The negative educational gradient in divorce: Do the lower educated have worse marriages?

Diederik Boertien, Universitat Pompeu Fabra, diederik.boertien@upf.edu

Juho Härkönen, Stockholm University, juho.harkonen@sofi.su.se

Abstract

The relationship between education and divorce has recently reversed in several countries with less educated men and women being currently more likely to divorce. This carries potential implications for class and gender inequalities in family life, well-being, and children's life chances. However, little is known about why the least educated currently have lower family stability. Two main explanations can be identified in the literature. First, those with less education could have lower marital satisfaction. Second, those with less education could have lower thresholds to divorce. Relationship dissolution means that a person also gives up access to their partners' resources. If spouses possess many resources, the drop in marital satisfaction required to motivate a person to divorce might therefore be higher.

Empirical evidence so far has not provided evidence that the educational gradient in divorce is explained by variation in marital satisfaction or variation in exit thresholds by educational groups. We use data from the British Household Panel Survey to analyze the trends in marital satisfaction among educational groups and the risks of divorce in these groups given satisfaction levels. We find that marital satisfaction trajectories are practically identical for people with distinct levels of education. The hypothesis that lower educated people have worse relationships therefore did not hold. Marital satisfaction trajectories did not change the coefficient for education when explaining divorce risk. We tested for the validity of a selection and income loss explanation of

variation in exit thresholds. We observed that only income considerations were able to explain part of the educational gradient.

The relationship between education and divorce has recently reversed in several countries with less educated men and women being currently more likely to divorce (De Graaf & Kalmijn, 2004; Härkonen & Dronkers, 2006; Jalovaara, 2003; Lyngstad, 2004; Teachman, 2002). This carries potential implications for class and gender inequalities in family life, well-being, and children's life chances (McLanahan, 2004; McLanahan & Percheski, 2008). However, little is known about why the least educated currently have lower family stability. The negative education gradient also being observed for women contradicts predictions from the Beckerian model of household behavior (Becker, 1981). Two main explanations can be identified in the literature. First, those with less education have lower marital satisfaction. This might be because they experience more financial pressures and related problems that could destabilize relationships (Conger et al., 1990; Ono, 1998; Oppenheimer, 1997; Rogers, 2004; Sayer & Bianchi, 2000; Schoen, Rogers & Amato, 2006; Teachman, 2010). Or it could be that the lower educated individuals possess fewer skills and abilities that make relationships work. For instance, certain communication skills might prevent conflicts from escalating and affecting the stability of a couple (Amato, 1996; Donnellan et al., 2004; Blazys, 2009; Dronkers, 2002; Holley et al., 2006). In these cases differences in relationship satisfaction should explain the negative educational gradient in divorce. Second, those with less education could have lower thresholds to divorce (Amato et al., 2007; Amato & Hohmann-Marriot, 2007; Amato, 2010). For instance, relationship dissolution means that a person also gives up access to their partners' resources. If spouses possess many

resources, the drop in marital satisfaction required to motivate a person to divorce might therefore be higher. Empirical research has so far not provided evidence whether the current negative educational gradient in divorce reflects variation in marital satisfaction or variation in exit thresholds by educational groups. We use data from the British Household Panel Survey to analyze the trends in marital satisfaction among educational groups and the risks of divorce in these groups given satisfaction levels. The main research question of this article is therefore: *Can the negative educational gradient in divorce in Britain be explained by differences in marital satisfaction trajectories, and why?* In the next section, literature on the educational gradient in divorce will be discussed, followed by an empirical analysis investigating the research question posed.

Education and Divorce

Concerns about increasing family polarization have first been formulated in the context of the United States (McLanahan, 2004). But, a body of European research has also noticed trends towards increasing family polarization in several countries (Bernardi & Martinez-Pastor, 2010; De Graaf & Kalmijn, 2004; Härkonen & Dronkers, 2006; Jalovaara, 2003; Lyngstad, 2004; Teachman, 2002). When focusing on divorce, the observed trends are in line with the expectations of Goode (1962; 1970; 1993). Goode argued that over time, it will first be the individuals with many resources that will divorce most. Resources are needed to overcome legal, social and financial barriers. Once divorce becomes more wide-spread, institutions adapt and those barriers are likely to become smaller. When the costs related to divorce decrease, the lower educated, who have less resources, are enabled to divorce too. Because lower educated people might experience more pressure to the couple and/or have less relationship skills, they are

ultimately expected to divorce most once barriers have faded out. This trend has been observed in many countries, suggesting that, indeed, when constraints are lifted, the unions of the lower educated are less stable (Härkonen & Dronkers, 2006). While the trends fit the theory, two parts still need empirical verification. Firstly, it needs to be established why the lower educated are today more prone to divorce. Secondly, it has to be examined whether these factors also explain the change in the educational gradient over time, which does not necessarily have to be the case. In this article, we focus only on the first part. Our aim is to explain the current negative educational gradient, and not change over time, which will be left for future research.

Why do lower educated people divorce more than others? The most straightforward explanation is that lower educated people have less satisfying marriages. This might be because they experience more financial pressures and employment disruptions. A large body of research has shown that income and employment do affect relationship stability (Conger et al., 1990; Ono, 1998; Oppenheimer, 1997; Rogers, 2004; Sayer & Bianchi, 2000; Schoen, Rogers & Amato, 2006; Teachman, 2010; Hankins and Hoekstra, 2011; Boertien, 2012).

The lower educated might also be less able to manage relationships. Lower educated people could have less favorable communication styles, unfavorable personality traits or lack other abilities that help relationships stay intact. Very little research gives insight into the distribution of relationship skills by educational level. Most studies on relationship skills do not focus on differences by education (Amato, 1996; Donnellan et al., 2004). Some more explicit support for the hypothesis has been provided by studies on intelligence. Three papers have shown that intelligence is related to union stability net of income, education, and various personal and parental characteristics (Blazys,

2009; Dronkers, 2002; Holley et al., 2006). Differences in intelligence are likely to account for part of the story. At the same time, intelligence might not be the most important skill necessary to manage relationships.

Besides differences in marital satisfaction, the negative educational gradient could also be explained by differences in the threshold to divorce (Amato et al., 2007; Amato & Hohmann-Marriot, 2007; Amato, 2010). People differ in the extent to which they value the duration of relationships. Some people might want to stay their whole lives in one relationship no matter what, while others might find breaking up a reasonable option when relationships do not seem to work out. How people differ in their commitment to relationships and how this is distributed across society, however, has not been investigated. From a theoretical perspective, three reasons why the lower educated could have lower exit thresholds emerge. It could be that the lower educated have less to lose when they leave a relationship. The access to financial resources lost when divorcing might lead to a bigger drop in economic position for the higher educated. Higher educated women might also lose a husband who helps out in terms of housework and childcare to a larger extent than the lower educated (Bianchi et al., 2000; Bonke & Esping-Andersen, 2009). A second explanation would only work for women. It could be that the marriage market is more attractive for lower educated women than for others. In that case it might be easier to find a new partner for lower educated women. Most literature has pointed out that the marriage market is tight for higher educated women and lower educated men (Blossfeld, 2009). A third explanation could be a selection explanation, it might be that the higher educated who marry are a more selective group, which consists of those who are most committed to staying in a

marriage. Marriage rates among the higher educated are lower compared to those of the lower educated (Blossfeld, 2009; Kalmijn, 2007).

By examining the marital satisfaction trajectories of educational groups this paper aims to first establish whether the negative educational gradient can be explained by marital satisfaction or by differences in exit thresholds. So far, the relation between education and marital satisfaction has not been an explicit research objective, but some articles on marital satisfaction trajectories have reported whether educational differences were found. These studies focusing on the U.S. all did not find differences in marital satisfaction trajectories by education (Amato & Hohmann-Marriott, 2007; Lavner & Bradbury, 2010; Rauer et al., 2008). Besides only focusing on the U.S. context the data used in these studies referred to older marriage cohorts (Amato & Hohmann-Marriott, 2007), used small sample sizes (Lavner & Bradbury, 2010) or were based on cross-sectional data (Rauer et al., 2008). An investigation of marital satisfaction trajectories in contexts outside of the United States therefore are still missing, as well as a recent longitudinal investigation in general that looks at a larger sample of couples. In addition, none of these studies actually investigated whether marital satisfaction trajectories explained the negative gradient in divorce or not.

Therefore, in this paper the BHPS is used to investigate the marital satisfaction trajectories of 1,539 women and 1,542 men in Britain between 1996 and 2009. Britain is one of the European countries where in recent cohorts the educational gradient seems to have turned around and therewith provides a good case to study for the purposes of this paper (Chan & Halpin, 2005). Based on the results found for the U.S. the main hypothesis to be investigated in this paper is: *Marital satisfaction trajectories do not*

explain the educational gradient in divorce in Britain. After testing this hypothesis, the mechanisms behind the patterns observed will be analyzed.

Method

The BHPS is a representative longitudinal household survey of the British population, which annually interviews all individual members of a sample of British households. The first wave dates from 1991; however, the first year in which marital satisfaction was recorded was 1996. During this period of observation 1,539 women and 1,542 men were married and provided information on all variables included in the analysis for respectively 7,455 and 7,437 person-years. For the sample, all people who were married or entered into their first marriage during the observation period were selected. Only the first fifteen years of the marriage were taken into account to not include marriages from older cohorts and to minimize the educational groups studied from becoming too selective due to couples divorcing.

In the analysis differences in divorce risks by education were estimated followed up by differences in marital satisfaction trajectories. Additional analyses were done to investigate the mechanisms underlying the patterns observed.

Measures

The first dependent variable used in this study is divorce. Couples were coded as experiencing a divorce when they reported either a separation or a divorce. Of the sample 9% experienced a divorce during the observation window used in this study.

The second dependent variable was marital satisfaction. Marital satisfaction was measured on a scale ranging from 1 = *not satisfied at all* to 7 = *completely satisfied*. The question was asked to both partners of a couple individually, allowing the estimation of marital satisfaction of both partners. Studies on marital satisfaction have used many different measures. The weakness of the one used in this study is that the measure only consists of one question. At the same time, the question used is closest to the concept of marital satisfaction, which is the overall evaluation of the relationship a person has (Fincham & Rogge, 2010). In addition, the question has empirically been shown to be one of the most informative measures of relationship satisfaction (Funk & Rogge, 2007). In this study the variable was treated as continuous, in line with most other studies using this measure (Amato & Hohmann-Marriot, 2007; Schoen et al., 2006). Robustness checks were done using alternative specifications of the variable (i.e. a logged version and a dummy of values 6 and 7 versus the rest), but unless mentioned this did not change results.

The main independent variable of the analysis was the years of education the person completed up to that point in time. A continuous measure of education performed better than using a categorical one (i.e. International Standard Classification of Education (ISCED) 1-2, 3-4 and 5-6). Robustness checks using a categorical variable for education did not yield different results. Control variables used were age at marriage; age difference between the partners; logged personal labor income in the year of reference (in 2005 prices); the share of labor income brought in by the reference person; logged household income; number of children; activity status; gender norms; whether the couple cohabited before marrying; whether the couple had a child before marrying;

Table 1. Descriptive Statistics for the Sample

	Average	St. Dev.	Min.	Max.
% ISCED 3 – 4	41.7%			
% ISCED 5 – 6	44.8%			
% Unemployed	1.9%			
% Inactive	15.3%			
% Cohabited before marriage	59.3%			
% Child before marriage	18.3%			
Annual household income (2005 prices)	37,481	25,853	0	1,241,205
Monthly labor income	1,680	3,790	0	98,231
Gender norm scale	0.03	0.51	-2	1.63
Age	36.0	8.1	17	81
Age at marriage	29.2	7.03	17	84
Number of children in household	1.32	1.08	0	7
Duration of relationship	6.77	4.60	0	15.9
Satisfaction with partner/spouse	6.30	1.05	1	7
Divorce	1.83%	0.13	0	1
Education in years	13.58	2.30	9	17
N	14,892 person-years		(3,082 persons)	

social class of the mother using the Cambridge scale, and the duration of the marriage. Three dummies were included for whether the person was a student, retired, or unemployed in the year of reference. Gender norms were measured by a standardized

scale based on eight questions that measure the respondents' views on gender roles and other issues related to family life ($\alpha = .68$). See Table 1 for descriptive statistics of the variables and the sample used. The listwise deletion procedure adopted led to the exclusion of 25.9% of cases.

Procedure

The analysis consisted of several steps done separately by gender. Firstly, the differences in divorce risk and satisfaction trajectories were estimated by education. In a second step it was investigated whether possible differences in satisfaction trajectories explained distinct divorce risks by education. A third step consisted of estimating the different equations simultaneously using the statistical package aML.

Satisfaction trajectories were estimated with the following model using random effects growth curves, which allowed splitting the residual into a time-varying and a fixed individual component:

Model 1: $sat_{it} = \alpha + \beta_1 educ_{it} + \beta_2 t + \beta_3 educ_{it} t + \beta_4 X_{it} + u1_i + \varepsilon 1_{it}$;

Where sat is satisfaction with the partner, educ is education in years, t is the duration of the marriage and X_{it} a vector of control variables. $u1_i$ is a fixed individual and $\varepsilon 1_{it}$ a time-varying residual. The same model was estimated for the marital satisfaction trajectories of the reference person's partner:

Model 2: $psat_{it} = \alpha + \beta_1 educ_{it} + \beta_2 t + \beta_3 educ_{it} t + \beta_4 X_{it} + u2_i + \varepsilon 2_{it}$;

Where psat is the marital satisfaction of the partner and $u2_i$ is a fixed individual and $\varepsilon 2_{it}$ a time-varying residual. A problem with the analyses could be that due to different divorce risks the lower-educated could become a more selective group of 'better'

marriages at longer durations of relationships. A first step to minimize this bias was to limit the analysis to the first fifteen years of marriage, and to run robustness checks with an even shorter time-frame (ten years). Secondly, interactions of duration with education were included to look at changes over time in the effect of education on marital satisfaction trajectories.

Divorce risk was estimated by discrete-time event history models in a stepwise manner. The following three models were estimated, where div is experiencing a divorce:

Model 3: $div_{it} = \alpha + \beta_1 educ_{it} + \beta_2 t + \beta_3 educ_{it} t + \beta_4 X_{it} + \varepsilon 3_{it}$;

Model 4: $div_{it} = \alpha + \beta_1 educ_{it} + \beta_2 t + \beta_3 educ_{it} t + \beta_4 X_{it} + \beta_5 sat_{i,t-1} + \varepsilon 3_{it}$;

Model 5: $div_{it} = \alpha + \beta_1 educ_{it} + \beta_2 t + \beta_3 educ_{it} t + \beta_4 X_{it} + \beta_5 sat_{i,t-1} + \beta_6 psat_{i,t-1} + \varepsilon 3_{it}$

The fixed individual residuals u1 and u2 of the first two models are likely to correlate with the time-varying residual $\varepsilon 3_{it}$ of the last three models. This is to say, there might be time-invariant unobserved characteristics that are correlated with marital satisfaction that also determine divorce risk. The coefficients of satisfaction in Models 3 to 5 are therefore also likely to include the effects of these unobserved characteristics on divorce risk. To take this into account, Models 1, 2 and 5 were estimated simultaneously where the fixed individual residuals of the first two models were allowed to correlate with the residual of Model 5.

After establishing whether marital satisfaction explains educational differences in divorce risk, additional variables were included in the models and interacted with satisfaction in order to examine the mechanisms that could explain the results found.

Results

Figure 1 shows how the risk of divorce developed over time for women. Higher educated women were less likely to divorce than lower and mid-educated women. In Table 2 the estimates are shown for Model 1, which confirmed that these differences between educational groups were also statistically significant. In Figure 2 the results for the marital satisfaction trajectories of women are shown. These curves were based on predicted values taken from Model 1 of Table 2. The figure shows that no significant differences by education were observed, which was confirmed when looking at the numbers in Table 2. The interaction terms of education with duration were significant, reflecting the increase and subsequent decrease of the advantage of the higher educated, the latter might be due to more bad marriages that left the sample for the lower educated because of divorce. An absence of effects was also present when looking at the marital satisfaction of women's partners in Model 2 of Table 2.

The inclusion of marital satisfaction in the divorce equation did not alter the coefficient for education. This suggested that the educational gradient in divorce found for women in Britain was not explained by differences in marital satisfaction. At the same time, marital satisfaction was a very solid predictor of divorce. The results were robust to the simultaneous estimation of the equations and correlating residuals. It can be seen from Model 6 in Table 2 that the coefficients involving education did not change.

The results for men were similar to those for women. Figure 3 shows the Kaplan-Meier survival curves for divorce by male education. Model 3 of Table 3 confirms that the negative gradient in divorce by male education was significant. When turning to marital satisfaction trajectories, a bit more differences were found compared to the results for

Figure 1. Kaplan-Meier curves for divorce by women's education

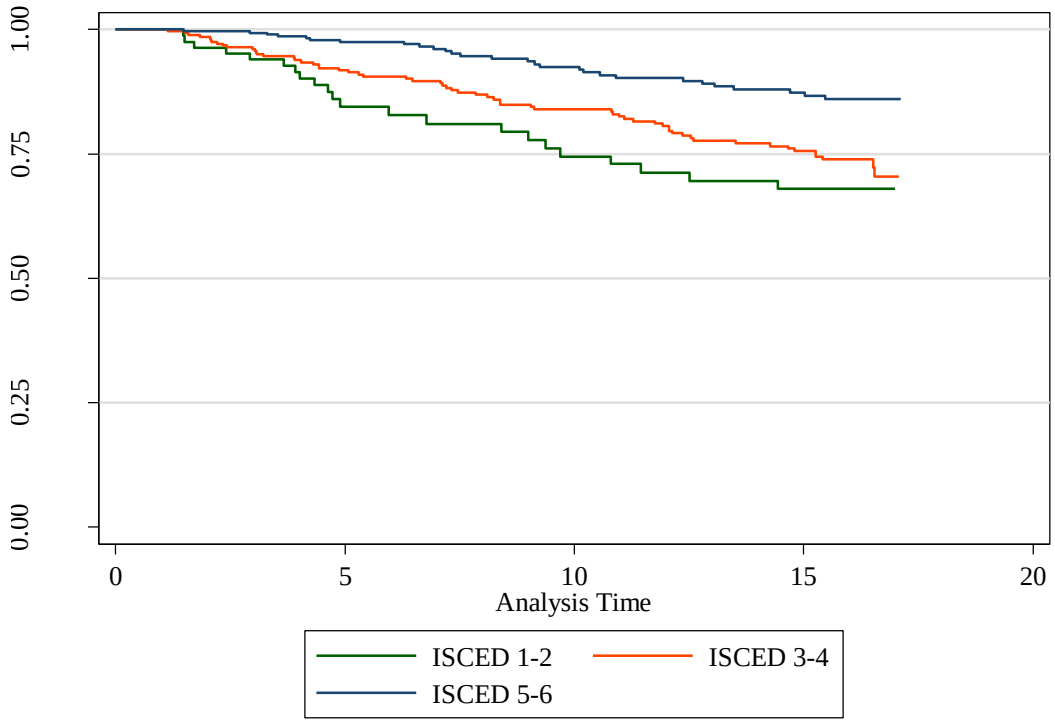

Figure 2. Marital satisfaction trajectories by women's education

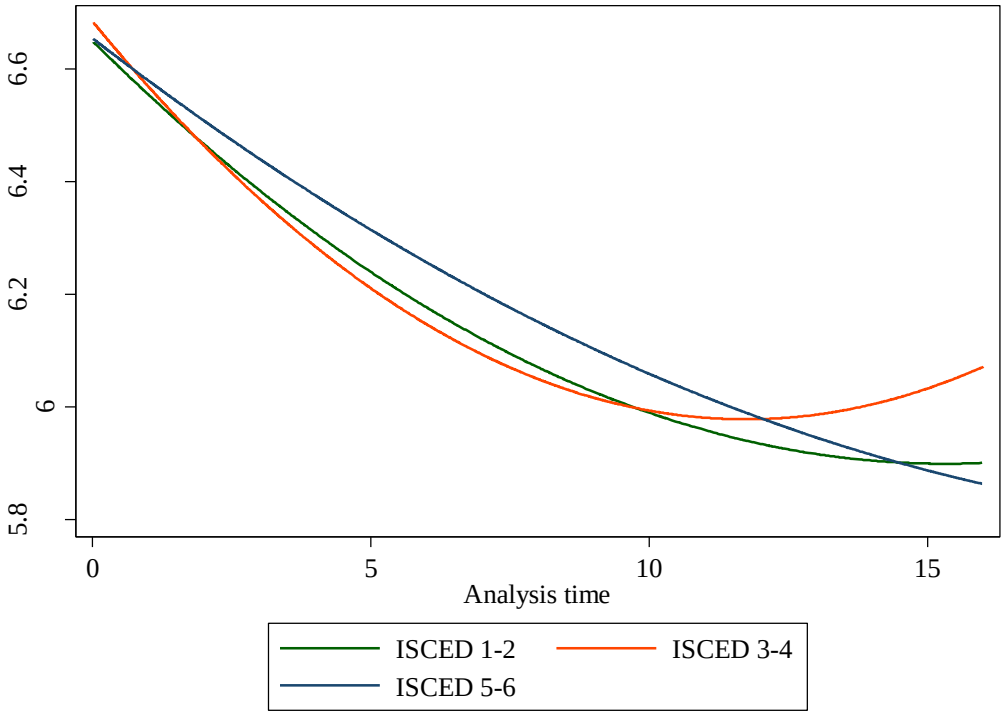

Table 2. Marital satisfaction trajectories and divorce risk by women's education N = 7 455 person-years divided over 1 539 persons

Outcome:	Marital Satisfaction		Mar. sat. of partner		Divorce		Divorce		Divorce		Both	
Marital Satisfaction	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE
Education	-0.002	0.014									-0.005	0.015
Duration	-0.222***	0.055									-0.235***	0.050
Duration^2	0.012***	0.004									0.012***	0.003
Education*Duration	0.009**	0.004									0.010***	0.004
Education*Duration^2	-0.000**	0.000									-0.001***	0.000
Constant	6.703***	0.192									6.751***	0.196
ε1											-0.306***	0.101
*u*1											0.812	0.018
Partners' satisfaction												
Education			0.001	0.013							0.000	0.014
Duration			-0.112*	0.051							-0.110**	0.044
Duration^2			0.004	0.003							0.004	0.003
Education*Duration			0.002	0.004							0.003	0.003
Education*Duration^2			-0.000	0.000							-0.000	0.000
Constant			6.647***	0.174							6.661	0.191
ε2											0.016	0.140
*u*2											0.695***	0.014
Outcome: Divorce												
Education					-0.201**	0.099	-0.197**	0.100	-0.204**	0.102	-0.205*	0.122
Duration					-0.259	0.416	-0.505	0.422	-0.536	0.426	-0.205	0.503
Duration^2					0.018	0.027	0.033	0.028	0.033	0.028	-0.49	0.031
Education*Duration					0.030	0.032	0.041	0.033	0.041	0.033	-0.040	0.039
Education*Duration^2					-0.002	0.002	-0.003	0.002	-0.003	0.002	-0.003	0.003
Marital satisfaction							-0.606***	0.052	-0.514***	0.057	-0.371***	0.085
Partners' satisfaction									-0.287***	0.066	-0.386***	0.106
Constant					-1.617***	1.271	2.232***	1.321	3.621***	1.372	2.978*	1.693
ε3											0.871	0.557
Rho1											0.498***	0.021
Rho2											0.760***	0.003
Rho3											0.710***	0.003

*p<0.10; **p<0.05; ***p<0.01

women. While little differences in marital satisfaction were found by education, some differences emerged for the satisfaction men's partners. As shown in figure 4 it can be observed that the partners of lower educated men had a consistently lower marital satisfaction than others. When calculating the marginal effect of education on satisfaction by duration the differences by education turned significant for some years (see Table 4). When including marital satisfaction in the divorce equations the effect of education on divorce risk decreased but remained solidly significant. The educational gradient in divorce observed for men was therefore to some extent explained by differences in marital satisfaction. But it seems that a big part of the story seems to lie with differences in exit thresholds from relationships. When looking at the simultaneous estimation of Table 3 results for education also did not change here.

The robustness checks done on all the previous analyses (different specifications of education and marital satisfaction), did not change results for almost all models. Only the effect of women's satisfaction by men's education on marital satisfaction turned significant when using a dummy variable for marital satisfaction. At the same time, the dummy for marital satisfaction did not alter the coefficients for education when explaining divorce. Additional analysis (not shown) pointed out that taking into account larger parts of the marital satisfaction trajectories (not just the preceding year) did not provide extra explanatory power when explaining divorce. Satisfaction in various years preceding the reference year did not have effects beyond satisfaction in the year before and did not change the coefficients for education. The results have been replicated just using the first 10 years of the relationship to check whether the lower educated divorcing more and therefore becoming a more select group over time influenced results. If results would change, this could indicate that groups becoming more selective

Figure 3. Kaplan-Meier curves for divorce by men's education

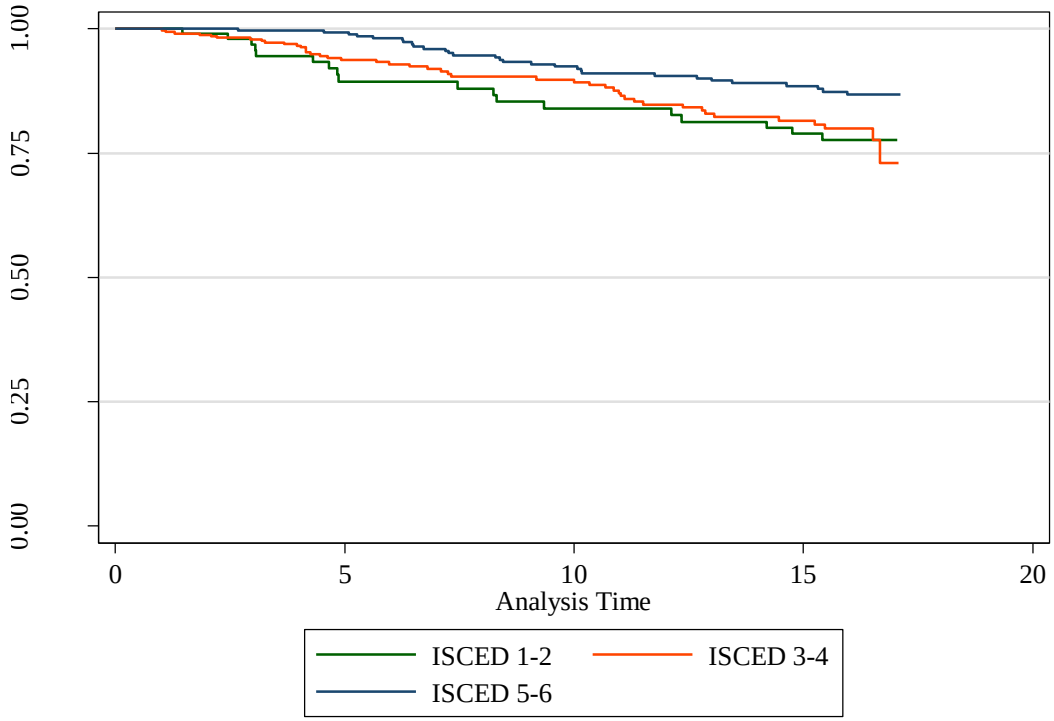

Figure 4. Marital satisfaction of partners by men's education

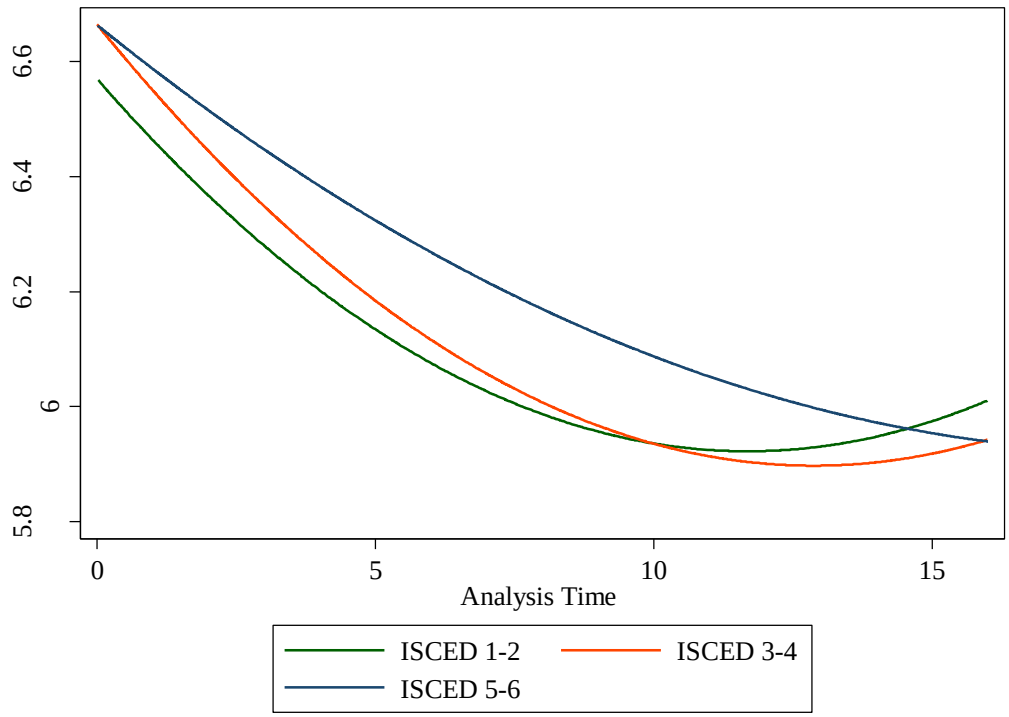

Table 3. Marital satisfaction trajectories and divorce risk by men's education N = 7 437 person-years divided over 1 542 persons

Outcome:	Marital Satisfaction		Mar. sat. of partner		Divorce		Divorce		Divorce		All	
Marital Satisfaction	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE
Education	0.002	0.013									-0.005	0.014
Duration	-0.087*	0.050									-0.095**	0.046
Duration^2	0.005	0.003									0.004*	0.002
Education*Duration	0.001	0.004									0.002	0.003
Education*Duration^2	-0.000	0.000									-0.000	0.000
Constant	6.577***	0.176									6.682***	0.195
ε1											-0.508***	0.166
*u*1											0.703***	0.015
Partners' satisfaction												
Education			0.008	0.014							0.007	0.014
Duration			-0.176***	0.054							-0.195***	0.043
Duration^2			0.008**	0.003							0.009***	0.002
Education*Duration			0.005	0.004							0.007**	0.003
Education*Duration^2			-0.000	0.000							-0.000**	0.000
Constant			6.550***	0.193							6.563***	0.180
ε2											-0.944***	0.068
*u*2											0.801***	0.019
Outcome: Divorce												
Education					-0.299***	0.093	-0.296***	0.095	-0.258***	0.095	-0.257**	0.110
Duration					-0.861**	0.391	-0.919**	0.398	-0.991**	0.401	-0.979**	0.475
Duration^2					0.051**	0.025	0.054**	0.026	0.060**	0.025	0.060**	0.030
Education*Duration					0.072**	0.030	0.072**	0.031	0.072**	0.030	0.072**	0.036
Education*Duration^2					-0.004**	0.002	-0.004**	0.002	-0.005**	0.002	-0.005**	0.002
Marital satisfaction							-0.52***	0.057	-0.315***	0.065	-0.309***	0.065
Partners' satisfaction									-0.491***	0.057	-0.466***	0.086
Constant					-0.168	1.180	3.109**	1.260	4.471***	1.273	4.240***	1.614
ε3											0.050	0.147
Rho1											0.500***	0.022
Rho2											0.717***	0.003
Rho3											0.771***	0.004

*p<0.10; **p<0.05; ***p<0.01

Table 4. Marginal effects of years of education on satisfaction by time since start of relationship N = 7 437 for women and N = 7 455 for men

	Women's education on women's satisfaction		Men's education on women's satisfaction	
	Dy/dx	SE	Dy/dx	SE
T=0	-0.002		0.008	0.014
T=1	0.006		0.013	0.012
T=2	0.013		0.017*	0.010
T=3	0.019**		0.021**	0.010
T=4	0.024**		0.024**	0.010
T=5	0.027***		0.026***	0.010
T=6	0.029***		0.028***	0.010
T=7	0.029***		0.029***	0.011
T =8	0.029***		0.029***	0.011
T=9	0.027**		0.029***	0.011
T=10	0.024**		0.028**	0.011
T=11	0.019*		0.026**	0.011
T=12	0.014		0.023**	0.011
T=13	0.007		0.020*	0.012
T=14	-0.002		0.016	0.013

*p<0.10; **p<0.05; ***p<0.01

over time could have caused the absence of effects. However, results did not change when restricting the time-frame. Just, as can be expected, in the satisfaction models the interaction terms of education with duration ceased to be significant.

Given the robustness of the results, the main explanation behind distinct divorce risks by education seems to lie with exit thresholds. To illustrate, the average marital satisfaction of lower educated women before the year of divorce was 5.04 compared to 4.85 for their higher-educated counter-parts. The numbers for their partners' satisfaction were 6.21 and 5.13 respectively. For lower educated men it was 5.71 compared to 5.45 for the higher educated. For their partners it was 4.79 and 5.07 respectively (but for the mid-educated it was 5.15).

Mechanisms

In this next section, the analysis done to investigate the mechanisms behind the results found is presented. For table 5 the controls and mediating variables that could explain the results were included into the analysis in a stepwise manner. In the theoretical section different explanations for the existence of variation in exit thresholds from relationships were outlined. First, it could be that the higher educated are a more select group, given their lower marriage rates. In that case only the ones most committed marry. Second, it could be that the lower educated have less to lose when they divorce. After a divorce people lose access to their partners' resources, which might increase the exit threshold to divorce. For Table 5, first the controls that do not directly relate to either of those explanations were included. Results did not change compared to the models estimated before. Second, the variables related to selection into marriage were included. Age at marriage reduced the odds of divorce, but slightly increased the effect of education on divorce. Third, variables related to resources were included into the models. For both men and women divorce risks were higher when women had more resources and divorce risk was negatively related to men's resources.

Table 5. Discrete-time event history models explaining divorce by gender N = 7 437 for women and N = 7 455 for men

	Women						Men					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE
Education	-0.20*	0.10	-0.21**	0.11	-0.18*	0.11	-0.27***	0.10	-0.28***	0.10	-0.26***	0.10
Duration	-0.54	0.43	-0.54	0.43	-0.47	0.44	-1.01**	0.41	-1.07**	0.41	-1.17	0.41
Duration^2	0.03	0.03	0.03	0.03	0.03	0.03	0.06**	0.03	0.06**	0.03	0.07***	0.03
Education*Duration	0.04	0.03	0.04	0.03	0.03	0.04	0.07**	0.03	0.08**	0.03	0.09***	0.03
Education*Duration^2	-0.00	0.00	-0.00	0.00	-0.00	0.00	-0.005**	0.002	-0.005**	0.002	-0.005***	0.002
Marital satisfaction	-0.50***	0.06	-0.49***	0.06	-0.48***	0.06	-0.32***	0.06	-0.32***	0.06	-0.32***	0.07
Partners' satisfaction	-0.29***	0.07	-0.30***	0.07	-0.28***	0.07	-0.49***	0.06	-0.48***	0.06	-0.48***	0.06
Child under 4 years	-0.24	0.22	-0.30	0.23	-0.36	0.23	-0.09	0.21	-0.21	0.22	-0.24	0.22
Gender norms scale	0.20	0.18	0.09	0.18	0.01	0.19	0.37**	0.19	0.32*	0.19	0.28	0.19
Number of children	0.09	0.10	-0.07	0.12	-0.18	0.13	0.07	0.10	-0.02	0.11	-0.10	0.12
Selection into mar.												
Age at marriage			-0.08***	0.02	-0.09***	0.02			-0.08***	0.02	-0.08***	0.02
Cohabited before mar.			0.21	0.19	0.23	0.19			0.13	0.19	0.12	0.20
Child before marriage			0.28	0.24	0.15	0.25			0.26	0.25	0.12	0.25
Age – partners' age			0.02	0.02	0.03	0.02			0.06**	0.02	0.06**	0.02
Resources												
Ln(labour income)					0.04	0.05					-0.04*	0.02
Labour income share					0.74*	0.41					-0.10	0.46
Lab inc share missing					-0.25	0.73					-1.30**	0.53
Ln(Household inc.)					-0.18	0.17					-0.15	0.14
Unemployed					-0.34	0.65					0.72*	0.41
Partner Unemployed					0.88**	0.40					-0.14	0.65
Inactive					-0.45*	0.24					0.72	0.45
Partner Inactive					0.78*	0.45					-0.28	0.24
Maternal class score					0.01	0.01					-0.01*	0.01
Maternal class missing					0.21	0.30					-0.74**	0.29
Constant	3.43**	1.39	5.97***	1.56	7.01***	2.50	4.53***	1.29	6.94***	1.44	9.20***	2.11

*p<0.10; **p<0.05; ***p<0.01

For both women and men the effect of education became smaller but remained significant. Some additional analyses were done using other variables such as differences in gender norms between the partners, the share of housework done by the partner and parental divorce, but yielded no significant results. The same was the case for interactions of marital satisfaction and education with the mediating variables.

Discussion

The results presented before show that a negative educational gradient in divorce exists in Britain for both men and women. Marital satisfaction did not differ by education for women, nor did it for their partners. At the same time, slight differences in marital satisfaction were found by education of men. The partners' of lower educated men seemed less satisfied with their relationship than others. At the same time, marital satisfaction trajectories did not play a role in the educational gradient observed for women, while it changed to some extent the coefficient of education when explaining divorce for men. However, also for men the coefficient of education on divorce remains highly significant once controlling for marital satisfaction. In search for alternative explanations sets of control variables were included related to selection into marriage and the threshold to leave a relationship. Only income variables, fitting in the latter category, explained to some extent the educational gradient in divorce once controlling for marital satisfaction.

The first implication of these results is that the implicit assumption that marriages of the lower educated are worse does not seem to hold. This assumption has been central in the debate on the turnaround in the educational gradient in divorce. Goode's theory implied that relationships of lower educated people are of lower quality, and therefore,

once legal, social and economical barriers are lifted, they will divorce more. The numbers presented suggest that this is not the case and that the negative educational gradient in divorce needs new explanations.

A first finding in that direction is that variation in exit thresholds from relationships were found by education. This is to say, lower educated people leave relationships earlier than higher educated people. The drop in marital satisfaction needed to cause a break-up is larger for the higher educated. The found effects for income suggest that this is partly due to variation in the economic costs of divorce in an absolute sense. If a person loses access to a partner's income and other resources, these losses are likely to be bigger for the lower educated in an absolute sense than for others.

A selection explanation did not seem likely because related variables did not change the coefficient for education. Future research could investigate more possibilities. Given that it is not the quality of the relationship that matters, differences in divorce risk by education seem to be determined by barriers to divorce and the availability of alternatives. Do the lower educated have better alternatives than the higher educated? What other barriers can there be to divorce? Might there be a bigger social cost for the higher educated to divorce? It could be that if divorce is still seen as a failure, this could have bigger effects on the reputation of the higher educated than on others. Another explanation can be sought in how well people are able to deal with shocks to the relationship. It might be that certain people are not able to manage the impact a shock to the relationship has. A small shock might for these people cause a break-up, while for others it does not or will only lead to a break-up after years of trying to repair the relationship. In that case variation in commitment to relationships or relationship skills can be the reason why the lower educated divorce more.

The results of this article do have consequences on how family polarization in society could be reduced. If, indeed, marital satisfaction does not differ by education, focusing on the long-term relationship dynamics in order to reduce inequalities between educational groups might not be the most effective remedy. Depending on what other explanation seems valid, focusing on reducing income inequality could reduce differences but that would be a strategy of increasing barriers to divorce for the lower educated. Instead, a focus on the frequency with which the lower educated have to deal with shocks to the couple, and how to deal with sudden crises might be a more desirable strategy when focusing on relationships.

In order to come to a greater understanding of the existing inequalities in different countries, it has first to be investigated whether the results found also can be replicated in other countries than Britain. Other questions that would very much increase our understanding of the issue are: Does variation in the exit thresholds to divorce differ by country? What variations in context are related with lower inequalities? Can skills that allow people to deal with sudden crises explain parts of the story?

Conclusion

The existing negative educational gradient in divorce in many countries carries many potential consequences for class and gender inequalities in family life, well-being, and children's life chances. Despite its great impact on inequality, little is known about why the lower educated divorce more. A key assumption in theoretical and empirical treatments of the issue was that the lower educated have worse relationships than others due to greater economic pressures and the possession of less relationship skills. In this

paper we challenge this hypothesis by showing that marital satisfaction trajectories do not differ by level of education in Britain, one of the countries where a negative educational gradient in divorce can be observed. Using the BHPS we have shown that controlling for marital satisfaction trajectories does not change the negative effect of education on divorce. The results suggested that variation in the exit thresholds from relationships exists by education. We investigated the validity of different hypotheses about variation in exit thresholds. An explanation based on selection into marriage, with the higher educated being a more selected group of people, did not hold. And explanation based on income considerations did to a small extent explain the educational gradient, suggesting that the absolute loss of resources prevents the higher educated from divorcing more. Future research could investigate the validity of alternative hypotheses: the role of relationship skills that allow couples to manage with sudden crises, and differences in the social cost to divorce by education.

References

Amato, P.R. (1996). Explaining the Intergenerational Transmission of Divorce. *Journal of Marriage and Family,* 58, 628-640.

Amato, P.R. (2010). Research on Divorce: Continuing Trends and New Developments. *Journal of Marriage and Family*, 72, 650-666.

Amato, P. R., Booth, A., Johnson, D., and Rogers, S. J. (2007). *Alone together: How marriage in America is changing.* Cambridge, MA: Harvard University Press.

Amato, P.R., and Hohmann-Marriott, B. (2007). A Comparison of High- and Low-Distress Marriages That End in Divorce. *Journal of Marriage and Family, 69,* 621-638.

Becker, G. S. (1981). *A treatise on the family.* Cambridge, MA: Harvard University Press.

Bernardi, F., Martinez-Pastor, J. (2010). Female Education and Marriage Dissolution: Is it a Selection Effect? *European Sociological Review, 27,* 693-707.

Bianchi, S., Milkie, M.A., Sayer, L.C., Robinson, J.P. (2000). Is Someone Still Doing the Housework? Trends in the Gender Division of Household Labor. *Social Forces, 79,* 191-228.

Blazys, G. (2009). Personality, Intelligence, and Marital Outcomes. Working paper, University of Washington.

Blossfeld, H. (2009). Educational Assortative Marriage in Comparative Perspective. *Annual Review of Sociology,* 35, 513-30.

Boertien, D. (forthcoming). Jackpot? Gender Differences in the Effects of Lottery Wins on Separation. *Journal of Marriage and Family.*

Bonke, J., Esping-Andersen, G. (2011). Family Investments in Children. Productivities, Preferences and Parental Child Care. *European Sociological Review, 27,* 43-55.

Chan, T.W., Halpin, B. (2005) *The instability of divorce risk factors in the UK*, Sociology Working Paper 2005-06, Dept of Sociology, University of Oxford.

Conger, R. D., Elder, G. H., Lorenz, F. O, Conger, K. J., Simons, R. L., Whitbeck, L. B., Huck, S., & Melby, J. N. (1990). Linking economic hardship to marital quality and instability. *Journal of Marriage and the Family, 52,* 643-656.

Donellan, M.B., Conger, R.D. and Bryant, C.M. (2004). The Big Five and Enduring Marriages. *Journal of Research in Personality,* 38, 481-504.

Dronkers, J. (2002). Bestaat er een samenhang tussen echtscheiding en intelligentie? [Is there a relation between divorce and intelligence?]. *Mens en Maatschappij*, 77, 25-42.

Fincham, F.D., Rogge, R. (2010). Understanding Relationship Quality: Theoretical Challenges and New Tools for Assessment, *Journal of Family Theory & Review, 2*, 227-242.

Funk, J.L., Rogge, R.D. (2007). Testing the Ruler with Item Response Theory: Increasing Precision of Measurement for Relationship Satisfaction with the Couples Satisfaction Index. *Journal of Family Psychology, 21*, 527-583.

Goode, W. J. (1962). Marital Satisfaction and Instability. A Cross-Cultural Class Analysis of Divorce Rates. In Bendix, R., Lipset, S. M. (Eds), *Class, Status, and Power. Social Stratification in Comparative Perspective*. New York: The Free Press, pp. 377–387.

Goode, W. J. (1970 [1963]). *World Revolution and Family Patterns*. New York: The Free Press.

Goode, W. J. (1993). *World Changes in Divorce Patterns*. New Haven: Yale University Press.

Graaf, P.M. de (2006). Change and Stability in the Social Determinants of Divorce: A Comparison of Marriage Cohorts in the Netherlands. *European Sociological Review*, 22, 561-572.

Hankins, S., Hoekstra, M. (2011). Lucky in Life, Unlucky in Love? The Effect of Random Income Shocks on Marriage and Divorce. *Journal of Human Resources*, 46, 403-426.

Härkönen, J., Dronkers, J. (2006). Stability and Change in the Educational Gradient of Divorce. A Comparison of Seventeen Countries. *European Sociological Review*, 22, 501-517.

Holley, P., Yabiku, S., Benin, M. (2006) The Relationship Between Intelligence and Divorce. *Journal of Family Issues,* 27, 1723-1748.

Jalovaara, M. (2003). The Joint Effects of Married Partners' Socioeconomic Positions on the Risk of Divorce. D*emography*, 40, 67–81.

Kalmijn, M. (2007) 'Explaining cross-national differences in marriage cohabitation, and divorce in Europe, 1990-2000, *Population Studies 61(3):*243-263.

Lavner, J.A., Bradbury, T.N. (2010). Patterns of Change in Marital Satisfaction over the Newlywed Years. *Journal of Marriage and Family*, 72, 1171–1187.

Lyngstad, T. H. (2004). The Impact of Parents' and Spouses' Education on Divorce Rates in Norway. *Demographic Research*, 10, 119–142.

McLanahan, S. (2004). Diverging Destinies: How Children Are Faring Under the Second Demographic Transition. *Demography*, 41, 607–627.

McLanahan, S., Percheski, C. (2008). Family Structure and the Reproduction of Inequalities. *Annual Review of Sociology, 34*, 257-276.

Oppenheimer, V. K. (1997). Women's employment and the gain to marriage: The specialization and trading model. *Annual Review of Sociology, 23,* 431-453.

Ono, H. (1998) Husbands' and Wives' Resources and Marital Dissolution. *Journal of Marriage and Family,* 60: 674-689.

Ono, H., Raymo, J.M. (2006) Housework, market work and "doing gender" when marital satisfaction declines. *Social Science Research, 35,* 823-850.

Rauer, A. J., Karney, B. R., Garvan, C. W., Hou, W. (2008). Relationship risks in context: A cumulative risk approach to understanding relationship satisfaction. *Journal of Marriage and Family,* 70, 1122 – 1135.

Rogers, S. J. (2004). Dollars, dependency, and divorce: Four perspectives on the role of wives' income. *Journal of Marriage and Family, 66,* 59-74.

Sayer, L. C., Bianchi, S. M. (2000). Women's economic independence and the probability of divorce: A review and reexamination. *Journal of Family Issues, 21,* 906-943.

Schoen, R., Rogers, S. J., Amato, P. R. (2006). Wives' employment and spouses' marital happiness: Assessing the direction of influence using longitudinal couple data. *Journal of Family Issues, 25,* 506-528.

Teachman, J. (2002). Stability Across Cohorts in Divorce Risk Factors. *Demography*, 39, 331–351.

Teachman, J. (2010). Wives' economic resources and risk of divorce. *Journal of Family Issues, 31,* 1305-1323.