Do mother's and father's education condition the impact of parental divorce on child well-being?

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ABSTRACT

We use the British Cohort Study to investigate to what extent parental resources moderate the association between parental divorce in childhood and lowered child well-being as indicated by maternal reports of child psychological well-being and by academic test scores (reading and math tests). We argue that children of mothers with more years of education suffer *less* when their parents split up because better educated mothers may be better able to provide a safe and stable environment for their children after divorce. In addition, we argue that having a better educated father could either aggravate or reduce the effects of parental divorce. This is one of the first studies to simultaneously investigate the role of maternal, and paternal resources, and pre-divorce shared resources. Our analyses indicate that the effect of parental divorce on psychological well-being is reduced for better educated mothers and for families with more pre-divorce economic resources, but increased for better educated fathers. For academic test scores we find a protective effect of having a better educated father and higher pre-divorce social resources.

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1. Introduction

There is a large body of research showing that children with divorced parents experience more unfavorable developmental outcomes than children of intact families. Negative effects are found for a range of outcomes in childhood and adulthood, including well-being, behavioral problems, school grades, delinquency, and educational attainment (Amato, 2000, 2010). Increasingly, research focuses on factors that may increase or reduce the effects of parental divorce, i.e., questions about moderator (interaction) effects. For example, studies have examined whether the effects of parental divorce depend on the quality of the parents' marriage (Hanson, 1999; Morrison and Coiro, 1999; Strohschein, 2005b), the number of siblings (Sun and Li, 2009), race and ethnicity (Fomby and Cherlin, 2007; Kalmijn, 2010; McLanahan and Sandefur, 1994; Osborne and McLanahan, 2007; Wu and Thomson, 2001), and socio-economic resources of the parents (Albertini and Dronkers, 2009; Biblarz and Raftery, 1993; Cavanagh and Huston, 2006; Elliott and Richards, 1991; Fischer, 2007; Jonsson and Gahler, 1997; McLanahan and Sandefur, 1994). A review by Hetherington and Stanley-Hagan (Hetherington and Stanley-Hagan, 1999) calls for more research into diversity in outcomes and possible protective factors. This call is echoed about 10 years later in a recent review by Amato (2010) who argues that "researchers should focus less attention on mean differences (...) and more attention on the factors that produce variability" (p. 658) (2010). The present study contributes to this literature by examining whether the impact of parental divorce on child well-being depends on the educational level of mother and father. We investigate two child outcomes psychological well-being and academic test scores (reading and math tests).

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Researchers have since long recognized that parental resources (social and economic) play a key role in understanding the impact of parental divorce on child well-being (McLanahan and Sandefur, 1994). Most of these studies are studies of mediation; they posit that parental divorce causes a decline in child well-being because a divorce leads to a decline in parental resources available to the child (e.g., Sun and Li, 2002; Thomson et al., 1994). However, the loss of resources may depend on the pre-divorce levels. Parents with more pre-divorce resources may be better able to provide a safe and stable environment for children even despite a divorce. One mechanism could be that better educated parents may be more aware of the potential negative effects of divorce for the children. As a result they may be more likely to put their grievances aside for the sake of the children and to actively attempt to reduce the negative effects of the divorce. Another mechanism could be that people with more resources may be able to retain the house they were living in, so that the children can stay at their school and can keep their neighborhood friends (Hagan et al., 1996).

A few studies have examined such interaction effects, although all of these have focused on the child's socio-economic outcomes, not on well-being. In Italy, for example, Albertini and Dronkers (2009) found that divorce had a large negative impact on children's educational attainment for those with less educated mothers while there was no difference in educational attainment between children from divorced and intact families when the mother was better educated. Findings from the National Child Development Study in Britain showed that the effect of parental divorce on children's reading test scores was stronger for manual class fathers than for non-manual class fathers (Elliott and Richards, 1991). Biblarz and Raftery (1993), however, found the opposite results. Using data for the US, they found that at the high end of the socio-economic spectrum the negative impact of parental divorce on the child's socio-economic attainment is greater.

These mixed findings may be attributed to country differences, but could also be explained by the fact that these studies took the resources of only one parent into account. Following divorce the mother usually remains with the children and the father leaves the household. A mother with high resources may be quite beneficial to the child, but the father's resources may not have such favorable effects, as these are often lost to the child following divorce. As father's and mother's resources are highly correlated, studies that use information on only one parent may give an incomplete picture as mother's and father's resources could have opposite effects. The loss of a high resource father may overshadow the benefits of having a high resource mother in such studies. We are aware of only two studies that examine effects of parental divorce while incorporating information about the resources of both the parents. Using Swedish registry data, Jonsson and Gahler (1997) found that the effect of parental divorce on the child's educational career was most unfavorable if a high resource father and a low resource mother broke up. In the Netherlands, Fischer showed that the impact of parental divorce on the child's educational level is lower when levels of mother's education are higher whereas the impact is larger when father's education is higher (Fischer, 2007). Clearly, these studies illustrate the importance of looking at the resources of the mother and father simultaneously.

Little research has examined the interaction between parental socio-economic resources and parental divorce for child well-being. To our knowledge, only two studies shed some light on this issue. The study of Elliott and Richards (1991) in the UK also investigated child behavioral problems, but they did not find significant interactions between parental divorce and socio-economic resources. In a study of family instability and children's early problem behavior, Cavanagh and Huston (2006) found that a greater "HOME score," a measure of child toys and other commodities in the home, decreased the effect of family instability on negative behaviors towards teachers and a higher income reduced negative behaviors towards peers.

The present paper contributes to this literature by examining whether the impact of parental divorce on child well-being (as indicated by maternal reports of psychological well-being and by academic test scores) depends on the educational level of mother and father. We focus on these aspects of child well-being because they have been widely used in this literature and they also allow us to test our hypotheses across different domains of children's lives (i.e., at home and at school). We use educational level as our indicator of parental socio-economic resources, as educational level is the best indicator of the social, economic, and cognitive resources a person possesses in modern societies. Moreover, educational level is the most comparable socio-economic indicator for men and women and is relatively fixed over time, which makes it ideal when studying the impact of divorce (i.e., a parent's education is not affected by his or her divorce). However, mother's and father's educational level are not exhaustive indicators of parental economic and social resources. We therefore, additionally examine whether other parental shared resources, such as economic hardship, moderate the impact of divorce beyond that of parental educational level. To our knowledge, this is one of the first studies to simultaneously investigate the moderating influence of maternal, paternal and shared pre-divorce resources. The data we use come from the British Cohort Study (BCS). This panel dataset makes it possible to investigate the impact of parental divorce between age 5 and 10 on the well-being of children at age 10. The BCS has the advantage that it is a very large dataset, so that we observe sufficient parental divorces in order to be able to detect variability in the impact of divorce. We only investigate children living with their mothers before and after the marital split because the number of children living in other arrangements was too small and would blur the results. An additional advantage is that the predictions regarding the effects of mother's and father's resources are less ambiguous in these cases.

2. Background and hypotheses

The effects of divorce on children's outcomes have often been explained in terms of a decline or loss of parental resources after divorce (McLanahan, 1985). Usually, a distinction here is made between economic and social resources. Following

divorce, the household in which the child remains (usually the mother's) faces a marked loss of economic resources (Jarvis and Jenkins, 1999; McLanahan and Sandefur, 1994). This decline following divorce is the result of a loss of economies of scale and the loss of the father's income. State welfare benefits for single mothers, child support and alimony payments by fathers, and modest increases in labor force participation by mothers are unlikely to compensate fully for the losses caused by divorce (Damme et al., 2009; Jarvis and Jenkins, 1999; Jenkins, 2008). Socio-economic resources are important to child well-being, as these buy better living conditions, better neighborhoods, schools, and various goods and services that benefit children (Strohschein, 2005a; Turney, 2011). Ample research shows that (declining) socioeconomic resources explain a considerable part of the effect of parental divorce on well-being and behavioral problems for children (Artis, 2007; Cavanagh and Huston, 2006; McLanahan and Sandefur, 1994; Sun and Li, 2002; Thomson et al., 1994).

Social resources are believed to decline as well after divorce. Research shows that the quality of the relationships with parents as well as the quality of parenting is negatively affected by divorce (Cheadle et al., 2010; Seltzer, 1991). Because the parent–child relationship is very important to child well-being, this is an important explanation of the divorce effect (Amato and Gilbreth, 1999; King and Sobolewski, 2006). Most often the father leaves the household which reduces the amount of contact with the child. Occasionally it leads to a departure of the father from the child's life (Cheadle et al., 2010; Seltzer, 1991). Not only does the father leave, the mother may have less time and energy available for the child too, as she may be forced to work more. In addition, the parents may have to cope with their own (psychological) problems which may lead to less attention to the child. Research shows that social resources are important in explaining why a parental divorce has negative effects on children's well-being and behavior (Artis, 2007; Sun and Li, 2002; Thomson et al., 1994).

To formulate hypotheses about the moderating impact of education, we need to assume that the loss of resources differs depending on the mother's and father's level of education. Below we explain various ways in which this may occur, using the notions of economic and social resources as a starting point. We start with hypotheses on mother's education and then discuss hypotheses on father's education. Because mother's and father's education are highly correlated, we base our predictions on net interaction effects, i.e., moderator effects of mother's education while controlling for the moderator effect of father's education.

2.1. Mother's education

There are a number of reasons to suspect that children of better educated mothers experience smaller declines in economic resources following their parents' divorce. Better educated mothers may be better able to negotiate the divorce so that they get more child support and alimony. In line with this, research shows that men are more likely to pay more child support when the mother has a higher educational level (Seltzer, 1991). Amato and Gilbreth (1999) show in a meta-analysis that children of divorce have higher well-being if absent fathers pay more child support. Mothers with higher levels of education are also more likely to work during the marriage, and they may in turn have better chances on the labor market which means they are more likely to keep their job (following divorce) and to find a well-paying job (Damme et al., 2009). Based on these findings, we expect that a higher level of mother's education reduces the negative impact of divorce on the well-being of their children.

Are there reasons to suspect that the change in social resources differs for higher and lower educated mothers? Better educated mothers may be more aware of the risks of divorce because they are more likely to read books, magazines and newspapers (Werfhorst and Kraaykamp, 2001). As a result, they may be more familiar with (popularized) psychological and sociological knowledge on this topic. To counter such risks, better educated mothers may then give extra attention to the children, despite the problems they themselves may have with the divorce. Research on several large panel studies in the US shows higher levels of involvement of mothers following divorce when the mother has a higher educational level (Cheadle et al., 2010; Seltzer, 1991). Second, better educated mothers may be less likely to be forced to move to a different neighborhood after the divorce and this also reduces the loss of the child's social capital embodied in the neighborhood (and school) (Hagan et al., 1996). Third, research shows that mothers with more socio-economic resources experience fewer psychological problems following divorce than those with fewer resources (Liu and Chen, 2006; Mandemakers et al., 2010). Because the psychological problems that mothers face also affect child well-being (Turney, 2011) and the parent–child relationship negatively (Kiernan and Huerta, 2008), this may be an additional route through which educational level moderates the impact of divorce on well-being.

2.2. Father's education

How would father's education affect the economic and social resources after divorce? In our view, the predictions here are less clear and there may even be opposing effects. One argument is that because children are less likely to maintain regular contact with the father after divorce, the status of the father will be less influential in children's lives. The father cannot serve as an economic role model as he did during marriage and he may be less likely to transfer his insights and knowledge to the child. This would imply a weaker effect of father's educational level after divorce (Biblarz and Raftery, 1993), or what is the same interaction, a more negative effect of parental divorce for children of better educated fathers. In the literature, this line of reasoning has typically been applied to status outcomes of children such as educational attainment and school grades (Fischer, 2007; Jonsson and Gahler, 1997). These predictions are inspired by the literature on social stratification in which it is shown that the father's occupational and educational status has strong effects on children's education and occupation (Grusky and DiPrete, 1990). Later research generalized the effect of father's status to other indicators, such as the health and

well-being of young and adolescent children (Reynolds and Ross, 1998). Hence, we could expect a negative interaction effect of father's education and parental divorce on child well-being as well, with the effect of parental divorce on child well-being being more negative for better educated fathers.

In contrast to this line of reasoning, it can also be argued that there is a reverse interaction effect for fathers. Even though there are more resources to lose when a child has a better educated father, better educated fathers may also be better able to transfer such resources if they are separated from the child. Research has shown that better educated married fathers are more strongly involved in the upbringing of their children than lower educated fathers (Kalmijn, 1999; Sayer et al., 2004). Other research shows that a similar pattern exists for non-resident fathers. For example, Seltzer (1998), analyzing the National Survey of Families and Households in the US, has shown that better educated divorced fathers are more likely to obtain joint custody over their children after divorce after controlling for the effect of the quality of the pre-divorce relationship with the child (Seltzer, 1998). Cooksey and Craig (1998), analyzing the same data but this time focusing on non-resident father's relationships with their children (0–18 years of age), have shown that better educated non-resident fathers are more likely to see their children at least once a month and more likely to talk at least once a week with their children than lower educated non-resident fathers (Cooksey and Craig, 1998). Hence, it seems that higher educated fathers are better able to maintain the relationship they have with their child after divorce, and in doing so, be also more strongly involved in parenting. Because continued parenting by the non-resident father has a clear positive effect on child well-being (Amato and Gilbreth, 1999), one could expect a positive interaction effect, with the effects of parental divorce being less negative for children of better educated fathers.

2.3. Shared resources

Pre-divorce social and economic resources may be lost following divorce, but there may be shared resources which are not fully captured by either mother's or father's educational level. We therefore also examine whether the impact of divorce depends on a number of pre-divorce characteristics: we interact parental divorce effects with poverty, whether the parents read to the child, the number of siblings and whether the mother was a young mother at the time of the birth of the child. The latter two may not directly indicate resources, but they may affect the level of resources available to the child.

In sum, we propose three hypotheses: (1) The effect of parental divorce on child well-being is less negative the higher the education of the mother; (2) the effect of parental divorce on child well-being is more negative the higher the education of the father; and (3) the effect of parental divorce on child well-being is less negative the higher the education of the father.

3. Data and methods

To examine the hypotheses, we use data from the British Cohort Study (BCS). The BCS follows the lives of nearly all children born in a certain week of April in 1970. The original sample provides information on about 17,000 births. Very little information on the parents is available at the first wave (around the child's birth) so we start at the second wave (age 5). Childhood follow-ups took place when the children were 5, 10, and 16. At age 5 13,071 of the original cohort participated. We selected all children who were still living with both parents at age 5 as they are still at risk of experiencing divorce in childhood (11,791 children). 10,915 (92.3%) and 8715 (73.9%) of these children participated at age 10 and 16 respectively. We focus on the age-5 and age-10 waves, as the age 16-wave suffers from high number of missing values, especially for the academic test score measures (the wave consisted of many separately administered questionnaires).[1] We limited the sample to children who, at age 10 were either living with their mother and father (when parents were still together) or were living with their mother (when the parents separated). Mothers who lived with a new partner are included in this second group. We excluded observations of children who were not living in an intact family at age 10 due to other reasons than parental divorce (e.g., parental death, in family care) because including them would complicate the analysis and detract the analysis from the central hypothesis. The sample was reduced due to panel attrition and missing values on the main variables of interest. The final sample consists of 9166 children for whom we have information on either psychological well-being or an academic test scores at age 10.

3.1. Psychological well-being

At age 5 and 10 the mother answered a battery of questions on the child's behavior and psychological well-being, the so-called Rutter A scale. The items cover the child's well-being and measures of internalizing and externalizing problem

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[1] Additional analyses examining the impact of parental divorce between 5 and 10 on subsequent adolescent psychological well-being (using the age 16 wave) show similar results as the analyses limited to age 10. Such analyses were not possible for the academic test scores. This additional analysis uses the age-16 wave as a follow-up to increase the power of the analysis. We were most interested in the children whose family remained intact and the children whose parents divorced between age 5 and 10. So for the follow-up at age 16, the children whose parents divorced or whose family was no longer intact for another reason after age 10 were excluded. The age 16 wave adds an additional 4951 observations with follow-up information on psychological well-being. The separate age 16 (see Table B1) and pooled age 10–16 analyses (see Table B2) confirm the findings presented in this article. Note that the impact of divorce does not differ between age 10 and 16 in the pooled analyses of psychological well-being. Please see Appendix B for details.

behavior. Previous research on parental divorce and child well-being makes extensive use of these items (cf. Cherlin et al., 1991, 1998; Elliott and Richards, 1991; Kiernan, 1997; Sigle-Rushton et al., 2005). At age 5, 19 questions were asked on a 3-point scale (0 = never, 1 sometimes, 2 = almost all of the time) and at age 10 the same questions were used but this time on a 0–100 range. Examples of items are "X is very restless", "X is often worried", and "X bullies others". Factor analyses showed that these items measured a single underlying factor of the child's psychological well-being. We excluded the following three items: "twitches mannerisms", "sucks thumb or finger", "bites nails, fingers". These items reflected rare, or not necessarily deviant behavior and the factor analyses confirmed that these items were dissimilar to the other items. In addition, we excluded the item "not much liked by others" because the between wave correlations of this item over time were low ($r < .10$), and this item may be hard to evaluate by the mother. To derive a comparable scale over time based on the 15 remaining items (see the list in Appendix A), we standardized each item at each age and took the sum of the items. We standardized the items because they are not presented in the same metric in all waves. This implies that we examine relative changes in well-being across waves. The correlation between the summed scores between 5 and 10 was .43. Alpha was .75. at age 5 and .81. at age 10. We reversed the scales so that a higher score indicates a higher level of well-being.

3.2. Academic test scores

The children were tested for various age-appropriate measures of academic ability. At age 5 we combined two tests into one measure: the Copying Designs test and the English Picture Vocabulary test (cf. Sigle-Rushton et al., 2005). Reliability of this scale was .49. At age 10 we examined two tests separately: the Shortened Edinburg Reading test (64 items) and the Friendly Math test (72 items). The correlations between the two ages were modest: the (combined) test at age 5 correlated .50 with the reading test at age 10 and .49 with the math test at age 10.

3.3. Parental divorce

We derived information on parental divorce from questions about the child's mother and father figures (cf. Sigle-Rushton et al., 2005). We did not differentiate between marital and non-marital dissolutions because too few non-marital dissolutions were observed for separate treatment. Information at age 10 on the mother and father figure of the child and the reasons for the absence of a natural mother/father were used to define parental divorce (parents separated or divorced as reasons). We observed 499 divorces (5.4%) between age 5 and age 10. Note again that our sample is limited to children whose parents were together in the first wave (age 5).

3.4. Educational level

Educational level was measured as the age of leaving full-time education, reported at age 5. This variable ranges from age 10 to 25. The correlation between mother's and father's educational level was .56, which is fully consistent with research on educational assortative mating (Schwartz and Mare, 2005).

3.5. Shared economic and social resources

The shared economic and social resources of the family prior to divorce were measured at age 5. Unfortunately, the BCS does not include information on the family's income at age 5 so we resorted to alternative measures of the shared economic resources available to the child. We used a composite index of economic deprivation of the household (a scale comprised of crowding (the ratio of people to rooms in the household) and a list of amenities (i.e., ownership of telephone, car, refrigerator, washing machine, and spin drier, alpha = .50)). Note that the economic deprivation index might be best suited to discriminate between families at the bottom of the poverty distribution, but less well so for families on the higher end. Social resources available to the child were captured by a dummy variable that indicates whether the mother or father read to the child in the past week. In addition to these two indicators of resources, we included whether the mother was young at the time of birth of the child (younger than 20) and the number of siblings, as these may affect the resources available to the child before and after their parents' divorce.

3.6. Controls

We employed controls for a variety of characteristics of the child and the family prior to divorce (i.e., at age 5 of the child). We controlled for the child's sex and baseline measures of the dependent variables at age 5 (academic performance and psychological well-being at age 5, see above for details). We included baseline measures of child well-being as these may be indicative of problems in families prior to divorce and children of divorce might have lower well-being prior to divorce, so including these measures helps to better capture the impact of divorce. Note that models that exclude these measures show similar results, but larger effects of parental divorce. The mother's psychological distress (factor score derived from Malaise inventory (cf. Rodgers et al., 1999)) at the child's age-5 wave was included as that may be a relatively good proxy for parental conflict and problems that existed in the family prior to a divorce.

3.7. Analysis strategy

We used OLS regression of the child's psychological well-being and academic test scores in childhood (age 10) regressed on baseline measures of child well-being (age 5, before separation), parental divorce between age 5 and 10, parental educational level, and controls.[2] We used interaction terms of mother's and father's educational level, and indicators of shared social and economic resources with parental divorce to test our hypotheses. The (continuous) independent and dependent variables were standardized so that regression coefficients can be interpreted as effect sizes.

We used multiple imputation to deal with missing values. Multiple imputation is a viable strategy under the condition that the missing values are missing at random. We proceeded as follows. We used the multiple imputation routine in Stata 12.1 MP (former ICE command, cf. Carlin et al., 2008) to create 10 imputed datasets. We used the target sample (respondents from an intact family at age 5 (N = 11,791)) because information from the entire sample may help to obtain better imputations. Next, we dropped the observations which in the original data did not fit our selection criteria (see Section 3) and the observations with missing information on variables other than the controls, i.e., dependent variable, parental divorce, and mother's and father's educational level. We decided to essentially only impute missing values on the control variables to be on the safe side. The parent read to child variable had the most missing values; about 2.3% of the observations were missing (see Table 1). Finally, we fitted the regression models in each imputed dataset and combined the estimates using Rubin's rules. Please see Table 1 for descriptives of the variables used in the analyses.

4. Results

First, we present analyses of the impact of parental divorce on psychological well-being; the analysis of the effect of divorce between age 5 and 10 on psychological well-being at age 10. Next, we move to academic test scores measured at age 10. We first look at the reading test and then at the math test. Each analysis first presents a base model in which we investigate the impact of parental divorce on child well-being. These base models replicate previous research on parental divorce using similar datasets. Then we estimate models that add interactions of parental divorce with mother's and father's educational level separately and then simultaneously. Finally, we include interactions with the shared parental pre-divorce resources. These models test in a stepwise fashion whether parental educational level and shared resources condition the impact of divorce.

4.1. Psychological well-being

Table 2 investigates the impact of parental divorce between age 5 and 10 on the child's psychological well-being at age 10. As we control for the standardized baseline child well-being, we interpret the effects of parental divorce as the change in relative well-being. Children whose parents divorced had at age 10 about .15 standard deviation lower well-being compared to children whose families remained intact. These effects hold after we took a range of controls related to characteristics of the child and his/her family into account. The control variables show expected results. The mother's report of child psychological well-being at age 5 predicts well-being at age 10; a 1 standard deviation higher level of well-being at age 5 increases the score at age 10 by .37 standard deviation. Children who exhibit higher academic skills at age 5 have a higher psychological well-being at age 10. Furthermore, boys show lower psychological well-being at age 10 than girls. Children whose mothers were more psychologically distressed at baseline show lower levels of well-being. As expected, the indicators of the parent's shared economic and social resources protect child well-being: children from economically deprived backgrounds had lower well-being five years later and children whose parents often read to them at home had higher well-being. Children who had more siblings showed slightly lowered well-being but this indicator was only significant at the 10% level. In addition, children of younger mother's had lower well-being at age 10. Net of the controls and the parental shared economic and social resources, a higher educational level of the father increased child well-being. No direct effect on child well-being is found for the mother's educational level.

The second and third models investigate whether the impact of divorce depends on the mother's and father's educational level. The interaction effect of the mother's educational level in model 2 is positive, whereas that of the father's in model 3 is negative. These separate interaction terms however are not significantly different from zero (p = .130 for mothers and p = .426 for fathers). In the fourth model, however, once we include both parents' education, the interaction effect of mother's educational level and parental divorce is significant and quite strong. A one standard deviation in educational level of the mother decreases the negative impact of divorce by about three quarters, i.e., the interaction effect divided by the main effect (.116/−.153). The effect for mothers who are one standard deviation more highly educated than the mean, the effect is −.153 + 1 ∗ .116 = .037, which is negligible. For mothers who are one standard deviation below the mean, the

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[2] The inclusion of baseline measures of child well-being (i.e. a lagged dependent variable) may pose a problem as it violates assumptions on the error term. However, we need to control for preexisting differences in well-being between children, as otherwise the divorce effect would likely be overestimated. The popular alternative solution to use a change score model was not feasible due to the long time window between waves and differences in measurement of the dependent variables. Note that results omitting the respective lagged dependent variable are very similar and show that as expected the effect of divorce, the educational level variables and the interactions are somewhat larger. The interpretation of the results are not substantively affected by the in- or exclusion of these variables (results are available on request).

Table 1
Descriptive statistics.

	Full sample (N = 9166)					Family intact (N = 8667)		Divorce (N = 499)	
	Mean	s.d.	Min	Max	N	Mean	s.d.	Mean	s.d.
Dependent variables (at age 10)									
Psychological well-being (std.)	0	1	−6.5	2.9	9006	.014	.99	−.25	1.1
Reading test (std.)	0	1	−2.7	1.9	7635	.011	1	−.2	1
Math test (std.)	0	1	−3.7	2.3	7629	.011	1	−.2	.95
Controls (at age 5)									
Child psych. well-being (std.)	0	1	−4.2	9.8	9166	.008	.99	−.13	1.1
Child academic ability (std.)	0	1	−3.8	2.8	9121	.010	1	−.17	.96
Male (ref. = female)	.52	–	0	1	9166	.52	–	.53	–
Mother's psych. distress (std.)	0	1	−1.1	5	9116	−.013	.99	.23	1.1
Shared resources (at age 5)									
Economic deprivation (std.)	0	1	−2.2	10	9163	−.011	.99	.18	1.1
A parent read to child (ref. = did not read)	.81	–	0	1	8955	.81	–	.78	–
Number of siblings	1.6	1.1	0	13	9166	1.6	1.1	1.5	1.2
Young mother (mother's age <20 at birth)	.072	–	0	1	9160	.067	–	.16	–
Mother's educational level	16	1.7	10	24	9166	16	1.7	16	1.5
Father's educational level	16	2.1	10	25	9166	16	2.1	16	1.9
Family remains intact (ref.)	.946	–	0	1	9166	1	–	0	–
Experienced parental divorce	.054	–	0	1	9166	0	–	1	–

Table 2
Effects of parental divorce on child psychological well-being (std.). Standard errors in parentheses. N = 9006.

	1 Baseline		2 Mother's education		3 Father's education		4 Both parents' education		5 Pre-divorce shared resources	
Intercept	.028	(.025)	.028	(.025)	.028	(.025)	.028	(.025)	.022	(.026)
Controls (at age 5)										
Child psych. well-being (std.)	.367	(.011)***	.366	(.011)***	.367	(.011)***	.366	(.011)***	.366	(.011)***
Child academic ability (std.)	.064	(.010)***	.064	(.010)***	.064	(.010)***	.063	(.010)***	.064	(.010)***
Male (ref. = female)	−.129	(.019)***	−.129	(.019)***	−.129	(.019)***	−.129	(.019)***	−.129	(.019)***
Mother's psych. distress (std.)	−.099	(.011)***	−.099	(.011)***	−.099	(.011)***	−.099	(.011)***	−.098	(.011)***
Shared resources (at age 5)										
Economic deprivation (std.)	−.036	(.012)**	−.037	(.012)**	−.036	(.012)**	−.037	(.012)**	−.032	(.012)**
A parent read to child (ref. = did not read)	.060	(.025)*	.060	(.025)*	.059	(.025)*	.060	(.025)*	.066	(.026)*
Number of siblings (std.)	−.070	(.037)~	−.069	(.037)~	−.070	(.037)~	−.070	(.037)~	−.058	(.040)
Young mother (mother's age <20 at birth)	−.022	(.011)*	−.022	(.011)*	−.022	(.011)*	−.022	(.011)*	−.026	(.011)*
Mother's educational level (std.)	−.002	(.012)	−.005	(.012)	−.002	(.012)	−.007	(.012)	−.007	(.012)
Father's educational level (std.)	.029	(.011)**	.030	(.011)**	.031	(.012)**	.034	(.012)**	.035	(.012)**
Parental divorce (ref. = family remained intact)	−.153	(.041)***	−.152	(.041)***	−.154	(.041)***	−.153	(.041)***	−.040	(.096)
Divorce * mother's edu. (std.)			.070	(.046)			.116	(.053)*	.110	(.053)*
Divorce * father's edu. (std.)					−.037	(.046)	−.094	(.053)~	−.109	(.055)*
Divorce * economic depriv. (std.)									−.083	(.049)~
Divorce * a parent read to child									−.109	(.109)
Divorce * number of siblings (std.)									−.084	(.120)
Divorce * young mother									.056	(.045)

Note: Combined estimates from imputed datasets (10 imputations) using Rubin's rules.

~ $p < .10$.
* $p < .05$.
** $p < .01$.
*** $p < .001$, two-sided.

effect is −.269, a modest negative effect. Because the variables are standardized, the main effects refer to the effect for a parent with an average level of education, and this is the same main effect as in the model without the interaction.

The moderator effect of mother's education only becomes apparent once we control for the interaction with father's education. This is plausible, given the positive correlation between father's and mother's education. However, there also

is a negative interaction effect of parental divorce and father's education which helps to produce this result ($-.094$). Note that this interaction is on the border of statistical significance ($p = .077$) and it is in the direction of our second hypothesis which argues that a parental divorce is worse for children when the father is better educated. We suppose that at age 10, the loss of resources of better educated fathers may increase the impact of divorce, therefore suppressing the beneficial influence of mother's educational level.

The final model in column 5 adds interactions of parental divorce with the shared pre-divorce resources. The interactions are all not significantly different from zero. Only children of poor families prior to divorce appear to be worse off, that effect however is only significant at the 10% level. Note that the main effect of divorce appears to decrease, but that is merely the result of including interactions with dummy variables. The predicted divorce effect now reflects the predicted effect for families with average economic resources, who did read to their child, with average number of children, and with older mothers. In fact, adding these interactions does not reduce the protective effect of having a more highly educated mother. The effect remains strong and significant. Hypothesis 2 receives further support as the interaction with father's educational level becomes significant and is of the same size as the mother's protective effect. Taken together, the three significant interactions of the positive influence of mother's educational level, the negative of the father's, and the weak negative effect of pre-divorce poverty point in the direction that economic resources are influential for the child's psychological adjustment following divorce.

4.2. Academic performance

Table 3 investigates the impact of parental divorce on the child's academic performance using the reading test and Table 4 repeats the exercise for the math test. The results of model 1 in Tables 3 and 4 show that children whose parents divorced have an about .1 standard deviation lower academic performance on both the reading and math tests compared to children whose parents stayed together. Parental divorce appears to have a weaker effect on these measures of academic performance than it has on psychological well-being. The effects of the control variables differ from the analysis of child psychological well-being. Children with a higher psychological well-being at age 5 do better overall; by about .06 standard deviation. Academic ability at age 5 is a strong predictor of age 10 scores in reading and math, as a 1 standard deviation is associated with .4 standard deviation higher scores. We find that boys do worse than girls in reading, but better in math. Children whose mothers were more psychologically troubled at baseline show lower levels on both indicators of academic performance, but the effect was weaker than it was on child psychological well-being.

Parental shared economic and social resources reported at age 5 are important predictors of reading and math scores at age 10. Children whose parents were poorer when they were 5 had lower levels of academic performance. Children whose parent read to them had higher scores. The number of siblings of a child does not appear to affect academic performance. Children of young mothers performed worse at reading but not at math.

Unlike psychological well-being, the direct effects of both parents' educational level on the academic performance are significant and of larger size. Net of controls, a higher educational level of the mother and father increased academic performance on both the reading and math tests. The mother's education appeared to be somewhat more important as the effect is larger than that of the father for both tests.

The second and third models add the interaction effects of mother's and father's educational level with parental divorce. These models paint a somewhat different picture for the academic performance compared to psychological well-being. Similarly, a more highly educated mother does not appear to buffer the negative of divorce on the child's reading ($p = .212$) and math scores ($p = .713$) if we do not simultaneously include the father's. For the reading test, however, children of more highly educated fathers experience less negative effects of divorce. The impact of divorce is nullified for children with fathers whose educational level is at least one standard deviation above the mean ($-.095 + 1 * .114$). No such protective effect is found for math ($p = .713$). Model 4 adds the interactions with the parents' educational level simultaneously. Note that for psychological well-being we previously observed that the effects changed as a result of holding the other parent's educational level constant. No such change is observed for the reading and math test. The interaction with mother's educational level remains insignificant and the positive interaction with the father's educational level for the reading score remains positive and significant. Apparently, the loss of a high resource father makes divorce worse with regard to the child's psychological well-being, but for doing well at school it has the opposite effect (at least for reading).

The interactions of divorce with the pre-divorce economic and social resources are added in model 5. Note that as before (the interpretation of) the divorce effect changes because we added interactions with dummy variables. The results reveal a striking finding for both the reading and math academic test scores: children who had more social resources in the form of at least one parent who read to them at age 5 suffer much less negatively from parental divorce than children whose parents did not read to them (about 20% of the children, see Table 1). In the group of children whose parents did not read to them (=reference group) divorce is associated with an about .352 and .311 standard deviations lower score on reading and math respectively. For children whose parents read to them only minor negative effects of divorce ($-.352 + .301 = -.49$ for reading and $-.311 + .258 = -.53$ for math) were found. The other pre-divorce characteristics do not significantly moderate the impact of divorce for reading and math. The interactions with mother's and father's educational level are hardly affected by adding these interactions. The mother's educational level remains insignificant. For the father, the positive interaction for reading decreases somewhat in size (.114 to .096) and drops in significance to the 10% level. This suggests that the positive effect of father's educational level can be in part explained by the higher social resources that such a father may bring.

Table 3
Effects of parental divorce between age 5 and 10 on reading test (std.) administered at age 10. Standard errors in parentheses. N = 7635.

	1 Baseline		2 Mother's education		3 Father's education		4 Both parents' education		5 Pre-divorce shared resources	
Intercept	−.010	(.026)	−.011	(.026)	−.011	(.026)	−.011	(.026)	.006	(.026)
Controls (at age 5)										
Child psych. well-being (std.)	.056	(.011)***	.056	(.011)***	.055	(.011)***	.055	(.011)***	.056	(.011)***
Child academic ability (std.)	.415	(.011)***	.415	(.011)***	.415	(.011)***	.415	(.011)***	.416	(.011)***
Male (ref. = female)	−.182	(.019)***	−.182	(.019)***	−.181	(.019)***	−.181	(.019)***	−.179	(.019)***
Mother's psych. distress (std.)	−.019	(.011)~	−.019	(.011)~	−.019	(.011)~	−.019	(.011)~	−.019	(.011)~
Shared resources (at age 5)										
Economic deprivation (std.)	−.042	(.012)***	−.042	(.012)***	−.042	(.012)***	−.042	(.012)***	−.038	(.012)**
A parent read to child (ref. = did not read)	.131	(.026)***	.131	(.026)***	.131	(.026)***	.131	(.026)***	.111	(.027)***
Number of siblings (std.)	−.029	(.038)	−.029	(.038)	−.027	(.038)	−.027	(.038)	−.049	(.040)
Young mother (mother's age <20 at birth)	−.052	(.011)***	−.052	(.011)***	−.052	(.011)***	−.052	(.011)***	−.055	(.012)***
Mother's educational level (std.)	.094	(.012)***	.091	(.012)***	.094	(.012)***	.094	(.012)***	.096	(.012)***
Father's educational level (std.)	.086	(.012)***	.086	(.012)***	.081	(.012)***	.081	(.012)***	.081	(.012)***
Parental divorce (ref. = family remained intact)	−.097	(.043)*	−.097	(.043)*	−.095	(.043)*	−.095	(.043)*	−.352	(.098)***
Divorce * mother's edu. (std.)			.058	(.046)			.001	(.053)	−.007	(.054)
Divorce * father's edu. (std.)					.114	(.046)*	.114	(.054)*	.096	(.056)~
Divorce * economic depriv. (std.)									−.040	(.047)
Divorce * a parent read to child									.301	(.110)**
Divorce * number of siblings (std.)									.176	(.125)
Divorce * young mother									.039	(.045)

Note: Combined estimates from imputed datasets (10 imputations) using Rubin's rules.
~ *p* < .10.
* *p* < .05.
** *p* < .01.
*** *p* < .001, two-sided.

Table 4
Effects of parental divorce between age 5 and 10 on math test (std.) administered at age 10. Standard errors in parentheses. N = 7625.

	1 Baseline		2 Mother's education		3 Father's education		4 Both parents' education		5 Pre-divorce shared resources	
Intercept	−.109	(.026)***	−.109	(.026)***	−.109	(.026)***	−.109	(.026)***	−.095	(.027)***
Controls (at age 5)										
Child psych. well-being (std.)	.055	(.011)***	.055	(.011)***	.055	(.011)***	.055	(.011)***	.055	(.011)***
Child academic ability (std.)	.403	(.011)***	.403	(.011)***	.403	(.011)***	.403	(.011)***	.404	(.011)***
Male (ref. = female)	.057	(.020)**	.057	(.020)**	.057	(.020)**	.057	(.020)**	.058	(.020)**
Mother's psych. distress (std.)	−.029	(.011)**	−.029	(.011)**	−.029	(.011)**	−.029	(.011)**	−.028	(.011)*
Shared resources (at age 5)										
Economic deprivation (std.)	−.048	(.012)***	−.048	(.012)***	−.048	(.012)***	−.048	(.012)***	−.047	(.013)***
A parent read to child (ref. = did not read)	.102	(.027)***	.102	(.027)***	.102	(.027)***	.102	(.027)***	.085	(.028)**
Number of siblings (std.)	−.041	(.039)	−.041	(.039)	−.041	(.039)	−.041	(.039)	−.049	(.041)
Young mother (mother's age <20 at birth)	−.016	(.011)	−.016	(.011)	−.016	(.011)	−.016	(.011)	−.021	(.012)~
Mother's educational level (std.)	.100	(.012)***	.099	(.012)***	.100	(.012)***	.100	(.013)***	.101	(.013)***
Father's educational level (std.)	.079	(.012)***	.079	(.012)***	.078	(.012)***	.078	(.012)***	.078	(.012)***
Parental divorce (ref. = family remained intact)	−.102	(.044)*	−.101	(.044)*	−.101	(.044)*	−.101	(.044)*	−.311	(.101)**
Divorce * mother's edu. (std.)			.017	(.047)			.005	(.054)	−.000	(.055)
Divorce * father's edu. (std.)					.027	(.047)	.024	(.054)	.019	(.057)
Divorce * economic depriv. (std.)									−.006	(.047)
Divorce * a parent read to child									.258	(.113)*
Divorce * number of siblings (std.)									.057	(.128)
Divorce * young mother									.059	(.045)

Note: Combined estimates from imputed datasets (10 imputations) using Rubin's rules.
~ *p* < .10.
* *p* < .05.
** *p* < .01.
*** *p* < .001, two-sided.

4.3. Gender differences

Numerous studies report differences between boys and girls in the effects of parental divorce, although more recent studies do not appear to find such differences (Amato, 2010). However, it could be that the loss of the father's resources is most harmful for boys and the mother's resources may be more protective for girls. We therefore ran a number of additional analyses (not shown, available upon request) to investigate whether the impact of divorce and the moderating factors of mother's and father's educational level had different effects for boys and girls. These analyses revealed that the effects are broadly similar and did not differ significantly.

5. Conclusion and discussion

We used the British Cohort Study to investigate to what extent parental resources moderate the association between parental divorce on two child outcomes; psychological well-being and academic performance (reading and math test scores). We argued that better educated mothers may be better able to provide a safe and stable environment for their children after divorce. Children of mothers with more years of education may therefore suffer *less* when their parents split up. Furthermore, we argued that having a better educated father could either aggravate or reduce the effects of parental divorce. Moreover, we held a range of pre-divorce shared economic and social resources constant and also investigated whether these moderated the impact of divorce. We tested these assertions on a large prospective dataset of children that included measures taken at ages 5 and 10. Between age 5 and 10 about 5% of the parents had divorced (499 children).

We have found some evidence that the mother's educational level interacts with parental divorce for psychological well-being. We found a positive interaction effect, showing that a parental divorce in childhood is less detrimental to child psychological well-being if the mother is better educated. For the best educated mothers, there may even be a small positive effect, but for lower educated mothers, the effect is quite negative. This interaction was only found when the interaction with father's education was also included. For academic performance, we did not find an interaction effect for the mother.

For father's education, we had opposite predictions and the results are somewhat more uncertain. When we focus on child psychological well-being, we see a negative interaction effect. For academic performance with regard to reading we find a positive interaction effect; children of more highly educated father's experience less negative effects of divorce for doing well academically.

For the shared pre-divorce resources, we find that net of the parental educational interactions children from poor families suffer more psychologically from divorce. Social resources, whether parents read to their children prior to divorce, predicted a much reduced impact of divorce on both the reading and math academic test scores.

Theoretically, we suggested several mechanisms to understand the interaction effects. For the mother, we argued that better educated mothers would be less likely to fall into poverty after divorce. We also argued that better educated mothers would be more aware of the possible harm of divorce to their children, and hence, would be more likely to make additional investments in their children after divorce. Finally, we argued that better educated mothers would suffer less psychologically from a divorce compared to lower educated mothers. This too, could have a positive outcome for children. Although these mechanisms have been studied and confirmed in other research before, it remains to be seen which of these mechanisms is most responsible for the interactions that we found. Our main purpose now was to establish that there was an interaction effect in the first place. We established this, but can offer only tentative explanations for our findings. For psychological well-being we found three interactions effects with divorce: children with a more highly educated mother were better off, worse off if the father was more highly educated, and worse off if the family was poor prior to divorce. All in all, this pattern suggests that children cope better with divorce if their parents can ensure their material well-being. For the other dimension of well-being, doing well in school, our findings suggest another mechanism. Here we found that children with a more highly educated father and children whose parents read to them prior to divorce did not suffer as much from divorce. This suggests that children can do well in school despite a divorce as long as both parents remain involved, and that material circumstances play less of a role.

The consequences of our findings are complex. At first, the finding seems to have a positive implication. As the population of most western societies continues to become better educated, we would expect that the effects of divorce on children in general would also become less negative in society. At the same time, however, there is evidence that in some societies, divorce has become relatively more common among the lower educated than among the better educated (Graaf and Kalmijn, 2001; Hoem, 1997; Martin, 2006). This would run counter to the previous, more optimistic conclusion. The picture may be even bleaker, as the benefits of education found in this study could have arisen solely because education indicates someone's relative position in society. Educational expansion therefore does not necessarily bring more resources to children. Finally, and more importantly, we could argue that the interactions that we found imply a cumulative disadvantage. Children of lower educated parents have worse life chances in the first place and when their parents divorce or separate, they are affected more negatively. This suggests that the problem of divorce may become more rather than less important over time. It also means that issues of family life and social stratification remain closely linked in modern societies (McLanahan, 2004).

Appendix A

Included items in child's psychological well-being scale:

is very restless
is squirmy/fidgety
often destroys belongings
frequently fights with others
is often worried
is rather solitary
is irritable, quick to anger
often appears miserable/unhappy
sometimes takes others' things
is often disobedient
cannot settle to do things
is fearful/afraid of new things
is fussy or over-particular
often tells lies

Appendix B. Additional analysis using the wave at age 16

See Tables B1 and B2.

Table B1
Effects of parental divorce between age 5 and 10 on adolescent psychological well-being (std.) Age 16. *N* = 4951.

	1 Divorce		2 Mother's education		3 Father's education		4 Both parents' education		5 Shared resources	
Intercept	−.006	(.035)	−.006	(.035)	−.006	(.035)	−.006	(.035)	−.007	(.036)
Controls (at age 5)										
Child psych. well-being (std.)	.312	(.015)***	.312	(.015)***	.312	(.015)***	.312	(.015)***	.312	(.015)***
Child academic ability (std.)	.088	(.015)***	.088	(.015)***	.088	(.015)***	.088	(.015)***	.088	(.015)***
Male (ref. = female)	.009	(.026)	.009	(.026)	.009	(.026)	.009	(.026)	.009	(.026)
Mother's psych. distress (std.)	−.075	(.015)***	−.075	(.015)***	−.075	(.015)***	−.075	(.015)***	−.074	(.015)***
Shared resources (at age 5)										
Economic deprivation (std.)	−.034	(.016)*	−.035	(.016)*	−.034	(.016)*	−.035	(.016)*	−.027	(.017)
A parent read to child (ref. = did not read)	.012	(.036)	.013	(.036)	.012	(.036)	.013	(.036)	.016	(.037)
Number of siblings (std.)	−.087	(.053)	−.086	(.053)	−.085	(.053)	−.086	(.053)	−.102	(.057)~
Young mother (mother's age <20 at birth)	−.020	(.016)	−.020	(.016)	−.020	(.016)	−.020	(.016)	−.027	(.016)~
Mother's educational level (std.)	−.021	(.015)	−.026	(.016)~	−.020	(.015)	−.026	(.016)~	−.026	(.016)
Father's educational level (std.)	.015	(.015)	.016	(.015)	.013	(.015)	.016	(.015)	.017	(.015)
Parental divorce (ref. = family remained intact)	−.177	(.059)**	−.186	(.059)**	−.179	(.059)**	−.186	(.059)**	−.127	(.151)
Divorce * mother's edu. (std.)			.131	(.064)*			.131	(.070)~	.124	(.071)~
Divorce * father's edu. (std.)					.058	(.067)	.000	(.074)	−.013	(.077)
Divorce * economic depriv. (std.)									−.141	(.073)~
Divorce * a parent read to child									−.086	(.165)
Divorce * number of siblings (std.)									.096	(.059)
Divorce * young mother									.159	(.164)

Note: Combined estimates from imputed datasets (10 imputations) using Rubin's rules.
~ *p* < .10.
* *p* < .05.
** *p* < .01.
*** *p* < .001, two-sided.

Table B2
Pooled analysis. Effects of parental divorce between age 5 and 10 on child psychological well-being (std.) age 10 and adolescent psychological well-being age 16 (std.). Standard errors (adjusted for clustering) in parentheses. $N = 13,957$; N children = 9006.

	1 Divorce		2 Mother's education		3 Father's education		4 Both parents' education		5 Shared resources	
Intercept	.017	(.024)	.016	(.024)	.017	(.024)	.016	(.024)	.012	(.025)
Age 16 (ref = age 10)	−.008	(.014)	−.008	(.014)	−.008	(.014)	−.008	(.014)	−.008	(.014)
Controls (at age 5)										
Child psych. well-being (std.)	.348	(.012)***	.348	(.012)***	.348	(.012)***	.348	(.012)***	.348	(.012)***
Child academic ability (std.)	.073	(.010)***	.072	(.010)***	.073	(.010)***	.072	(.010)***	.073	(.010)***
Male (ref. = female)	−.080	(.016)***	−.080	(.016)***	−.081	(.016)***	−.080	(.016)***	−.080	(.016)***
Mother's psych. distress (std.)	−.091	(.011)***	−.091	(.011)***	−.091	(.011)***	−.091	(.011)***	−.090	(.011)***
Shared resources (at age 5)										
Economic deprivation (std.)	−.035	(.011)**	−.036	(.011)**	−.035	(.011)**	−.036	(.011)**	−.030	(.011)**
A parent read to child (ref. = did not read)	.044	(.025)~	.044	(.025)~	.044	(.025)~	.044	(.025)~	.050	(.025)~
Number of siblings (std.)	−.075	(.038)~	−.075	(.038)~	−.075	(.038)*	−.076	(.038)*	−.073	(.041)~
Young mother (mother's age <20 at birth)	−.022	(.011)*	−.022	(.011)*	−.022	(.011)*	−.022	(.011)*	−.027	(.011)*
Mother's educational level (std.)	−.008	(.010)	−.013	(.010)	−.008	(.010)	−.014	(.010)	−.014	(.010)
Father's educational level (std.)	.024	(.009)*	.024	(.009)**	.024	(.010)*	.027	(.010)**	.028	(.010)**
Parental divorce (ref. = family remained intact)	−.158	(.044)***	−.156	(.044)***	−.158	(.044)***	−.157	(.044)***	−.054	(.088)
Divorce * age 16	−.016	(.078)	−.024	(.078)	−.015	(.078)	−.023	(.078)	−.027	(.079)
Divorce * mother's edu. (std.)			.093	(.035)**			.121	(.039)**	.115	(.039)**
Divorce * father's edu. (std.)					−.004	(.038)	−.062	(.044)	−.077	(.046)~
Divorce * economic depriv. (std.)									−.104	(.051)*
Divorce * a parent read to child									−.108	(.099)
Divorce * number of siblings (std.)									.003	(.122)
Divorce * young mother									.072	(.047)

Note: Combined estimates from imputed datasets (10 imputations) using Rubin's rules.
~ $p < .10$.
* $p < .05$.
** $p < .01$.
*** $p < .001$, two-sided.

References

Albertini, Marco, Dronkers, Jaap, 2009. Effects of divorce on children's educational attainment in a Mediterranean and catholic society – evidence from Italy. Eur. Soc. 11, 137–159.

Amato, Paul R., 2000. The consequences of divorce for adults and children. J. Marriage Family 62, 1269–1287.

Amato, Paul R., 2010. Research on divorce: continuing trends and new developments. J. Marriage Family 72, 650–666.

Amato, Paul R., Gilbreth, Joan G., 1999. Nonresident fathers and children's well-being: a meta-analysis. J. Marriage Family 61, 557.

Artis, J.E., 2007. Maternal cohabitation and child well-being among kindergarten children. J. Marriage Family 69, 222–236.

Biblarz, Timothy J., Raftery, Adrian E., 1993. The effects of family disruption on social mobility. Am. Sociol. Rev. 58, 97–109.

Carlin, John B., Galati, John C., Royston, Patrick, 2008. A new framework for managing and analyzing multiply imputed data in stata. Stata J. 8, 49–67.

Cavanagh, Shannon E., Huston, Aletha C., 2006. Family instability and children's early problem behavior. Soc. Forces 85, 551.

Cheadle, Jacob E., Amato, Paul R., King, Valarie, 2010. Patterns of nonresident father contact. Demography 47, 205–225.

Cherlin, A.J., Furstenberg, F.F., Chase-Lansdale, L., Kiernan, K.E., Robins, P.K., Morrison, D.R., Teitler, J.O., 1991. Longitudinal studies of effects of divorce on children in Great Britain and the United States. Science 252, 1386–1389.

Cherlin, Andrew J., Lindsay Chase-Lansdale, P., McRae, Christine, 1998. Effects of parental divorce on mental health throughout the life course. Am. Sociol. Rev. 63, 239.

Cooksey, Elizabeth N., Craig, Patricia H., 1998. Parenting from a distance: the effects of paternal characteristics on contact between nonresidential fathers and their children. Demography 35, 187–200.

Damme, Maike Van, Kalmijn, Matthijs, Uunk, Wilfred, 2009. The employment of separated women in Europe: individual and institutional determinants. Eur. Sociol. Rev. 25, 183–197.

Elliott, B. Jane, Richards, Martin P.M., 1991. Children and divorce: educational performance and behavior before and after parental separation. Int. J. Law Policy Family 5, 258–276.

Fischer, Tamar, 2007. Parental divorce and children's socio-economic success: conditional effects of parental resources prior to divorce, and gender of the child. Sociology 41, 475–495.

Fomby, Paula, Cherlin, Andrew J., 2007. Family instability and child well-being. Am. Sociol. Rev. 72, 181–204.

Graaf, Paul M. De, Kalmijn, Matthijs, 2001. Trends in the intergenerational transmission of cultural and economic status. Acta Sociol. 44, 51–66.

Grusky, David, DiPrete, Thomas, 1990. Recent trends in the process of stratification. Demography 27, 617–637.

Hagan, John, MacMillan, Ross, Wheaton, Blair, 1996. New kid in town: social capital and the life course effects of family migration on children. Am. Sociol. Rev. 61, 368–385.

Hanson, Thomas L., 1999. Does parental conflict explain why divorce is negatively associated with child welfare? Soc. Forces 77, 1283.

Hetherington, E. Mavis, Stanley-Hagan, Margaret, 1999. The adjustment of children with divorced parents: a risk and resiliency perspective. J. Child Psychol. Psychiatry 40, 129–140.

Hoem, Jan M., 1997. Educational gradients in divorce risks in sweden in recent decades. Population Stud. 51, 19–27.

Jarvis, Sarah, Jenkins, Stephen P., 1999. Marital splits and income changes: evidence from the british household panel survey. Population Stud. 53, 237–254.

Jenkins, Stephen P., 2008. Marital splits and income changes over the longer term. Ins, Colchester.

Jonsson, Jan O., Gahler, Michael, 1997. Family dissolution, family reconstitution, and children's educational careers: recent evidence for Sweden. Demography 34, 277.

Kalmijn, Matthijs, 1999. Father involvement in childrearing and the perceived stability of marriage. J. Marriage Family 61, 409–421.

Kalmijn, Matthijs, 2010. Racial differences in the effects of parental divorce and separation on children: generalizing the evidence to a European case. Soc. Sci. Res. 39, 845–856.

Kiernan, Kathleen, 1997. The Legacy of Parental Divorce. Social, Economic and Demographic Experiences in Adulthood. Centre for Analysis of Social Exclusion, LSE, London.

Kiernan, Kathleen E., Huerta, M. Carmen, 2008. Economic deprivation, maternal depression, parenting and children's cognitive and emotional development in early childhood. British J. Sociol. 59, 783–806.

King, Valarie, Sobolewski, Juliana M., 2006. Nonresident fathers' contributions to adolescent well-being. J. Marriage Family 68, 537.

Liu, Ruth X., Chen, Zeng-Yin, 2006. The effects of marital conflict and marital disruption on depressive affect: a comparison between women in and out of poverty. Social Sci. Quart. 87, 250–271.

Mandemakers, Jornt J., Monden, Christiaan W.S., Kalmijn, Matthijs, 2010. Are the effects of divorce on psychological distress modified by family background? Adv. Life Course Res. 15, 27–40.

Martin, Steven P., 2006. Trends in marital dissolution by women's education in the United States. Demographic Res. 15, 537–560.

McLanahan, Sara, 1985. Family structure and the reproduction of poverty. Am. J. Sociol. 90, 873–901.

McLanahan, Sara, 2004. Diverging destinies: how children are faring under the second demographic transition. Demography 41, 607–627.

McLanahan, Sara.S., Sandefur, Gary., 1994. Growing Up With a Single Parent: What Hurts, What Helps. Harvard University Press, Cambridge, MA.

Morrison, Donna Ruane, Coiro, Mary Jo, 1999. Parental conflict and marital disruption: do children benefit when high-conflict marriages are dissolved? J. Marriage Family 61, 626.

Osborne, Cynthia, McLanahan, Sara, 2007. Partnership instability and child well-being. J. Marriage Family 69, 1065.

Reynolds, John R., Ross, Catherine E., 1998. Social stratification and health: education's benefit beyond economic status and social origins. Soc. Probl. 45, 221–247.

Rodgers, Bryan, Pickles, A., Collishaw, S., Power, Chris, Maughan, B., 1999. Validity of the Malaise inventory in general population samples. Soc. Psychiatry Psychiatr. Epidemiol. 34, 333–341.

Sayer, Liana C., Gauthier, Anne H., Furstenberg, Frank F., 2004. Educational differences in parents' time with children: cross-national variations. J. Marriage Family 66, 1152–1169.

Schwartz, Christine, Mare, Robert, 2005. Trends in educational assortative marriage from 1940 to 2003. Demography 42, 621–646.

Seltzer, Judith A., 1991. Relationships between Fathers and children who live apart: the father's role after separation. J. Marriage Family 53, 79.

Seltzer, Judith A., 1998. Father by law: effects of joint legal custody on nonresident fathers' involvement with children. Demography 35, 135–146.

Sigle-Rushton, Wendy, Hobcraft, John, Kiernan, Kathleen, 2005. Parental divorce and subsequent disadvantage: a cross-cohort comparison. Demography 42, 427–446.

Strohschein, Lisa, 2005a. Household income histories and child mental health trajectories. J. Health Soc. Behav. 46, 359–375.

Strohschein, Lisa, 2005b. Parental divorce and child mental health trajectories. J. Marriage Family 67, 1286.

Sun, Yongmin, Li, Yuanzhang, 2002. Children's well-being during parents' marital disruption process: a pooled time-series analysis. J. Marriage Family 64, 472.

Sun, Yongmin, Li, Yuanzhang, 2009. Parental divorce, sibship size, family resources, and children's academic performance. Soc. Sci. Res. 38, 622.

Thomson, E., Hanson, T.L., McLanahan, S.S., 1994. Family-structure and child well-being – economic-resources vs parental behaviors. Soc. Forces 73, 221–242.

Turney, Kristin, 2011. Chronic and proximate depression among mothers: implications for child well-being. J. Marriage Family 73, 149.

Werfhorst, Herman G.van de, Kraaykamp, Gerbert, 2001. Four field-related educational resources and their impact on labor, consumption, and sociopolitical orientation. Sociol. Educ. 74, 296–317.

Wu, Lawrence L., Thomson, Elizabeth, 2001. Race differences in family experience and early sexual initiation: dynamic models of family structure and family change. J. Marriage Family 63, 682.