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Differential Effects of Parental Separation on Child Outcomes. Are Children from Higher Social Backgrounds Affected More?

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Abstract

The consequences of high divorce rates for intergenerational mobility depend on two factors. The first has been widely studied and regards the differing incidence of divorce according to socio-economic background. The second has been studied less and is the heterogeneity in the effects of divorce according to parental background. This paper investigates whether signs from earlier research that children from higher social backgrounds suffer more from divorce can indeed be interpreted as such. We follow a cohort of British children born in 1970 (N = 11,073) and look at how educational and occupational outcomes differ depending on family structure, socio-economic background, and the interaction between them. We improve on earlier studies by including a rich set of pre-divorce characteristics and are able to show that heterogeneity in the effects of divorce indeed exists and is not likely to be due to selection effects. Children whose parents are more highly educated have a larger 'divorce penalty' when it comes to educational and occupational attainment. A large part of the heterogeneity can be explained by the parents' income at age 16, parental monitoring, the child's participation in extra-curricular activities and his or her views regarding the benefits of education at age 16. The results suggest that, in contrast to the emphasis put in much recent research, divorce seems to have been a factor contributing to increased intergenerational mobility in the period under study.

Keywords

Child development; education; inequality; parental divorce; occupational attainment.

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Introduction

In their *American Sociological Review* article in 1993, Biblarz and Raftery concluded that “Recent changes in family structure may lead to greater universalism in contemporary American Society”. By comparing the occupational status of fathers and sons, they concluded that social mobility was higher in the group of men that had experienced a parental divorce than in the group of those who had not. The negative effects of parental divorce on occupational attainment were thus found to be greater for those from a higher socio-economic background. Given the rapid increase in divorce rates over the preceding decades, this led to the suggestion that changes in family structure will lead to greater mobility in society. Little more than ten years later, McLanahan came to the opposite conclusion in her influential study in *Demography* in 2004. She argued that changes in family structure over the previous decades had disproportionately affected the disadvantaged in society. Trends in single motherhood by education revealed that the incidence of divorce and entrance into parenthood without marriage was highest for the less well educated. Combined with the well-documented negative effects of parental divorce on child outcomes, this observation led to the argument that the changes in demographic behaviour over the last few decades have brought about a reduction in intergenerational social mobility.

Whether parental divorce specifically contributes to higher or lower intergenerational social mobility overall depends both on differences in the incidence of divorce and differences in its effects according to socio-economic background. The focus of research has been on differences in the incidence of divorce, both in the United States and in Europe (Ellwood & Jencks, 2004; McLanahan, 2004; Esping-Andersen, 2007; Härkönen & Dronkers, 2007; McLanahan & Percheski, 2008). The dominant view has therefore been that changes in family dynamics have contributed to lower intergenerational mobility in several countries on both sides of the Atlantic. However, this conclusion cannot be confirmed until the differences in the consequences of parental divorce (and other family structures) for children’s life chances have also been studied extensively. Despite its importance, however, this issue has been investigated relatively little.

A set of studies has looked at differences in the effects of parental divorce on children’s behaviour, well-being and educational outcomes (Elliott & Richards, 1991; Biblarz & Raftery, 1993; 1999; McLanahan & Sandefur, 1994; Battle, 1997; 1998; Biblarz et al., 1997; Jonsson & Gähler, 1997; Cavanagh & Huston, 2006; Fischer, 2007; Albertini & Dronkers, 2009; Mandemakers & Kalmijn, 2011; Martin, 2012; Bernardi & Radl, 2014). In general, these studies find what Biblarz and Raftery (1993) concluded, namely that negative effects of parental divorce are greater when the resources of the parents are higher (with the exceptions of Biblarz et al., 1997 and Cavanagh & Huston, 2006). If these findings are correct, this would warrant a nuancing of the diverging destinies argument when it comes to parental divorce and, depending on the size of the differences in the effects, require a new look at the possible equalizing effects of parental divorce on children’s outcomes. However, the studies looking at the heterogeneity of the effects of parental divorce were not designed to specifically answer this question. Some of the studies do not look at outcomes normally used to evaluate intergenerational mobility (Elliott & Richards, 1991; Cavanagh & Huston, 2006; Mandemakers & Kalmijn, 2011), others base their conclusions on cross-sectional data (Battle, 1997; 1998; Biblarz & Raftery, 1993; 1999; Biblarz et al., 1997; Fischer, 2007; Albertini & Dronkers, 2009; Bernardi & Radl, 2014), and others still are not able to control for important pre-divorce factors such as educational performance (Jonsson & Gähler, 1997; Martin, 2012). There is therefore a need for studies specifically designed to evaluate the heterogeneity in the effects of parental divorce on attainment variables. In addition, there has only been one study that specifically looks at how to explain the heterogeneity observed (Martin, 2012). This study shows that when only looking at post-divorce characteristics, heterogeneity according to social background can be partially explained by lower educational expectations on the part of parents, less engagement of children in structured leisure activities, and less involvement of parents in their children’s schools. The question remains whether these variables remain important when controlling for pre-divorce levels and other pre-divorce characteristics.

In order to fill this gap in the literature, we aim to answer the question “Do the effects of parental divorce on educational and occupational attainment of children differ by socio-economic background?” We use longitudinal data from the British Cohort Study 1970 on the educational attainment of 11,073 children. The data allow us to control for a rich set of pre-divorce characteristics. This enables us to check whether the effects observed are due to pre-existent differences by parental background (i.e. differential selection into divorce by social background). Given that divorce rates are lower for the more highly educated, those among them who divorce might be a more problematic subgroup compared to less educated couples that divorce. Alternatively, discarding this possibility would strengthen the claim that can be made regarding the stronger negative effects of divorce on child outcomes for those coming from higher social backgrounds. Additionally, we take some first steps towards explaining the higher penalties of divorce observed among those from higher educational backgrounds.

Parental divorce and socio-economic status. Does divorce disable the compensatory effects of social origin?

A stronger negative association between parental divorce and children’s educational and occupational attainment for those coming from a higher socio-economic background would be a relevant finding not only for the debate on diverging destinies and family polarization. From a theoretical perspective too, such a result would be unexpected, and hence interesting. The literature on inter-generational mobility has emphasized that it is especially the lack of downward mobility of children from a high socio-economic background that prevents societies from moving towards more openness (Gambetta, 1987; Boudon, 1998). Studies on educational performance have shown that when children from higher socio-economic backgrounds are faced with failure at school, they get a ‘second chance’ to achieve success in the system more often than others (Bernardi, 2012; 2014). Greater negative effects of parental divorce on children of higher socio-economic status might therefore be a contrasting example, where, when faced with adversity, parents do not manage to compensate for the difficulties experienced by their children. Understanding why such ‘compensatory effects’ are absent in this case would therefore greatly enhance our understanding of the processes that determine the intergenerational transmission of social advantage in general.

Heterogeneity in the effects of parental divorce according to parental background

In 1988, Coleman argued that the effect of family SES (Socio-Economic Status) on children’s outcomes should be lower among single parent families. Given that parental divorce puts constraints on both the time and resources of parents, those from higher socio-economic backgrounds will have fewer opportunities to transmit advantages to their children.

The empirical evidence accumulated supports this claim in general. Studies have looked at the intergenerational transmission of educational and occupational attainment (Biblarz & Raftery 1993; 1998; Martin, 2012), or at the heterogeneity of the effects of parental divorce according to SES (Elliott & Richards, 1991; McLanahan & Sandefur, 1994; Battle, 1997; 1998; Jonsson & Gähler, 1997; Cavanagh & Huston, 2006; Fischer, 2007; Albertini & Dronkers, 2009; Mandemakers & Kalmijn, 2011; Bernardi & Radl, 2014), and found children from higher social backgrounds to suffer more from parental divorce than others (except Biblarz et al., 1997 and Cavanagh & Huston, 2006). The outcomes studied range from educational attainment, occupational status, children’s behavioural problems and their general well-being. The studies use a variety of moderators, such as parental education (Jonsson & Gähler, 1997; Fischer, 2007; Albertini & Dronkers, 2009; Mandemakers & Kalmijn, 2011), and also parental class, occupation (Elliott & Richards, 1991; Biblarz & Raftery, 1993) and resources at home that could stimulate child development (Cavanagh & Huston, 2006).

The results differ when looking at the effects of maternal resources. When authors have looked at the effects of mothers’ resources separately, they have found smaller effects of parental divorce the more maternal resources are present (Jonsson & Gähler, 1997; Fischer, 2007; Albertini & Dronkers, 2009; Mandemakers & Kalmijn, 2011). Because children often live with their mothers after divorce, it seems as if access to the outside parent’s resources is less following divorce, but that the resources of the residential parent become essential. Congruent with these results, some studies have

found that following divorce the intergenerational transmission of advantage becomes more dependent on the socio-economic background of the resident parent, who normally is the mother (Beller, 2009; Erola & Jalovaara, 2012). Given that the relationship between children and their mother does not normally worsen following divorce (Peters & Ehrenberg, 2008), this might point to the transmission of advantage by the mother being unaffected. Indeed, the mother's resources are likely to ease adjustment to the experience of divorce.

Most of the results quoted are based on cross-sectional data and therefore leave space for several other explanations. It could well be that the lower performance of children (and its predictors) was already present before divorce and that the patterns observed are due to distinct selection into divorce by educational level (Martin, 2012). Two studies on behavioural outcomes have looked at the pre-divorce characteristics of children. They found for the UK that also when controlling for the pre-divorce behaviour of children the effects of parental divorce on post-divorce behaviour are greater when paternal resources are higher (Elliott & Richards, 1991) and lower when maternal resources are higher (Mandemakers & Kalmijn, 2011). However, none of the studies looking at educational outcomes have been able to effectively control for the pre-divorce educational performance of children. A longitudinal study that effectively controls for pre-divorce achievement and other characteristics of children could therefore make a great step forward in investigating whether the effects of parental divorce observed are in fact causal or not (but cannot exclude the possibility that unobserved time-varying characteristics play a role). In our study we aim to advance on that point and additionally aim to explain the heterogeneity observed. Based on the longitudinal studies of behavioural outcomes, where effects persisted after taking into account pre-divorce behaviour, we expect to find heterogeneity in the effects of parental divorce according to SES background in our study too.

Hypothesis 1: The effects of parental divorce are greater for children with highly educated parents.

Mechanisms

Why would we expect heterogeneity in effects according to parental background? So far, existing evidence has been primarily limited to reporting the interaction effects existing between parental divorce and background characteristics. Martin (2012) shows that her results can be partially explained by lower educational expectations of parents, less participation of children in structured leisure activities, and less involvement of parents in their children's schools. She looks at the post-divorce characteristics of a sample of US youths. While giving a direction to future research, the study is therefore not able to control for pre-existing differences between those whose parents divorce and those whose parents do not. Apart from these results, no empirical treatments exist that have tried to explain the interaction effects found.

Several possible explanations can be derived from the general literature on the effects of parental divorce on child outcomes. Reductions in family income (Jonsson & Gähler, 1997; Kiernan, 1997; Cavanagh & Huston, 2006; Amato, 2010), re-marriage (Thomson et al., 1994; Borgers et al., 1996; Jonsson & Gähler, 1997; Ginther & Pollak, 2004; Gennetian, 2005; Bjarnason et al., 2011), family social capital, such as parenting styles and monitoring (McLanahan & Sandefur, 1994; Pryor, 2004), pre-divorce conflict (Dronkers, 1999; Fomby & Osborne, 2010; Musick & Meier, 2010), and age at parental divorce (Kiernan & Cherlin, 1999; Lyngstad & Engelhardt, 2009) are all established mediators or moderators of the effects of parental divorce that could differ according to parental social background. Any of these variables could therefore form an additional reason for expecting heterogeneity in the effects of divorce. We base our expectations on the findings of Martin (2012), the only study to have directly addressed this question:

Hypothesis 2: The heterogeneity in effects by according to parental background is primarily driven by negative effects of divorce on attitudes towards education and participation in extra-curricular activities.

Method & Data

The data we use are taken from the British Cohort Study 1970 (BCS). This is a longitudinal panel survey which has sampled a cohort of all the British children born in a particular week in 1970 and attempted to interview them at different points in their lives. We selected all the respondents providing information on their educational and occupational attainment in the 2000 wave, which was when they were aged 30. These selection criteria led to dropping the 41% of the cases that were selected for the sample in 1970 but were no longer present in 2000. This attrition occurred for the following reasons: an estimated 10% emigrated or died between age 0 and 30; 12% refused to cooperate or no successful contact was made; around 19% of the initial respondents were no longer traceable at some point in the survey; and a large attrition occurred when the survey transferred from the parents' household to the mostly newly-formed households of their child at age 26. Robustness checks have been used to check for the possible influence of attrition (see appendix A). The substantive results of our study appear to be robust, although some results started to hover around the significance levels depending on the specifications used. This will be elaborated upon in the results section.

1.0% of cases had to be left out due to missing information on the dependent variables. Missing data on the other variables was treated by using multiple imputation of the missing values based on 20 datasets, enabling all the other cases to remain in the sample. The main results are replicated in Table B1 of the appendix using listwise case deletion instead of multiple imputation, and they appear to be robust. Cases lost to attrition were not included in the imputation and neither were cases without information on the dependent variables for other reasons, in order to assure that no values on the dependent variables were imputed. Whether values had to be imputed depended primarily on the wave in which questions were asked. For some waves the sample was smaller than for others. For instance, in 1986 there was a teachers' strike during the observation period of the survey. Because some questionnaires were filled out at school, a substantial proportion of the sample did not participate in that part of the interview. In general, missing data was imputed for around 15% of the cases for the variables measured at age 5. Unfortunately, we sometimes had to impute more than half of the values at age 16. Consequently, some of the variables might wrongly not show up as statistically significant, since by definition they cannot explain up to half of the variation. The results including characteristics at age 16 thus have to be interpreted as very conservative.

Table 1 provides descriptive statistics of the final sample of the 11,073 individuals and an overview of the measures used in this study.

Measures

The dependent variables that were used in this study were educational and occupational achievement at age 30. To measure educational achievement, we used a dummy variable taking the value of 1 for respondents who had tertiary education (ISCED categories 5-6) and 0 for lower levels of education. For occupational attainment, we used both categorical and continuous measures at age 30. The categorical value measured access to the service class, based on whether respondents had a professional, managerial or technical occupation (value=1) or not (value=0) (the classification used by the Population Census at the time). The continuous measure was based on converting the SOC90 (Standard Occupational Classification 90) codes provided by the BCS into ISEI (International Socio-Economic Index) scores.

The main independent variable was parental divorce. We coded those as having experienced a divorce using the question asked at age 30 of whether the respondents' parents had ever permanently divorced or separated. If this information was not available in the year 2000, we searched for additional information by gathering information on household composition and the marital status of the parents from earlier waves. Children who were born into a single-parent family or who had experienced the death of a parent were included in the sample, and separate dummies for these families were included. In some cases, we restricted the divorce variable further by only including divorces that occurred after age 5 and before age 16 in order to ensure that the variables were measured either before or after the divorce. In that case, we gave those whose parents divorced outside this range a separate indicator too, and did not exclude them from the analysis.

In order to look at heterogeneity in the effects of parental divorce according to family background, we used a measure of parental resources based on education and interacted it with parental divorce. The combination of both parents' educational level was taken from the 1975 wave (the first wave with information on parents' educational achievement; information was taken from other waves if it was missing in 1975 and available in 1970 or later waves). The variable takes value 1 if both parents had at most completed high school, value 2 if only the father had more qualifications, 3 if only the mother had, and 4 if both had more than high school education. Results were similar using other specifications for the parents' education levels.

In order to check whether the patterns observed could be due to differential selection into divorce according to parental background, we included several characteristics measured at age 5 in the second stage of the analysis and restricted the divorce variable to those who experienced a divorce after age 5. Most importantly, we included measures of cognitive ability and behavioural problems. To measure cognitive ability, we used three tests taken by the children in the cohort (The "Human Figure Drawing Test", the "Copying design test", and the "English Picture Vocabulary Test"). The standardized scores from each of these tests were combined into one factor measuring general cognitive ability using factor analysis (Feinstein, 2003; Batty et al., 2007; a fourth test called the 'profile test' was not used given that it did not correlate highly with the other three tests). The score for behavioural problems was based on 38 questions regarding behaviour, physical and psychological problems and other concerns, which were answered by the mother.

Other variables at age 5 included: measures of material resources – two dummies for whether the father and mother were employed, and a categorical measure that reflects the interviewer's judgment of how well equipped the house was (well, adequately, or poorly equipped); maternal well-being – a composite measure based on 25 questions regarding psychological problems and issues; parental involvement and monitoring – a dummy for whether both parents met the school/nursery school staff before or after enrolling the child, the number of hours the child watched TV per day, the number of days a week the child was read to by someone at home, and composite measures for the mother's authoritarian values regarding child-rearing (13 questions), opinions against sex equality (4 questions), and values regarding child independence (6 questions).

In a third stage we looked at post-divorce characteristics in order to uncover possible explanations for the patterns observed. These characteristics were measured at age 16, and we restricted the divorce variable to those who experienced this between age 5 and 16 for this part of the analysis. The characteristics included: material resources – weekly employment income of the household in pounds (middle points of 11 categories taken), a dummy for whether the mother was employed, and a dummy for whether the mother reported financial hardship in the previous year; maternal well-being – the same composite measure regarding psychological problems as used at age 5; parental involvement and monitoring – whether either of the parents had visited the child's school in the previous year, a summed index of activities the child usually did with the parents (e.g. visiting friends, playing games, etc.), a dummy for whether the child reported the parents as being strict, and a summed scale of whether the parents asked the child where he or she went, with whom and what they were going to do (0=none of them ever, 9= all three of them all the time); child behaviour and attitudes – whether the child had read a book in the previous 4 weeks, was a member of a club or society, and a scale measuring the child's attitudes towards the benefits of continuing education and education in general (9 questions, e.g. 'qualified people have a better chance to get a job' and 'best to leave full-time education as soon as possible to get experience'; the answer options were 'fully agree', 'partially agree' and 'disagree').

Procedure

We started by estimating whether there is any penalty related to divorce when it comes to educational and occupational attainment. With this aim, we estimated Linear Probability Models (LPM) for the two binary dependent variables separately and an Ordinary Least Squares (OLS) regression for the ISEI scores. In these first models we only included parental divorce as the independent variable and the interaction of this variable with parental education. This gave insight into the existence of a divorce penalty and possible heterogeneity in the effects of divorce. We subsequently attempted to

scrutinize alternative explanations for the existence of heterogeneity in the effects of parental divorce according to parental education. In order to check whether selection into divorce was responsible for the patterns observed, we included characteristics at age 5. We limited the divorce variable to those children who experienced divorce after age 5 for this analysis. The last part of the analysis concentrated on possible mediating variables measured at age 16. The divorce variable was restricted to those who experienced parental divorce between age 5 and 16 in order to make possible the claim that post-divorce characteristics explain the observed patterns.

Missing data on independent variables were treated by using multiple imputation of 20 datasets, over which the subsequent analyses were run and averaged out using STATA's MI commands.

Results

Table 2 gives an overview of the effects of parental divorce on three child outcomes: completing tertiary education; having a service-class job; and occupational status at age 30. The table also shows the effects of parental education and the interaction of this with parental divorce. The results show that for children of all backgrounds there exists a significant divorce penalty on all three outcomes. Those whose parents divorced are 7 percentage points less likely to complete tertiary education, 5 percentage points less likely to have a service-class job and score almost 3 points lower on occupational status at age 30.

The penalty, however, is not equal across social backgrounds. As earlier studies have found, higher parental education levels are associated with a larger negative effect of divorce on all three outcomes. The effects on tertiary education and obtaining a service-class job are statistically significant, and they are substantial. Those whose parents both have more than a high school diploma suffer a divorce penalty more than twice as big on these two outcome measures compared to those whose parents both have at most high school education. More precisely, the divorce penalties for the former are 10.2 percentage points for tertiary education and 7.5 percentage points for a service-class job, while the numbers are 4.8 and 2.8 respectively for the second group. No significant results were found for occupational status.

In order to be able to claim that the source of these patterns actually lies in family background, two other possibilities have to be examined. A first possibility is differential selection into divorce according to social background. Given that the more highly educated are likely to divorce less (Härkönen & Dronkers, 2006; Bernardi & Martinez-Pastor, 2011), those who divorce might do so depending on traits that might also negatively affect children's educational and occupational achievement. In that case, the higher divorce penalty observed for the children of more highly educated parents would be driven by pre-existing differences between those who divorce and those who do not. We checked for this possibility by including pre-divorce characteristics, the most important one being parental involvement with children and parental disagreement on matters related to child socialization (values on gender equality and children's independence).

A second and related possibility would be that children with low cognitive abilities per se suffer less in terms of educational and occupational attainment after parental divorce. It could be that those at the bottom of the cognitive ability distribution have less to lose out of a divorce because of a 'floor effect'. In the case of low cognitive abilities the chances of educational and occupational success are already low and cannot be worsened much by a parental separation. Previous studies have also shown that pre-school cognitive abilities correlate with socio-economic background (Feinstein, 2003). This finding combined with the hypothesized floor effect might explain the smaller divorce penalty for children of low socio-economic status observed in prior studies.

In order to check for these possibilities, we added a rich set of pre-divorce characteristics into the analysis (measured at either age 0 or age 5), including pre-divorce cognitive ability. In Tables 3 and 4 the penalty for a divorce experienced after age 5 on completion of tertiary education and having a service-class job is displayed. The coefficients showing heterogeneity in this divorce penalty (Models 1) are roughly similar to those in Table 2 (where divorces experienced before age 5 were also considered). In the second models, sets of pre-divorce characteristics are also included. This rich set of variables covering material and non-material family resources explains part of the divorce penalty for

those whose parents do not have more than high school education (and the coefficient for obtaining a service job became practically 0). The observation that pre-divorce characteristics explain part of the divorce penalty for this group suggests that for those from lower educational backgrounds, those whose parents divorce might be a selected group, and it is these pre-existing characteristics that explain a part of their lower achievements at age 30.

For the other groups of children, however, the divorce penalties remain largely unaffected by the inclusion of pre-divorce characteristics, suggesting that selection into divorce is not a satisfactory explanation for the divorce penalties for children whose parents have more than high school education. The explanation that higher performing children in general are affected more by divorce was also not supported by the analysis. Controlling for pre-divorce cognitive ability (and in an additional analysis not shown here we also controlled for a three-way interaction among cognitive ability, parental education and divorce) the heterogeneity observed remains. Consequently, heterogeneity in the effects of divorce on these child outcomes has instead to be sought for in the changes that occur after a family goes through a divorce.

To this end, we added a large set of post-divorce characteristics into the original models. In Tables 5 and 6 the effects of variables measured at age 16 are displayed. To ensure that the characteristics are measured after divorce, the divorce variable was limited to those who experienced a divorce between ages 5 and 16. We first included each of the variables one by one in order to see whether they could explain part of the divorce penalties observed. Subsequently, we included in Model 2 the variables that did not affect the results and in Model 3 the ones that did.

Several variables, ranging from maternal psychological well-being to whether the child read books and did activities with their parents, proved to be of limited relevance to the heterogeneity in the effects of divorce on tertiary education and obtaining a class job. This first set of variables explained around 9% of the total divorce penalty for those whose parents have more than high school education (i.e. for tertiary education $(0.044+0.077)-(0.062+0.071)/(0.062+0.071)=0.09$), but none of the heterogeneity in the divorce penalty. The small set of variables included in Model 3 did explain a substantial part of the divorce penalty and its heterogeneity. Weekly employment income, opinions about the value of education, whether the child was member of a club and whether parents asked where the child was going, with whom and what they were going to do together explain around 40% $((0.062+0.071)-(0.029+0.053)/(0.062+0.071)=0.38$ and $(0.039+0.077)-(0.010+0.058)/(0.039+0.077)=0.41$) of the total divorce penalty for those with parents that have more than high school education, and around 25% of the heterogeneity in the penalties across educational backgrounds (for both outcomes the numbers are very similar). These variables thus explain a large part of the divorce penalties for those with lower educational backgrounds too. The two variables largely responsible for these numbers are weekly employment income and attitudes towards the value of education.

Pre-divorce characteristics were left out of this model because they had proven not to influence the results before and to keep the models presented as parsimonious as possible. However, in robustness checks not shown here but available upon request, we included the pre-divorce characteristics into the models for Tables 5 and 6. The share of the divorce penalty explained for those with a higher educational background remained unchanged.

The results show that financial resources seem to be an important resource that is negatively affected by parental divorce. Given that those with more highly educated parents will have more of that resource, they have more to lose from a divorce. Parental monitoring and opinions regarding education might be an indication of an underlying factor that is important too. Divorced parents could be less able to monitor their children and transmit values to their offspring. It might be especially hard for a non-resident parent to contribute to these two important factors that strongly predict educational and occupational achievement.

We checked the possible influence of differential attrition by parental background on the results presented above by using multiple imputation. We multiple-imputed values for cases that got lost over time using characteristics at age 0 (see the appendix for a detailed description). The results show that attrition could be responsible for a considerable part of the heterogeneity observed. However, after controlling for this possible influence, the substantive results remain the same, with the

four post-divorce characteristics explaining an equally large part of the heterogeneity in the effects of parental divorce according to educational background. The robustness checks are displayed in Tables A1 and A2 of the appendix.

Discussion

Studies that combine research on social stratification and the consequences of divorce on child development have largely concentrated on the differing incidence of parental divorce according to social background (Ellwood & Jencks, 2004; McLanahan, 2004; Esping-Andersen, 2007; Härkönen & Dronkers, 2007; McLanahan & Percheski, 2008). These studies have concluded that the higher frequency of divorce among the lower classes leads divorce to be an amplifier of social inequalities. Little attention has been paid to differences in the ‘penalty’ for divorce according to social background. Initial evidence from earlier studies had shown that those from higher social backgrounds suffer more in terms of educational and occupational achievement following divorce than others. If this were the case, the overall effect of divorce on inequalities within society would be unclear. A longitudinal study that looked at the effects of parental divorce on the educational or occupational achievements of children, and that was able to effectively control for many pre-divorce characteristics, was still lacking within the field. Therefore, it remained unclear whether and to what extent the results observed were due to differential selection into divorce according to education or due to larger effects of divorce on well-performing children in general.

In this study we have been able to take advantage of the rich set of measures provided by the British Cohort Study 1970. We have shown that for this cohort there exists a not extremely large but considerable divorce penalty regarding educational and occupational achievement (children of divorced parents are 7 and 5 percentage points less likely to complete tertiary education and obtain a service job at age 30 respectively). In line with earlier studies (Elliott & Richards, 1991; McLanahan & Sandefur, 1994; Battle, 1997; 1998; Jonsson & Gähler, 1997; Cavanagh & Huston, 2006; Fischer, 2007; Albertini & Dronkers, 2009; Mandemakers & Kalmijn, 2011; Bernardi & Radl, 2014; Biblarz & Raftery 1993; 1998; Martin, 2012), we find that the penalty is more than twice as big for those who have more highly educated parents compared to those with more poorly educated parents. Importantly, neither do pre-divorce characteristics explain the differences according to social background, nor was a generally bigger effect of divorce on those with high cognitive ability at age 5 observed (which was driven by lower educational background). It is therefore likely that the heterogeneity in the effects observed is due to changes in the resources of families with higher educational backgrounds.

Does this mean that divorce is an equalizer, and that the ‘diverging destinies’ argument has to be looked at critically? Within this sample, 24.8% of the children whose parents had lower education levels divorced, compared to 20.6% for those with more highly educated parents. Given that the divorce penalty is more than twice as big for those from higher education backgrounds, the overall negative consequences for educational and occupational achievement associated with the occurrence of divorce are much larger for the group of children with better educated parents compared to the poorly educated group. This would suggest that at this point in time and space divorce was an equalizer.

The results of this paper suggest that some of the resources parents with higher education use to improve the outcomes of their children are affected and at least partially disabled by divorce. Given that parents from higher social backgrounds are normally able to ‘compensate’ for adversities that affect their children (Bernardi, 2012), this is an interesting case where such compensating effects are absent. What resources are affected and what does this tell us in general about how the higher classes protect their offspring? Our study has shown that both material and non-material resources play a role. Income was the most important mediator found in this study. Even though divorce has direct costs, it is more likely that these effects are caused by a reduced access to the economic resources of the parent living outside of the household. Income can buy a good education and thus access to good jobs too. It might also provide for the necessary supporting materials for learning (e.g. books, private lessons), and finding a job (e.g. less pressure to find a job quickly and accept bad jobs). In line with the results of Martin (2012), we have also found a role for extra-curricular activities and the attitudes children have towards education. Why do the children of divorced parents participate less in extra-curricular

activities and why do they expect fewer benefits from education? If the income situation of mothers who are divorced is significantly worse than that of their non-divorced counterparts, the benefits divorced adults reap from their own higher education and past participation in extra-curricular activities might be fewer than those of their peers. If children whose parents have divorced observe or hear from their parents that the returns from education and additional activities were lower than expected due to divorce, this could affect their own behaviour and attitudes. Given that the children of divorced parents are more likely to divorce themselves (Amato, 2010), the future benefits of higher education might be lower. Given that income losses are less grave for fathers compared to mothers after divorce (Amato, 2010), an interesting implication of this argument would be that the expected benefits of education for girls should be affected by divorce more than for boys. This is something that could be checked in future research.

Parental divorce might thus weaken the intergenerational transmission of advantage due to income and attitudes at the individual level. At the macro-level, studies have shown that education systems with early tracking have less heterogeneity in the effects of parental divorce (Bernardi & Radl, 2013), arguably because being in a higher track protects children from downward mobility during their educational career. A comparable study to this one performed for another country could provide more evidence and insight on this argument in the future.

Future research can also address some of the limitations of the current study. The main limitation so far has been that much missing information at age 16 prevented us from the possibility of explaining an important part of the heterogeneity in the effects observed at age 30. A future study could attempt to look at information available at other ages. Another limitation was that income information was only available at age 16 and only for the household the child lived in. We tried to compensate for this shortcoming by using material resources pre-divorce as proxies, but part of the variation in income might not have been caught accurately by the measures we used. A third limitation was that attrition possibly plays a role in the story too; a non-negligible part of the heterogeneity in the effects disappeared when allowing for the possible effects of attrition.

Despite these limitations, a large part of the heterogeneity in the effects of parental divorce was explained by a small set of variables at age 16, and we were able to include many strong predictors of child outcomes measured before divorce, such as cognitive ability and behavioural problems. These substantive results remained once the possible influence of attrition was taken into account. Strong support has therefore been found for the claim that those from higher education backgrounds suffer more from divorce than others. This warrants a re-investigation of the argument that increasing divorce rates also strengthen the intergenerational transmission of advantage in society. In addition, parents from higher social backgrounds seem to use financial resources and the transmission of attitudes to pass advantage on to their children, but divorce seems to at least partially disable these mechanisms. This paper therefore answers some important questions and provides a base for asking questions such as the following. Is divorce an equalizer? How is the transmission of attitudes towards education affected by life events? And, do tracking systems reduce the influence of attitudes on educational outcomes once in a higher educational track?

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Appendix A. Possible influence of attrition

To check whether the main results observed are robust when taking into account attrition, we estimated a model based on multiple imputation of the cases lost due to attrition (in addition to the multiple imputation already used for missing information on specific variables). Of the target sample in 1970, 4.1% already did not cooperate in 1970, 37.3% did not cooperate or were not traceable in the subsequent waves, and 1% had missing information on the dependent variables of the study. The remaining 58.6% of the cases were included in the analysis. In this robustness check we imputed values for the main variables of the analysis for the 38.3% of cases not used in the analysis but present in 1970, based on the following variables measured in 1970: whether the birth was a pre-marital conception, father's age on leaving education, mother's age on leaving education, mother's age at childbirth, whether the mother smoked before the pregnancy, whether the mother stopped smoking during the pregnancy, whether the mother continued smoking during the pregnancy, birth weight of the child and the age in hours at which the weight was measured, whether the father was unemployed, and whether the mother took any antenatal classes. Apart from these variables, the other variables of the final model were also included in the imputation equation. These were: parental education, parental divorce, weekly household employment income (1986), the scale measuring whether parents ask where the child goes (1986), whether the child is member of a club (1986), and whether the child has positive views regarding the benefits of education (1986).

It can be observed in Tables A1 and A2 that a part of the divorce penalty for the more highly educated could exist because of differential attrition according to parental background. However, there remains a large part of the heterogeneity still to be explained after accounting for the possible influence of attrition. In these models the variables measured at age 16 also explain substantive parts of the heterogeneity in the effects of divorce on educational and occupational achievement.

Table 1. Descriptive statistics of the 11,073 British Cohort 1970 members

	Avg.	Std.	Min.	Max.	% Miss.
Completion of tertiary education at age 30	0.27		0	1	0
Attainment of a service class job at age 30	0.37		0	1	0
ISEI score of job at age 30	44.6	16.7	0	90	0
Parents divorced before age 30	0.24		0	1	0.1
Parents divorced between age 5 and 30	0.17		0	1	0.1
Parents divorced between age 5 and 16	0.12		0	1	0.1
Child born to single-parent family	0.01		0	1	0.1
Parent died before age 30	0.03		0	1	0.1
Neither parent completed more than high school education	0.36		0	1	3.9
Only mother completed more than high school education	0.18		0	1	3.9
Only father completed more than high school education	0.11		0	1	3.9
Both parents completed more than high school education	0.35		0	1	3.9
Cognitive ability at age 5	0.08	1.26	-4.47	4.23	24.4
Father employed at age 0	0.97		0	1	13.3
Mother housewife at age 5	0.57		0	1	18.9
House adequately equipped (ref. well equipped), age 5	35.4		0	1	19.8
House poorly equipped (ref. well equipped), age 5	0.03		0	1	19.8
Mother's Rutter score for psychological problems, age 5	4.24	3.57	0	23	18.7
Child's Rutter score psycholog./behavioural problems, age 5	9.36	5.42	0	36	18.7
Whether both parents met school staff, age 5	0.38		0	1	19.3
Hours of TV watched per day, age 5	1.37	1.27	0	7	21.1
Number of days per week read to child, age 5	4.42	2.55	0	7	21.3
Non-authoritarian values regarding child rearing, age 5	0.16	1.02	-3	3.02	18.3
Disagreeing with values regarding sex equality, age 5	-0.06	1.02	-3	4.05	18.3
Disagreeing on "children should be themselves", age 5	0.99	1.05	-3	3.41	18.3
Weekly household employment income (x £100), age 16	2.18	1.26	0.25	5.50	50.5
Mother employed, age 16	0.56		0	1	21.9
Household financial hardship last year, age 16	0.13		0	1	34.3
Rutter score for mother's psychological problems, age 16	2.08	1.57	0	25	62.3
Whether either parent visited school last year, age 16	0.56		0	1	37.7
Index of activities done with parents, age 16	6.22	3.50	0	15	57.5
Child's report of parents' strictness, age 16	4.55	1.25	1	7	55.1
Scale of whether parents asked where child went, age 16	6.04	2.69	0	9	55.9
Whether child read any book in previous 4 weeks, age 16	0.60		0	1	54.0
Whether child was member of a society/club, age 16	0.83		0	1	54.0
Positive views regarding benefits of education, age 16	4.36	2.05	0	9	57.5

Note: Miss.= % of sample used that had missing information and thus multiply imputed values (20) used in the analysis

Table 2. The effect of parental divorce on child outcomes at age 30, OLS regressions, N = 11 073

Variable	Attaining Tertiary Education		Attaining a Service Class Job		ISEI score	
<i>Family situation</i> (ref. intact two-parent family)						
Parental divorce	-0.071*** (0.009)	-0.048*** (0.012)	-0.054* (0.010)	-0.028* (0.015)	-2.86*** (0.36)	-2.75*** (0.58)
<i>Parental Education</i> (ref. both max. high school)						
Only father has more than high school	0.093*** (0.011)	0.098*** (0.013)	0.112*** (0.013)	0.119*** (0.015)	4.92*** (0.44)	4.80*** (0.51)
Only mother has more than high school	0.102*** (0.014)	0.107*** (0.017)	0.241*** (0.016)	0.141*** (0.020)	5.14*** (0.53)	4.99*** (0.64)
Both have more than high school	0.322*** (0.010)	0.340*** (0.011)	0.308*** (0.011)	0.322*** (0.012)	11.79*** (0.37)	11.98*** (0.43)
Only father*parental divorce		-0.011 (0.025)		-0.017 (0.029)		0.565 (1.02)
Only mother*parental divorce		-0.022 (0.028)		-0.062* (0.034)		0.150 (1.17)
Both more than high school*parental divorce		-0.056** (0.023)		-0.047* (0.025)		-0.696 (0.89)
Constant	0.150 (0.006)	0.141 (0.007)	0.243 (0.007)	0.243 (0.008)	39.94 (0.270)	39.91 (0.296)

Note: Multiple imputation used for missing values on independent variables. Coefficients not shown for parental death, single parents, and their interactions with parental resources. LPM with robust standard errors for tertiary education and service-class job; OLS regression for ISEI scores.

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

Table 3. The effect of parental divorce after age 5 on completion of tertiary education by age 30, Linear Probability Models, N = 11 073

Variable	Model 1		Model 2	
<i>Family situation (ref. intact two-parent family)</i>				
Parental divorce after age 5	-0.044***	0.013	-0.026**	0.013
<i>Parental Education (ref. both max. high school)</i>				
Only father has more than high school	0.098***	0.013	0.052***	0.013
Only mother has more than high school	0.107***	0.017	0.054***	0.017
Both have more than high school	0.340***	0.011	0.240***	0.013
Only father*parental divorce	-0.008	0.027	-0.013	0.026
Only mother*parental divorce	-0.028	0.032	-0.047	0.031
Both more than high school*parental divorce	-0.059**	0.025	-0.066***	0.024
<i>Pre-divorce characteristics (age 5)</i>				
<i>Material Resources</i>				
Father employed at age 0			-0.008	0.022
Mother housewife			-0.003	0.009
House adequately equipped (ref. well equipped)			-0.031***	0.010
House poorly equipped (ref. well equipped)			0.009	0.023
<i>Maternal well-being</i>				
Rutter score for psychological problems			-0.002	0.001
<i>Children's well-being</i>				
Rutter score psychological/behavioural problems			-0.002**	0.001
Cognitive ability			0.057***	0.004
<i>Parental involvement/Monitoring</i>				
Whether both parents met school staff			0.015	0.010
Hours TV watched per day			-0.008**	0.004
Number of days per week read to child			0.009***	0.002
Non-authoritarian values regarding child rearing			0.012**	0.005
Disagreeing with values regarding sex equality			-0.021***	0.004
Disagreeing with "children should be themselves"			-0.003	0.004
Constant			0.234	0.008

Note: Multiple imputation used for missing values on independent variables. Coefficients not shown for divorce before age 5, parental death, single parents, and their interactions with parental resources. Linear probability models with robust standard errors.

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

Table 4. The effect of parental divorce after age 5 on access to a service class job by age 30, Linear Probability Models, N = 11 073

Variable	Model 1		Model 2	
<i>Family situation (ref. intact two-parent family)</i>				
Parental divorce after age 5	-0.023	0.018	0.000	0.017
<i>Parental Education (ref. both max. high school)</i>				
Only father has more than high school	0.120***	0.015	0.067***	0.015
Only mother has more than high school	0.139***	0.020	0.082***	0.020
Both have more than high school	0.323***	0.012	0.216***	0.013
Only father*parental divorce	-0.018	0.033	-0.025	0.032
Only mother*parental divorce	-0.050	0.038	-0.071*	0.038
Both more than high school*parental divorce	-0.064**	0.028	-0.073***	0.027
<i>Pre-divorce characteristics (age 5)</i>				
<i>Material Resources</i>				
Father employed at age 0			0.005	0.027
Mother housewife			-0.016*	0.009
House adequately equipped (ref. well equipped)			-0.046***	0.011
House poorly equipped (ref. well equipped)			-0.053**	0.025
<i>Maternal well-being</i>				
Rutter score for psychological problems			-0.002*	0.001
<i>Children's well-being</i>				
Rutter score psychological/behavioural problems			-0.001	0.001
Cognitive ability			0.063***	0.004
<i>Parental involvement/Monitoring</i>				
Whether both parents met school staff			0.016	0.010
Hours TV watched per day			-0.013***	0.004
Number of days per week read to child			0.008***	0.002
Non-authoritarian values regarding child rearing			0.005	0.005
Disagreeing with values regarding sex equality			-0.012**	0.005
Disagreeing with "children should be themselves"			0.002	0.004
Constant			0.298	0.034

Note: Multiple imputation used for missing values on independent variables. Coefficients not shown for divorce before age 5, parental death, single parents, and their interactions with parental resources. Linear probability models with robust standard errors.

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

Table 5. The effect of parental divorce between ages 5 and 16 on completion of tertiary education by age 30, Linear Probability Models, N = 11 073

Variable	Model 1		Model 2		Model 3	
<i>Family situation (ref. intact two-parent family)</i>						
Parental divorce between ages 5 and 16	-0.062***	0.014	-0.044***	0.015	-0.029*	0.015
<i>Parental Education (ref. both max. high school)</i>						
Only father has more than high school	0.098***	0.013	0.076***	0.013	0.058***	0.014
Only mother has more than high school	0.107***	0.017	0.080***	0.017	0.063***	0.017
Both have more than high school	0.340***	0.011	0.290***	0.012	0.233***	0.013
Only father*parental divorce	-0.005	0.030	-0.001	0.031	-0.008	0.032
Only mother*parental divorce	-0.031	0.036	-0.031	0.036	-0.033	0.035
Both more than high school*parental divorce	-0.071**	0.029	-0.077***	0.030	-0.053*	0.030
<i>Post-divorce characteristics (age 16)</i>						
<i>Material Resources</i>						
Weekly household employment income (x £100)					0.040***	0.005
Mother employed			-0.008	0.009		
Household financial hardship previous year			-0.026*	0.015		
<i>Maternal well-being</i>						
Rutter score for psychological problems			-0.009**	0.003		
<i>Parental involvement and monitoring</i>						
Whether either parent visited school last year			0.088***	0.009		
Index of activities done with parents			0.007***	0.002		
Child's report of parents' strictness			-0.012***	0.004		
Scale of whether parents ask where child goes					0.011***	0.002
<i>Child's behaviour and attitudes</i>						
Whether child read any book in previous 4 weeks			0.115***	0.011		
Whether child was member of a society/club					0.045***	0.017
Positive views regarding benefits of education					0.038***	0.003
Constant	0.142	0.007	0.086	0.030	-0.153	0.019

Note: Multiple imputation used for missing values on independent variables. Coefficients not shown for divorce before age 5 and after age 16, parental death, single parents, and their interactions with parental resources. Linear probability models with robust standard errors.

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

Table 6. The effect of parental divorce between ages 5 and 16 on obtaining a service-class job by age 30, Linear Probability Models, N = 11 073

Variable	Model 1		Model 2		Model 3	
<i>Family situation (ref. intact two-parent family)</i>						
Parental divorce between ages 5 and 16	-0.039*	0.020	-0.022	0.021	-0.010	0.020
<i>Parental Education (ref. both max. high school)</i>						
Only father has more than high school	0.120***	0.015	0.103***	0.015	0.080***	0.015
Only mother has more than high school	0.141***	0.020	0.120***	0.020	0.096***	0.020
Both have more than high school	0.323***	0.012	0.286***	0.013	0.214***	0.014
Only father*parental divorce	0.003	0.038	0.005	0.038	0.002	0.038
Only mother*parental divorce	-0.023	0.046	-0.025	0.046	-0.023	0.045
Both more than high school*parental divorce	-0.077**	0.029	-0.084**	0.034	-0.058*	0.034
<i>Post-divorce characteristics (age 16)</i>						
<i>Material Resources</i>						
Weekly household employment income (x £100)					0.049***	0.005
Mother employed			0.007	0.010		
Household financial hardship previous year			-0.046***	0.015		
<i>Maternal well-being</i>						
Rutter score for psychological problems			-0.004	0.003		
<i>Parental involvement and monitoring</i>						
Whether either parent visited school last year			0.065***	0.010		
Index of activities done with parents			0.007***	0.002		
Child's report of parents' strictness			-0.001	0.005		
Scale of whether parents ask where child goes					0.005*	0.003
<i>Child's behaviour and attitudes</i>						
Whether child read any book in previous 4 weeks			0.079***	0.012		
Whether child was member of a society/club					0.053***	0.018
Positive views regarding benefits of education					0.034***	0.003
Constant	0.234	0.008	0.145	0.030	-0.034	0.021

Note: Multiple imputation used for missing values on independent variables. Coefficients not shown for divorce before age 5 and after age 16, parental death, single parents, and their interactions with parental resources. Linear probability models with robust standard errors.

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

Table A1. The effect of parental divorce on educational achievement at age 30, LPM

Variable	Sample 1: Excluding cases lost due to attrition N = 11 073				Sample 2: Including cases lost due to attrition, N = 17 993			
	Model 1		Model 2		Model 1		Model 2	
<i>Family situation (ref. intact two-parent family)</i>								
Parental Divorce	-0.045***	0.015	-0.010	0.016	-0.056***	0.018	-0.020	0.019
<i>Parental Education (ref. both max. high school)</i>								
Only father has more than high school	0.089***	0.013	0.051***	0.013	0.090***	0.012	0.051***	0.013
Only mother has more than high school	0.092***	0.017	0.049***	0.017	0.094***	0.015	0.049***	0.016
Both have more than high school	0.305***	0.011	0.206***	0.013	0.308***	0.011	0.206***	0.013
Only father*parental divorce	-0.000	0.031	-0.003	0.031	-0.007	0.031	0.005	0.031
Only mother*parental divorce	-0.031	0.037	-0.032	0.032	-0.014	0.034	-0.015	0.034
Both more than high school*parental divorce	-0.066**	0.029	-0.049*	0.029	-0.048	0.029	-0.031	0.029
<i>Variables 1970</i>								
Father unemployed	-0.01	0.02	-0.01	0.02	-0.01	0.02	0.02	0.02
Mother took antenatal classes	0.07***	0.01	0.05***	0.01	0.07***	0.01	0.05***	0.01
Birth weight	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Age at weighing	-0.02	0.05	-0.02	0.05	-0.03	0.05	-0.03	0.05
Mother smoked but stopped before pregnancy	-0.04***	0.01	-0.04***	0.01	-0.04***	0.01	-0.04***	0.01
Mother stopped smoking during pregnancy	-0.07***	0.02	-0.07***	0.02	-0.07***	0.02	-0.07***	0.02
Mother smoked during pregnancy	-0.08***	0.01	-0.07***	0.01	-0.08***	0.01	-0.06***	0.01
Pre-marital conception	-0.01	0.01	-0.01	0.01	-0.01	0.01	-0.01	0.01
Mother's age at birth	0.006***	0.001	0.006***	0.001	0.006***	0.001	0.006***	0.001
<i>Variables 1986</i>								
Weekly household employment income (x £100)			0.042***	0.004			0.042***	0.004
Scale of whether parents ask where child goes			0.010***	0.002			0.010***	0.002
Whether child is member of a society/club			0.044***	0.015			0.043***	0.014
Positive views regarding benefits of education			0.046***	0.002			0.036***	0.003
Constant	0.05	0.06	-0.24***	0.06	0.06	0.07	-0.23***	0.07

Table A2. The effect of parental divorce on occupational achievement at age 30, LPM

Variable	Sample 1: Excluding cases lost due to attrition N = 11 073				Sample 2: Including cases lost due to attrition, N = 17 997			
	Model 1		Model 2		Model 1		Model 2	
<i>Family situation (ref. intact two-parent family)</i>								
Parental Divorce	-0.025	0.020	-0.008	0.020	-0.032	0.023	0.003	0.025
<i>Parental Education (ref. both max. high school)</i>								
Only father has more than high school	0.110***	0.015	0.071***	0.015	0.110***	0.015	0.069***	0.015
Only mother has more than high school	0.125***	0.020	0.080***	0.019	0.124***	0.018	0.076***	0.017
Both have more than high school	0.290***	0.013	0.186***	0.015	0.292***	0.012	0.185***	0.014
Only father*parental divorce	-0.007	0.038	-0.007	0.038	0.008	0.039	0.008	0.038
Only mother*parental divorce	-0.025	0.046	-0.023	0.046	-0.013	0.042	-0.011	0.042
Both more than high school*parental divorce	-0.073**	0.033	-0.051	0.033	-0.059*	0.031	-0.039	0.031
<i>Variables 1970</i>								
Father unemployed	-0.03	0.03	0.01	0.06	-0.03	0.03	0.01	0.06
Mother took antenatal classes	0.06***	0.01	0.03***	0.01	0.06***	0.01	0.03***	0.01
Birth weight in grams	+0.00**	0.00	0.00	0.00	+0.00**	0.00	0.00	0.00
Age at weighing	-0.09	0.06	-0.09	0.06	-0.10*	0.06	-0.10*	0.06
Mother smoked before pregnancy	-0.06***	0.01	-0.06***	0.01	-0.06***	0.02	-0.06***	0.02
Mother stopped smoking during pregnancy	-0.07***	0.02	-0.07***	0.02	-0.07***	0.02	-0.07***	0.02
Mother smoked during pregnancy	-0.08***	0.01	-0.07***	0.01	-0.08***	0.01	-0.07***	0.01
Pre-marital conception	-0.02	0.02	-0.02	0.02	-0.02	0.02	-0.01	0.02
Mother's age at birth	0.004***	0.001	0.004***	0.001	0.004***	0.001	0.004***	0.001
<i>Variables 1986</i>								
Weekly household employment income (x £100)			0.052***	0.004			0.052***	0.004
Scale of whether parents ask where child goes			0.004	0.003			0.004	0.003
Whether child is member of a society/club			0.054***	0.015			0.052***	0.018
Positive views regarding benefits of education			0.031***	0.003			0.031***	0.003
Constant	0.210***	0.070	-0.048	0.07	0.220***	0.069	-0.040***	0.079

Note: Multiple imputation used for missing values and attrition. Coefficients not shown for parental death, single parents, and their interactions with parental resources. LPM with robust standard errors; * < 0.10 ** p < 0.05; *** p < 0.01

Table B1. Results using listwise case deletion instead of multiple imputation, LPM

Variable	Model 1		Model 2	
	Achievement of tertiary education by age 30		Achievement of a service class job by age 30	
<i>Family situation (ref. intact two-parent family)</i>				
Parental Divorce between age 5 and 16	-0.064***	0.014	-0.038*	0.020
<i>Parental Education (ref. both max. high school)</i>				
Only father has more than high school	0.098***	0.015	0.119***	0.015
Only mother has more than high school	0.105***	0.020	0.139***	0.020
Both have more than high school	0.339***	0.012	0.322***	0.012
Only father*parental divorce	-0.003	0.038	0.008	0.038
Only mother*parental divorce	-0.026	0.046	-0.027	0.046
Both more than high school*parental divorce	-0.067**	0.030	-0.072**	0.034
Constant	0.142***	0.007	0.236	0.008
N	10 627			

Coefficients not shown for parental death, single parents, and their interactions with parental resources. LPM with robust standard errors; * < 0.10 ** p < 0.05; *** p < 0.01