Extended abstract EPC 2016

Similar, but still different? Heterogamy in study discipline among highly educated couples and their risk of divorce

Lindsay Theunis[1], Christine Schnor[2] & Jan Van Bavel[1, 2]

Introduction

The second half of the 20th century has been marked by notable changes in the educational composition of many western and non-western populations. Enrollment and completion rates in advanced education have substantially increased, especially among women. Since the mid-1980s, the gender imbalance in education even turned to the disadvantage of men in many countries (Van Bavel 2012; Vincent-Lancrin 2008). One consequence of the reversal of the gender gap in education is the growing number of marriages in which wives have more education than their husbands (De Hauw et al. 2015; Grow and Van Bavel 2015a). This has encouraged scholars to reinvestigate the educational gradient in relationship outcomes.

In the past, hypogamy (i.e., wife has more education than husband) was associated with higher divorce rates than homogamy (i.e. husband and wife have the same level of education, which is the most common situation) and the more traditional hypergamy (i.e., husband has more education than wife). The non-normative power relations that characterize hypogamy are assumed to evoke more conflicts within the partnership and receive less social support from society (Blossfeld 2014; Bumpass et al. 1991; Heaton 2002; Kalmijn 2003; Teachman 2002). However, recent research found changing patterns across time and space. An American study from Schwartz and Han (2014) showed, for instance, that hypogamy was once more likely to dissolve, but this association disappeared in more recent marriage cohorts. The authors argue that norms about the institution of marriage shifted away from rigid gender specialization toward more flexible, egalitarian partnerships, which has increased the social acceptance and prevalence of non-traditional relationships. The lowest dissolution rates are recently found among homogamous couples in which both partners have tertiary education. It is argued that the similarity between highly educated partners and their high level of socioeconomic resources promote union stability (Jalovaara 2003; Lyngstad 2004, Maënpää and Jalovaara 2014; Theunis et al. 2015).

Yet, research on divorce has so far neglected the fact that the highly educated are not a homogeneous group either. Although women now form the majority of those enrolled in advanced education, they are still heavily underrepresented in study disciplines that lead to lucrative and powerful jobs. Women tend to graduate more often in disciplines like health and personal care, education and teaching, or humanities and in these sectors the wages tend to be lower (Brown and Corcoran 1997; Van Bavel 2010). One reason why women are overrepresented in particular fields of education may be that they expect these kind of studies to lead to jobs with working conditions that are more or less compatible

[1] Interface Demography, Vrije Universiteit Brussel
[2] Centre for Sociological Research, University of Leuven

with childbearing and –rearing. Consequently, fields of education also reflect preference heterogeneity, with predominantly female branched studies being more gender stereotypical oriented than predominantly male branched studies (Begall and Mills 2012; Lappegård and Rønsen 2005; Van Bavel 2010).

We expect that divorce rates within the group of the highly educated homogamous couples might vary according to partners' fields of education. In fact, the different aspects that characterize partners' fields of education – like the heterogeneity in work-life aspirations and prospects – have also been used to predict and explain variation in divorce risks according to partners' levels of education. On the one hand, it can be argued that study disciplines with lower earnings prospects are related to lower marital stability, as it offers less financial security. On the other hand, it can be argued that heterogamy in study disciplines decreases marital stability, as dissimilarity in work-life preferences might create tensions and frustrations between partners. However, if gender specialization is still more likely to increases the gains from marriage, we expect dissolution rates to be lower for heterogamous gender-traditional combinations (woman graduated in a more female dominated field than the man) than for gender-atypical combinations (man graduated in a more female dominated field than the woman). If societies are indeed evolving to more flexible, egalitarian relationships like proposed by Schwartz and Han (2014), it can be expected that gender-atypical combinations have at least as high dissolution rates than gender-traditional combinations.

Data and Method

The study is based on the 2001 Belgian Census, linked to the National Populations Registers for the years 2001 to 2006 by Statistics Belgium. We focus on highly educated homogamous couples (both partners have a tertiary degree) who married between 1986 and 2001. To increase homogeneity in our sample, we include only marriages in which the wife's age at marriage was between 18 and 50 and in which both spouses were Belgian-born and no longer enrolled in school at the time of the census (n=109,613). Marital dissolution is defined as a date between 2001 and 2006 at which one of the spouses has left the marital residence or both spouses left marital home in order to live apart. If both spouses moved out, but on a different date, the date of the first move was defined as the time of separation. We use a piecewise constant hazard approach to investigate the effect of a couple's educational match in terms of his and her field of education on divorce.

In our first empirical analyses, we concentrate on marriages in which both partners have a university degree (n=25,118) to avoid heterogamy on the educational level. This means that, for the time-being, we did not include marriages in which at least one partner has a non-academic tertiary degree. We distinguish the following 7 fields of education, inspired by the ISCED Fields of Education and Training 2013 classification: HUM = Humanities and arts; SOC = social sciences, journalism and information, education and teaching, and services; ECO = Economics, business and administration; LAW = Law; NAT = Natural sciences, agriculture, forestry, fisheries and veterinary, mathematics and statistics, and ICT; ENG = Engineering, manufacturing and construction; HEA = Health and welfare.

Preliminary results

First, we show the frequency of study discipline combinations in couples (Table 1). Study disciplines are ordered from low male-dominated to highly male-dominated. Most marriages are homogamous (on diagonal, 44.83%) and gender-traditional (left of the diagonal, 40.61%). Gender-atypical combinations (right of the diagonal, 14.56%) are much less common. Half of the husbands and wives who graduated in law (LAW, the field with the most balanced sex ratio, namely 0.98) were married homogamously (husbands: 49.05%; wives: 50.13%). There is also a very high degree of homogamy among husbands and wives graduated in health or welfare (HEA) and economics, business or administration (ECO). The reason could be that these study disciplines are still quite gender-balanced and thus offer attractive marriage markets or that these categories remain quite broad and thus include a variety of university disciplines. The table also shows that among persons who graduated in study disciplines typical for their gender, homogamy remains quite low. Husbands graduated in engineering, manufacturing or construction (ENG), the most male-dominated field, but also wives who graduated in humanities or arts (HUM), the most female-dominated field, have low degrees of being married homogamously (husbands - ENG: 17.84%; wives - HUM: 33.16%).

Table 2 shows the hazard rates of divorce depending on husband's and wife's field of education. Overall, we see that couples that are homogamous in terms of field of education were not the most stable; rather, certain heterogamous combinations of study disciplines resulted in higher marital stability. For example, being married to a man with a diploma in engineering, manufacturing or construction (ENG) seemed to guarantee a very stable marriage for almost all women. Male engineers often have very high salaries, which increases financial security and may lower the risk of separation. In addition, these men might be less confronted with female colleagues, perhaps implying less opportunities to fall in love with another partner. The workplace has been shown to be a very common place to meet new romantic partners (Grow and Van Bavel 2015b; Kalmijn and Flap 2001). The other way around, when the marriage consisted of a woman graduated in engineering, manufacturing or construction (ENG), the rate of divorce was also rather low if she was married to a man graduated in a balanced or male-dominated branch of study, but rather high if she was married to a man graduated in a predominantly female branch of study. The latter finding might be explained in two, possible complementary ways. First, it might be that men graduated in predominantly female branches of study have many female colleagues, which might promote extramarital affairs. Second, these men might be confronted with a situation in which their wives outearn them, which might threat their gender identity as breadwinners (Klesment and Van Bavel 2015; Schwartz and Gonalons-Pons forthcoming).

In sum, we found relatively low divorce rates for gender-traditional marriages (wife graduated in more female-dominated field than husband) in which the husband graduated in technical engineering, the most male-dominated field. The highest divorce rates were found among gender-atypical combinations (husband graduated in more female-dominated field than wife). We will refine our future analyses by also looking to partners with a tertiary non-academic degree and by reevaluating the categorization of the educational fields.

Table 1 Absolute and relative frequencies of husbands' and wives' fields of education, ordered from low to highly male-dominated

			W I V E S							
			HUM	SOC	HEA	LAW	NAT	ECO	ENG	Total
H U S B A N D S	HUM	n	1,567	314	177	148	134	137	24	2,501
		row %	62.65	12.55	7.08	5.92	5.36	5.48	0.96	100
		col %	33.16	8.34	3.42	4.06	4.47	3.63	2.34	9.96
		cell %	6.24	1.25	0.70	0.59	0.53	0.55	0.10	9.96
	SOC	n	500	1,159	314	242	162	239	41	2,657
		row %	18.82	43.62	11.82	9.11	6.10	9.00	1.54	100
		col %	10.58	30.79	6.06	6.64	5.40	6.33	4.00	10.58
		cell %	1.99	4.61	1.25	0.96	0.64	0.95	0.16	10.58
	HEA	n	328	303	2,423	243	218	232	45	3,792
		row %	8.65	7.99	63.9	6.41	5.75	6.12	1.19	100
		col %	6.94	8.05	46.75	6.67	7.26	6.15	4.39	15.10
		cell %	1.31	1.21	9.65	0.97	0.87	0.92	0.18	15.10
	LAW	n	500	380	417	1,787	136	313	32	3,565
		row %	14.03	10.66	11.70	50.13	3.81	8.78	0.90	100
		col %	10.58	10.10	8.05	49.05	4.53	8.29	3.12	14.19
		cell %	1.99	1.51	1.66	7.11	0.54	1.25	0.13	14.19
	NAT	n	494	457	540	249	1,555	316	112	3,723
		row %	13.27	12.28	14.50	6.69	41.77	8.49	3.01	100
		col %	10.45	12.14	10.42	6.84	51.82	8.37	10.92	14.82
		cell %	1.97	1.82	2.15	0.99	6.19	1.26	0.45	14.82
	ECO	n	697	623	631	586	288	2,074	75	4,974
		row %	14.01	12.53	12.69	11.78	5.79	41.70	1.51	100
		col %	14.75	16.55	12.17	16.09	9.60	54.94	7.31	19.80
		cell %	2.77	2.48	2.51	2.33	1.15	8.26	0.30	19.80
	ENG	n	640	528	681	388	508	464	697	3,906
		row %	16.39	13.52	17.43	9.93	13.01	11.88	17.84	100
		col %	13.54	14.03	13.14	10.65	16.93	12.29	67.93	15.55
		cell %	2.55	2.10	2.71	1.54	2.02	1.85	2.77	15.55
	Total	n	4,726	3,764	5,183	3,643	3,001	3,775	1,026	25,118
		row %	18.82	14.99	20.63	14.50	11.95	15.03	4.08	100
		col %	100	100	100	100	100	100	100	100
		cell %	18.82	14.99	20.63	14.50	11.95	15.03	4.08	100

Table 2 Hazard ratios for all combinations of husband's and wife's field of education, ordered from low to highly male-dominated

		W I V E S						
		HUM	SOC	HEA	LAW	NAT	ECO	ENG
H U S B A N D S	HUM	1.11	1.14	1.12	0.90	1.17	0.98	1.22
	SOC	0.96	1.18	1.17	0.94	1.42	0.84	1.75
	HEA	1.05	0.82	0.68	1.04	1.44	0.97	0.37
	LAW	0.80	1.06	1.00	1.00	1.06	1.28	0.49
	NAT	0.59	0.81	1.09	0.78	0.63	0.63	0.27
	ECO	1.17	1.15	0.69	0.70	0.64	1.03	0.92
	ENG	0.68	0.87	0.56	0.67	0.73	0.50	0.65

Notes: Combination LAW-LAW = ref. Model is controlled for marriage duration (baseline), female age at marriage, relative age, marriage order, parity and age youngest child, and region and urbanization.

References

Begall, K., & Mills, M. C. (2013). The Influence of Educational Field, Occupation, and Occupational Sex Segregation on Fertility in the Netherlands. *European Sociological Review*, *29*(4), 720–742. doi:10.1093/esr/jcs051

Blossfeld, G. J. (2014). Educational Assortative Mating and Divorce: A Longitudinal Analysis of the Influences of Education on the Divorce Rate for Different Educational Matches. Paper presented at the Annual Meeting of the Population Association of America 2014, Boston.

Brown, C., & Corcoran, M. (1997). Sex-Based Differences in School Content and the Male-Female Wage Gap. *Journal of Labor Economics*, *15*(3), 431–465. doi:10.1086/209867

Bumpass, L. L., Castro Martin, T., & Sweet, J. A. (1991). The impact of family background and early marital disruption. *Journal of Family Issues*, *12*, 22–42.

De Hauw, Y., Grow, A., & Van Bavel, J. (2015). The Shifting Gender Balance in Higher Education an s Assortative Mating in Europe. Paper presented at the Annual Meeting of the Population Association of America, San Diego.

Grow, A., & Van Bavel, J. (2015a). Assortative Mating and the Reversal of Gender Inequality in Education in Europe – An Agent-Based Model. *PLoS ONE*, *10*(6), 1–24. doi:10.1371/journal.pone.0127806

Grow, A., & Van Bavel, J. (2015b). Too Few Alternatives? The Reversal of the Gender Gap in Education and its Consequences for Union Stability. *IUSSP working paper, prepared for the Workshop on the science of choice – How to model the decision-making process?*.

Heaton, T. B. (2002). Factors Contributing to Increasing Marital Stability in the United States. *Journal of Family Issues*, *23*(3), 392–409.

Jalovaara, M. (2003). The Joint Effects of Marriage Partners' Socioeconomic Positions on the Risk of Divorce. *Demography*, *40*(1), 67–81. doi:10.1353/dem.2003.0004

Kalmijn, M. (2003). Union disruption in the Netherlands: Opposing Influences of Task Specialization and Assortative Mating? *International Journal of Sociology*, *33*(2), 36–64.

Kalmijn, M., & Flap, H. (2001). Assortative Meeting and Mating: Unintended Consequences of Organized Settings for Partner Choices. *Social Forces*, *79*(4), 1289–1312. doi:10.1353/sof.2001.0044

Klesment, M., & Van Bavel, J. (2015). The Reversal of the Gender Gap in Education and Female Breadwinners in Europe. *Families and Societies. Working paper series*, *2015*(26).

Lappegård, T., & Rønsen, M. (2005). The Multifaceted Impact of Education on Entry into Motherhood. *European Journal of Population / Revue Européenne de Démographie*, *21*(1), 31–49. doi:10.1007/s10680-004-6756-9

Lyngstad, T. H. (2004). The impact of parent's and spouses' education on divorce rates in Norway. *Demographic Research*, *10*, 121–142. doi:10.4054/DemRes.2004.10.5

Mäenpää, E., & Jalovaara, M. (2014). Homogamy in socio-economic background and education, and the dissolution of cohabiting unions. *Demographic Research*, *30*(65), 1769–1792. doi:10.4054/DemRes.2014.30.65

Schwartz, C. R., & Han, H. (2014). The Reversal of the Gender Gap in Education and Trends in Marital Dissolution. *American Sociological Review*, *79*(4), 605–629. doi:10.1177/0003122414539682

Schwartz, C. R., & Gonalons-Pons, P. (Conditionally accepted). "Trends in Relative Earnings and Marital Dissolution: Are Wives Who Outearn Their Husbands Still More Likely to Divorce?" *RSF: The Russell Sage Journal of the Social Sciences.*

Teachman, J. D. (2002). Stability across Cohorts in Divorce Risk Factors. *Demography*, *39*(2), 331–51. doi:10.2307/3088342

Theunis, L., Schnor, C., Willaert, D., & Van Bavel, J. (2015). Educational Assortative Mating and Marital Stability: Adding a Contextual Dimension. Paper presented at the Annual Meeting of the Population Association of America, San Diego (CA), United States of America.

Van Bavel, J. (2010). Choice of study discipline and the postponement of motherhood in Europe: the impact of expected earnings, gender composition, and family attitudes. *Demography*, 439–458.

Van Bavel, J. (2012). The reversal of gender inequality in education, union formation and fertility in Europe. *Vienna Yearbook of Population Research*, *10*, 127–154. doi:10.1553/populationyearbook2012s127

Vincent-Lancrin, S. (2008). The Reversal of Gender Inequalities in Higher Education: An On-going Trend. In *Higher Education to 2030. Volume 1: Demography* (Vol. 1, pp. 265–298). Paris: OECD.