Less Education, More Divorce: Explaining the Inverse Relationship Between Women’s Education and Divorce

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Between Women’s Education and Divorce

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Abstract: Highly educated women currently have more stable marriages than less educated women in several societies, yet we know little about the reasons for this difference. In this paper, we draw on social exchange theory to hypothesize how educational differences in marital satisfaction and barriers to divorce can explain the inverse educational gradient of divorce. Discrete-time event history analyses of 1,887 first marriages from the British Household Panel Survey show that marital satisfaction does not explain the negative association between women’s education and divorce. Instead, we find that higher barriers to divorce help keep the marriages of educated women intact. We use this finding to propose a novel interpretation for the reversed educational gradient of divorce in many countries.
Less Education, More Divorce: Explaining the Inverse Relationship Between Women’s Education and Divorce

In the early sixties, William J. Goode predicted that as divorcing becomes easier, the initially positive relationship between class and divorce wanes and eventually reverses (Goode 1962; 1963). Half a century later, a growing body of research has documented such a shift in the association between women’s education and divorce in several European (Hoem 1997; Chan and Halpin 2005; De Graaf and Kalmijn 2006a; Härkönen and Dronkers 2006; Matysiak, Styrc, and Vignoli 2013) and non-Western societies (Park, Raymo, and Creighton 2009; Raymo, Fukuda, and Iwasawa 2013). In the United States, the inverse relationship between female education and divorce has widened over the past decades (Martin 2006). Because divorce is associated with lower well-being among divorcees and their children, strong educational differences in its incidence can strengthen existing socioeconomic inequalities (McLanahan and Percheski 2008).

Yet why less educated women have elevated divorce rates is poorly understood (Amato 2010, p. 661). The stabilizing effect of men’s education on marriages is well-established, but common theoretical accounts lead to ambiguous predictions of the effects of women’s education on divorce (Lyngstad and Jalovaara 2010). Many theories predict that highly educated women are more likely to divorce, and the existing explanations for educated women’s higher marital stability are weakly grounded in evidence.

The objective of this study is to explain why less educated women have higher divorce rates than better educated women. After reviewing the literature, we propose an explanatory approach based on social exchange theory and its distinction between marital attractions and barriers to divorce (Levinger 1976). This heuristic provides a
framework for discussing the role of more specific factors. We analyze event-history data for 1,887 first marriages from the 1996-2009 waves of the British Household Panel Survey (BHPS). Core advantages of these data are their representativeness of the British population and annual measurements of a wide range of questions, from socioeconomic factors to marital satisfaction and indicators of personal and social stressors. The United Kingdom is one of the countries where educated women currently have more stable marriages than those with less education (Chan and Halpin 2005; Cooke and Gash 2010). To preview our findings, they point to economic and demographic factors that can be interpreted as barriers to divorce as an important explanation to the higher marital stability among educated women.

BACKGROUND

Wife’s Education and Divorce: Theory and Evidence

How does the wife’s education affect divorce? Theories of divorce generally rely on a cost-benefit model, in which marriages are maintained as long as their benefits exceed the costs of divorce (e.g., Brines and Joyner 1999). In this framework, education affects divorce by altering these costs and benefits. In practice, schooling is regarded as an economic and a non-economic resource with ambiguous effects on divorce (Becker, Landes, and Michael 1977).

Education as human capital raises the economic benefits one can reap from the labor market. This allows for a higher level of consumption, but increases the opportunity costs of housework, childcare, and other, traditionally female, non-labor

1 Other relevant features of British family demography are high divorce rates, high rates of births to teen-aged and single women, and high rates of poverty among single mothers (Chan and Halpin, 2005; Esping-Andersen, 2007).
market activities. According to Becker’s economic model of the family, this weakens
the returns to a household division of tasks into market and non-market work and the
interdependency between the spouses, and increases the utility of options outside
marriage (Becker et al. 1977). Women’s human capital thus decreases their dependence
on marriages and increases their possibilities of exiting them.

This “specialization and trading model” (Oppenheimer 1997) is a standard
approach to theorizing the effects of wife’s human capital on divorce. One of its
criticisms is that it pays insufficient attention to the economic utility of her earnings.
These can counteract any benefits from specialization, and increase spouses’ mutual
dependency as a guarantor of a level of living they might otherwise not attain. The
wife’s human capital additionally provides a buffer against economic risks, such as the
husband’s unemployment or illness, which can increase marital stress and lead to a re-
evaluation of the marital bargain (White and Rodgers 2000). Empirical results of the net
effects of the wife’s (un)employment and incomes are considerably conflicting (White
and Rodgers 2000; Lyngstad and Jalovaara 2010; Özcan and Breen 2012). Some studies
have found, however, that variables such as her incomes, unemployment, and working
schedules partly mediate the negative female educational gradient of divorce (Jalovaara
2001; Raymo et al. 2013).

Another critique of the specialization and trading model has been that it
implicitly treats all marriages alike. It has been refined to consider heterogeneity in
marital quality. According to this approach, education and other economic resources
provide the means to exit low-quality marriages, but may not have any influence on
high-quality ones (Sayer and Bianchi 2000; Sayer et al. 2011; Kreager et al. 2013).
Much of the evidence supports this view (ibid.).
Education has also been seen to affect divorce through non-economic pathways. Yet it is unclear what the relevant ones are. The literature includes references to such factors as general “non-market productivity” (Becker 1974), relationship skills (Blossfeld et al. 1995; Amato 1996; Härkönen and Dronkers 2006), attitudes (Levinger 1976), and knowledge about the legal system and the divorce process (Blossfeld et al. 1995; Hoem 1997). Education, as well as other economic resources, also holds symbolic value as a marker of social prestige which may influence marital behavior (Edin and Kefalas 2005). Furthermore, traits, such as intelligence (Dronkers 2002) and health (Kreager et al. 2013) correlate with education. Lastly, her high education, particularly if it is higher than his, can go against gendered expectations of economic provision and status relationships within marriage (Fenstermaker 2002) and provoke behaviors conducive to marital instability. Some of these non-economic factors promote marital stability among the highly educated, whereas others undermine it. The few empirical studies that have directly assessed non-economic factors lead to a similar conclusion. Raymo and colleagues (2013) found that measures intended to capture concerns with “losing face” explained a part of the negative educational gradient in Japan, whereas Boertien, von Scheve and Park (2012) found that highly educated German women more often held personality traits which de-stabilize marriages.

Finally, education can shape divorce risks by structuring life course trajectories. Higher education—and in particular, longer time in education—postpones marriages (for Britain, Berrington, and Diamond 2000). Later age at predicts marital stability (Lyngstad and Jalovaara 2010) and age at marriage can mediate a part of the educational gradient of divorce (e.g., Härkönen and Dronkers 2006; Martin 2006). In some countries, highly educated women marry less, which may mean that those who do are more committed to their marriages. Bernardi and Martínez-Pastor (2011) did not
find that such selectivity was responsible for the negative educational gradient in Spain.

The educational gradient of divorce can additionally vary by marital duration. Newlywed couples face considerable uncertainty of themselves, their spouses, and their common life, and new information and unexpected events can alter the utility gained from the marriage (Becker et al. 1977). At the same time, shared investments made during the course of the marriage increase couples’ mutual dependency (Brines and Joyner 1999). Findings assert that negative educational gradients of divorce are the strongest at early stages of the marriage (South and Spitze 1986; Jalovaara 2002). None of these studies, however, provided direct measures to explain this finding.

Summing up, the effects of female education on divorce are theoretically ambiguous and many theories predict higher divorce rates for educated women, rather than the reverse. Additionally, many explanations of why less educated women are currently more likely to divorce than better educated ones are weakly grounded in evidence.

Wife’s Education, Marital Attractions, and Barriers to Divorce: Theoretical Framework and Hypotheses

In the absence of strong guidance from theory and previous research for explaining the inverse educational gradient of divorce for women, we construct a middle range framework to orient the formulation of hypotheses and the choice of variables. Specifically, we build on the distinction between marital attractions and barriers as made by social exchange theorists (e.g., Levinger 1965; 1976). Attractions are the relative balance of the rewards and costs of a specific marriage and include emotional returns, social approval, and economic benefits and losses. Barriers, on the other hand, have been defined as constraints to dissolution emanating from other sources than the
attractions of the marriage (Levinger 1965; 1976). In our framework, education affects marital stability either by affecting attractions of the marriage or the barriers to divorce. Likewise, the variables used in the empirical analysis are expected to operate through these two. The third component of social exchange theory, alternatives to the marriage, can often be interpreted as barriers to divorce: a lack of alternatives can be a barrier to divorce. These alternatives—such as alternative spouses—can be hard to measure (but, see South and Lloyd 1995; Lyngstad 2011). For the most part, this also holds for this study. Findings that re-marriage rates do not differ by socio-economic variables (Shafer and James 2013) suggest, however, that educational differences in access to alternative spouses are an unlikely explanation to the educational gradient of divorce. Like in most previous studies, we focus on individual and couple level factors which can affect attractions and barriers (cf. Brines and Joyner 1999).

This general framework can also be used to interpret the mechanisms highlighted in different theories. For instance, Becker’s thesis about marriage-specific capital, as well as Oppenheimer’s argument about the husbands’ economic losses from divorcing an educated wife can be seen as emphasizing the barriers to divorce. On the other hand, findings of the destabilizing effect of economic stress should be seen as mediated through attractions. Goode (1962; 1963) himself based his prediction of the changing class gradients of divorce on the weakening (societal) barriers to divorce, which permits the higher stress (lower attractions) among lower class families to find an expression in marital dissolution (cf., Härkönen and Dronkers 2006; Matysiak et al. 2013; Park and Raymo 2013). The interplay between attractions and barriers has been used to address various questions in the divorce literature (e.g., Heaton and Albrecht 1991; White and Booth 1991; Previti and Amato 2003; Amato and Hohmann-Marriot
2007), but to our knowledge, not in recent research on the educational gradient of divorce.

Marital satisfaction and quality are commonly-used measures of marital attractions (White and Booth 1991) and strong predictors of divorce (Karney and Bradbury 1995). Were these attractions responsible for the negative educational gradient of divorce for women, we would expect marital satisfaction to explain the gradient.

HYPOTHESIS 1:—Educational differences in marital satisfaction explain why less educated women have higher divorce rates.

An obvious candidate for why education affects marital satisfaction is economic circumstance. According to the family stress model, economic stressors affect spouses’ emotional distress and their interactions (Conger et al. 1990), which in turn affect marital satisfaction (Karney and Bradbury 1995; White and Rodgers 2000). Likewise, unemployment (especially of the husband) and other forms of economic hardship have repeatedly been shown to affect marital quality and satisfaction (Conger, Conger, and Martin 2010; Halliday Hardie and Lucas 2010). This leads to a more specific hypothesis, which is in line with Goode’s (1962; 1963) argument:

HYPOTHESIS 1a:—Economic stressors—such as unemployment and material hardship—affect marital satisfaction and explain why less educated women have higher divorce rates.
The household division of labor can affect marital satisfaction. Responsibility for housework and childcare can lower marital satisfaction, in particular if this is perceived as unfair (e.g., Wilkie, Ferree, and Ratcliff 1998; Twenge, Campbell, and Foster 2003). Likewise, the division of housework predicts divorce (Oláh and Gähler 2014), but contingent on the division of housework prevalent in each society (Cooke 2006). Gender norms and attitudes can in themselves affect marital satisfaction (Lye and Biblarz 1993), although the effects of these, too, can vary by social context. To the extent that educated wives are better able to negotiate a balanced division of housework and childcare (Bonke and Esping-Andersen 2011) and hold gender norms conducive to higher marital satisfaction, we can formulate the following hypothesis:

HYPOTHESIS 1b:—The division of housework and gender norms affect marital satisfaction and explain why less educated women have higher divorce rates.

Educational differences in marital satisfaction have not been extensively studied. Previous findings suggest that the highly educated are more satisfied with their marriages, although the differences are not large (Karney and Bradbury 1995; Conger et al. 2010; Isen and Stevenson 2010; Halliday Hardie and Lucas 2010). This suggests that barriers to divorce may be more important.

Barriers to divorce can hold a marriage intact despite low attractions. Barriers can be economic or non-economic (Becker et al. 1977; White and Booth 1991) and include “commitment” (Johnson, Caughlin and Huston 1999), moral or reputational barriers (Raymo et al. 2013), and investments to assets and marriage-specific goods (Briner and Joynes 1999). For our purposes, these barriers should correlate with education to explain the observed negative gradients.
HYPOTHESIS 2:—*Educational differences in barriers to divorce explain why less educated women have higher divorce rates.*

Barriers are generally measured using objective indicators such as home ownership and common children. Both reflect joint investments. Home ownership raises the economic (and emotional) costs of leaving the partnership (South and Spitze 1985; White and Booth 1991; Jalovaara 2001). Loss of the economic resources of the partner and financial dependence provide other examples of financial barriers to divorcing. Regarding the former, they may deter the husband of an educated wife from divorcing, but also affect the decisions of educated wives who tend to have educated husbands. Common children are often mentioned in subjective accounts as barriers to divorce (Knoester and Booth 2000), yet the evidence for such an effect of children beyond their early years is not strong (Lyngstad and Jalovaara 2010). Step-children may have different effects, as marriages with step-children can still be “incomplete institutions” (Cherlin 1978) to which commitment is less. Parental divorce and separation is another potential factor. Children of divorce tend to have lower levels of education than those from intact families. They are also more likely to perceive dissolution as a viable solution to unsatisfactory marriages and thus hold lower barriers to divorce (Wolfinger 2005). If parental divorce lowers access to educated partners (Erola, Härkönen, and Dronkers 2012), those with higher education will be less likely to marry someone with a divorced background. Last, scholars have complemented indicators of barriers to divorce with measures such as attitudes and religiosity (Amato and Hohmann-Marriott 2007).
What are considered to be the relevant barriers to divorce varies from one study to the next, and some variables can both act as barriers and influence marital satisfaction. What is important is that they exert an influence on marital dissolution net of the attractions. We formulate the following hypotheses of different barriers to explain why less educated women divorce more.

HYPOTHESIS 2a:—*Economic barriers to divorce*—such as homeownership, other wealth, financial dependency on the spouse, and husband’s education—affect divorce independently of marital satisfaction and explain why less educated women have higher divorce rates.

HYPOTHESIS 2b:—*Family demographic factors*—such as parental divorce, the number and age of children, step-children, and pre-marital cohabitation—affect divorce independently of marital satisfaction and explain why less educated women have higher divorce rates.

HYPOTHESIS 2c:—*Religiosity and gender norms* affect divorce independently of marital satisfaction and explain why less educated women have higher divorce rates.

An alternative approach to barriers considers the heterogeneity in the effects of marital satisfaction on divorce (cf. Schumm and Bughaighis 1985; White and Booth 1991; Amato and Hohmann-Marriott 2007). According to Levinger (1965), barriers should be trivial for those in happy marriages but hold unhappy marriages intact. However, a growing number of studies have found that a large number of divorces involve seemingly unproblematic marriages with at least moderate levels of marital happiness (Amato and Hohmann-Marriott 2007). When divorce became more
accessible, this share may have increased (De Graaf and Kalmijn 2006b). The reason some such marriages dissolve may have to do with low barriers and commitment (Amato and Hohmann-Marriott 2007). Barriers may thus have most importance at (relatively) high levels of satisfaction, whereas those in poor quality marriages would divorce in any case. Schumm and Bugaighis (1985) argued that such a scenario could be expected in cultures, which value personal happiness over marital stability, whereas Levinger’s (1965) scenario would be more likely in contexts with the opposite valuations.

A further complication for our purposes is that education can, as discussed, provide resources to overcome barriers and at the same time itself be associated with barriers to divorce. For example, Kreager and colleagues (2013) found that educated women had more stable marriages when they were not characterized by marital violence, but were also more likely to leave violent ones. Due to the complex and contingent interrelations between women’s education, barriers to divorce, and resources to overcome these barriers, formulating hypotheses about interaction effects of education and satisfaction on divorce proves difficult. We refrained from formulating such hypotheses. Nevertheless, we tested for these interactions, as we believe that they can offer additional insights into interpreting the findings.

DATA AND METHOD

Data

We used data from the British Household Panel Survey (BHPS), a representative longitudinal household survey of the British population, which annually interviewed all adult members of a sample of households. The sample was selected using a stratified clustered design based on postal codes. All members of the selected households became
panel members and were followed over time, also if they left the household. After thirteen waves of the survey, 66% of those selected for the sample in the first wave were still part of the study (see the quality profile of the BHPS for more information (Lynn, 2006)).

We began our observation window from 1996, which was the first year when respondents were asked about marital satisfaction, and it extended until 2009. We selected all heterosexual couples who were married for the first time during the observation period, and who provided information on divorce and education (excluding 9.1% of couples and 10.9% of person-years due to missing information). Only the first fifteen years of the marriage were taken into account in order to avoid the educational groups studied from becoming too selective due to divorce. Some marriages had already begun before our observation window and excluding them from the analysis would have restricted the number of marriages further. Therefore, we included these (left-truncated) marriages and set the duration of their marriage accordingly for the event-history analysis (Guo 1993). In total, we observed 1,887 couples for 9,130 person-years.

We decided against including cohabiting couples in order to connect to the general literature on female education and divorce, which has mostly focused on married couples. Socioeconomic resources may influence the dissolution of married and cohabiting couples differently, and whether and in which contexts this is the case remains unresolved (e.g., Brines and Joyner 1999; Jalovaara 2013). Furthermore, the heterogeneity of cohabitating living arrangements poses challenges to their measurement in common surveys (for Britain, see Murphy (2000)). Previous studies from Spain do not suggest that selection into marriage biases the results (Bernardi and Martinez-Pastor, 2011). We believe the same to be the case for Britain. Berrington and
Diamond (2000), for example, showed for the 1958 British cohort that educated people are more likely to marry than the less educated.

Measures of Divorce, Education, and Marital Satisfaction

Our dependent variable was divorce. Couples were coded as experiencing a divorce when they reported either a separation or a divorce, conditional on being married the previous year. 9.9% (180 couples) of the sample experienced a divorce during the observation period. Divorce, which refers to the wave where one of the partners moved out, is measured at $t$ whereas all independent variables are measured at $t - 1$. The survival curves predicted that 24% of first marriages ended after 15 years. This is similar to the estimate of a 29% divorce probability after 15 years (of all marriages), reported by the most recent official statistics.$^2$

Our main independent variable was a time-varying measure of the years of education completed by the wife by the interview date. The continuous specification of educational attainment fit the data better (assessed using the Akaike and Bayesian Information Criteria) than a categorical one, which we nevertheless used in the descriptive analyses due to its informative value. The categorical measure of educational attainment differentiated between low (GCSE grade A-C or less; ISCED 0-2), middle (A-levels; ISCED 3-4), and high education (tertiary degrees; NVQ-level 3; ISCED 5-6). Our regression results were robust to the specifications.

Our first hypothesis stated that marital satisfaction explains the negative educational gradient of divorce. We measured marital satisfaction using the question “How satisfied are you with your spouse/partner?” with responses ranging from 1 =

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$^2$ Office for National Statistics UK, website consulted 03/12/2013, www.statistics.gov.uk
“not satisfied at all” to 7 = “completely satisfied”. The question was asked individually from both partners (using a self-completion questionnaire filled out after the face-to-face part of the interview). The weakness of this measure is that it only consists of one question, and one could argue that marital satisfaction is not just based on satisfaction with the partner. At the same time, it is one of the most informative measures (Funk and Rogge 2007) and the closest single one of the concept of marital satisfaction as the overall evaluation of the relationship (Fincham and Rogge 2010). We treated the variable as continuous, in line with most other studies (Amato and Hohmann-Marriot 2007; Schoen et al. 2006). Robustness checks were done using alternative specifications (i.e. a logged version and a dummy of values 6 and 7 versus the rest), but they did not change the results. The same was the case for the inclusion of lagged measures of marital satisfaction.

**Other variables**

The lack of strong guidance from theory and previous research and our own hypotheses suggest several potential variables, which can explain the inverse educational gradient of divorce. Our demographic variables mainly reflect barriers to divorce. *Ethnicity* was a dummy variable indicating whether the respondent was white or not. We acknowledge that “non-whites” are a heterogeneous group with different divorce rates, but small cell sizes prevented more detailed classifications. *Parental divorce* measured whether either partner came from a divorced (or separated) family. Her *age at marriage* was measured continuously in years and can act as a barrier to divorce (by affecting alternatives to the current marriage) but can also affect marital satisfaction (if it correlates with maturity and stability). *Pre-marital cohabitation* was a dummy variable often regarded as reflecting attitudes toward the marital institution, whereas *step-children*—indicating
whether one of the partners entered the marriage with a previous child—can affect both marital satisfaction and commitment to the marriage. The number of children was a continuous variable and the age of the youngest child was a dummy variable, indicating whether the youngest child was less than four years old. Finally, we included the share of opposite-sex singles in a person’s region (based on a classification of 19 regions, such as East Midlands, Inner London, or Merseyside) and age group (everyone up to 7 years older and up to 3 years younger for women, and the opposite for men) as a crude measure of marriage market conditions.

We included a group of variables measuring labor market and economic conditions. Her and his unemployment (dummies) and material deprivation—measured as an index of six questions, and rescaled to vary between 0 and 1, on whether or not the household could afford “eating meat on alternate days”, “replacing furniture”, and the like—and her unusual working hours (other schedules than “just mornings” or “mornings and afternoons”) can be marital stressors (Conger et al. 1990), whereas annual household income can also be a barrier to divorce. Other economic barriers to divorce included were his education (measured continuously in years), her percentage contribution to the total household labor income (included as a measure of her economic dependency), home ownership (dummy), and her and his interests on savings and investments, which proxy wealth (in 2005 prices).

We included a group of variables tapping into attitudes and behaviors. Her church attendance indicates religiosity, a barrier to divorce. Her gender norms were measured by a standardized scale based on eight seven-point scale questions on the respondents’ views on gender roles and other issues related to family life (such as

3 We also looked at whether the ownership was shared or not but this did not prove to be relevant for divorce risk.
agreement on “a woman and her family would all be happier if she goes out to work”, Cronbach’s $\alpha = 0.68$), with higher scores reflecting more egalitarianism. These can shape both marital satisfaction and barriers to divorce. Her *share of the total time dedicated to housework* by the couple indicates gender egalitarian practices in the marriage, and can shape marital satisfaction.

Each model also included marital duration (continuous) and calendar year (continuous). We experimented with several specifications of marital duration, but more complicated measures of marital duration as well as interactions with education did not improve model fit (5-year splines for duration did not improve model fit and a quadratic term for duration was not significant; results are available upon request). We used calendar year instead of marriage cohort because period effects on divorce dominate over cohort effects (Härkönen 2014).

---TABLE 1 AROUND HERE---

Missing values on all variables but education and divorce were multiply imputed using 20 datasets (see Rubin 1987). Table 1 displays the characteristics of the original sample used in this study before imputation. 42.2% of cases and 34.4% of person-years have one or more values imputed on the independent variables used in the final models of the paper. The dependent variable and all independent variables were included in the equation used for imputation to make sure the imputations are ‘proper’ (Rubin 1987). The multiple imputations were done using the ‘mi’ commands in Stata 12. Because model fit statistics do not have a clear interpretation in multiple imputation settings, we do not report them (StataCorp 2013).
Analyses

Our analytical strategy had three main steps. First, we described divorce risks (using survival and hazard function estimates) and marital satisfaction trajectories by educational attainment.

The second part of the analysis used discrete-time event history analysis (Yamaguchi 1991), suitable given the annual measurements in our data, to assess how much of the female educational gradient of divorce is mediated by our independent variables. We estimated the models using logit regression.4

We estimated a series of discrete-time event history models where each model includes marital duration and calendar year (centered to year 2000). In the first step, we tested whether the educational gradient of divorce could be explained by marital satisfaction.

In the second step of the regression analyses, we assessed whether the educational gradient is mediated by each of the other independent variables. Due to their large number, we first assessed each independent variable separately. We excluded from further consideration all variables which were not significant mediators of education on divorce at the 5 percent significance level. We used a test based on standardizing the logit coefficients of education on the mediating variable (taken from a model with the mediating variable as the dependent variable) and of the mediating variable on divorce, controlling for education (Iacobucci 2012).

In the third step of the regression analysis, we entered the remaining variables in four blocks, depending on when in the life course and where in the expected causal chain from education to divorce they appear. Although not clear-cut, such a

4 The main analyses were also run using Linear Probability Models (LPM) and the results were robust (cf. Mood 2010).
categorization helped in deciding the order in which the variables are introduced. Some of the variables precede education, whereas others are affected by it. They also affect one another, and therefore entering them in the correct order is necessary in order to draw correct conclusions.

In the third and final part of the analysis, we explored the interdependencies of the variables more closely. Particularly, we were interested in which variables of the final model affected divorce independently of marital satisfaction and could be considered as barriers to divorce. To this end we estimated a path model for discrete outcomes within a Structural Equation Model setting (e.g., Winship and Mare 1983) on the discrete-time event history data. All variables that were relevant for both divorce and the educational gradient at the previous stage of the analysis were included in the model as endogenous variables (except parental divorce, which precedes education). Exogenous variables in these models were parental divorce, duration, and calendar year.

RESULTS

Female Education, Divorce, and Marital Satisfaction Trajectories
We began our analysis with descriptive analyses of the educational gradients in divorce and of marital satisfaction trajectories in Britain. Figures 1 and 2 show survival curves of marriages and hazards of divorce by educational attainment. These show what previous British studies have already found: educated women have more stable marriages. The curves predict that after 15 years of marriage 32% of the low educated women had divorced, compared to 13% of those with high education. The educational gradient of divorce appears the clearest during the early years of marriage. The differences in the survival curves were statistically significant at the 0.1 % level (both using the Wilcoxon and log-rank tests).
Our first hypothesis stated that marital satisfaction differences explain why low educated women divorce more. For this to hold, there should of course be educational differences in marital satisfaction. Figures 3 and 4 show the wives’ and husbands’ average (lowess-smoothed) marital satisfaction trajectories, respectively, by her education. Unlike expected, neither marital satisfaction levels nor its trajectories differ much by educational attainment. His marital satisfaction appears to be more strongly differentiated by her education. However, the differences are small at all marital durations and never exceed 0.2 units on the scale from 1 to 7 (or one fifth of a standard deviation).

In results not presented here (but available upon request), we ran additional growth curve regressions of marital satisfaction trajectories to assess the robustness of this finding. These regressions accounted for period change and attrition due to divorce (see Lynch (2003) for a similar model for analyzing educational differences in health across the life course). The conclusion of small educational differences in marital satisfaction remained, and we found significant differences by education only at few durations. Given that educational differences in divorce risk exist at all durations (see Figure 2), this suggests that marital satisfaction plays at best only a limited role in explaining educational differences in divorce.
Discrete-time Event History Analysis

We continued our analysis by estimating a series of discrete-time event history models. The purpose was to assess how much of the association between female education and divorce is mediated by our variables. Table 2 shows results from five models. The first model included duration and calendar year as the only controls, and showed that an additional year of education predicts an 11% lower annual divorce risk.

We added her marital satisfaction in the second model. Its mediating effect was modest in size: the odds ratio of an additional year of education changed from 0.89 to 0.91. The educational gradient was further reduced, but only slightly, when controlling for his marital satisfaction (Model 3). At same levels of her and his marital satisfaction, wives with an additional year of education have a 9% lower annual divorce risk. This analysis confirmed our suspicion that educational differences in marital satisfaction do not explain lower educated women’s higher divorce rates.

Models 4 and 5 included interactions between education and her and his marital satisfaction, respectively. As discussed in the theory section, we did not formulate explicit hypotheses of these interactions given their theoretical ambivalence and contingency, but believe the results can offer valuable insights. The interaction term between education and her marital satisfaction was not significant. However, there was a significant interaction effect between her education and his satisfaction. The inverse

5 The change in the educational gradient was similar when comparing the coefficients using LPM (change from -0.0025 to -0.0022), which are better suited for comparing coefficient sizes between models (Mood 2010).
association between her education and divorce is stronger when he is more satisfied with the marriage. With average levels of his satisfaction, when he would give the score 6, an additional year of her education would reduce the risk of divorce by 11%; if he reported a satisfaction score of 4, an additional year of education would reduce the risk of divorce only by 3%. A possible interpretation is that the husbands of low educated women have fewer barriers to leave at least relatively satisfying marriages. This interpretation contrasts the proposition that when relationships are of a high quality, barriers are irrelevant because the benefits of the relationship prevent divorce (Levinger 1965). But it is in line with recent American findings stressing the importance of barriers for holding relatively satisfied couples together. Overall, our findings so far suggest that barriers to divorce are a likely explanation for low educated British women’s higher divorce rates.

We continued our analysis by testing which other variables are significant mediators of the inverse relationship between education and divorce. First, we tested their importance one by one, and selected for further consideration those which were significant mediators at the 5% level of statistical significance (see above; Iacobucci 2012).

--TABLE 3 AROUND HERE--

Table 3 presents the results from this mediation analysis. The first column shows the standardized effect of education on each mediating variable, the second column the standardized effect of each mediating variable on divorce, conditional on education, the third column shows the Z-scores of the mediating effect of the respective

\[ \text{Z-score} = \frac{\text{effect of education} - \text{effect of mediating variable}}{\text{standard error of effect of mediating variable}} \]

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6 (100% * (1.144 * 0.966 – 1) = −11%), and (100% * (1.144 * 0.964 – 1) = −4%) respectively.
variable, and the fourth column shows the odds ratio of female education on divorce when controlling for each variable. The larger the Z-score, the more significant is the mediating effect of the variable. However, for the substantive size of the mediating effect one should look at the odds ratios that are shown in the fourth column.

Several variables did not pass the test. Importantly, age at marriage and egalitarian gender norms actually strengthened the negative gradient in our sample. Several other findings are also of interest. Her and his marital satisfactions are the two single most important predictors of divorce. But because they correlate less with education than almost all other variables, their mediating effects remain limited. Others, such as his education, the share of singles in the age group and region (reflecting concentration of educated women to areas such as London), household income, home ownership, material deprivation, his savings, his unemployment and parental divorce correlate strongly with education. Of these, the variables which are strong predictors of divorce also have strong mediating effects. Home ownership in particular, but also material deprivation and household incomes are important mediators, judging both by the Z-score (above 3) of the mediation effect and the change in the odds ratio of education when controlling for these variables.

--TABLE 4 AROUND HERE--

Ten variables mediated the educational gradient of divorce at the 5 % significance level. We continued the event history analysis by entering these significant mediators block by block (Table 4). We included Model 1 (from Table 2) in the table to enable easier comparisons to the baseline gradient.
In Model 6, we controlled for parental divorce and ethnicity as the two variables that precede both educational attainment and divorce. Parental divorce increases the divorce risk, as expected, but ethnicity no longer had a significant effect. The odds ratio of an additional year of education changed slightly, from 0.89 to 0.90. This indicates that the fact that less educated women are more often in marriages in which at least the other spouse comes from a divorced home explains a small part of the inverse educational gradient of divorce. Model 7 added his education and step-child as variables, which are generally determined at entry into marriage, but after the completion of her education. Having step-children de-stabilizes marriages, but highly educated husbands stabilize them. The size of the coefficient of the latter is similar in size to that of her education, but significant only at the 10% level. Its significance level is smaller than when only conditioning on her education (Table 3), indicating that the other variables in Model 7 explain part of its effect. The coefficient of her education is 0.93 in Model 7; part of the explanation of the negative educational gradient of divorce is thus that educated women marry educated men, and particularly, that they (or their husbands) do not have children from previous partnerships.

In Model 8, we added homeownership and (logged) household incomes as independent variables. These are determined by education, and home ownership often follows after marriage. Both reduce the risk of divorce, although the coefficient for household incomes is significant only at the 10% level. Incomes were strongly significant in Table 3, and it is probable that the effect of incomes operates through home ownership, which is the more proximate predictor of divorce. The same is likely to hold for husband’s education, which is non-significant in this model. But most importantly, the estimate for her education was also reduced to 0.96 and became not significant for the first time.
In Model 9, we also included his unemployment and material deprivation as additional independent variables, which can be less predictable events across the marital life course. We excluded his education, which was not significant in the previous model. The remaining significant effect of household incomes is mediated by material deprivation and his unemployment. His unemployment doubles the divorce risk. Not being able to afford all six items on the index likewise doubles the divorce risk, but the coefficient for material deprivation was significant only at the 10% level. The estimate of her education remained not-significant and stable.

This final model suggests that parental divorce, step-children, home ownership, material deprivation, and his unemployment are important mediators of the educational gradient of divorce. Ethnicity, his education and household incomes were no longer significant predictors of divorce. Their effects on divorce were rather mediated by other variables, which had more independent predictive power. Having a highly educated husband, for example, can help her purchase a home, which acts as the more proximate stabilizer of marriages. Part of the effect of his education seems also to be mediated by parental divorce and step-children; highly educated men are less likely to come from divorced homes, have previous children, or marry women who do. Likewise, household incomes are likely to be lower when he is unemployed—which predicts divorce irrespective of economic consequences—and household incomes of course promote home ownership and lower the risk of material hardship.

Female Education and Divorce: A Path Analysis

As the final stage of the analysis, we analyzed whether the mediating variables in our final event history model affect divorce through marital satisfaction or independently of it. As shown above, marital satisfaction itself has a strong effect on divorce, but it has a
limited mediating effect on the relationship between the wife’s education and divorce. Nevertheless, some of the important mediating variables may still affect divorce via marital satisfaction. Variables should only be considered as indicating barriers to divorce when they predict divorce independently of marital satisfaction. To assess the interdependency of these variables, and to draw appropriate conclusions of the importance of marital attractions *vis à vis* barriers to divorce, we estimated a path model on our discrete-time event history data in a Structural Equations Model setting.

---FIGURE 5 AROUND HERE---

Figure 5 displays the results from this model. The estimates shown are *y*-standardized coefficients taken from a path model that explicitly modeled the dependent variable as dichotomous. The results confirm the observations from Table 4 that the effects of his unemployment and deprivation operate through his and her marital satisfaction. This is in line with the family stress model (e.g., Conger et al. 1990), which emphasizes economic stressors and their influence on marital satisfaction through the partners’ interactions. Other variables, and most notably home ownership, had a direct suppressing effect on divorce, independently of marital satisfaction. Home ownership is therefore best seen as a barrier to divorce, as it has been interpreted in earlier studies (South and Spitze 1985; White and Booth 1991; Jalovaara 2001). Our demographic variables, namely parental divorce and step-children, operate both through satisfaction and independently. Their direct effects are stronger, however, than the effects on partners’ satisfaction, suggesting that they too primarily operate as (lowering the) barriers to divorce. Finally, the analysis shows a weak positive direct effect of education on his marital satisfaction.
DISCUSSION

More and more studies have paid attention to the increasingly negative female educational gradient of divorce in a variety of countries (Hoem 1997; Chan and Halpin 2005; De Graaf and Kalmijn 2006a; Härkönen and Dronkers 2006; Park et al. 2009; Matysiak et al. 2013). These findings are in line with William J. Goode’s (1962; 1963) thesis of a reversal in the class gradient of divorce as the decreasing external barriers of divorce allow the supposedly higher marital stress among the lower classes to find an expression in divorce. Although the macro-level trends fit Goode’s argument (Härkönen and Dronkers 2006; Matysiak et al. 2013), the micro-level foundations of this explanation have been weak and we have known little about why less educated women are currently more likely to divorce (Amato 2010, p. 661). This gap in our knowledge limits the understanding of this rare example of a reversal in associations between sociological variables (Chan and Halpin 2005) and also of a demographic development that can strengthen existing inequalities (McLanahan and Percheski 2008).

The objective of this study was to explain why low educated women currently divorce more. We used a middle-ground theoretical framework based on social exchange theory to guide our analyses of discrete-time event history data on first marriages in Britain. Our findings show that marital satisfaction plays only a limited role in explaining the current educational gradient. Despite being a strong predictor of divorce, educational differences in marital satisfaction are minor. This questions the micro-foundations of Goode’s explanation as well as other theoretical arguments and ad hoc explanations that rest on educational differences in marital quality. Economic stressors (his unemployment and material deprivation) did contribute to explaining the gradient by operating through marital satisfaction, but their contribution was altogether small.
Barriers to divorce, or the lack of them, were more important explanations. Particularly, not owning a home, parental divorce, and step-children increased divorce risk and contributed to explaining why wives with less education have higher divorce rates. Both parental divorce and step-children can shape commitment to the marriage. Parental divorce may lower the threshold at which a marriage is dissolved by providing an example of feasible behaviors in the face of marital challenges (Wolfinger 2005), whereas marriages involving step-children can be “incomplete institutions” (cf. Cherlin 1978) to which one is less committed. Both are more common among less educated women and help explain why they divorce more.

Housing is households’ most important financial asset. Recent American research has paid increasing attention to the importance of wealth for entry into marriage and findings suggest that wealth is important both due to its symbolic and its use value (Edin and Kefalas 2005; Schneider 2013). Home ownership has been found to deter divorce already in earlier research (South and Spitze 1985; White and Booth 1991; Jalovaara 2001), and our findings highlighted its importance for understanding divorce risk differences by education. Home ownership has in previous research been regarded as a barrier to divorce, and was identified as such by our analyses.

This study did not attempt to explain why the educational gradients of divorce have changed, but our findings lay the grounds for new theorizing of this shift. They highlighted the importance of some barriers to divorce, but we do not claim that the barriers we identified are the only important ones. Instead, we maintain that barriers to divorce may more broadly offer insights into this change. Two general types of hypotheses can be put forward. One possibility is that barriers to divorce have become more strongly associated with higher education. For example, education is today associated with less approval of divorce (Rijken and Liefbroer 2012), but this was the
opposite in the past, at least in the United States (Martin and Parashar 2006). However, it is unlikely that there has been an across-the-board educational shift in the barriers to divorce. Of the barriers highlighted in this study, home ownership in Britain has for long been divided along class lines (Ermisch and Halpin 2004) and the association between parental divorce and educational attainment has remained stable (Sigle-Rushton, Hobcraft, and Kiernan 2005).

Another possibility is that the effects of barriers to divorce have changed. Accounts of family change commonly point out how the foundations of marriage have changed toward higher expectations for marital happiness and personal gratification (Cherlin 1992; Coontz 2005). This can mean that barriers become less important for holding together marriages with low satisfaction (as most of them dissolve in any case), but more important for marriages characterized by at least moderate levels of satisfaction (Schumm and Bughaighis 1985; Amato and Hohmann-Marriott 2007). We interpreted our finding of the interaction effect between her education and his marital satisfaction in this light. This argument of the changing importance barriers to divorce is similar to the one on the increasing economic requirements for marriage (Edin and Kefalas 2005). Both reflect change into a society in which marriage no longer has its former normative and institutionalized status.

The educational gradient of divorce may thus have changed as a result of changes in the effects of the barriers to divorce which are associated with educational attainment. If the threshold to divorce at least at moderate levels of marital satisfaction decreases, education-related barriers to divorce result in keeping educated women increasingly together relative to their less-educated peers. Some indications for the importance of the shift in the cultural foundations of marriage for educational differences in divorce can be found from previous studies. These found that the
educational gradient tends to be more negative when divorce and other family practices associated with the “Second Demographic Transition” are more common (but not, for example, when divorce laws are more liberal) (Härkönen and Dronkers 2006; see also Matysiak et al. 2013).

Here, a distinction between societal barriers to divorce (such as divorce legislation and social sanctions) and “personal” ones (such as commitment and investments to the marriage) can be useful. Goode’s (1962; 1963) theory focused primarily on societal barriers, such as the relaxation of divorce laws and the stigma associated with divorce, whereas barriers discussed in this study have been more of the latter kind. Education can help to overcome societal barriers, as well as provide the means to break away from disruptive marriages (Kreager et al. 2013), but at the same time be associated with factors which make the dissolution of at least moderately functioning marriages costlier. This dual role of education means that the interaction effects between education and marital satisfaction can be contingent on the social context and the importance given to marital happiness and stability.

Our analysis is of course not without its limitations, which future research would do well to address. First, the results only speak directly to marriages in the UK, although we expect the main conclusions to hold in other similar countries. Second, our interpretation of barriers is admittedly a “residual” one, relying on effects independent of marital satisfaction instead of being direct measures of what is perceived as barriers. Third, future research could look into how female education affects who files for divorce as an additional test of the proposed explanations. Our data allowed measuring her and his satisfaction separately, but her education may differently shape the barriers to her and his divorce decisions. Furthermore, questions of causality remain open. Within the frame of this study, we cannot make definitive claims of causal effects of
education, nor of the other variables. For example, home ownership is endogenous, as dysfunctional couples are less likely to purchase homes. Regarding education, our objective was not to estimate causal effects of educational attainment on divorce, but rather, to understand why social groups characterized by different levels of education differ in marital stability. It can also be that changing selectivity to educational attainment levels provides cues to the changing educational gradients of divorce.

Finally, with our data we were not able to directly test what could explain the changes in the female educational gradients of divorce. We proposed a framework which emphasizes the changing importance of barriers as a potential explanation. Whether it proves useful or not is left for future research to assess. In any case, our analysis has provided evidence which redirect the theoretical foundations for understanding these socioeconomic differences in divorce from differences in attractions and returns from marriage toward barriers to divorce.

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FIGURES AND TABLES

FIGURE 1. Wife’s Education and Divorce: Survival Curves.

NOTE: 1,887 marriages, and 9,130 person-years.
FIGURE 2. Wife’s Education and Divorce: Smoothed Hazard Curves.

NOTE: 1,887 marriages, and 9,130 person-years.
FIGURE 3. Wife’s Education and Her Marital Satisfaction: Lowess Smoothed Trajectories.

SOURCE: Authors’ calculations using the British Household Panel Survey (BHPS), 1996-2009. NOTE: 1,887 marriages, and 9,130 person-years.

SOURCE: Authors’ calculations using the British Household Panel Survey (BHPS), 1996-2009. NOTE: 1,887 marriages, and 9,130 person-years.
FIGURE 5. Structural Equations Model Explaining Divorce with Discrete-time Event History Data (Y-standardized Coefficients).

NOTE: 1,887 marriages, and 9,130 person-years.
<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>St. Dev.</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Divorce</td>
<td>0.02</td>
<td></td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Duration of marriage (years)</td>
<td>6.35</td>
<td>4.53</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>Wife’s education in years</td>
<td>13.4</td>
<td>2.3</td>
<td>9</td>
<td>17</td>
</tr>
<tr>
<td>Her satisfaction with spouse</td>
<td>6.25</td>
<td>1.14</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>His satisfaction with spouse</td>
<td>6.34</td>
<td>1.00</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Non-white</td>
<td>0.04</td>
<td></td>
<td>0</td>
<td>1</td>
</tr>
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<td>Her or his parents divorced</td>
<td>0.35</td>
<td></td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Wife’s age at marriage</td>
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<td>7.09</td>
<td>16.5</td>
<td>77.8</td>
</tr>
<tr>
<td>Cohabited before marriage</td>
<td>0.59</td>
<td></td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Step-children</td>
<td>0.10</td>
<td></td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Number of children in household</td>
<td>1.28</td>
<td>1.10</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Child under 4 years of age in household</td>
<td>0.37</td>
<td></td>
<td>0</td>
<td>1</td>
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<tr>
<td>Share of single persons in age group/region</td>
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<td>0.12</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Wife unemployed</td>
<td>0.02</td>
<td></td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Husband unemployed</td>
<td>0.03</td>
<td></td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Material deprivation (index)</td>
<td>0.09</td>
<td>0.15</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Her unusual working hours</td>
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<td></td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Annual household income (logged)</td>
<td>10.4</td>
<td>0.62</td>
<td>0</td>
<td>14.03</td>
</tr>
<tr>
<td>Her share of labor income</td>
<td>0.30</td>
<td>0.24</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Husband’s education in years</td>
<td>13.6</td>
<td>2.3</td>
<td>9</td>
<td>17</td>
</tr>
<tr>
<td>House owned by one of the spouses</td>
<td>0.84</td>
<td></td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Her interest on savings</td>
<td>114.9</td>
<td>307</td>
<td>0</td>
<td>1500</td>
</tr>
<tr>
<td>His interest on savings</td>
<td>143.6</td>
<td>342.1</td>
<td>0</td>
<td>1500</td>
</tr>
<tr>
<td>Her church attendance</td>
<td>0.10</td>
<td></td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Gender norm scale</td>
<td>0.10</td>
<td>0.52</td>
<td>-2</td>
<td>1.63</td>
</tr>
</tbody>
</table>
## Her share of housework

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.73</td>
<td>0.20</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

| $N$      | 9,130 person-years | (1,887 couples) |

**SOURCE:** Authors’ calculations using the British Household Panel Survey (BHPS), 1996-2009.

**NOTE:** St. Dev. = Standard Deviation; Min. = Minimum Value Observed; Max. = Maximum Value Observed.
TABLE 2. Discrete-Time Event History Models on Wife’s Education, Marital Satisfaction, and Divorce.

<table>
<thead>
<tr>
<th></th>
<th>MODEL 1</th>
<th>OR</th>
<th>SE</th>
<th>MODEL 2</th>
<th>OR</th>
<th>SE</th>
<th>MODEL 3</th>
<th>OR</th>
<th>SE</th>
<th>MODEL 4</th>
<th>OR</th>
<th>SE</th>
<th>MODEL 5</th>
<th>OR</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wife’s education in years</td>
<td>0.89**</td>
<td>0.03</td>
<td></td>
<td>0.91**</td>
<td>0.03</td>
<td></td>
<td>0.91**</td>
<td>0.03</td>
<td></td>
<td>0.98</td>
<td>0.09</td>
<td></td>
<td>1.14</td>
<td>0.13</td>
<td></td>
</tr>
<tr>
<td>Duration</td>
<td>1.01</td>
<td>0.02</td>
<td></td>
<td>0.97†</td>
<td>0.02</td>
<td></td>
<td>0.96*</td>
<td>0.02</td>
<td></td>
<td>0.97†</td>
<td>0.02</td>
<td></td>
<td>0.98</td>
<td>0.02</td>
<td></td>
</tr>
<tr>
<td>Calendar year (0=1996)</td>
<td>0.95**</td>
<td>0.02</td>
<td></td>
<td>0.95*</td>
<td>0.02</td>
<td></td>
<td>0.94**</td>
<td>0.02</td>
<td></td>
<td>0.95*</td>
<td>0.02</td>
<td></td>
<td>0.94**</td>
<td>0.02</td>
<td></td>
</tr>
<tr>
<td>Her marital satisfaction</td>
<td>0.56**</td>
<td>0.02</td>
<td></td>
<td>0.63**</td>
<td>0.03</td>
<td></td>
<td>0.59**</td>
<td>0.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>0.73**</td>
<td>0.05</td>
<td></td>
</tr>
<tr>
<td>Education * her satisfaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.99</td>
<td>0.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education * his satisfaction</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.96*</td>
<td>0.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>0.04**</td>
<td>0.009</td>
<td></td>
<td>1.37</td>
<td>0.43</td>
<td></td>
<td>5.22**</td>
<td>2.05</td>
<td></td>
<td>1.04</td>
<td>0.47</td>
<td></td>
<td>0.52</td>
<td>0.30</td>
<td></td>
</tr>
<tr>
<td>Person-years</td>
<td>9,130</td>
<td></td>
<td></td>
<td>9,130</td>
<td></td>
<td></td>
<td>9,130</td>
<td></td>
<td></td>
<td>9,130</td>
<td></td>
<td></td>
<td>9,130</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


† p < 0.10.
* p < 0.05.
** p < 0.01.
TABLE 3. Mediation Analysis of the Educational Gradient of Divorce: Discrete-time Event History Models.

<table>
<thead>
<tr>
<th>Mediating variable (Med)</th>
<th>Education on Med</th>
<th>Med on divorce, cond. on education</th>
<th>Mediation effect</th>
<th>Education on divorce, cond. on Med</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Standardized coef.</td>
<td>Standardized coef.</td>
<td>Z-score</td>
<td>Odds ratio</td>
</tr>
<tr>
<td><strong>-</strong></td>
<td><strong>-</strong></td>
<td><strong>-</strong></td>
<td><strong>-</strong></td>
<td><strong>0.89</strong></td>
</tr>
<tr>
<td>Home ownership</td>
<td>19.28**</td>
<td>-4.98**</td>
<td>-4.82**</td>
<td>0.92*</td>
</tr>
<tr>
<td>His or her parental divorce</td>
<td>-10.66**</td>
<td>4.32**</td>
<td>-3.99**</td>
<td>0.90**</td>
</tr>
<tr>
<td>Her marital satisfaction</td>
<td>4.24**</td>
<td>-10.6**</td>
<td>-3.92**</td>
<td>0.91**</td>
</tr>
<tr>
<td>Material deprivation</td>
<td>-18.79**</td>
<td>3.96**</td>
<td>-3.87**</td>
<td>0.91**</td>
</tr>
<tr>
<td>His marital satisfaction</td>
<td>4.02**</td>
<td>-13.5**</td>
<td>-3.84**</td>
<td>0.90**</td>
</tr>
<tr>
<td>His unemployment</td>
<td>-10.15**</td>
<td>3.99**</td>
<td>-3.70**</td>
<td>0.90**</td>
</tr>
<tr>
<td>Household income (logged)</td>
<td>29.27**</td>
<td>-3.38**</td>
<td>-3.35**</td>
<td>0.91**</td>
</tr>
<tr>
<td>Non-white</td>
<td>6.03**</td>
<td>-3.74**</td>
<td>-3.15**</td>
<td>0.89**</td>
</tr>
<tr>
<td>Step-child</td>
<td>-7.93**</td>
<td>2.97**</td>
<td>-2.76**</td>
<td>0.90**</td>
</tr>
<tr>
<td>His education</td>
<td>32.59**</td>
<td>-2.41**</td>
<td>-2.40*</td>
<td>0.91**</td>
</tr>
<tr>
<td>His interest on savings</td>
<td>11.02**</td>
<td>-1.98*</td>
<td>-1.94†</td>
<td>0.89**</td>
</tr>
<tr>
<td>Variable</td>
<td>Coefficient</td>
<td>Standardized Coefficient</td>
<td>Standardized Coefficient</td>
<td>Z-score</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>-------------</td>
<td>--------------------------</td>
<td>--------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>She religious</td>
<td>6.35**</td>
<td>-1.78†</td>
<td>-1.70†</td>
<td>0.89**</td>
</tr>
<tr>
<td>Her interest on savings</td>
<td>12.54**</td>
<td>-1.31</td>
<td>-1.30</td>
<td>0.89**</td>
</tr>
<tr>
<td>Number of children</td>
<td>-13.61**</td>
<td>1.16</td>
<td>-1.15</td>
<td>0.89**</td>
</tr>
<tr>
<td>Her unemployment</td>
<td>-3.33**</td>
<td>0.99</td>
<td>-0.92</td>
<td>0.89**</td>
</tr>
<tr>
<td>Child under 4 years present</td>
<td>4.26**</td>
<td>-0.53</td>
<td>-0.52</td>
<td>0.89**</td>
</tr>
<tr>
<td>Cohabited before marriage</td>
<td>-0.38</td>
<td>1.98*</td>
<td>-0.33</td>
<td>0.89**</td>
</tr>
<tr>
<td>Share of singles in age group and region</td>
<td>-50.20**</td>
<td>-0.06</td>
<td>0.06</td>
<td>0.89**</td>
</tr>
<tr>
<td>Unusual working hours</td>
<td>2.80**</td>
<td>0.12</td>
<td>0.11</td>
<td>0.89**</td>
</tr>
<tr>
<td>Her share of housework</td>
<td>-9.68**</td>
<td>-1.09</td>
<td>1.08</td>
<td>0.88**</td>
</tr>
<tr>
<td>Her labor income share¹</td>
<td>14.88**</td>
<td>1.37</td>
<td>1.36</td>
<td>0.90**</td>
</tr>
<tr>
<td>Her gender norms</td>
<td>5.25**</td>
<td>3.31**</td>
<td>2.77**</td>
<td>0.88**</td>
</tr>
<tr>
<td>Age at marriage</td>
<td>-7.74**</td>
<td>-4.08**</td>
<td>3.59**</td>
<td>0.88**</td>
</tr>
</tbody>
</table>

**SOURCE:** Author’s calculations using the British Household Panel Survey (BHPS), 1996-2009.

**NOTE.** Coefficients in Column 1: Standardized coefficients of education on the mediating variable, controlling for duration and year. Column 2: Standardized coefficients of mediating variable divorce, controlling for duration, year, and education. Column 3: Z-score for significance of mediating effect: \( \frac{(\text{Column2} \times \text{Column3})}{\sqrt{(\text{Column2}^2 + (\text{Column3})^2 + 1)}} \) (Iacobucci 2012).

¹ Controlled for household income.

† \( p < 0.10; \) * \( p < 0.05; \) ** \( p < 0.01. \)
TABLE 4. Discrete-Time Event History Models to Explain Educational Gradients of Divorce.

<table>
<thead>
<tr>
<th></th>
<th>MODEL 1</th>
<th></th>
<th>MODEL 6</th>
<th></th>
<th>MODEL 7</th>
<th></th>
<th>MODEL 8</th>
<th></th>
<th>MODEL 9</th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OR</td>
<td>SE</td>
<td>OR</td>
<td>SE</td>
<td>OR</td>
<td>SE</td>
<td>OR</td>
<td>SE</td>
<td>OR</td>
<td>SE</td>
</tr>
<tr>
<td>Wife’s education (years)</td>
<td>0.89**</td>
<td>0.03</td>
<td>0.90**</td>
<td>0.03</td>
<td>0.93*</td>
<td>0.03</td>
<td>0.96</td>
<td>0.03</td>
<td>0.96</td>
<td>0.03</td>
</tr>
<tr>
<td>Marital duration</td>
<td>1.01</td>
<td>0.02</td>
<td>1.01</td>
<td>0.02</td>
<td>1.02</td>
<td>0.02</td>
<td>1.03</td>
<td>0.02</td>
<td>1.03</td>
<td>0.02</td>
</tr>
<tr>
<td>Calendar year</td>
<td>0.95**</td>
<td>0.02</td>
<td>0.95**</td>
<td>0.02</td>
<td>0.94**</td>
<td>0.02</td>
<td>0.95*</td>
<td>0.02</td>
<td>0.95*</td>
<td>0.02</td>
</tr>
<tr>
<td>Non-white</td>
<td>0.91</td>
<td>0.38</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parents divorced</td>
<td>2.07**</td>
<td>0.35</td>
<td>1.97**</td>
<td>0.34</td>
<td>1.86*</td>
<td>0.32</td>
<td>1.85**</td>
<td>0.32</td>
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</tr>
<tr>
<td>His education</td>
<td>0.93†</td>
<td>0.03</td>
<td>0.96</td>
<td>0.04</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Step-child</td>
<td>1.78*</td>
<td>0.41</td>
<td>1.67*</td>
<td>0.39</td>
<td>1.68*</td>
<td>0.40</td>
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<tr>
<td>Home ownership</td>
<td></td>
<td></td>
<td>0.56**</td>
<td>0.10</td>
<td>0.62*</td>
<td>0.12</td>
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<tr>
<td>Household income (logged)</td>
<td>0.84†</td>
<td>0.10</td>
<td></td>
<td></td>
<td>2.13†</td>
<td>0.91</td>
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<tr>
<td>Material deprivation</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>1.91†</td>
<td>0.61</td>
<td></td>
<td></td>
</tr>
<tr>
<td>He unemployed</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>0.04**</td>
<td>0.01</td>
<td>0.03**</td>
<td>0.01</td>
<td>0.06**</td>
<td>0.02</td>
<td>0.32</td>
<td>0.34</td>
<td>0.09*</td>
<td>0.11</td>
</tr>
<tr>
<td>Person-years</td>
<td>9,130</td>
<td>9,130</td>
<td>9,130</td>
<td>9,130</td>
<td>9,130</td>
<td>9,130</td>
<td>9,130</td>
<td>9,130</td>
<td>9,130</td>
<td>9,130</td>
</tr>
</tbody>
</table>

SOURCE: Author’s calculations using the British Household Panel Survey (BHPS), 1996-2009. † p < 0.10; * p < 0.05; ** p < 0.01.