effects of educational expansion, 2) the comparison of observed couples with counterfactual ones had couples been randomly matched and 3) the endogenous nature of labor supply within households. How we have addressed these issues in our study is discussed in the following sections, with a final section detailing our analytical strategy for comparing Gini Coefficients to estimate the effect of educational homogamy on income inequality.

3.1 Structural effects of educational expansion

First, birth cohorts are conceived here as denoting temporal units of educational expansion in Germany and Switzerland. By comparing the effects of educational homogamy on inter-couple income inequality across birth cohorts, we are able to identify structural effects of educational expansion. Regarding educational homogamy, the notion of the educational system as a marriage market also suggests that spouses belonging to the same birth cohort are likely to have experienced the same context in terms of the educational expansion (Mare 1991).

The differentiation of the analysis with regard to birth cohorts is therefore a necessary step to address the structural effect of the educational expansion on the development of earning inequalities via educational homogamy. Moreover, this approach complements previous research that focuses only on recent period changes rather than cohort changes (e. g., Pestel 2015 for the case of Germany). An obvious weakness of this design, however, is that birth cohorts are observed at different stages in the life course during the years surveyed. Thus, old cohorts are at later stages, whereas younger cohorts are at earlier stages. In the literature, this is referred to as an identification problem of age, period and cohort effects (see Bell and Jones 2014; Fienberg and Mason 1979; Glenn 1976). Given the restricted time-span of our data, however, it is not possible to disentangle differences observed across cohorts from age effects.

3.2 Educational homogamy and random matching procedure

Our second methodological issue relates to how we assess the effect of educational homogamy on inter-couple income inequality. To this end, we randomly match couples in the data in order to construct relevant counterfactuals to the observed couples. If observed couples select partners based on similar educational endowments (i. e. educational homogamy), then the randomly matched couples remove the effect of partnering choices. To assess to what extent educational homogamy contributes to inter-couple income inequality, we plot Gini Coefficients using the Lorenz command in Stata for each birth cohort (see Jann 2016).

Because we are further interested in changes in the effects of educational homogamy across cohorts as a reflection of educational expansion, we compare these differences across birth cohorts to assess how the association between couple formation and the development of income inequalities may have changed in the

two countries. This also implies that we need to condition our random matching of couples on individual cohort membership. To this end, we randomly matched couples belonging to the same birth cohort. Note that this conditional matching – although appropriate given the theoretical background – leads to problematic matches at the borders of the sample space of each cohort. In such a setting, for example, a man born in 1979 might not be matched to a woman born in 1980 if they belong to two different cohorts. In order to deal with this rather strict assumption, the matching takes place as a sampling without replacement. In the present context, this is obtained by sorting the data according to year of observation, birth cohort and gender, as well as an additional random variable.

To this end, a file containing information about partners is prepared in the same way, whereby the sorting with regard to gender is reversed. The two datasets are then merged line-by-line, generating random couples. In doing so, we maintain the observed association of couples' cohort membership while removing the association of their educational endowments (see Table 1) as well as in all further characteristics. Thus, only people observed in the same survey year are matched to each other.

3.3 Accounting for endogenous labor supply

To address our third empirical issue, we account for the endogenous nature of labor supply within households by using a structural model of labor supply (Creedy and Kalb 2005; Pestel 2015). To this end, we consider employment status, hours worked and earnings accumulated not only as a function of an individual's characteristics (e. g., education, age, sex, etc.), but also of a couple's coordination – or bargaining process – that is based also on the characteristics of one's partner.

Assuming that households seek to maximize their utility U_i, this negotiation process can be thought of as the maximization of the potential earnings of randomly matched spouses given their individual and household characteristics and especially the counterfactual hours of leisure $h_{i,k,f}$ and $h_{i,k,m}$ as the complement to the hours worked (where the index f and m designate female and male, respectively). Following the literature on the estimation of labor supply models (Creedy and Kalb 2005; Pestel 2015), we model the utility of the j^{th} working time combination (out of 7×7 combinations – see Appendix A1) for household i as

$$\begin{aligned} U_{i,j} = {} & \beta_1 \ln(income_{j;m,f}) + \beta_2 \ln(leisure_{j;f}) + \beta_3 \ln(leisure_{j;m}) \\ & + \beta_4 \ln(leisure_{j;f}) * \ln(leisure_{j;m}) + \beta_5 \ln(leisure_{j;f}) * \ln(income_{j;m}) \\ & + \beta_6 \ln(leisure_m) * \ln(income_{j;f}) + \varepsilon_{i,j} \qquad j = 1, \ldots, 49 \end{aligned}$$

and additional higher order terms of leisure and income as well as interactions of leisure with own and partner's education and age as well as with the number of children of different ages, cohort and migration background. Thus, the household utility function used in the present study follows a joint translog function (i. e. tak-

ing the logarithm of all individual and household characteristics), with the main arguments income and leisure included in the model along with further individual and household characteristics (Creedy and Kalb 2005; Pestel 2015). While the model was estimated as a conditional logit model, the predicted utility function of observed couples is then used to predict counterfactual couples' labor supply (i. e. households constructed via random matching).

However, in order to make these counterfactual predictions, we have to impute the hypothetical income for all individuals not working. To this end, we first estimate the log-transformed hourly wage rate for all employed people as well as those not in the labor force or who are currently unemployed for each year separately using a Heckman selection model (Heckman 1979). Given the purpose of the present study, the estimation of the wage rate and the individual gross annual income is a necessary step in order to adequately model couples' decisions about their joint labor supply.

Whereas wage rates were predicted by individual human capital assets (e. g., education, tenure, etc.) and contextual differences in wage rates (e. g., gender, age, migration background, and region), the selection mechanisms influencing female labor supply were mainly constructed by individual characteristics and household formation variables (e. g., family status, number of children and the interaction of these variables with gender). More formally, the logarithm of the wage rate was predicted as

$$E\left[\ln(y) \mid z^* > 0; year\right] = \beta_1 education + \beta_2 tenure + \beta_3 tenure^2 + \beta_4 age + \beta_5 age^2 + \beta_6 class + \beta_7 gender + \beta_8 migration + \beta_9 region + \beta_{10} cohort$$

and the selection into paid employment as

$$E\left[z^* \mid year\right] = y_1 edu + y_2 gender + y_3 migration + y_4 region + y_5 age + y_6 age^2 + y_7 cohort + y_8 civil\ status + y_9 kids1 + y_{10} kids2 + y_{11} kids3 + y_{12} gender * kids1 + y_{13} gender * kids2 + y_{14} gender * kids3$$

In order to take the uncertainty of this imputation in latter analyses into account, we added a random draw of the error distribution to the predicted wage rate of each observation. This then served as the basis for constructing the predicted gross household income based solely on couple's earnings for all dual households in the sample and for all of the 49 working time combinations they can choose from.[2]

2 Although the reported inequality is comparable to the one in other studies using the same data (Grabka and Kuhn 2012), the inequality measure based on the predicted working income slightly underestimates the actual one in the observed data.

3.4 Analytical strategy for comparing income inequality measures

These predictions are then used for calculating the counterfactual couples' earnings distribution in order to assess the impact of educational homogamy on income inequality between couples and across cohorts using Gini coefficients. Further discussion of results from our study is done so with the understanding that we focus only on inter-couple income inequality, which contributes only partially to the overall household income inequality. To this end, we calculate three Gini coefficients for each birth cohort.

The first measure estimates the overall income inequality of the observed couples in the data (A). The second measure calculates the income inequality of randomly matched couples, after adjusting for labor supply (B). This measure simulates what the level of inequality would be if partners were matched at random and their labor supply adjusted to their hypothetical partner's earning potential. Consequently, the difference between A and B reflects the total effect of educational homogamy. However, the confounding effect of labor supply remains, as we cannot ascertain how much of this difference is attributed to educational homogamy alone or due to the endogenous labor supply behavior of couples.

To this end, we calculate a third, counterfactual measure of income inequality for the observed couples in which their actual partners were to work the hours of the randomly matched ones (C). By comparing A and C, we are then able to derive the total effect of labor supply on income inequality, i. e. the extent to which income inequality would decrease if labor supply decisions were not endogenous to the household context.

Our primary interest, however, lies in the difference between B and C. By comparing differences in inequality of randomly matched couples and observed couples after adjusting for the labor supply of both, we are able to derive the pure effect of educational homogamy on inter-couple income inequality. Compared to a naïve estimation of educational homogamy effects between measures A and C, this difference excludes the offsetting effect of labor supply on income inequality.

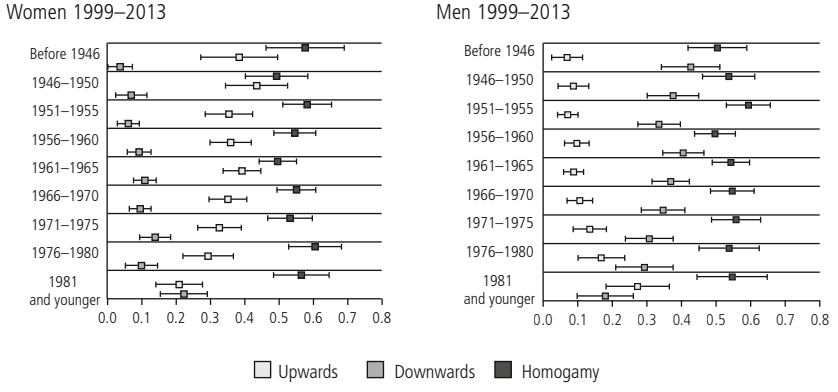
4 Results

As discussed in the previous section, we estimate the effect of educational homogamy using a counterfactual approach. To this end, our first step is to assess the level of educational homogamy across birth cohorts. This allows us to observe whether there is indeed an increase in educational homogamy in the aftermath of educational expansion. Secondly, we assess to what extent educational homogamy has contributed to inter-couple income inequality across birth cohorts by comparing the Gini coefficients of the three measures discussed in the analytical strategy section.

4.1 Results from the random matching of couples

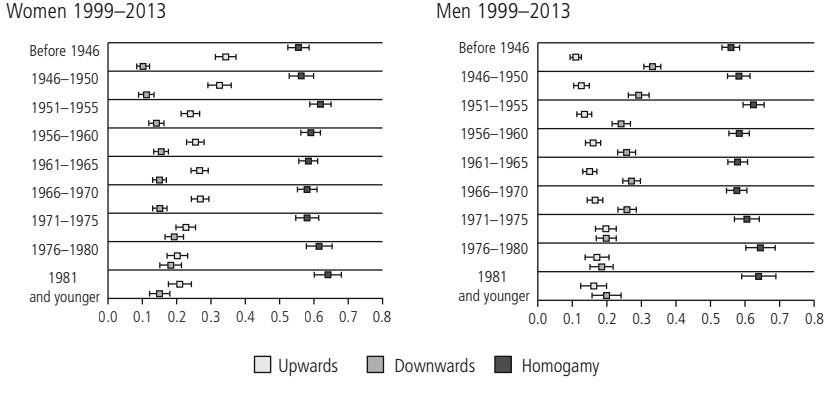
To assess the extent of educational homogamy across birth cohorts, Figures 1 and 2 show the share of couples in the observed data that are matched according to the same level of educational endowments. In both countries, we find educational homogamy to be strong and stable over time, with roughly 60% of couples in the sample partnered with similar educational qualifications. Therefore, we are unable to confirm our first hypothesis of an increase in educational homogamy for Germany and Switzerland (H1a).

Figure 1 Observed educational homogamy in Switzerland



Source: Swiss Household Panel (w15), 1999–2013.

Figure 2 Observed educational homogamy in Germany



Source: German Socio Economic Panel (w30), 1999–2013.

Although we do not find support for a clear increase in educational homogamy as hypothesized, this initial finding is nonetheless consistent with previous studies on educational homogamy trends in recent decades (Blossfeld and Timm 2003; Breen and Salazar 2010; Breen and Salazar 2011; Breen and Andersen 2012). Upon further investigation of gender differences in partner patterns, we find that highly educated women are more likely to be single than men, which could counteract the hypothesized increase in educational homogamy.

Nevertheless, we do see a convergence of male and female patterns across cohorts. Whereas older male cohorts were more likely to marry downwards and older female cohorts marry upwards, there is no gender difference amongst the younger cohorts (i. e. for individuals born after 1971). Thus, we do find supporting evidence for the convergence of the shares for upward and downward marrying couples amongst later cohorts (H1b).

Turning to the assessment of the consequences of educational expansion and educational inequality on the development of inter-couple income inequality, we first turn our attention to the constructed counterfactual couples. As shown in Table 1, our matching approach seems to be quite successful in reproducing the intended structure (i. e. in terms of age and cohort membership). In addition, the randomly matched data successfully eliminates the correlation between couples with regard to educational endowments, the hourly wage rate and the hours worked. Interestingly, we find little similarity between the log-transformed hourly wage rates of couples. This is likely explained by the low participation rate of women in traditionally male-breadwinner countries. Thus, the small association between couples' hours worked likely indicates that couples typically have one primary earner.

Table 1 Partial correlations before and after random matching

	SHP		SOEP	
	Observed	Randomly matched	Observed	Randomly matched
Age	0.885	0.923	0.909	0.937
Cohort	0.864	0.945	0.889	0.960
Highest education	0.268	–0.005	0.388	0.003
ln(hourly wage rate)	0.067	–0.002	0.075	0.002
Hours worked	–0.040	–0.009	0.086	0.022
N	24 648	24 648	134 720	134 720

Sources: German Socio Economic Panel (w30), 1999–2013; Swiss Household Panel, 1999–2013; own calculations, controlling for year of observation and cohort.

4.2 Income inequality of observed and randomly matched couples

In order to better understand the potential effects of educational homogamy on income inequality, we compare the distribution of inequality between observed couples and randomly matched couples according to their educational endowments

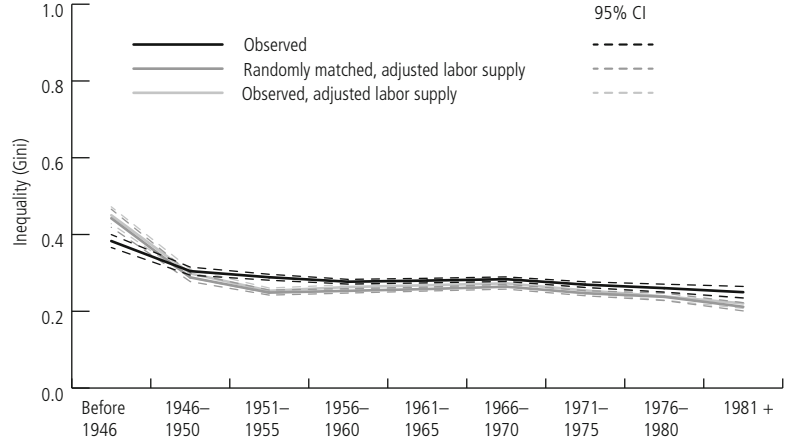
across cohorts. Following the arguments in the theoretical section, we further take into consideration to what extent households' labor supply decisions contribute to differences in this distribution. To this end, we not only compare the observed income inequality (A) to the randomly matched couples after adjusting for labor supply (B), but also construct a counterfactual for observed couples in which their partners work the hours of those under random matching (C).

By adjusting for labor supply for both observed and randomly matched couples, we are able to derive the pure effect of educational homogamy (i. e. between the observed and counterfactual inter-couple income inequality after adjusting for labor supply for both groups if they were randomly paired). In addition, the comparison of observed couples (A) with observed couples with adjusted for labor supply (C) provides us with the effect of labor supply on inter-couple income inequality. The distance between these distributions demonstrate the size of the effect, while lower scores of the randomly matched data suggests that these two effects do indeed contribute to inter-couple income inequality.

Figures 3 and 4 demonstrate differences in the distribution of inequality for A) the observed couples (i. e. black lines), B) randomly matched couples with adjusted labor supply (i. e. grey lines) and C) our counterfactual couples (i. e. light grey lines). More precisely, a lower Gini coefficient of the randomly matched couples suggests that educational homogamy and (female) labor supply both contribute to income inequality in these countries. To isolate these effects, the counterfactual couples also take into account the household strategies to maximize household utility in terms of labor supply decisions (Becker 1981; Elder 1994). To estimate the pure effect of educational homogamy on income inequality across cohorts, we compare the observed inequality to its counterfactual (i. e. the distribution of inequality of observed couples if they were to work the hours of randomly matched partners).

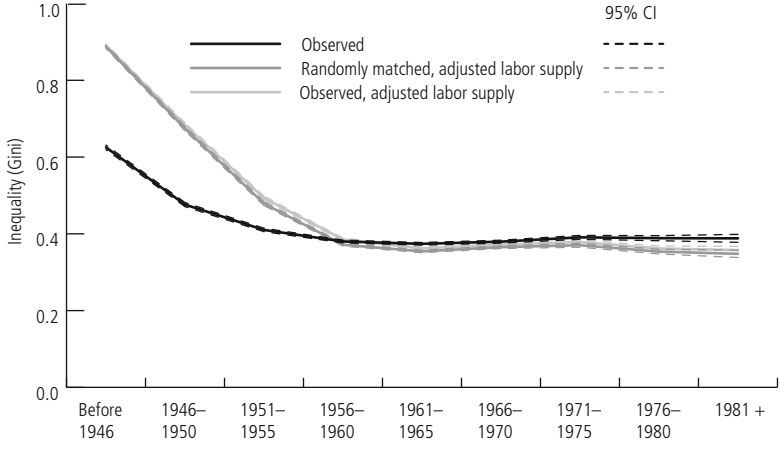
While the observed inequality is generally higher and more stable for younger cohorts in Germany than in Switzerland, the distribution of the different measures reveals a similar pattern in both countries. For Switzerland as well as for Germany, inequality of randomly matched couples is generally lower than the observed one (see Figure 3 and 4, black vs. grey lines). Thus, we find support for H2a in both countries, although differences are not always statistically significant. Moreover, we find that differences are strongest for older cohorts in both Switzerland and Germany where, however, inequality is predicted to be even higher under a random allocation of partners and the corresponding labor supply decisions. For the case of Germany, there is additionally some indication of an increase in this difference for younger cohorts (widening gap between the black and the grey line in Figure 4 for the two youngest cohorts (H2b). Against the background of a stable level of homogamy in both countries, the opposite effects for younger and older cohorts might suggest differences in labor supply behavior across cohorts. However, we find no clear support for our hypothesis that effects are stronger in Switzerland than in

Figure 3 Gini coefficients after matching in Switzerland



Source: Swiss Household Panel (w15), 1999–2013.

Figure 4 Gini coefficients after matching in Germany



Source: German Socio Economic Panel (w30), 1999–2013.

Germany (H4), despite differences between these countries concerning endogenous decision-making of household regarding labor supply (see Appendix 4).

In addition, these findings further suggest that the effect of educational homogamy on income inequality is largely mediated through couples' labor supply decisions. This can be observed by the difference in the Gini coefficients of observed couples (A) and the counterfactual couples with adjusted labor supply (C). As the

total effect of a non-random choice of partners is mostly mediated by endogenous labor supply decisions, we find support for our hypothesis that labor supply offsets the effect of educational homogamy on inter-couple income inequality (H3). Furthermore, there is no solid indication that these effects change across cohorts, as all three measures are nearly parallel for birth cohorts after 1950. Thus, in line with the above outlined stable level of educational homogamy, educational expansion did not seem to have amplified the effects of educational homogamy and couples' labor supply decisions on inter-couple income inequality.

5 Discussion

Our study addresses potential consequences of educational expansion as a reflection of interrelated socio-demographic and socio-economic trends. More precisely, we assess the impact of educational homogamy on inter-couple income inequality, against the background of educational expansion. In order to understand the relationship between these trends and inter-couple income inequality, we have addressed several empirical issues. First, we conceptualized a structural definition of birth cohorts as temporal units of educational expansion. Second, we compared the Gini coefficients of observed and randomly matched couples. Third, we addressed the endogenous nature of labor supply within households.

To this end, we have selected two countries that not only demonstrate similar demographic and economic trends contributing to income inequality in recent years, but also are characterized by a strong male breadwinner model. Using the Swiss Household Panel and German Socio-Economic Panel, our analyses confirm much of what has been shown in related studies. This includes a substantial increase in female human capital, namely in the obtainment of tertiary degrees. Against this background, we then compared trends in educational homogamy, finding evidence of a strong and persistent association between the educational credentials of couples in both Germany and Switzerland.

Our results demonstrate evidence of slightly higher inter-couple income inequality for educational homogenous couples than if they were randomly matched. Although this difference is small, a consistent trend across cohorts for individuals born after 1950 emerges, which indicates that these trends are occurring in relation to educational expansion and particularly the increase of female human capital. While not the focus of this contribution, this observation might reflect differences in female labor supply in relation to partners' earnings. This view is then also in line with the finding that significant differences between observed inter-couple income inequality and the one under a random choice of partners are mostly mediated by endogenous labor supply decisions within households. As discussed in the interpretation of results, however, differences observed across cohorts may reflect

different life course stages. Although we are not able to disentangle cohort and age effects, we have argued that only slight changes in levels are evident across cohorts, whereas the overall patterns remain quite similar. Moreover, we only find strong differences amongst the oldest and youngest cohorts. Thus, we do not expect age effects to strongly bias our findings.

Together, our analyses indicate that educational homogamy only partially contributes to the rise in income inequality in recent years. Hence, the potential socio-economic consequences of these demographic trends are marginal in comparison to other trends, such as the increase in single households. Nevertheless, our paper contributes to the current literature on educational expansion, especially with regards to its consequences for socio-economic and gender equality. By comparatively analyzing socio-demographic and socio-economic consequences of educational expansion, we demonstrate that both aspects are intricately linked and can potentially contribute to overall household material well-being and differences between households. However, the extent of impact is directly relational to (female) labor supply, which is in line with many of the previous studies on dual earner countries (Breen and Salazar 2011; Schwartz 2010; Cancian and Reed 1999; Breen and Salazar 2010; Breen and Andersen 2012; Dribe and Nystedt 2013). While labor supply is undoubtedly a crucial factor, alternative explanations may better explain why educational homogamy has not contributed to increased income inequality in either dual earner or male breadwinner countries.

Moreover, differences in couples' earnings may also reflect gender differences regarding pay, although for our purposes, this difference is accounted for once we included Heckman-imputed hourly wage rate for the measurement of our dependent variable. In both settings, the gender pay gap is equally likely to influence the impact of educational homogamy on inter-couple income inequality as female labor supply. We therefore argue that gender differences in work time and pay are consequentially related to inter-couple income inequality. Thus, future work relating socio-economic to socio-demographic consequences of educational expansion should look more closely into differences in female labor supply and educational returns to further examine a potential tradeoff between gender and income inequalities.

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7 Appendix

Appendix 1 Variable operationalization

Variable	Description
Income/Earnings	
Log gross yearly household income	Household level variable; Includes individual earnings of the household members as well as additional sources of income.
Log gross yearly earnings from labor market participation	Individual level variable; Based on current labor market participation; The dependent variable in the Heckman selection model.
Log gross hourly wage rate	Estimated hourly wage rates (for all obs. in all years) based on a heckman selection model (See the document describing necessary methodological steps.
Log gross yearly earnings	Based on the estimated log hourly wage rate (hatlnhwage / hatlnhwage_p): hours * hatlnhwage * 4.33 * 12

Continuation of Appendix 1 on the next page.

Continuation of Appendix 1.

Variable	Description
Demographics	
Gender	1 = Female
Age	Based on birth year and survey year
Education	Based on ISCED: General Schooling Vocational Education and Training Higher Education
Number of children in household (by age group)	Kids1: Children aged 4 years and younger. Kids2: Children aged 5 to 14 Kids3: Children aged 15 to 18
Migration background	Based on information about country of birth, citizenship at birth, parents' citizenship Born in residing country, one parent of that origin Born in residing country, no parent of that origin Not born in residing country
Labor market	
Employment status	Employed Unemployed Not employed
Tenure	Total years in employment
Working hours per week	Based on information about the hours worked in all or first and second job: 0 hours / not in employment 1–10 hours 11–20 hours 21–30 hours 31–40 hours 41–50 hours 51–80 hours
Time	
Survey Year	Year survey data was taken
Birth Cohort	1935–1940 1941–1945 1946–1950 1951–1955 1956–1960 1961–1965 1966–1970 1971–1975 1976–1980 1981 and younger

Appendix 2 Summary description of SHP variables

Variable	Obs.	Mean	Min.	Max.
Income/Earnings				
Gross yearly household income	24 648	84 316	1 160	2 068 270
Gross yearly earnings from labor market participation (observed)	24 648	175 327	0	697 533
Log gross hourly wage rate	24 648	3.71	0.81	6.26
Gross yearly earnings (simulated with labor supply)	24 648	177 737	0	1 303 059
Demographics				
Gender	24 648	0.50	0	1
Age	24 648	44.54	25	64
Education	24 648	2.39	1	3
Number of children in household (under 4 years of age)	24 648	0.23	0	3
Number of children in household (5–14 years of age)	24 648	0.65	0	6
Number of children in household (15–18 years of age)	24 648	0.25	0	5
Migration background	24 648	1.34	1	3
Labor market				
Employment status	24 648	1.16	1	3
Tenure	24 648	22.54	0	61
Working hours per week (observed)	24 648	3.70	0	6
Time				
Survey Year	24 648	2005	1999	2013
Birth Cohort	24 648	4.82	1	9

Source: Swiss Household Panel (w15), 1999–2013.

Appendix 3 Summary description of SOEP variables

Variable	Obs.	Mean	Min.	Max.
Income/Earnings				
Gross yearly household income	134 720	53 681	0	3 564 784
Gross yearly earnings from labor market participation (observed)	134 720	59 388	0	422 208
Log gross hourly wage rate	134 720	2.71	–1.80	5.99
Gross yearly earnings (simulated with labor supply)	134 720	54 703	0	904 363
Demographics				
Gender	134 720	0.50	0	1
Age	134 720	45.62	25	64
Education	134 720	2.22	1	3
Number of children in household (under 4 years of age)	134 720	0.16	0	3
Number of children in household (5–14 years of age)	134 720	0.48	0	6
Number of children in household (15–18 years of age)	134 720	0.21	0	4
Migration background	134 720	1.24	1	3
Labor market				
Employment status	134 720	1.38	1	3
Tenure	134 720	20.60	0	72.5
Working hours per week (observed)	134 720	3.25	0	6
Time				
Survey year	134 720	2005	1999	2013
Birth cohort	134 720	4.41	1	9

Source: German Socio Economic Panel (w30), 1999–2013.

Continuation of Appendix 4 on the next page.

Appendix 4 Female participation in education and the labor market (Switzerland and Germany)

	Cohort								
	<1946	1946–50	1951–55	1956–60	1961–65	1966–70	1971–75	1976–80	1981+
Highest Education (Switzerland)									
General Education	0.09	0.08	0.05	0.07	0.04	0.06	0.04	0.03	0.02
Vocational Education and Training	0.76	0.72	0.70	0.66	0.66	0.59	0.60	0.60	0.46
Higher Education	0.15	0.19	0.25	0.27	0.30	0.35	0.37	0.36	0.53
N	369	769	1 523	1 975	2 582	2 280	1 583	809	438
Labor Market Participation (Switzerland)									
Employed	0.67	0.81	0.81	0.84	0.85	0.88	0.92	0.93	0.98
Unemployed	0.03	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00
Not Employed	0.31	0.19	0.19	0.15	0.14	0.11	0.08	0.06	0.02
N	369	769	1 523	1 975	2 582	2 280	1 583	809	438
Highest Education (Germany)									
General Education	0.23	0.18	0.13	0.12	0.10	0.13	0.13	0.09	0.10
Vocational Education and Training	0.56	0.58	0.54	0.56	0.61	0.59	0.57	0.64	0.61
Higher Education	0.21	0.24	0.33	0.32	0.29	0.28	0.30	0.27	0.28
N	4 731	6 364	9 510	11 197	11 798	10 871	7 084	4 018	1 850
Labor Market Participation (Germany)									
Employed	0.37	0.60	0.76	0.79	0.78	0.74	0.69	0.70	0.93
Unemployed	0.11	0.08	0.06	0.05	0.05	0.05	0.05	0.05	0.00
Not Employed	0.52	0.32	0.18	0.16	0.17	0.21	0.26	0.25	0.07
N	4 731	6 364	9 510	11 197	11 798	10 871	7 084	4 018	1 850

Seismo

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Von der alternativen zur prekären Familienform? Der Wandel des Zusammenhangs von Bildung und nichtehelichen Familienformen in Deutschland

Dirk Konietzka* und Michaela Kreyenfeld**

Zusammenfassung: Der Beitrag untersucht den Zusammenhang von Bildung und Familienform auf Basis des deutschen Mikrozensus 1996–2012. Es zeigt sich, dass sich in Westdeutschland eine positive Beziehung zwischen Bildungsniveau und nichtehelichem Zusammenleben mit zunehmender Verbreitung dieser Lebensform umgekehrt hat. Es wird zudem deutlich, dass im Westen Deutschlands bildungshomogene Paare am oberen Ende der Bildungsskala die Pioniere der Verbreitung nichtehelicher Lebensgemeinschaften mit Kindern waren. In Ostdeutschland zeigen sich andere Muster als in Westdeutschland.

Schlüsselwörter: Familie, nichteheliche Geburten, Familienformen, Kohabitation, Ehe

Un modèle familial alternatif devenu modèle précaire ? L'impact changeant de l'éducation sur les partenariats hors mariage en Allemagne

Résumé : Basé sur le micro-recensement allemand 1996–2012, cet article s'intéresse à la relation entre l'éducation et la structure familiale. Il montre qu'en Allemagne de l'Ouest, la relation entre le niveau d'éducation et la cohabitation hors mariage s'est inversée avec la diffusion plus large de ce modèle conjugal. Dans cette région, c'est les couples dont les deux partenaires ont un niveau d'éducation élevé qui ont été les pionniers du modèle couple non-marié avec enfants. En Allemagne de l'Est, cette tendance diffère.

Mot-clés : famille, naissances hors mariage, forme de vie, cohabitation, mariage

From an Alternative to a Precarious Family Form? The Changing Role of Education in Nonmarital Childbearing in Germany

Abstract: This paper examines the association of education and family forms based on data of the German microcensus 1996–2012. The investigation shows that highly educated women in western Germany had a higher probability of living in a nonmarital instead of a marital union. With an increase in the share of nonmarital births, the association has reversed. Likewise, the highly educated couples were initially the vanguards of living in nonmarital unions with children, but they are nowadays the least likely to do so. Patterns differ between eastern and western Germany, though.

Keywords: family, nonmarital births, living arrangements, cohabitation, marriage

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1 Einleitung

Ein zentrales Merkmal des Wandels der Lebensformen in den europäischen Gesellschaften seit den 1970er Jahren ist die zunehmende Verbreitung nichtehelicher Lebensgemeinschaften. Während das nichteheliche Zusammenleben in vielen Ländern Europas eine begrenzte Phase im jungen Erwachsenenalter darstellt, hat sich die Kohabitation vor allem in den nordischen Ländern Europas und in Frankreich auch als Familienform, in denen Kinder grossgezogen werden, etabliert (Raley 2001; Kiernan 2002; Heuveline und Timberlake 2004; Perelli-Harris et al. 2012). Ein indirekter Indikator dafür, dass nichteheliche Lebensgemeinschaften mit Kindern an Bedeutung gewinnen, ist die Nichtehelichenquote. Sie lag in Deutschland im Jahr 2015 bei 35 Prozent. Dieser Wert liegt zwar im Vergleich zu den anderen europäischen Ländern im unteren Mittelfeld (Eurostat 2016; Sobotka 2011). Er überdeckt jedoch grosse regionale Unterschiede zwischen den westlichen und östlichen Bundesländern. So war der Anteil nichtehelicher Geburten im Jahr 2015 im Osten (inklusive Berlins) mit 58 Prozent fast doppelt so hoch wie im Westen mit 30 Prozent (Statistisches Bundesamt 2017a, 2017b). Zugleich hat die Nichtehelichenquote in Westdeutschland zwischen 2000 und 2015 um mehr als 10 Prozentpunkte zugenommen. Diese Entwicklung ist nicht auf den deutschen Fall beschränkt. Vielmehr weisen europäische Länder, in denen die Anteile nichtehelicher Geburten lange Zeit gering waren, seit der Jahrtausendwende eine beträchtliche Dynamik auf. Dies gilt etwa für Italien (Anstieg zwischen 2000 und 2014 von 9.7 auf 28.8 Prozent) und Polen (Anstieg im gleichen Zeitraum von 12.1 auf 24.2 Prozent). Auch in der Schweiz sind die Anteile der nichtehelichen Geburten zwischen 2000 und 2014 von 10.7 auf 21.7 Prozent aller Geburten gestiegen (Eurostat 2016).

Der Bedeutungszuwachs der nichtehelichen Lebensgemeinschaften in Deutschland seit den 1980er Jahren spiegelt sich auch in einer zunehmenden soziologischen und demographischen Beschäftigung mit dieser Lebensform wider (Tyrell 1985; Vaskovics und Rupp 1995; Zapf 1987; Hill und Kopp 1999; Huinink 1999; Nave-Herz 1999; Klein und Lauterbach 1999; Lengerer 2007; Naderi 2008; Lois 2009). Aus sozialstruktureller Perspektive ist dabei die Frage von Interesse, in welchen sozialen Segmenten Kohabitationen hauptsächlich verankert sind und welche Veränderungen im Lauf der Zeit stattgefunden haben. Mit Blick auf die sozialen Trägergruppen nichtehelicher Lebensgemeinschaften spielt die Bildungsexpansion eine zentrale Rolle, da in deren Folge die quantitativ stark gewachsene Gruppe der höher Gebildeten sozial weniger homogen wurde. Zugleich sind die unteren Bildungsgruppen nicht nur anteilsmässig kleiner, sondern auch sozial selektiver geworden (Leschinsky und Mayer 1999; Solga und Wagner 2001).

Hinsichtlich des Zusammenhangs von Bildung und Lebensformen haben sich zwei gegensätzliche Perspektiven herausgebildet. Zum einen wird die steigende Bildungsbeteiligung von Frauen als ursächlich für den Bedeutungsverlust der Ehe

als Lebensform betrachtet. Hoch qualifizierte Frauen waren demnach die Pioniere veränderter familialer Verhaltensweisen (Lesthaeghe 1992). Zum anderen werden die gering Gebildeten als Gruppe identifiziert, die nicht nur auf dem Arbeitsmarkt, sondern zunehmend auch im privaten Bereich mit instabilen und prekären Lebensverhältnissen konfrontiert sind (McLanahan 2004; Perelli-Harris et al. 2010).

Unser Beitrag knüpft an diese Problemstellung an, indem wir die Determinanten nichtehelicher Elternschaft in Ost- und Westdeutschland untersuchen. Als Datenbasis dient der Mikrozensus der Jahre 1996–2012. Wir konzentrieren uns auf den Zusammenhang von formaler Bildung und Familienform. Der innerdeutsche Vergleich und der Einbezug mehrerer Beobachtungszeitpunkte ermöglicht es zugleich zu untersuchen, in welchem Mass dieser Zusammenhang kontextabhängig und im Zeitvergleich stabil ist. Neben der Frage, ob sich die Beziehung zwischen Bildung und Lebensformen in beiden Teilen Deutschlands seit den 1990er Jahren gewandelt hat, richtet sich unser Interesse darauf, wie die Bildungsressourcen von Frauen im Zusammenspiel mit denen des Partners auf die Lebensform wirken. Um uns trotz des Querschnittsdesigns des Mikrozensus dem neuralgischen Übergang der Kindgeburt anzunähern, begrenzen wir die Analyse auf Mütter mit Kindern im Alter von 0 bis 1 Jahr.

Im Folgenden diskutieren wir zunächst die Wirkungszusammenhänge zwischen individuell und im Paarkontext bestehenden Bildungsressourcen und der Wahl der Lebensform (Abschnitt 2). Nach der Vorstellung der Daten und Analysestrategie (Abschnitt 3) untersuchen wir in Abschnitt 4 den Wandel des Einflusses der Bildung von Frauen und ihrer Partner auf die familiale Lebensform. Abschliessend diskutieren wir die ungleichheitssoziologische und sozialpolitische Relevanz des Zusammenhangs von Bildung und nichtehelicher Elternschaft und fragen nach Implikationen der Befunde, die über den deutsch-deutschen Vergleichshorizont hinausreichen (Abschnitt 5).

2 Theoretische Überlegungen und Forschungsstand

2.1 Zur Rolle der Bildung

Bildung ist in modernen Gesellschaften eine generalisierte Ressource für Lebenschancen. Sie bestimmt über individuelle Handlungsspielräume und den Zugang zu erstrebenswerten Gütern in praktisch allen Lebensbereichen über den gesamten Lebensverlauf hinweg. In der Sphäre Erwerbsarbeit und Arbeitsmarkt sind diese Zusammenhänge evident und die Tatsache, dass mehr Bildung (im Sinne von Humankapital oder höheren Abschlüssen) den Zugang zu erstrebenswerten Marktgütern und Positionen (Einkommen, Status, Berufsstellung) verbessert, ist unbestritten; auch wenn die Mechanismen, über die Bildung wirkt – Qualifikationen, Humankapital,

Kompetenzen oder Zertifikate – theoretisch unterschiedlich betont werden (Arrow 1973; Mincer 1974; Becker 2011).

Bildung ist darüber hinaus theoretisch und empirisch hoch relevant für das Verständnis von Verhalten und Entscheidungen im privaten Bereich. In der klassischen Familienökonomie gilt die zunehmende Bildung und die damit wachsende ökonomische Unabhängigkeit der Frauen als entscheidend für den Rückgang der Heirats- und Geburtenneigungen (Becker 1993). Dahinter liegt die Vorstellung, dass Heirat und Haushaltsgründung unteilbare Prozesse, Kind und Beruf nicht vereinbar und eine Eheschliessung wesentlich darauf angelegt ist, eigene Kinder aufzuziehen (Becker 1974). Mit der Zusatzannahme, dass Spezialisierung Effizienzgewinne bringt und zudem Frauen "biologically committed to the care of children" (Becker 1993, 37) sind, wird eine geschlechtlich organisierte Haushaltsführung als effizienter gegenüber einer partnerschaftlichen Arbeitsteilung betrachtet. Eine wachsende Arbeitsmarktbeteiligung und steigende ökonomische Unabhängigkeit der Frau stellen die ökonomische Rationalität dieses Modells jedoch in Frage. Das klassische familienökonomische Modell wurde im Wesentlichen von Gary S. Becker (1960) in der Mitte des letzten Jahrhunderts entwickelt. Es entstand in einer Zeit, in der das Modell der geschlechtlichen Arbeitsteilung noch eine erhebliche normative Anziehungskraft besass, Frauen nur allmählich in den Arbeitsmarkt strömten und die Erwerbsverläufe von Männern noch nicht wesentlich durch Arbeitsmarktunsicherheiten geprägt waren.

Einen Gegenentwurf stellen die von Valerie Oppenheimer entwickelten Überlegungen zum "marriage timing" dar (Oppenheimer 1982; 1988; 1994). Demnach ist die gestiegene Erwerbsbeteiligung von verheirateten Frauen und deren zunehmende Angleichung an die Erwerbsmuster der Männer im Kontext veränderter "family strategies" zu sehen, durch welche Familien ökonomische Unsicherheiten reduzieren und ihr Wohlstandsniveau erhöhen können (Oppenheimer 1982; 2000). Nach Oppenheimer haben die u. a. durch Deindustrialisierungs- und Deregulierungsprozesse verursachten verschlechterten ökonomischen Chancen, denen vor allem die gering qualifizierten Männer in der frühen Erwerbsphase ausgesetzt sind, deren Heiratsfähigkeit ("marriageability") reduziert. Ihnen fehlen häufig die ökonomischen Ressourcen und Perspektiven, einen Haushalt zu gründen und zu heiraten. Angesichts der starken Verbreitung bildungshomogamer Partnerschaften können wiederum die Ressourcen der Partnerinnen die ökonomische Lage dieser Haushalte nicht wesentlich verbessern. D. h., für geringer qualifizierte Frauen und Männer mag die Ehe unverändert erstrebenswert sein, es mangelt ihnen aber an den notwendigen Ressourcen, um eine Eheschliessung zu realisieren (Oppenheimer 2003; Kalmijn 2011). Vor allem in den USA hat sich vor dem Hintergrund, dass Männer ihre angestammte Rolle als Ernährer nicht mehr ausfüllen können, eine Debatte um steigende Nichtehelichenquoten und eine hohe Abhängigkeit schlecht qualifizierter

und unverheirateter Mütter von sozialstaatlichen Transfers herausgebildet (Friedman et al. 1994; McLanahan 2004; Graefe und Lichter 2007).

Einen grundsätzlich anderen Ansatz, den Wandel der Heirats- und Familiengründungsmuster zu verstehen, verfolgen soziokulturelle Theorien. Die modernisierungstheoretische Perspektive erklärt die zunehmende Verbreitung nichtehelicher Lebensgemeinschaften durch eine Erosion der Institution Ehe und damit einhergehende neuartige Optionen der privaten Lebensführung (Cherlin 2004). Dies gilt zunehmend auch für Lebensformentscheidungen rund um die Familiengründung. Diese Perspektive ist in der deutschsprachigen Soziologie vor allem mit der Individualisierungsthese (Beck-Gernsheim 1998) verknüpft. In der demographischen Forschung herrscht hingegen die Annahme eines durch den postmateriellen Wertewandel induzierten Verhaltenswandels vor (Lesthaeghe 1992, 2010). Die gemeinsame Klammer beider Ansätze ist die Perspektive einer fortgeschrittenen bzw. Post-Modernisierung. Demnach markierten die 1960er und 1970er Jahre eine soziokulturelle Zeitenwende, welche die Nachkriegsepoche des "golden age of marriage" (Festy 1980) und der Dominanz der modernen Kernfamilie (Parsons 1955) beendeten und eine neue Entwicklungsphase begründeten, in der sich weniger institutionell bindende Verhaltensmuster im Bereich Familie, Partnerschaft und Sexualität herausgebildet haben. Typischerweise wird angenommen, dass den Wandel vor allem die höher gebildeten Gruppen und unter diesen insbesondere Frauen vorangetrieben haben (Meyer und Schulze 1988).

Insgesamt wird also die Frage, welche Rolle Bildungsressourcen für den Wandel der (nichtehelichen) Familienformen spielen, sehr unterschiedlich beantwortet. Machen die hinzugewonnenen Chancen der Frauen auf dem Arbeitsmarkt – wie die mikroökonomische Theorie von Gary S. Becker annimmt – eine Eheschliessung unattraktiver, da es für die Frauen weniger lohnend erscheint, in eine gemeinsame Haushaltsführung, Ehe und Kinder zu investieren? Oder stärken die guten Erwerbs- und Einkommenschancen höher qualifizierter Frauen im Gegenteil die ökonomische Basis der Familie? Hat dies wiederum zur Folge, dass gerade ressourcenstarke Paare den institutionellen Rahmen der Ehe vorziehen, um ihre Investitionen in Partnerschaften und Familie besser absichern zu können? Sind umgekehrt weniger qualifizierte Frauen und deren Partner immer weniger ökonomisch in der Lage, einen «klassischen» Paarhaushalt mit Ehe und Familie zu gründen? Hinzu kommt die Frage, inwieweit sich im Zuge der sukzessiven Höherbildung jüngerer Geburtskohorten die Zusammenhänge zwischen Bildung und Familienform im Zeitvergleich verändert haben.

2.2 Forschungsstand

Die bisherige empirische Evidenz zum bildungsspezifischen Heiratsverhalten hat die klassische ökonomische Unabhängigkeitshypothese, nach der eine höhere Bildung von Frauen mit einer abnehmenden Heiratsneigung eingehen sollte, wenig gestützt. Das zentrale Ergebnis der Forschung ist, dass nicht hinreichend zwischen

lebenszeitlich verschobenen Übergängen und einer endgültigen Abkehr von Ehe und Familie unterschieden wurde (Oppenheimer 1988). Höhere Bildung führt demnach nicht zuletzt über den Mechanismus verlängerter Bildungsdauern zu einem späteren Heiratszeitpunkt im Lebenslauf; die ultimative Heiratsneigung der höher gebildeten ist jedoch grösser als die der geringer qualifizierten und ökonomisch weniger gut gestellten Frauen (Oppenheimer 1988; Goldstein und Kenney 2001; Ono 2003). In eine ähnliche Richtung gehen Studien, die die Heiratsraten von nichtehelich Zusammenlebenden untersucht haben (Duvander 1999; Kravdal 1999). Ein Vergleich von nichtehelichen und ehelichen Erstgeburten in elf europäischen Ländern hat ferner gezeigt, dass in den meisten Ländern Bildung und nichteheliche Elternschaft negativ miteinander korrelieren (Perelli-Harris et al. 2010).

In Deutschland sind die Befunde zum Einfluss der Bildung auf das Heiratsverhalten bislang weniger eindeutig. Vereinzelte Studien weisen zwar darauf hin, dass mit dem Bildungsgrad die Heiratsneigung von Frauen tendenziell steigt (Arranz Becker und Lois 2010). Die Mehrzahl der Studien zeigt jedoch einen negativen oder insignifikanten Zusammenhang zwischen der Bildung der Frau und der Heiratsrate (Blossfeld und Huinink 1991; Blossfeld und Jaenichen 1992; Klein 1992; Müller et al. 1999; Hiekel et al. 2015).[1]

Ausgangspunkt der Untersuchungen zur nichtehelichen Elternschaft, die nach der Wiedervereinigung für Deutschland vorgelegt wurden, sind zumeist die grossen Ost-West-Unterschiede in den Nichtehelichenquoten (Huinink 1999; Huinink und Konietzka 2003; Klüsener und Goldstein 2016). Im Jahr 2015 lag die Nichtehelichenquote in Ostdeutschland (mit Berlin) bei 58 und in Westdeutschland bei 30 Prozent (Statistisches Bundesamt 2017a). Analysen auf Basis des Mikrozensus 1996–2000 haben zudem deutliche Unterschiede in der Neigung zur unverheirateten Elternschaft nach dem Bildungsgrad sowie zwischen verschiedenen Lebensformen aufgezeigt (Konietzka und Kreyenfeld 2005). Gering qualifizierte Frauen mit Kindern sind in Ost- wie auch in Westdeutschland häufiger alleinerziehend als höher qualifizierte Frauen. Zugleich haben sich erhebliche Ost-West-Unterschiede im Hinblick auf nichteheliche versus eheliche Lebensgemeinschaften gezeigt. Westdeutsche Frauen mit Abitur leben häufiger in einer nichtehelichen Lebensgemeinschaft als schlechter qualifizierte Frauen, wenn sie Kinder haben. In Ostdeutschland existiert ein umgekehrter Zusammenhang (ebd.).

Die innerdeutschen Unterschiede verdeutlichen nicht nur, dass der Einfluss von Bildung auf Lebensformen variieren kann. Speziell die westdeutschen Ergebnisse zählen zu den wenigen empirischen Belegen für die klassische Unabhängigkeitsthese,

1 Uneinigkeit besteht über die korrekte Interpretation der Ergebnisse, da in den ereignisanalytischen Modellen zumeist nicht zwischen der ultimativen Wahrscheinlichkeit zu heiraten und dem Timing der Heirat unterschieden wird. Differenzen in den Befunden zum Zusammenhang von Bildung und Heiratsrate ergeben sich auch in Abhängigkeit davon, ob der Übergang von einer nichtehelichen Lebensgemeinschaft in eine Ehe nach Dauer der Lebensgemeinschaft oder der Übergang in eine Ehe nach Lebensalter modelliert wird.

d. h. die ökonomisch wie kulturell begründbare Annahme, dass höher gebildete Frauen nach der Familiengründung häufiger als andere Bildungsgruppen die Lebensform der Ehe «meiden» und stattdessen nichtehelich zusammenleben. In diesem Beitrag schliessen wir an die genannten Analysen zur Bildungsstruktur nichtehelicher Elternschaft an, gehen jedoch in folgender Weise über diese hinaus: *Erstens* ergänzen wir die früheren Analysen, die sich auf den Zeitraum 1996–2000 bezogen und damit auf eine Zeit, in der nichteheliche Elternschaft in Westdeutschland weniger bedeutsam war, durch aktuelle Ergebnisse des Mikrozensus 2004, 2008 und 2012. *Zweitens* liegt ein konzeptueller Schwachpunkt vieler Studien zum Heiratsverhalten und zur nichtehelichen Elternschaft darin, dass sie sozialstrukturelle Merkmale des Partners nicht berücksichtigen. Da Paare vielfach bildungshomogam sind und folglich die Bildungsniveaus beider Partner miteinander korrelieren (Blossfeld und Timm 2003), können die empirischen Befunde zum Zusammenhang von Bildung der Frau und nichtehelicher Mutterschaft verzerrt werden, wenn die Partnermerkmale nicht berücksichtigt werden. Gerade auch mit Blick auf die Argumentation von Oppenheimer und anderen über den Wandel der ökonomischen Position der Männer (Graefe und Lichter 2007; Kalmijn 2011; Oppenheimer 2000) scheint es angebracht, die Rolle von Bildungsressourcen für familiale Verhaltensmuster und Entscheidungen im Paarkontext zu modellieren. Schliesslich legen wir angesichts der anteilsmässigen Zunahme der höher gebildeten Frauen und Männer in jüngeren Kohorten besonderes Augenmerk auf die Frage, wie sich die Beziehung zwischen Bildungsressourcen und Familienform über die Zeit verändert hat.

2.3 Hypothesen

Unser Ausgangspunkt ist die Unabhängigkeitshypothese, der zufolge Frauen mit zunehmender Bildung die Lebensform Ehe als weniger attraktiv betrachten als nichteheliche Lebensformen. Die klassische Unabhängigkeitshypothese thematisiert die Heiratsentscheidung, nicht die Wahl der Lebensform. Allerdings lässt sich analog vermuten, dass sich Frauen mit höherer Bildung nach der Geburt eines Kindes häufiger als andere Frauen gegen eine Heirat entscheiden und stattdessen unverheiratet zusammenleben. Die Alternativhypothese postuliert, dass die verschlechterten Arbeitsmarktchancen der Männer und die damit verbundenen prekärer werdenden ökonomischen Grundlagen von Ehe und Familie in den unteren Bildungsgruppen nicht nur die Heiratschancen, sondern generell die Gelegenheiten für stabile Partnerschaften reduzieren (McLanahan 2004; Perelli-Harris et al. 2010). Demnach sind es vorrangig gering qualifizierte junge Frauen, die nach der Geburt von Kindern alleinerziehend sind.

Im Hinblick auf die Lebensform können Alleinerziehende und kohabitierende Mütter als zwei strukturell voneinander verschiedene Gruppen betrachtet werden. In der Diskussion um die Verbreitung von nichtehelichen Lebensgemeinschaften galten zunächst die höher gebildeten Frauen als Pioniere neuer Lebensformen

und Lebensstile, die in den 1970er und 1980er Jahren dezidiert anti-institutionell orientiert waren (Meyer und Schulze 1988). Versteht man nichteheliche Lebensgemeinschaften in diesem Sinne als progressive oder alternative Lebensformen, kann man davon ausgehen, dass in einer frühen Phase vor allem hoch qualifizierte Frauen mit Kindern kohabitierten. Mit zunehmender Diffusion dieser Familienform sowie wachsender sozialer Heterogenität der höheren Bildungsgruppen sollten jedoch die Bildungsunterschiede im nichtehelichen Zusammenleben mit Kindern insgesamt abgenommen haben. Für Westdeutschland würde man auf Basis dieser Annahmen davon ausgehen, dass der zunächst positive Zusammenhang von Bildung und Kohabitation über unseren Beobachtungszeitraum schwächer geworden ist. Für Ostdeutschland, wo nichteheliche Lebensgemeinschaften als Familienform bereits in den 1990er Jahren weitgehend etabliert waren, ist dagegen über den gesamten Beobachtungszeitraum von einer eher geringen Bildungsstratifizierung auszugehen.

Bisherige Studien haben zumeist die Merkmale des Partners nicht berücksichtigt. Aufgrund des hohen Ausmasses an Bildungshomogamie, welches auch für Deutschland aufgezeigt wurde (Wirth 2000; 2013), könnte der Zusammenhang zwischen der Bildung der Frau und der Lebensform teilweise ein Artefakt sein, welches auf die fehlende Berücksichtigung der Partnermerkmale verweist. Analog zu den Überlegungen von Oppenheimer zur Bedeutung der ökonomischen Stellung der Männer für die Heiratsentscheidung wäre zudem davon auszugehen, dass Frauen, deren Partner gering qualifiziert sind, häufiger nichtehelich statt ehelich zusammenleben. Dagegen lässt sich aus der Unabhängigkeitshypothese ableiten, dass primär Frauen, die höher qualifiziert sind als ihre Partner, eine nichteheliche Lebensgemeinschaft vorziehen. Die komplementäre Annahme lautet, dass Frauen, die schlechter qualifiziert sind als ihre Partner, rund um die Familiengründung häufiger heiraten.

Im Zeitvergleich erwarten wir schliesslich, dass die mit der Bildungsexpansion einhergehende zunehmende soziale Heterogenität der oberen Bildungsgruppen sowie die soziale Diffusion ursprünglich alternativer Lebensformen zur Folge hatten, dass hoch qualifizierte bildungshomogene Paare und höher als ihre Partner qualifizierte Frauen ihre Vorreiterrolle bei der Wahl nichtehelicher Familienformen über die Zeit verloren haben.

3 Daten und Methoden

Für unsere Analysen ziehen wir die Daten der Scientific-Use-Files des Mikrozensus der Jahre 1996, 2000, 2004, 2008 und 2012 heran. Der Mikrozensus ist eine amtliche, jährlich stattfindende Haushaltsbefragung, in der ein Prozent der Haushalte in Deutschland befragt werden. Der Scientific-Use-File ist wiederum eine 75-Prozent-Stichprobe des Originaldatensatzes (Schimpl-Neimanns 1998). Wir beschränken

uns auf die Periode 1996 und danach, weil erst seitdem nichteheliche Lebensgemeinschaften im Mikrozensus erhoben werden (Lengerer 2007). Der Abstand von vier Jahren ergibt sich daraus, dass der Mikrozensus ein rotierendes Panel ist, in dem jedes Jahr ein Viertel der Haushalte ausgetauscht wird. Der Vierjahresabstand stellt sicher, dass Individuen nicht wiederholt in die Stichprobe gelangen.

Unsere Stichprobe besteht aus Frauen, die zum Befragungszeitpunkt in einem privaten Haushalt am Hauptwohnsitz der Lebensgemeinschaft lebten, 18–49 Jahre alt waren und mindestens ein Kind im Alter von 0 bis 1 Jahr hatten, das im selben Haushalt lebte. Die enge Eingrenzung auf Frauen mit kleinen Kindern ermöglicht es, trotz des Querschnittsdesigns des Mikrozensus annäherungsweise den Lebenslaufabschnitt nach der Geburt eines Kindes zu erfassen. Die gesamte Stichprobe umfasst 39 372 Frauen (siehe auch Tabelle 1). Für einen Teil der Analysen berücksichtigen wir nur Frauen, die mit einem Partner im selben Haushalt leben. Für diesen Teil der Untersuchungen stehen 36 050 Fälle zur Verfügung.

Ein Nachteil des Mikrozensus ist es, dass das Verwandtschaftsverhältnis zwischen Kindern und Eltern nicht erhoben wird. Zwar wird der Elternschaftsstatus abgefragt, jedoch wird nicht differenziert, ob es sich um ein Stief-, Pflege- oder Adoptionsverhältnis handelt. Daraus ergibt sich u. a., dass der Partner, der mit der Befragungsperson zusammen lebt, nicht zwangsläufig der Vater des jeweiligen Kindes sein muss. Da die analytische Stichprobe jedoch nur auf Frauen mit Kindern im Alter von 0 bis 1 Jahr beschränkt ist, dürfte der Anteil der Stiefväter in der Stichprobe gering sein.

Die zentrale abhängige Variable ist die *Lebensform,* in der die Befragte zum Zeitpunkt der Datenerhebung lebt. Wir unterscheiden zwischen Alleinerziehenden und Müttern in nichtehelichen und ehelichen Lebensgemeinschaften. Als *alleinerziehende Mütter* werden Frauen definiert, die zum Befragungszeitpunkt nicht verheiratet sind und nicht mit einem Partner oder einer Partnerin in einem gemeinsamen Haushalt leben. Nicht berücksichtigt wird, ob diese Frauen geschieden oder verwitwet sind. Unberücksichtigt bleibt auch, ob es einen Partner oder eine Partnerin gibt, der nicht im Haushalt lebt, also eine Living-Apart-Together-Beziehung existiert. Der Einfachheit halber bezeichnen wir diese Gruppe als Alleinerziehende, auch wenn deren Lebensform als «unverheiratete Frauen, die mit einem oder mehreren Kindern, aber ohne Partner oder Partnerin in einem Haushalt leben» präziser bezeichnet wäre. Mütter in *nichtehelichen Lebensgemeinschaften* sind dagegen unverheiratete Frauen, die mit ihrem Partner oder ihrer Partnerin zusammen in einem Haushalt leben. Unverheiratet umfasst dabei ledig, geschieden und verwitwet. Theoretisch kann der Partner oder die Partnerin, mit der die befragte Person zusammenlebt, mit einer anderen Person verheiratet sein, was jedoch hier unberücksichtigt bleibt. Mütter in *ehelichen Lebensgemeinschaften* sind schliesslich jene Frauen, die zum Interviewzeitpunkt verheiratet sind, unabhängig jedoch davon, ob der Ehepartner im selben Haushalt lebt. Unberücksichtigt bleibt hier auch, ob die befragte Person

in Trennung vom ehelichen Lebenspartner ist. Unter eheliche Lebensgemeinschaften fallen auch Personen in eingetragenen Lebenspartnerschaften.

Die zentrale unabhängige Variable ist der *allgemeinbildende Schulabschluss*. Obwohl berufliche und Hochschulabschlüsse in Deutschland aus theoretischen Gründen die besseren Indikatoren für Arbeitsmarktchancen wären, ziehen wir in Abwesenheit von Längsschnittinformationen im Mikrozensus den allgemeinbildenden Abschluss heran, weil dieser in einem relativ frühen Alter erworben wird und damit in der Regel vor dem Zeitpunkt, zu dem junge Menschen ihre Heirats- und Familiengründungspläne realisieren. Die Schulbildung wurde in die drei Kategorien niedriger, mittlerer und hoher Schulabschluss klassifiziert. Unter «hoher Schulabschluss» fallen alle Personen mit Abitur oder Fachhochschulreife. «Mittlerer Abschluss» umfasst Personen mit Realschulabschluss oder einem gleichwertigen Abschluss, wie bspw. der Abschluss der Polytechnischen Oberschule der DDR. «Niedriger Abschluss» beinhaltet Personen mit Hauptschulabschluss wie auch Personen ohne Schulabschluss. Wünschenswert wäre aus inhaltlichen Gründen, d. h. zur Identifizierung von auf dem Arbeitsmarkt besonders benachteiligten Gruppen, eine Unterscheidung zwischen Personen ohne Schulabschluss und Personen mit Hauptschulabschluss. Da diese Gruppe sehr klein ist, um sie nach Kalenderjahren und Lebensformen zu unterscheiden, bleibt diese Differenzierung hier unberücksichtigt.

Die entsprechenden Bildungsinformationen haben wir für die Befragten und für den männlichen Partner, der zum Interviewzeitpunkt im selben Haushalt lebt, generiert. Die kleine Gruppe der Frauen, die in einer gleichgeschlechtlichen Partnerschaft mit Kind lebt, bleibt in den Analysen unberücksichtigt, in denen wir die Bedeutung der Merkmale der Partner untersuchen.

In unseren Analysen verwenden wir weiterhin Kontrollvariablen, welche den Zusammenhang von Bildung und Lebensform beeinflussen. Eine wichtige Variable ist das *Alter bei Geburt des Kindes*. Da höher gebildete Frauen typischerweise zu einem späteren Zeitpunkt in ihrem Leben Kinder bekommen als gering gebildete Frauen, kann der bivariate Zusammenhang zwischen Bildung und nichtehelicher Mutterschaft auf einen Alterseffekt zurückgehen, d. h. den Umstand, dass nichteheliche Geburten in jüngerem Alter häufiger stattfinden als später im Lebenslauf. Eine weitere zentrale Kovariate ist die *Staatsangehörigkeit*. Hier unterscheiden wir deutsche und nicht-deutsche Befragte, wobei Personen mit doppelter Staatsangehörigkeit zu den nicht-deutschen Befragten gezählt werden. Da nicht-deutsche Staatsangehörige zum einen häufiger nur über eine geringe formale Bildung verfügen, zum anderen aber eine höhere Heiratsneigung aufweisen, ist gerade die Berücksichtigung der Staatsangehörigkeit für die Analysen des Zusammenhangs von Bildungsniveau und Lebensform relevant (Naderi 2008). Eine weitere zentrale Variable ist die *Geburtenordnung*. Da im Standardprogramm des Mikrozensus nicht die Kinderzahl erfasst wird, müssen wir die Ordnung der Geburt indirekt über die Anzahl der Kinder, die zum Befragungszeitpunkt im Haushalt leben, schätzen. Aufgrund der nach wie

vor sehr verschiedenen familiendemographischen Verhaltensmuster in *Ost- und Westdeutschland* werden alle Analysen für beide Landesteile getrennt durchgeführt. Zu Westdeutschland zählen in unseren Analysen die zehn alten Bundesländer und zu Ostdeutschland die fünf neuen Bundesländer (einschliesslich Berlins).

4 Ergebnisse

Wir beginnen mit deskriptiven Darstellungen der Veränderung der Anteile alleinerziehender, nichtehelich und ehelich zusammenlebenden Frauen. Es folgt die multivariate Analyse des Zusammenhangs von Bildung und Lebensform. Als Methode verwenden wir multinominale und binäre logistische Modelle. In einem ersten Schritt werden die Veränderungen des Zusammenhangs von Bildung und Lebensform über die Zeit untersucht. Im zweiten Schritt konzentrieren wir uns auf die Bedeutung der Bildungskonstellationen der Partner für die Lebensform. Der zweite Teil der Analyse beschränkt sich entsprechend auf Personen, die mit einem Partner im selben Haushalt leben.

4.1 Deskriptive Ergebnisse

Tabelle 1 zeigt die Grundverteilungen der Variablen differenziert nach Ost- und Westdeutschland sowie der Lebensform. In Ostdeutschland ist eine hohe Bildungshomogenität mit einer Dominanz mittlerer Abschlüsse festzustellen. Während rund 34 Prozent der westdeutschen Frauen höchstens einen Hauptschulabschluss aufweisen, fallen nur etwa 15 Prozent der ostdeutschen Frauen in diese Kategorie. Dies ist Ausdruck der Tatsache, dass in der DDR in den 1970er und 1980er Jahren der Abschluss der polytechnischen Oberschule zunehmend zum Regelabschluss wurde und kein darunter liegender Abschluss (vergleichbar mit dem Hauptschulabschluss) in der DDR existierte. Damit wurden Personen ohne Abschluss zu einer negativ selektierten Gruppe, die heutzutage vielfach als «Bildungsverlierer» oder «Bildungsarme» bezeichnet werden. Erst in den letzten Jahren hat der Anteil von Personen mit Hauptschulabschluss (oder weniger) in Ostdeutschland zugenommen.

Die Aufgliederung der deskriptiven Daten nach der Lebensform deutet bereits auf einen deutlichen Bildungsgradienten hin. Der Anteil der gering qualifizierten Frauen ist bei den Alleinerziehenden deutlich höher als bei den kohabitierenden und verheirateten Frauen. Alleinerziehende sind zudem zum Befragungszeitpunkt relativ jung. Mehr als ein Drittel der Frauen sind unter 25 Jahre. Da es sich bei unserer Stichprobe um Frauen mit sehr kleinen Kindern handelt, können wir darauf schliessen, dass diese Gruppe sehr jung Mutter geworden ist. Nichteheliche und eheliche Lebensgemeinschaften unterscheiden sich hingegen nicht deutlich voneinander. Zwar sind die Anteile junger Mütter unter den Frauen in einer nichtehelichen Lebensgemeinschaft höher als unter den Verheirateten, jedoch ähnelt

sich die Bildungsverteilung beider Gruppen. Die Bildungsverteilung des Partners ergibt dagegen ein anderes Bild. So sind die Anteile derjenigen, deren Partner ein Abitur bzw. eine Fachhochschulreife aufweist, bei den kohabitierenden deutlich geringer als bei den verheirateten Frauen. Dies gilt vor allem in Ostdeutschland, wo 25 Prozent der Frauen in nichtehelichen Lebensgemeinschaften, aber 32 Prozent der verheirateten Frauen einen Partner mit Abitur oder Fachhochschulabschluss haben.

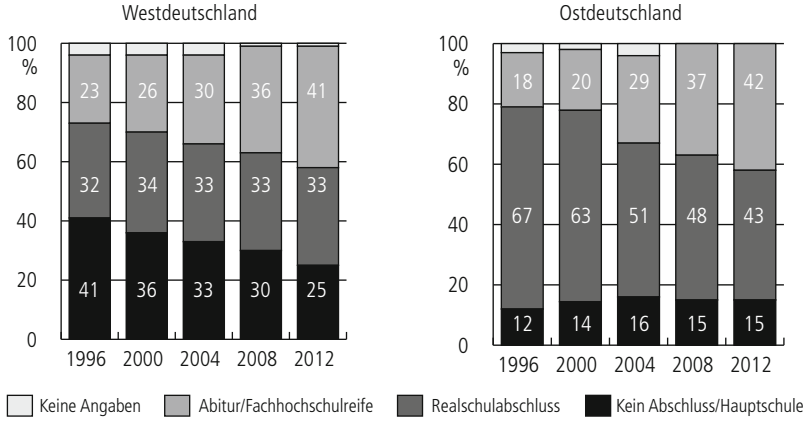
Tabelle 1 Deskriptive Statistik der analytischen Stichprobe, gepoolte Daten für die Jahre 1996–2012, Spaltenprozente

	Westdeutschland (%)				Ostdeutschland (%)			
	EHE	NEL	AE	Ges.	EHE	NEL	AE	Ges.
Jahr								
1996	24	11	17	22	21	12	14	17
2000	23	17	20	22	23	19	22	21
2004	19	19	19	19	20	21	20	20
2008	18	24	21	19	18	23	22	21
2012	16	28	23	18	18	25	22	21
Alter								
18–21	5	14	19	6	5	13	22	10
22–24	10	13	15	10	11	18	17	14
25–29	32	29	26	31	35	36	29	34
30–34	35	28	22	33	31	23	19	27
35–49	19	16	17	19	18	10	12	14
Staatsangehörigkeit								
Deutsch	81	91	88	82	86	98	95	92
Andere	19	9	12	18	14	2	5	8
Geburtsordnung								
Erstes Kind	42	67	64	46	39	64	65	51
Zweites Kind	39	24	24	36	42	28	25	35
Drittes u. w. Kind	19	9	12	18	19	8	11	14
Schulbildung								
Niedrig	33	33	48	34	13	12	26	15
Mittel	33	34	30	33	52	58	54	54
Hoch	31	31	19	30	33	29	19	29
Keine Angaben	3	3	3	3	2	1	2	2
Schulbildung Partner								
Niedrig	39	41	--	39	13	15	--	14
Mittel	24	26	--	24	50	58	--	53
Hoch	33	30	--	33	32	25	--	29
Keine Angaben	4	4	--	4	5	2	--	4
Alter des Partners								
18–21	2	11	--	3	2	8	--	4
22–24	6	12	--	7	7	13	--	9
25–29	26	28	--	26	28	37	--	31
30–34	36	28	--	35	34	27	--	32
35 oder älter	29	21	--	28	27	14	--	22
Keine Angaben	1	0	--	1	3	0	--	2
Fallzahl	27 293	2 984	2 131	32 408	3 666	2 107	1 191	6 964

Anmerkungen: EHE: Eheliche Lebensgemeinschaft; NEL: Nichteheliche Lebensgemeinschaft; AE: Alleinerziehend.
Quelle: Scientific-Use-File Mikrozensus (eigene ungewichtete Analysen).

In Abbildung 1 sind für die Untersuchungspopulation die Veränderungen der Schulbildung der Frauen mit Kindern im Alter von 0 bis 1 Jahr zwischen 1996 bis 2012 dargestellt. Es bestätigt sich die Annahme, dass in Westdeutschland die Anteile der Personen mit Hochschulzugangsberechtigung deutlich gestiegen sind. Im Beobachtungszeitraum hat sich das Verhältnis der gering und hoch Gebildeten zueinander nahezu umgekehrt. Im Osten hat, ausgehend von einer von der DDR geerbten Dominanz der mittleren Bildungsgruppe, zwar der Anteil der Frauen mit Abitur bzw. Fachhochschulabschluss stark zugenommen, jedoch ist anders als im Westen der Anteil der Frauen mit geringer Bildung weitgehend unverändert geblieben.

Abbildung 1 Bildungsniveau von Frauen mit Kindern im Alter von 0 bis 1 Jahr



Quelle: Scientific-Use-File Mikrozensus (eigene ungewichtete Analysen).

Tabelle 2 zeigt die Lebensformen von Müttern mit Kindern im Alter von 0 bis 1 Jahr getrennt nach dem Kalenderjahr. In beiden Teilen Deutschlands ist der Anteil der verheirateten Mütter über die Zeit gesunken. Trotz dieser Entwicklung ist die grosse Mehrheit der westdeutschen Mütter mit kleinen Kindern verheiratet. In Westdeutschland hat sich der Anteil der verheirateten Mütter von 90 Prozent im Jahr 1996 auf 77 Prozent im Jahr 2012 verringert. Dieser Rückgang ist vor allem auf die zunehmende Bedeutung der Kohabitation als Lebensform zurückzuführen, während der Anteil der Alleinerziehenden weniger stark gestiegen ist. Mit dieser Verschiebung geht ein relativer Strukturwandel von unverheirateter Elternschaft (von Müttern mit Kindern im Alter von 0 bis 1 Jahr) in Westdeutschland einher. Hat diese in den 1990er Jahren noch wesentlich auf alleinerziehende Mutterschaft

verwiesen (Konietzka und Kreyenfeld 2002)[2], bilden mittlerweile die nichtehelichen Lebensgemeinschaften die Mehrheit.

In Ostdeutschland hatte nichteheliche Mutterschaft zwar bereits in den 1990er Jahren eine erheblich grössere Verbreitung, bis zum Jahr 2000 war dennoch die Mehrheit der Mütter verheiratet. Seit 2004 ist dies nicht mehr der Fall. 55 Prozent der Mütter mit kleinen Kindern waren 2012 im Osten unverheiratet. Auch wenn deren Mehrheit mit dem Partner kohabitierte, waren insgesamt 18 Prozent aller Mütter in der Untersuchungsgruppe alleinerziehend.

Tabelle 2 Lebensform von Frauen mit Kindern im Alter von 0 bis 1 Jahr, Spaltenprozente

	1996	2000	2004	2008	2012
Westdeutschland (%)					
Eheliche Lebensgemeinschaft	90	87	84	80	77
Nichteheliche Lebensgemeinschaft	5	7	9	12	15
Alleinerziehend	5	6	7	7	9
Gesamt	100	100	100	100	100
Fallzahl	7 237	7 273	6 206	5 991	5 701
Ostdeutschland (%)					
Eheliche Lebensgemeinschaft	64	56	53	47	45
Nichteheliche Lebensgemeinschaft	22	26	31	34	37
Alleinerziehend	14	18	16	19	18
Gesamt	100	100	100	100	100
Fallzahl	1 177	1 483	1 421	1 432	1 451

Quelle: Scientific-Use-File Mikrozensus (eigene ungewichtete Analysen).

4.2 Multivariate Ergebnisse

4.2.1 Bildung der Frau und Lebensform im Zeitvergleich

In Tabelle 3 sind die Resultate der multivariaten Analyse dargestellt. Die abhängige Variable ist die Lebensform zum Befragungszeitpunkt, unterschieden nach nichtehelicher Lebensgemeinschaft, Ehe und alleinerziehender Mutterschaft. Die Basiskategorie sind eheliche Lebensgemeinschaften mit Kindern. Die Ergebnisse sind in Form von "relative risk ratios" (RR) dargestellt.

Im Wesentlichen bestätigen die multivariaten Ergebnisse die deskriptiven Analysen (siehe Tabelle 2). Alleinerziehende und vor allem Mütter in nichtehelichen Lebensgemeinschaften nehmen anteilsmässig über die Zeit zu. Unverheiratete Mut-

2 Abweichungen zu den Ergebnissen von Konietzka und Kreyenfeld (2005) ergeben sich durch eine leicht andere Abgrenzung der Untersuchungspopulation. Dort wurden geschiedene und verwitwete Personen aus der Untersuchung ausgeschlossen und eine etwas andere Altersabgrenzung vorgenommen. Zudem wurde West-Berlin zu Westdeutschland gruppiert.

Tabelle 3 Multinominales Logit-Modell, Relative Risk Ratios (RR) und Standardfehler (s.e.)

	Westdeutschland				Ostdeutschland			
	NEL		Alleinerziehend		NEL		Alleinerziehend	
	RR	s.e.	RR	s.e.	RR	s.e.	RR	s.e.
Jahr								
1996	Ref.		Ref.		Ref.		Ref.	
2000	1.61	0.12	1.32	0.10	1.44	0.14	1.40	0.16
2004	2.27	0.16	1.59	0.12	1.92	0.19	1.47	0.18
2008	3.30	0.23	2.05	0.16	2.69	0.27	2.20	0.27
2012	4.32	0.30	2.66	0.20	3.22	0.33	2.51	0.31
Alter								
18–21	2.06	0.17	2.33	0.20	1.47	0.19	2.21	0.30
22–24	Ref.		Ref.		Ref.		Ref.	
25–29	0.69	0.05	0.58	0.04	0.62	0.06	0.60	0.07
30–34	0.64	0.04	0.51	0.04	0.51	0.05	0.51	0.06
35–49	0.69	0.05	0.77	0.07	0.42	0.05	0.62	0.09
Staatsangehörigkeit								
Deutsch	Ref.		Ref.		Ref.		Ref.	
Andere	0.35	0.02	0.39	0.03	0.13	0.02	0.26	0.04
Geburtsordnung								
Erstes Kind	Ref.		Ref.		Ref.		Ref.	
Zweites Kind	0.42	0.02	0.45	0.03	0.48	0.03	0.41	0.03
Drittes oder weiteres	0.36	0.03	0.48	0.04	0.34	0.03	0.39	0.05
Schulbildung								
Niedrig	1.19	0.06	1.75	0.10	1.07	0.11	2.19	0.22
Mittel	Ref.		Ref.		Ref.		Ref.	
Hoch	1.00	0.05	0.72	0.05	0.76	0.05	0.57	0.05
Keine Angaben	1.66	0.20	1.46	0.21	0.80	0.20	1.23	0.32
Konstante	0.10	0.01	0.10	0.01	0.85	0.09	0.48	0.06
Modellgüte								
LL Nullmodell				–17 605				–6 974
LL Endmodell				–16 149				–6 315
Fallzahl				32 408				6 964

Anmerkung: Abhängige Variable: Alleinerziehend, nichteheliche Lebensgemeinschaft (NEL), eheliche Lebensgemeinschaft (Basiskategorie); Untersuchungspopulation: Frauen mit einem Kind im Alter von 0 bis 1 Jahr.
Quelle: Scientific-Use-File Mikrozensus (eigene ungewichtete Analysen).

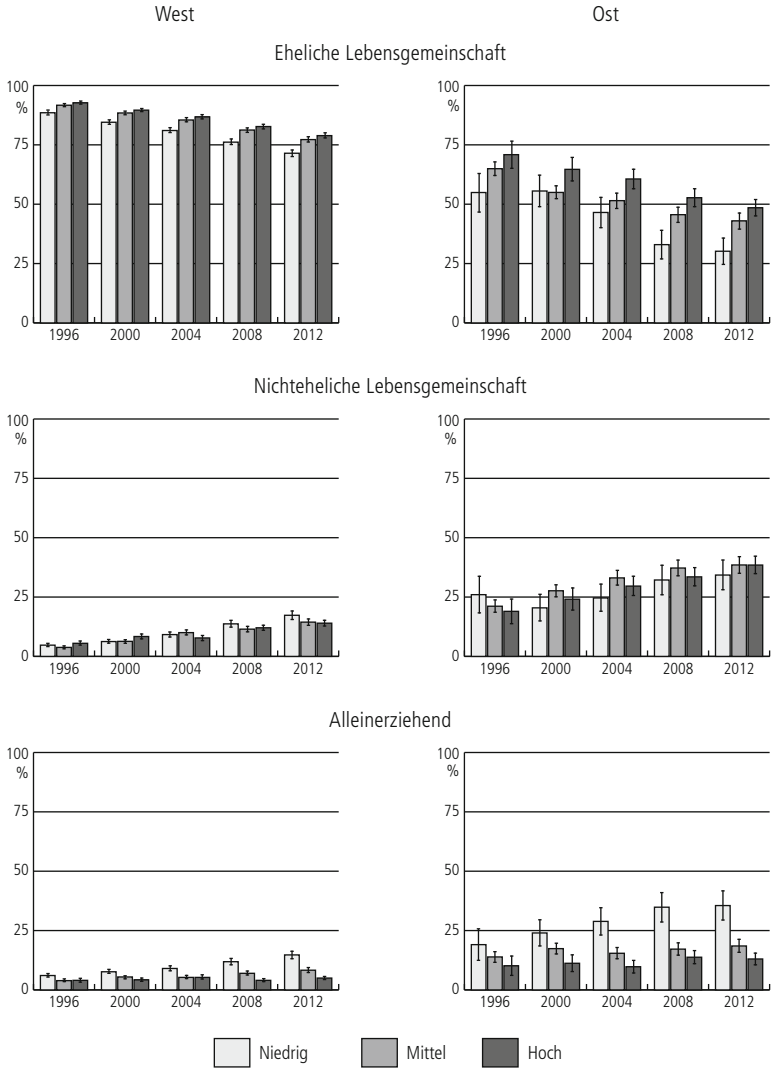
terschaft ist in Ost- und Westdeutschland eng mit dem Alter korreliert. Frauen, die zum Zeitpunkt der Befragung zwischen 18 und 21 Jahre alt sind, sind besonders häufiger alleinerziehend oder kohabitierend. Mit zunehmendem Alter geht die Wahrscheinlichkeit nichtehelicher Mutterschaft deutlich zurück. Nichtdeutsche Staatsangehörige sind selten alleinerziehend und leben auch selten in einer nichtehelichen Lebensgemeinschaft. Schliesslich spielt die Geburtenordnung die erwartete Rolle. Höhere Geburten finden eher in einer Ehe statt als erste Geburten. Unberücksichtigt bleibt hier, ob verheiratete Frauen häufiger ein zweites Kind bekommen oder diejenigen, die mehr als ein Kind bekommen, häufiger zwischen der Geburt des ersten und zweiten Kindes heiraten (Perelli-Harris 2014).

Die Bildung der Frau beeinflusst in Ost- und Westdeutschland eine alleinerziehende Mutterschaft generell negativ. In Ostdeutschland besteht zudem für Frauen mit Abitur (bzw. Fachhochschulreife) im Vergleich zum mittleren Bildungsabschluss eine verringerte Wahrscheinlichkeit zu kohabitieren. In Westdeutschland befinden sich dagegen Frauen mit niedriger Schulbildung mit erhöhter Wahrscheinlichkeit in einer nichtehelichen Lebensgemeinschaft, während sich Frauen mit hohem und mittlerem Abschluss nicht voneinander unterscheiden. Insgesamt bestätigen sich damit für Ostdeutschland die Befunde älterer Studien, die den Zeitraum 1996–2000 umfassten (siehe Konietzka und Kreyenfeld 2005). Dagegen stehen die Ergebnisse für Westdeutschland in einem gewissen Gegensatz zu bisherigen Befunden, die darauf verwiesen hatten, dass nichteheliche Elternschaft unter den Frauen mit Abitur am stärksten verbreitet ist.

Um zu untersuchen, inwiefern sich der Einfluss der Bildung über die Zeit verändert hat, haben wir ein weiteres Modell geschätzt, welches das Befragungsjahr mit der Bildung interagiert. Die Ergebnisse sind in Abbildung 2 dargestellt. Für die bessere Interpretierbarkeit der Ergebnisse haben wir die mittleren Wahrscheinlichkeiten ("average margins") aus den Modellen berechnet. Für Westdeutschland (linke Spalten) ist zu erkennen, dass sich der Einfluss der Bildung auf die Lebensform über die Zeit deutlich verändert hat. Während in den Jahren 1996 und 2000 Frauen mit hohem Schulabschluss häufiger als andere Frauen kohabitierten, hat sich in den Folgejahren der Zusammenhang umgekehrt. Gleichzeitig hat sich ein stark positiver Zusammenhang von Bildung und ehelicher Elternschaft herausgebildet. Demnach waren zunächst hoch qualifizierte Mütter die Vorreiter nichtehelicher Lebensgemeinschaften. Mittlerweile weisen jedoch die mittleren und vor allem die unteren Bildungsgruppen die höchsten Wahrscheinlichkeiten auf, in dieser Lebensform Kinder zu bekommen. Zudem sind Frauen mit niedrigem Bildungsabschluss häufiger alleinerziehend, was im Umkehrschluss bedeutet, dass sie vergleichsweise selten verheiratet sind.

In Ostdeutschland zeigt sich ein noch klarerer positiver Bildungsgradient der ehelichen Mutterschaft. Die geschätzte Wahrscheinlichkeit, ehelich ein Kind zu bekommen, liegt für die untere Bildungsgruppe im Jahr 2012 bei nur 30 Prozent,

Abbildung 2 Lebensformen nach Bildung und Kalenderjahr. Geschätzte Wahrscheinlichkeit und 95%-Konfidenzintervalle



Anmerkung: Geschätzte Wahrscheinlichkeiten und 95%-Konfidenzintervall für das Leben in einer Lebensform (eheliche Lebensgemeinschaft, nichteheliche Lebensgemeinschaft, Alleinerziehend); weitere Variablen im Modell sind Staatsangehörigkeit, Ordnung des Kindes, Alter der Befragten (siehe auch Tabelle 3 für die Modellergebnisse ohne Interaktion); Untersuchungspopulation: Frauen mit einem Kind im Alter von 0 bis 1 Jahr.
Quelle: Scientific-Use-File Mikrozensus (eigene ungewichtete Analysen).

während fast 50 Prozent der Frauen mit hohem Bildungsabschluss verheiratet sind. Nur geringe und tendenziell abnehmende Bildungsunterschiede bestehen hinsichtlich der Wahrscheinlichkeit, in einer nichtehelichen Lebensgemeinschaft zu leben, jedoch hat sich der negative Zusammenhang von Bildung und alleinerziehender Mutterschaft über die Jahre verstärkt.

4.2.2 Bildung des Partners und Lebensform im Zeitvergleich

In den abschliessenden Analysen haben wir zusätzlich die Bildung des Partners berücksichtigt (siehe Tabelle 4, Modell 1 für Ergebnisse ohne und Modell 2 für Ergebnisse mit Partnermerkmalen). Da wir nur Informationen zu den Merkmalen des Partners haben, der zum Interviewzeitpunkt mit der Befragungsperson im selben Haushalt lebte, sind die Analysen auf Frauen in ehelichen und nichtehelichen Lebensgemeinschaften beschränkt. Die abhängige Variable ist entsprechend die Wahrscheinlichkeit, in einer nichtehelichen versus ehelichen Lebensgemeinschaft zu leben. Als Methode haben wir binäre logistische Modelle geschätzt und die Ergebnisse als Odds Ratios (OR) wiedergegeben.

Die Bildung und das Alter des Partners haben einen bedeutenden Einfluss auf die Wahl der Lebensform. Demnach reduziert in West- wie in Ostdeutschland eine hohe Bildung des Partners die Wahrscheinlichkeit zu kohabitieren. Das Alter des Partners hat zudem einen stark negativen Einfluss auf nichteheliche Elternschaft. Interessanterweise reduziert sich der Einfluss des Alters der Frau deutlich, wenn für das Alter des Partners kontrolliert wird. Demnach ist es eher die junge Vaterschaft als die junge Mutterschaft, die ein nichteheliches Zusammenleben fördert.

Auch der Einfluss der Bildung der Mutter verändert sich bei Berücksichtigung der Bildung des Partners. Unsere Erwartung war, dass die Relevanz der Bildung der Frau nach Kontrolle der Merkmale des Mannes schwächer wird. In Ostdeutschland schwächt sich der negative Zusammenhang zwischen der Bildung der Frau und nichtehelicher Mutterschaft tatsächlich ab, wenn die Bildung des Partners berücksichtigt wird. In Westdeutschland finden wir hingegen vor Kontrolle der Partnermerkmale keine Unterschiede zwischen Frauen mit Abitur (bzw. Fachhochschule) und jenen mit mittlerem Bildungsabschluss. Nach Kontrolle der Partnermerkmale kristallisiert sich heraus, dass die höher qualifizierten Frauen eher in einer nichtehelichen Lebensgemeinschaft leben als Frauen mit mittlerem Schulabschluss. Damit bestätigt sich zumindest im Vergleich zur mittleren Bildungsgruppe die Unabhängigkeitshypothese. Gleichzeitig weisen die Ergebnisse darauf hin, dass mit einer hohen Bildung des Mannes das nichteheliche Zusammenleben weniger wahrscheinlich wird.

Um Veränderungen über die Zeit abbilden zu können, haben wir in einem nächsten Schritt ein Interaktionsmodell geschätzt, in dem wir die Bildung des Partners und das Kalenderjahr interagiert haben. Abbildung 3 gibt die Ergebnisse des Interaktionsmodells wieder. Der Zusammenhang zwischen der Bildung des Partners und nichtehelicher Elternschaft erweist sich als prinzipiell negativ, und

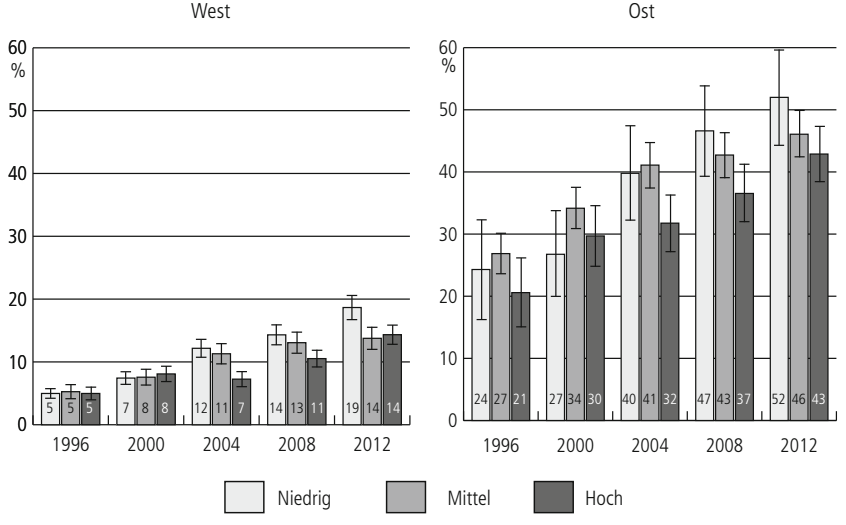
Tabelle 4 Logit-Modell, Odds Ratios (RR) und Standardfehler (s.e.)

	Westdeutschland				Ostdeutschland			
	Model 1		Model 2		Model 1		Model 2	
	OR	s.e.	OR	s.e.	OR	s.e.	OR	s.e.
Jahr								
1996	Ref.		Ref.		Ref.		Ref.	
2000	1.61	0.12	1.62	0.12	1.43	0.14	1.45	0.15
2004	2.27	0.16	2.30	0.17	1.98	0.20	2.06	0.21
2008	3.34	0.24	2.91	0.21	2.70	0.28	2.38	0.25
2012	4.36	0.30	3.84	0.28	3.31	0.34	2.97	0.32
Alter								
18–21	2.14	0.18	1.49	0.16	1.60	0.21	1.16	0.18
22–24	Ref.		Ref.		Ref.		Ref.	
25–29	0.68	0.05	0.89	0.08	0.62	0.06	0.65	0.07
30–34	0.63	0.04	1.01	0.10	0.50	0.05	0.63	0.08
35–49	0.69	0.05	1.09	0.12	0.40	0.05	0.62	0.10
Staatsangehörigkeit								
Deutsch	Ref.		Ref.		Ref.		Ref.	
Andere	0.34	0.02	0.34	0.02	0.12	0.02	0.13	0.02
Geburtsordnung								
Erstes Kind	Ref.		Ref.		Ref.		Ref.	
Zweites Kind	0.42	0.02	0.42	0.02	0.48	0.03	0.48	0.03
Drittes oder weiteres	0.36	0.03	0.36	0.03	0.34	0.04	0.33	0.03
Schulbildung								
Niedrig	1.18	0.06	1.10	0.06	1.08	0.11	1.12	0.13
Mittel	Ref.		Ref.		Ref.		Ref.	
Hoch	1.00	0.05	1.12	0.06	0.76	0.05	0.86	0.07
Keine Angaben	1.65	0.20	1.90	0.31	0.85	0.21	1.84	0.65
Schulbildung Partner								
Niedrig/kein			1.14	0.06			1.00	0.10
Mittel								
Hoch			0.87	0.05			0.74	0.06
Keine Angaben			0.87	0.14			0.38	0.11
Alter des Partners								
18–21								
22–24			0.26	0.10			0.22	0.13
25–29			1.79	0.21			2.42	0.52
30–34			0.70	0.06			1.12	0.14
35 und älter			0.53	0.05			0.91	0.13
Keine Angaben			0.57	0.06			0.70	0.11
Konstante	0.10	0.01	0.12	0.01	0.84	0.09	0.87	0.11
Modellgüte								
LL Nullmodell		–9 746		–9 746		–3 788		–3 788
LL Endmodell		–8 842		–8 776		–3 338		–3 289
Fallzahl		30 277		30 277		5 773		5 773

Anmerkung: Abhängige Variable: Nichteheliche Lebensgemeinschaft versus eheliche Lebensgemeinschaft (Basiskategorie); Untersuchungspopulation: Frauen mit einem Kind im Alter von 0 bis 1 Jahr.
Quelle: Scientific-Use-File Mikrozensus (eigene ungewichtete Analysen).

er nimmt zudem in Westdeutschland über die Zeit deutlich zu. Hingegen ist der Bildungsgradient in Ostdeutschland bei einer insgesamt deutlich höheren Wahrscheinlichkeit des nichtehelichen Zusammenlebens weniger klar ausgeprägt. Bei der Interpretation der Ergebnisse ist auch der in Ostdeutschland sehr grosse Anteil der Alleinerziehenden, die wir bei diesem Teil der Analysen ausschliessen mussten, zu berücksichtigen. Es ist zu vermuten, dass alleinerziehende Frauen häufiger gering qualifizierte Partner haben, mit denen sie entweder nicht zusammen wohnen oder von denen sie sich getrennt haben (Bastin 2014; Schnor 2014).

Abbildung 3 Nichteheliche Lebensgemeinschaften nach Bildung des Partners und Kalenderjahr. Geschätzte Wahrscheinlichkeit und 95%-Konfidenzintervalle

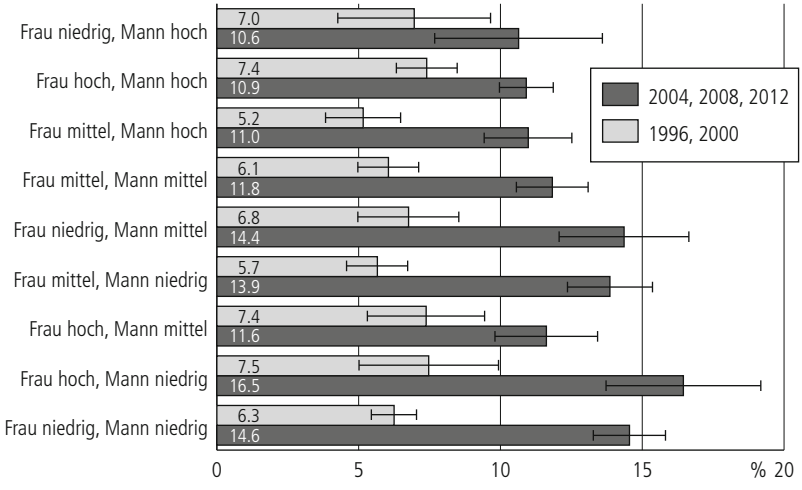


Anmerkung: Geschätzte Wahrscheinlichkeit und 95%-Konfidenzintervall für das Leben in einer nichtehelichen Lebensgemeinschaft (versus ehelichen Lebensgemeinschaft). Weitere Variablen im Modell sind Bildung der Befragten, Alter der Befragten, Staatsangehörigkeit der Befragten, Ordnung des Kindes, Alter des Partners (siehe auch Tabelle 2, Modell 2, für die Modellergebnisse ohne Interaktion); Untersuchungspopulation: Frauen mit einem Kind im Alter von 0 bis 1 Jahr.
Quelle: Scientific-Use-File Mikrozensus (eigene ungewichtete Analysen).

Abbildung 4 gibt abschliessend die Ergebnisse eines Modells wieder, in dem die Bildung der Frau und des Mannes mit dem Kalenderjahr interagiert wurden. Um genügend hohe Fallzahlen in den einzelnen Kategorien zu gewährleisten, haben wir die Analysen auf Westdeutschland begrenzt und zudem einzelne Befragungsjahre zusammengefasst. Erneut bestätigt sich der Wandel des Zusammenhangs von Bildung und Familienform über die Zeit. Demnach gehörten hoch qualifizierte Paare zu den

Vorreitern nichtehelicher Elternschaft, mittlerweile sind sie jedoch diejenigen, die besonders häufig ehelich zusammenleben. Stattdessen lebten in den Jahren 2004 bis 2012 Paare, in denen beide Partner einen niedrigen Schulabschluss haben, mit einer Wahrscheinlichkeit von 15 Prozent am häufigsten nichtehelich zusammen. Weiterhin kohabitierten im jüngeren Zeitraum verstärkt Frauen, deren männlicher Partner über einen formal geringen Abschluss verfügte. Dagegen lebten Frauen, deren Partner einen hohen Abschluss besitzen, allesamt am wenigsten wahrscheinlich nichtehelich zusammen. Dieses Muster spricht prinzipiell für die Oppenheimer-These der abnehmenden «Heiratsfähigkeit» der formal gering gebildeten Männer zur Erklärung von Lebensformen in Westdeutschland. Zugleich findet sich auch eine gewisse Bestätigung für die «Unabhängigkeitshypothese», da Frauen, die höher als ihre Partner qualifiziert sind, ebenfalls häufiger nichtehelich zusammenleben.

Abbildung 4 Nichteheliche Lebensgemeinschaften nach Bildungskombinationen und Kalenderjahr (Westdeutschland). Geschätzte Wahrscheinlichkeit und 95%-Konfidenzintervalle



Anmerkung: Geschätzte Wahrscheinlichkeit und 95%-Konfidenzintervall für das Leben in einer nichtehelichen Lebensgemeinschaft (versus ehelichen Lebensgemeinschaft). Weitere Variablen im Modell sind Alter der Befragten, Staatsangehörigkeit der Befragten, Ordnung des Kindes, Alter des Partners (siehe auch Tabelle 4 für die Modellergebnisse ohne Interaktion). Untersuchungspopulation: Westdeutsche Frauen mit einem Kind im Alter von 0 bis 1 Jahr und mit Partner im Haushalt.
Quelle: Scientific-Use-File Mikrozensus (eigene ungewichtete Analysen).

5 Schlussfolgerungen

Unsere Analysen der sozialstrukturellen Basis nichtehelicher Familienformen in Deutschland auf der Grundlage des Mikrozensus 1996 bis 2012 haben gezeigt, dass

sich die Rolle der Bildung im Beobachtungszeitraum teilweise verschoben hat. In Westdeutschland hat sich mit der zunehmenden Verbreitung von nichtehelichen Lebensgemeinschaften der zunächst positive Zusammenhang zwischen Bildungsniveau und Kohabitation nach der Familiengründung umgekehrt. Berücksichtigt man die Paarperspektive, zeigt sich dieses Muster noch deutlicher. Waren bildungshomogene Paare am oberen Ende der Bildungsskala die Vorreiter der Verbreitung nichtehelicher Lebensgemeinschaften mit Kindern, leben sie mittlerweile besonders häufig ehelich zusammen. Der Grund für diese relative Rangveränderung im Westen Deutschlands ist nicht die (wieder) zunehmende Neigung dieser Paare zu heiraten, sondern die im Beobachtungszeitraum stärkere Dynamik zugunsten nichtehelicher Lebensgemeinschaften bei Paaren, in denen der Mann über einen formal niedrigen Schulabschluss verfügt. Den mit Abstand stärksten Zuwachs haben zudem jene Paare erlebt, in denen beide maximal über einen Hauptschulabschluss verfügen. In Ostdeutschland, wo nichteheliche Mutterschaft bereits in den 1990er Jahren eine erheblich grössere Verbreitung hatte, lebten dagegen in der gesamten Untersuchungsperiode Mütter aus der unteren Bildungsgruppe verstärkt in einer nichtehelichen Lebensgemeinschaft, oder sie waren alleinerziehend.

Insgesamt ergibt sich damit die Befundlage, dass in Ost- und Westdeutschland gleichermassen unverheiratete Elternschaft zunehmend mit geringen Bildungsressourcen von Frauen und ihren Partnern einhergeht. Die Lebensformen «alleinerziehend» und «nichteheliche Lebensgemeinschaft mit Kind» haben gerade in Westdeutschland seit den 1990er Jahren unter schlecht qualifizierten Frauen überproportional an Bedeutung gewonnen. Zusätzlich hat sich die Neigung zugunsten einer nichtehelichen Lebensgemeinschaft über die Beobachtungsjahre immer weiter erhöht, wenn der Partner über einen geringen Bildungsstatus verfügt. Dieser Trend, der sich vor allem bei den Paaren gezeigt hat, bei denen beide Partner über höchstens einen Hauptschulabschluss verfügen, könnte auf die zunehmende ökonomische Marginalisierung der unteren Bildungsgruppen in Deutschland verweisen. Eine Eheschliessung ist in Deutschland nicht nur ökonomisch rational, um gemeinsame Investitionen abzusichern, sondern es ergeben sich gleichermassen Vorteile in Steuersystem, Sozialversicherungssystem und Erbrecht. Diese existieren jedoch in erster Linie für Paare, die über nennenswerte Ressourcen (einschliesslich Vermögen) verfügen oder so organisiert sind, dass sie von den Steuervorteilen des Einkommenssplittings profitieren (Ostner 1995). Für Paare am unteren Ende der Bildungsverteilung, deren Zugangschancen zu Arbeitsmarkt und Vermögen besonders gering sind, entfallen entsprechend wichtige ökonomische Beweggründe der Eheschliessung. Über die subjektiven Gründe für oder gegen eine Eheschliessung können wir an dieser Stelle nur spekulieren, jedoch verweist der überproportionale Anstieg nichtehelicher Familienformen unter den geringer Gebildeten potenziell auf strukturelle Veränderungen der Bildungsgruppen über die Zeit. So ist der Anteil der gering gebildeten Gruppe unter den Frauen mit Kindern im Alter von 0 bis 1

Jahr in Westdeutschland zwischen 1996 und 2012 von 41 auf 25 Prozent gesunken, während der Anteil höher gebildeter Frauen von 23 auf 41 Prozent gestiegen ist. Es ist anzunehmen, dass die zunehmende soziale Selektivität der unteren und die abnehmende Selektivität der oberen Bildungsgruppen zu den aggregierten Verhaltensänderungen in den verschiedenen Bildungsgruppen beigetragen haben. Auch wenn wir den Einfluss der veränderten sozialen Komposition und Selektivität der Bildungsgruppen nicht direkt messen konnten, ist der Befund ungleichheitssoziologisch und sozialpolitisch relevant, dass sich die Familienformen zwischen den Bildungsgruppen zunehmend differenzieren und insbesondere das nichteheliche Zusammenleben mit Kindern bei den formal gering Gebildeten überproportional zunimmt. Dies bedeutet zwar nicht, dass unverheiratetes Zusammenleben mit Kindern in Deutschland heute überwiegend eine prekäre Familienform darstellt, seinen Pioniercharakter als alternative Lebensform hat es aber eindeutig eingebüsst.

An unsere Ergebnisse schliesst sich die Frage an, ob vergleichbare Trends in Ländern mit ähnlichen Rahmenbedingungen zu beobachten sind. Die Schweiz ist in diesem Zusammenhang ein naheliegender Vergleichsfall, da hier wie im Westen Deutschlands nichteheliches Zusammenleben nach der Geburt von Kindern lange Zeit als Avantgardephänomen in privilegierten Bevölkerungsgruppen galt (Le Goff und Ryser 2010; Ryser und Le Goff 2015). Im europäischen Vergleich sind die Schweiz und Deutschland gemeinsam "the most reluctant to equalize cohabitation and marriage or even to recognize cohabitation" (Perelli-Harris und Sanchez Gassen 2012, 463), wobei die Schweiz besonders restriktiv hinsichtlich der Gewährung von Rechten nichtehelicher Väter ist (ebd., 462). Dennoch haben sich die Anteile nichtehelicher Geburten in der Schweiz in den letzten 15 Jahren verdoppelt (Eurostat 2016), und immerhin fünf Prozent aller Familienhaushalte in der Schweiz – Stieffamilien nicht mit einberechnet – bestehen aus nicht miteinander verheirateten Paaren (Bundesamt für Statistik 2016).

Die von uns präsentierten Analysen beruhten auf den Querschnittdaten des Mikrozensus. Als Indikator für soziale Ungleichheit haben wir nur den höchsten allgemeinbildenden Schulabschluss der Frauen und ihrer Partner, sofern diese im gemeinsamen Haushalt leben, zurückgegriffen. Wir konnten weder die im Hinblick auf mögliche ökonomische Marginalisierungsprozesse besonders gefährdete Gruppe der Frauen und Männer ohne Schulabschluss separat berücksichtigen, noch aufgrund des Querschnittdatencharakters die im Hinblick auf Arbeitsmarktchancen in Deutschland normalerweise aussagekräftigere Kategorie der beruflichen und akademischen Bildungsabschlüsse heranziehen. Solange adäquate Längsschnitt- und Lebensverlaufsanalysen nicht vorliegen, bleiben die Möglichkeiten, den Wandel sozialer Ungleichheit in der Dynamik der Lebensformen nach der Familiengründung empirisch zu analysieren, limitiert.

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Christian Reutlinger

Machen wir uns die Welt, wie sie uns gefällt?
Ein sozialgeographisches Lesebuch

Wieviel Pippi Langstrumpf steckt in uns? Wäre es manchmal nicht wunderbar, mit ein wenig Mut und Phantasie die Dinge ganz anders zu sehen und zu gestalten? Entscheidend für die Vorstellung von der Welt und ihrer Gestaltbarkeit sind der Standpunkt der Betrachtung und die Bereitschaft, bisherige Denkweisen und Normalvorstellungen zu hinterfragen. Das sozialgeographische Lesebuch nimmt konkrete soziale und räumliche Phänomene unter die Lupe: Nachbarschaften und ihr verlorenes Integrationspotential, benachteiligte Quartiere und ihr Einfluss auf das Lernen von Kindern, öffentliche Plätze und die Konflikte zwischen Jugendlichen und anderen Nutzenden oder zunehmende Migrationsbewegungen.

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Christian Reutlinger ist Professor für Sozialgeographie und Erziehungswissenschaft. Er ist Leiter der Forschungsabteilung des Instituts für Soziale Arbeit (IFSA) an der FHS St. Gallen, Hochschule für Angewandte Wissenschaften, verantwortlich für das Kompetenzzentrum Soziale Räume. Seine Arbeits- und Forschungsthemen sind Soziale Nachbarschaften, Gemeinwesenarbeit, Soziale Arbeit im öffentlichen Raum, Raum und Räumlichkeit in ausserschulischen Bildungs- und Erziehungsprozessen, Europäische Jugendforschung sowie Sozialgeographie der Kinder und Jugendlichen.

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Reihe «Gesundheit und Integration – Beiträge aus Theorie und Praxis»

Schweizerisches Rotes Kreuz (Hrsg.)

Flüchten – ankommen – teilhaben

232 Seiten, ISBN 978-3-03777-182-2, SFr. 38.—/Euro 35.—

Menschen auf der Flucht vor Krieg und Verfolgung stehen in diesem Buch im Mittelpunkt. Einige von ihnen haben in einem fremden Land – so auch in der Schweiz – Zuflucht gesucht und gefunden. Die Beiträge dieses Buches machen diese Menschen und ihre fragile Situation sichtbar. Sie zeigen Ansätze zu ihrer Unterstützung auf, beleuchten aber auch die eigenen Ressourcen der Flüchtlinge. Menschen auf der Flucht – dies geht aus diesen Beiträgen hervor – lassen sich nicht auf Schlagwörter wie «Flüchtlingswelle» oder gar «Flüchtlingslawine» reduzieren. Flüchtlinge sind Frauen, Männer und Kinder, welche einen Weg suchen, um ein Leben in Sicherheit führen zu können.
Das Buch bietet Hintergrundinformationen, theoretische Analysen und stellt konkrete praktische Unterstützungsansätze vor. Stellvertretend erzählen sechs Jugendliche und Erwachsene, warum sie in die Schweiz gekommen sind und wie sie sich hier zurecht finden. Die psychische und physische Gesundheit im Kontext von Flucht und Neuorientierung im Aufnahmeland ist ein Schwerpunkt des Bandes. Die Situation von Frauen und Kindern wird besonders berücksichtigt.

Das Schweizerische Rote Kreuz (SRK) engagiert sich seit vielen Jahren in der Grundlagen- und Projektarbeit in den Bereichen Gesundheit und Integration. Mit regelmässig erscheinenden Publikationen leistet das SRK in diesen gesellschaftlich relevanten Bereichen einen Beitrag zur aktuellen Diskussion und spricht Fachpersonen verschiedener Disziplinen aus Theorie und Praxis an. Der vorliegende Sammelband «Flüchten – ankommen – teilhaben» bildet die zwölfte Publikation der Reihe.

Korrigendum / Corrigendum

Der Umschlag der Schweizerischen Zeitschrift für Soziologie ändert jedes Jahr den Farbton. Aufgrund eines Herstellungsfehlers erschien die Ausgabe 43(2) im falschen Farbton. Die Ausgabe 43(3) erscheint nun wieder im richtigen, gelben Farbton.

La couverture de la Revue suisse de sociologie change de couleur chaque année. Suite à un défaut de production, le numéro 43(2) est paru dans la mauvaise nuance. Le numéro 43(3) parait à nouveau dans la bonne couleur (en jaune).

The cover of the Swiss Journal of Sociology changes its shade of colour each year. Because of a manufacturing error, the issue 43(2) was published in the wrong shade of colour. Issue 43(3) is now published in the correct shade of yellow.

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Penser la Suisse (PLS)

Verio Pini, Irene Pellegrini,
Sandro Cattacin, Rosita Fibbi

Italienisch ohne Grenzen

Zur Lage des Italienischen in der Schweiz

88 Seiten, ISBN 978-3-03777-185-3, SFr. 19.—/Euro 17.—

Die Sorge für die Sprache kann in einem mehrsprachigen Land nicht einfach den Sprachregionen überlassen werden. Am Beispiel des Italienischen in der Schweiz soll nachgezeigt werden, welche Wege zu gehen wären, um einen respektvollen Austausch zu wahren, ohne die Kommunikation einfach dem Englischen zu überlassen. Denn Letzteres würde nicht nur die Schweizer Mehrsprachigkeit gefährden, sondern auch zu einer intellektuellen Armut führen.

Verio Pini ist Berater für Sprachen in der Schweizer Bundeskanzlei und Mitglied von *Coscienza Svizzera*.
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Rosita Fibbi ist Migrationsexpertin und Soziologin am Schweizerischen Forum für Migrations- und Bevölkerungsstudien der Universität Neuchâtel.

Mit einem Beitrag von *Remigio Ratti*,
Prof. Dr. rer. pol., alt Nationalrat, Präsident von *Coscienza Svizzera*.

«Penser la Suisse» (PLS) ist ein Think Tank, der es sich zum Ziel setzt, nicht nur reaktiv sondern aktiv Erkenntnisse aus der Wissenschaft zu aktuellen und zukünftigen Problemlagen, aber auch generell zur Schweiz, hauptsächlich in Form von Publikationen zu verbreiten und damit zur Meinungsbildung sowohl in der Gesellschaft wie auch in der Politik beizutragen.