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The Intergenerational Transmission of Socioeconomic Status in Stepfamilies: What Happens if Two Fathers Are Involved in the Transmission Process?

Objective: *This study examines the intergenerational transmission of socioeconomic status among people who have a biological father as well as a stepfather. In particular, this study investigates how the relative importance of biological fathers and stepfathers in the transmission process depends on the time in*

coresidence, postdivorce contact frequency, and parental involvement.

Background: *The traditional literature on social mobility and stratification has a strong focus on the intact family. Recently, a new strand of literature on the transmission process in divorced families has emerged. However, little is known about the role of contact quantity and quality in the intergenerational transmission process in divorced families.*

Method: *The authors used the newly collected survey Parents and Children in the Netherlands and selected 1,540 respondents from stepfamilies. A structural equation model was used for the analysis.*

Results: *Biological fathers who have more frequent contact with their children after divorce and who are more involved in the school life of their child are more influential in the transmission process. This is also true for more involved stepfathers. In addition, there is evidence that stepfathers are especially important when there is limited contact with the biological father.*

Conclusion *Based on these findings, it could be said that stepfathers “replace” absent biological fathers but the role of stepfathers is relatively small when the biological father stays involved in the life of the child.*

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Key Words: education, intergenerational transmission, non-residential parenting, postdivorce parenting, stepfamilies.

The literature on social mobility and status attainment generally concludes that parents' socioeconomic status is positively associated with the socioeconomic outcomes of children (e.g., Beller, 2009; Blau & Duncan, 1967; Hout, 1988). However, the focus in this literature is implicitly on the role of residential biological parents, although it could be argued that this perspective needs to be reconsidered in a time that divorce and remarriage have become more and more common (Tach, 2015; Thomson, 2014). As a result of the increased rates of divorce, separation, and repartnering, stepparents enter children's lives, which means that more than two parent figures are involved in the intergenerational transmission of socioeconomic status. To complicate matters even more, divorce and remarriage interfere with mechanisms such as coresidence and parental involvement that are assumed to be crucial for the transmission process in the classic literature on mobility and status attainment (e.g., Coleman, 1988). Several scholars have argued that regular contact and coresidence strengthen the transmission process (Coleman, 1988; Grusec & Hastings, 2014), but in stepfamilies, one of the biological parents (usually the father) moves out and a stepparent enters the household only later in time.

In this study, we examine the intergenerational transmission of educational attainment in families with children who experienced a parental divorce or separation and who lived with a stepfather during childhood. These children have two father figures: their biological father and their stepfather. In traditional mobility studies, the father plays a crucial role in the intergenerational transmission process—but what happens if there are two father figures? Does one father figure substitute the other, or is it possible that both father figures are involved in the intergenerational transmission process simultaneously? Also, under what conditions does one of the father figures become more important in the transmission process than the other?

Only a handful of studies have previously examined the intergenerational transmission process in divorced families (Biblarz & Raftery, 1993; De Leeuw, Kalmijn, & Van Gaalen, 2018; Eriksen, Sundet, & Tambs, 2013; Erola & Jalovaara, 2017; Kalmijn, 2015). These studies generally show a positive association between the resources of stepfathers and the socioeconomic outcomes of children, also after controlling for the resources of the biological parents. Less

agreement exists about the role of nonresidential biological fathers. Although some authors report that the association between the socioeconomic status of biological fathers and children is weaker for nonresidential fathers than for residential fathers (De Leeuw et al., 2018; Erola & Jalovaara, 2017), others find no significant difference (Kalmijn, 2015). Erola and Jalovaara (2017) are to our knowledge the only scholars who explicitly addressed the relative importance of biological fathers vis-à-vis stepfathers in the transmission process, and they concluded, based on Finnish register data, that the influence of biological fathers' socioeconomic status disappears almost completely when a stepfather enters the household (Erola & Jalovaara, 2017).

An important limitation of the existing literature is the lack of attention for heterogeneity in predivorce and postdivorce contact in stepfamilies. It is likely that the relative importance of biological fathers and stepfathers in the transmission process is conditioned by the amount of contact with the child. Contact between parents and children is assumed to be an important mechanism for the intergenerational transmission process. Through contact, the child is able to access parental resources, such as talking about school-related matters, receive help with homework, and read books together (Coleman, 1988; Grusec & Hastings, 2014). However, the amount of contact is not the same in every stepfamily. Some (step)fathers coreside longer with the child than others (duration) and some biological fathers have more frequent contact with their children after divorce than others. One previous study included an aspect of this heterogeneity by examining the role of the number of years in coresidence for biological fathers and children, but there was no statistically significant moderator effect of duration found (De Leeuw et al., 2018). The authors suggest that a duration effect might be absent due to the heterogeneity in postdivorce contact among nonresidential biological fathers. We improve on the existing literature by including two measures of postdivorce contact. First, we include a direct measure of postdivorce contact frequency between biological fathers and their children. Second, we include a measure of paternal involvement in the school life of the child for the biological father as well as the stepfather.

Research on the intergenerational transmission process in nonintact families has, until now, been hampered by serious data limitations. Some

studies used register data, which ensures a sufficient number of cases but limits the analysis to a small and basic set of variables (e.g., Erola & Jalovaara, 2017). Others used survey data, which can provide access to a wider variety of variables, such as postdivorce contact frequency, but is limited by small numbers of stepfamilies (e.g., De Leeuw et al., 2018). In this article, we use a newly conducted multiactor survey among adult children (ages 25–46), who are named “anchors”, and their parents and the current partners of their parents (if applicable), who are named “alters” (Kalmijn et al., 2018). In the dataset, stepfamilies are systematically oversampled via the registers. As a result, the survey combines a large number of children from stepfamilies with a wide range of variables for all existing parent figures. For the purpose of this study, we selected 1,540 respondents who experienced a parental divorce or separation before the age of 16 and who lived with their mother and her new partner (stepfather) during childhood.

THEORY

From a sociological perspective, the transmission of educational attainment depends largely on parental resources, such as financial, cultural, and social capital. Previous literature indicates that financial capital is of little importance in the Dutch context due to the relatively low costs of education and the availability of financial support for students of low-income families (De Graaf, 1986, 1988). In contrast, cultural capital, a concept derived from Bourdieu (1973) to describe the set of parental characteristics that might benefit the educational attainment of a child—such as reading behavior, consumption of high-brow culture, or a specific taste—has been shown to be positively associated with the educational attainment of children, also in the Netherlands (Andersen & Jæger, 2015; De Graaf, De Graaf, & Kraaykamp, 2000; Xu & Hampden-Thompson, 2011). However, Coleman (1988) argued that whether there is social capital in the family is especially crucial. He stated that the educational attainment of a child will only benefit from the aforementioned parental resources if there is also within-family social capital. Within-family social capital is based on the following two core elements: (a) the presence of the parent and (b) the involvement of the parent in the socialization process. These two elements enable children to get

access to relevant parental resources (Coleman, 1988; Grusec & Hastings, 2014).

In this study, we argue that the relative importance of biological fathers and stepfathers varies between stepfamilies and is influenced by differences in within-family social capital. Some nonresidential fathers might stay closely involved in their children’s socialization, whereas others lose contact completely (e.g., Cheadle, Amato, & King, 2010; Juby, Billette, Laplante, & Le Bourdais, 2007). Moreover, there are stepfathers who enter the child’s life when they are still young, whereas others arrive only when the child is already a teenager. This study is an important contribution to the literature because it does not only acknowledge these variations but also it addresses them empirically. We do this in three ways, namely, by examining the importance of (a) the number of years lived in the same household, (b) postdivorce contact frequency (only biological fathers), and (c) parental involvement.

However, before we continue it should be acknowledged that the heritability of intelligence also plays a role in the transmission process. Despite the debate on the relative importance of genetic inheritance and socialization (Branigan, McCallum, & Freese, 2013), there seems to be a general consensus that the transmission of socioeconomic status depends at least partly on the heritability of intelligence, and this could be relevant in families where not all parents have a biological bond with the child (such as stepfamilies). The aim of this article is not to disentangle the relative importance of genetic and environmental factors in the transmission process. Nevertheless, it is important to keep in mind that, especially when the replaceability of biological fathers is discussed, biological fathers might always influence their child’s educational attainment simply due to the genes they share with their children.

The number of years (step)parents live with a child is a good start to study the role of within-family social capital in the transmission process. If parents and children live in the same household, they see each other on a regular basis, and the parents are more easily involved in the daily life of a child. Hence, we would expect (step)fathers who live longer with their children to have more time to build within-family social capital and to transmit educational attainment. Based on this assumption, we formulate the following two hypotheses:

H1a: The longer a nonresidential biological father lived in the same household as the child, the stronger the association between the socioeconomic status of the nonresidential biological father and the educational attainment of the child.

H1b: The longer a stepfather lived in the same household as the child, the stronger the association between the socioeconomic status of the stepfather and the educational attainment of the child.

It seems to make sense from a theoretical perspective that more time together in the same household results in a stronger association between the socioeconomic status of parents and the educational outcomes of children. However, the only previous study we are aware of that examined the importance of the number of years in the same household for biological fathers and children did not find a statistically significant moderation effect of the length of coresidence on the transmission process (De Leeuw et al., 2018). The authors argue that the absence of a significant moderation effect might be the result of heterogeneity in postdivorce contact between fathers and children.

The beneficial effects of contact itself on the educational attainment of the child, that is, the main effect of contact, has been studied extensively. For example, Tanskanen and Erola (2017) show in their study that the involvement of nonresidential fathers is beneficial for the cognitive and educational outcomes of children. In addition, there is a large body of literature on the importance of parental time investment for the cognitive outcomes of children, which generally supports the idea that spending more time with parents is beneficial for the educational outcomes of children (Bono, Francesconi, Kelly, & Sacker, 2016; Cano, Perales, & Baxter, 2018). Based on Coleman's within-family social capital it could be said that there is not only a positive main effect of contact but also that contact is an effective way through which transmission takes place. Only if there is contact, the child is able to access parental resources. Examples of beneficial parental resources are high ambitions and pro-school norms as well as knowledge to guide children during homework or important educational decisions. These resources tend to be more common among parents with a high socioeconomic statuses and, therefore, high parental involvement that provides access to these resources might result in an increasing differentiation in educational performance between

the children of parents with high and low socioeconomic statuses. Hence, we include a measure of postdivorce contact frequency to test the following hypothesis:

H2: The association between the socioeconomic status of nonresidential biological fathers and the educational attainment of children is stronger when there is frequent contact after divorce.

The disadvantage of looking at postdivorce contact frequency is that it only informs us about the variation in contact with the biological father. It should be acknowledged, however, that there is also heterogeneity among stepfathers. We are able to include this heterogeneity with a separate analysis based on a measure of involvement in the school life of children that is available for biological fathers as well as stepfathers. Another advantage of this measure is that it focuses on an activity specifically related to education. Several researchers have suggested that especially time spent together on education-related activities is beneficial for the cognitive outcomes of children (Fiorini & Keane, 2014; Hsin & Felfe, 2014). Again, based on the concept of within-family social capital of Coleman (1988), we do not only expect a main effect of involvement but also an interaction with the socioeconomic status of the parents. In other words, we expect that involvement, just as postdivorce contact, is beneficial for the transmission process.

H3a: The association between the socioeconomic status of nonresidential biological father and the educational attainment of a child is stronger when the nonresidential biological father is more involved in the school life of the child after divorce.

H3b: The association between the socioeconomic status of a stepfather and the educational attainment of a child is stronger when the stepfather is more involved in the school life of the child.

Until this moment, we have mainly focused on how contact of (step)fathers with children influences their own transmission process. However, there are also reasons to believe that there is an interplay between the presence of a stepfather and the contact between biological fathers and children (Juby et al., 2007). Based on the family system perspective, the entrance of a stepfather into the family could result in ambiguity in roles (what is expected of each father figure?)

or a revival of conflict between the biological parents, which could influence the relationship between the biological father and the child in a negative way (Fustenberg & Cherlin, 1991; Juby et al., 2007). This line of reasoning corresponds with the findings of Erola and Jalovaara (2017), which suggested that the role of the biological father diminished to a minimum when a stepfather entered the family. Conversely, it could also be possible that the relationship between the biological father and the child affects the role of the stepfathers in the transmission process. To study under which conditions a stepfather might be able to replace the biological father, we include interaction effects between the contact frequency and involvement of the biological father and the socioeconomic status of the stepfather and vice versa.

Finally, it could be argued that the transmission process of biological mothers could be influenced by the involvement patterns of the biological father and the stepfather. Based on the existing literature, there are two main scenarios. First, it has been suggested that mothers compensate for the loss of resources after divorce (Mandemakers & Kalmijn, 2014). That is, the mother gets more important in the transmission process if the (step)father of the child is not very involved in the socialization to compensate for the absence of a second parental figure. Alternatively, there are also reasons to believe that the association between the socioeconomic status of the mother and the educational attainment of the child becomes stronger if the (step)father gets more involved. Time and energy are limited resources. If the other parent figures play a limited role in the life of a child, the mother has no partner to share daily tasks with, which might increase stress and depressive symptoms and reduce the time the mother has for her child (Cooper, McLanahan, Meadows, & Brooks-Gunn, 2009). If the biological father or stepfather is also involved in the socialization of the child, this might indicate that the mother shares daily tasks with another parent figure, leaving her more time and energy to be involved in the life of the child. This could strengthen the intergenerational transmission process of the biological mother.

DATA AND METHOD

A new multiactor survey, the Parents and Children in the Netherlands (*Ouders en Kinderen*

in Nederland [OKiN]), was conducted at the University of Amsterdam in the first half of 2017 (Kalmijn et al., 2018). The data have been collected in close collaboration with Statistics Netherlands and were designed to overcome several data limitations that hampered this field of research in the past. The survey is based on a stratified random sample of people aged 25 to 45 (born 1971–1991) from the Dutch population registers. Nonintact families and in particular stepfamilies are systematically oversampled. In this way, OKiN combines relevant variables, for example, on residential history and intergenerational relationships, with a large number of cases in stepfamilies. Furthermore, the OKiN has a multiactor design, meaning that the biological parents of respondents and, if applicable, the current new partners of parents also received a questionnaire. Finally, the relevant variables from the System of Social Statistical Datasets (SSD), such as educational attainment, income, and country of birth, are matched to the OKiN survey data by Statistics Netherlands. The SSD is a longitudinal system generated by Statistics Netherlands based on (a) registers, (b) data from the large-scale Labor Force Surveys, and (c) data from the Employee Insurance Agency (Bakker, Van Rooijen, & Van Toor, 2014; Statistics Netherlands, 2017). Altogether, the OKiN has become a rich data file. In total, 6,485 (adult) children (25–46) participated in the survey and are referred to as “anchors,” and 9,325 (step)parents responded and are referred to as “alters.” The anchor and alter data can be used separately, but it is also possible to merge the files. For this study, we use mostly the anchor data. The response rate was 62%, which is higher than other surveys on similar topics in the Netherlands. Moreover, the intergenerational correlations between the educational attainment of parents and children in intact families is comparable to other studies in the Netherlands (.32). The correlations in the Netherlands and this dataset fall in a normal range and are more or less comparable with most other Western countries. For example, Ballarino and Bernardi (2016) reported an intergenerational correlation between .2 and .4 in a comparison of 14 Western countries based on occupational measures. A country comparison by Bladen (2013), based on educational measures, reported correlations between .3 and .45 in most Western countries.

For this study, we use a sample of stepfamilies. There are 3,310 anchor respondents who

experienced a parental divorce before the age of 16. We use only those who lived with their biological mother or in a shared parenting arrangement and remove 732 respondents who had other living arrangements during childhood (mostly because they lived for a few years with their biological father). We remove 833 respondents because the mother did not live with a new partner during their childhood. Of our final sample, 18% reported that their mother had multiple new relationships during their childhood that lasted at least 2 years. In these cases, the partner who stayed the longest was selected. In addition, we drop 157 respondents who report that they do not know their biological father at all. Finally, we drop 31 cases where the mother entered a same-sex relationship after divorce. This results in a final sample of 1,540 anchor respondents.

Operationalization Variables

Our main dependent variable is anchors' self-reported highest attained level of education. All Dutch children attend elementary school from age 4 or 5 onward. When they are about 12 years old, they continue in secondary education in which they are divided over roughly the following three tracks: the lowest prevocational track, the middle track that offers general secondary education, and a track focusing on preuniversity education. Each track prepares students to continue in a matching track in postsecondary or tertiary education. Students finish secondary education when they are between 16 and 18 years old. Postsecondary education or tertiary education usually takes between 1 and 5 years, which means that our respondents, who are between 25 and 45 years old, have usually already finished their education. The variables consist of eight categories, with the lowest category being primary education or less and the highest category representing a university degree. Following the coding of Ganzeboom and Treiman (2017), we recoded educational degrees in years of education, ranging from 6 years for (less than) primary school to 17 years for university.

Our main independent variables measure the socioeconomic status of biological fathers, biological mothers, and stepfathers. This measure is based on the educational attainment and occupational status of each parent. We retrieved our information on parents' educational attainment from the following three different sources:

children reporting on the educational attainment of their parents, parents' self-reporting (retrieved from alter data), and register-based information of the SSD. The variables consist of the same eight categories as the educational variable of children and are also recoded into years of education in the same way. We decided to take the average years of education if more than one source was available and the sources did not correspond because we argue that all three sources have their weaknesses and that one is not necessarily preferred over another. We know from previous studies that children's reports of parents' educational attainment are not always accurate (Engzell & Jonsson, 2015; Kreuter, Eckman, Maaz, & Watermann, 2010), but it is also possible that self-reports of parents have an upward bias due to social desirability in the answers. The register variables might seem to be an objective measure, but the SSD file also has some limitations. The register data are more incomplete in the older cohorts, and as previously mentioned the SSD file is partly based on a large-scale survey and data from the Employee Insurance Agency, and as a result selectivity could potentially bias these data. It should also be noted that self-reported education or information based on the SSD for a stepfather is only possible if the stepfather from childhood is still together with the biological mother. All things considered, we believe it is best to use the average score across sources if scores differ. Our measure of occupational status is based on questions on the occupation of the respondents' (step)parents while they were growing up. If parents were unemployed, the respondents were asked to report on the last occupation of the (step)parent. The occupational status of parents is coded using the International Socio-Economic Index (ISEI) (Ganzeboom, De Graaf, & Treiman, 1992).

Another important set of variables indicates how many years (step)fathers and children lived together in the same household (duration). The duration for biological fathers is based on the age of divorce because we selected only biological fathers who lived together with the child at birth. To derive the duration effects for stepfathers, we use questions in which respondents have been asked whether they lived together in one household with the stepfather and, if applicable, the starting and ending ages of this living arrangement. We have only selected respondents who lived with their stepfather in one household, but we included respondents ($n = 3$) who

lived with their stepfather for less than a year, which explains the presence of the zero value in our data.

Furthermore, the respondents were asked about postdivorce contact with their father if they reported to live with their mother after divorce. The question was phrased in such a way that only actual visits (face-to-face contact) are included, whereas contact via phone or social media was not taken into account. The five answer categories range from daily to never. We recoded the variable in a dummy indicating whether a respondent saw his or her father "at least monthly" (1) or "less" (0) during childhood. The 125 respondents who experienced shared residence arrangements after divorce did not answer the question on the postdivorce contact with their biological father, but they are recoded in the same category as those who saw their father daily. Shared residence refers to the situation in which the child alternates between living with his or her father and his or her mother on a regular basis, for example, living 1 week with his or her mother and the next week with his or her father. If the child lived part of the postdivorce period with the mother and part of the time in shared residence ($n = 49$), we take an average score weighted by the number of years each situation lasted.

Finally, we include a measure of educational involvement for biological fathers (postdivorce) and stepfathers. The respondents were asked for each parent separately whether the parent talked with them about school or education. The respondents could choose between four answer categories ranging from "very often" to "(almost) never" with an additional answer category "not applicable". A total of 140 respondents used the category "not applicable" when asked about the involvement of their biological father, and 43 gave this response to the same question about stepfathers. We are not able to say with absolute certainty what respondents meant if they used the category "not applicable." However, it could be argued that for each child it is in theory possible to talk about school or education with his or her parent. If they used the category "not applicable" it is very likely that the respondents meant that there was no contact with the parent or they already discussed school-related matters with someone else. This idea is supported by a descriptive analysis that shows that those who used the category "not applicable" were on average less close to their (step)fathers

and, in the case of biological fathers, used to see their fathers less frequently. Those differences are large. For example, 72.9% of the respondents who used the "not applicable" category said they were not close at all during childhood, whereas this category only accounts for 2.5% for those who said they discussed school-related matters very often with their biological father. Based on this analysis, we included the respondents who used the answer category "not applicable" in the same category as those who said "never." A robustness check in which the respondents who answered "not applicable" are coded to missing did not show any substantive differences with the analyses presented in this article. Finally, we control for age, gender (female = 1), whether biological parents were married when the child was born (= 1; cohabitation = 0), and whether the biological father had a new relationship during their childhood that lasted for at least 2 years (stepmother = 1). All our variables are summarized in Table 1.

Structural Equation Model and Full Information Maximum Likelihood Approach

We conduct a structural equation model (SEM) with a full information maximum likelihood approach in MPlus 7.3 (Muthén & Muthén, 1998–2012). This model has a number of advantages. To start, SEM models are well suited to include observed as well as latent variables. The two socioeconomic variables (education and occupation) of each parent predict the latent variable socioeconomic status in our SEM model. A multiple imputation model would be a suitable alternative approach to test our hypothesis. We replicated our findings with a chained imputation model in which we used parents' educational attainment instead of the latent variable on socioeconomic status, but this did not change our results. The only difference was the interaction between stepfathers' educational attainment and their own involvement, which was no longer statistically significant in the imputation model.

There are several reasons why we combine parents' educational attainment and occupational status in a latent variable. Theoretically, we consider parents' socioeconomic characteristics as an indicator of the level of parental resources that could benefit the child's educational attainment. Beneficial parental resources could take many forms, ranging from financial resources to social networks and practical

Table 1. *Descriptive Statistics*

Variables	Mean	SD	Minimum	Maximum	N
Years of education respondent	12.0	2.9	6	17	1,540
Years of education biofather	11.1	3.0	6	17	1,289
Occupation biofather (ISEI)	48.0	16.3	21	82	1,482
Years of education biomother	10.7	2.4	6	17	1,479
Occupation biomother (ISEI)	43.3	14.6	21	82	1,437
Years of education stepfather	11.5	3.0	6	17	1,224
Occupation stepfather (ISEI)	48.9	16.8	21	82	1,494
Involvement biofather	1.8	0.9	1	4	1,540
Involvement stepfather	2.1	0.9	1	4	1,540
Years coresidence stepfather	8.0	4.0	0	17	1,540
Years coresidence biofather	6.5	3.7	0	15	1,540
Age respondent	32.4	5.4	25	46	1,540
Postdivorce contact biofather \geq monthly (= 1)	0.8		0	1	1,540
Female (= 1)	0.6		0	1	1,540
Parents once married (= 1)	0.9		0	1	1,540
Stepmother (= 1)	0.8		0	1	1,540

ISEI = International Socio-Economic Index.

knowledge of the educational system to cognitive abilities and cultural capital, which could enable parents to help with homework tasks. There are reasons to believe that the educational attainment and occupational status capture different aspects of the wide variety of parental resources. For example, previous research on inequality shows that when parental educational attainment and occupational status are included in the model, the estimates indicate both a positive and additive association with the educational attainment of children (Tieben, De Graaf, & De Graaf, 2010).

There are also practical reasons to prefer the inclusion of parents' occupational status in our estimates. First, previous research indicated that children report more accurately on the occupational status of their parents than on the educational attainment of their parents (Engzell & Jonsson, 2015). Hence, relying only on children's reports of parental educational attainment could increase the bias in our estimates. Second, in a recent article, Tach (2015) explained that one of the most important reasons to be concerned about the limited attention for nonintact families in social mobility studies was the high number of missing values for questions on the characteristics of parents in nonintact families. A bias might occur when the distribution of missing samples is not random across the sample. In nonintact families, it is for example likely that the respondents who had limited contact

with their father during childhood report more frequently that they do not know the education level of their father. To avoid bias as much as possible, we try to optimize the use of the available data and to minimize the number of missing values. Combining the information on education and occupation into one socioeconomic indicator is an attractive way to reduce the number of parents for whom we have no socioeconomic indicators. The percentage of missing values per socioeconomic indicator is summarized in Table 2. If we had only used educational attainment as reported by the child, we would have no information for 29.4% of the biological fathers, 11.3% of the biological mothers, and 29.4% of the stepfathers. Combining the three educational sources and including occupational status in our models reduces the missing values to only 1.4% for biological fathers, 0.7% for biological mothers, and 1.8% for stepfathers.

Finally, by combining parental education and occupation, we can test our hypotheses in a more parsimonious fashion. Because we included three parent types in our models and interact the socioeconomic variables of these parents, our models would include six socioeconomic variables that should be interacted with contact and involvement variables. This would make our models impractically large, but more important, we would demand too much of our models. Using the SEM models enables

Table 2. Percentage of Missing Values Per Socioeconomic Indicator

Source of information	Biological father, %	Biological mother, %	Stepfather, %
Education			
<i>Anchor report</i>	29	11	29
<i>Alter self-report</i>	73	59	77
<i>System of Social statistical Datasets, register</i>	65	49	76
Combined	16	4	21
Occupation	4	7	3
SES ^a	1	1	2

^aIn this case, the combined educational measure and occupation are both missing. SES = socioeconomic status.

us to keep our models comprehensive and to limit the number of interactions to a reasonable amount.

To improve our model even further, the cases that are missing are not dropped due to the use of the full information maximum likelihood approach, which means that cases with missing values are not excluded from the analysis. It has been argued that this method produces more accurate results and is preferred over listwise deletion (Allison, 2003; Graham, 2009). Because not all variables fulfill the assumption of multivariate normality, we use robust standard errors as suggested by Yuan and Bentler (1998). In addition, we restrict our model to ensure that both socioeconomic indicators are weighted equally for the three parent types. We include interactions with parents' socioeconomic status to test how variables such as duration, contact frequency, and involvement influence the transmission process.

RESULTS

Before we examined the role of pre- and post-divorce contact in the transmission process, we started with Model 1, in Table 3, in which we included only the socioeconomic status of the biological parents and the control variables. Consistent with previous studies, the control variables indicated that women performed slightly better in education than men (Statistics Netherlands, 2015). However, the other control variables had no statistically significant effect. The coefficient of mothers' socioeconomic status seems larger than the coefficient of fathers'

socioeconomic status, but a Wald test indicated that the difference between the biological father and mother was not statistically significant. In the second model, the socioeconomic status of the stepfather was included in the model. As a result, the coefficients for biological fathers and mothers decreased somewhat. A comparison of the coefficient of the socioeconomic status of biological fathers and stepfathers indicated that the coefficient of biological fathers was slightly larger, but this difference was again not statistically significant. In other words, the association between the paternal socioeconomic status and the educational attainment of the child was not significantly different for biological fathers and stepfathers if we simply looked at the average stepfamily in our sample.

A concern one might have when the socioeconomic status of biological fathers and stepfathers are included simultaneously in one model is that both father figures are too much alike. We know that people tend to marry someone who is close to them in terms of socioeconomic status, and the stepfather and biological father are selected by the same partner (the biological mother; Gelissen, 2004; Kalmijn, 1998). However, the correlations between variables were not problematically high. For example, the partial correlation between the educational attainment of stepfathers and biological fathers was only .201, controlling for mothers' educational attainment. Mplus does not calculate multicollinearity indicators such as the variance inflation factor (VIF). However, we replicated our analysis with a linear regression analysis in which we took the average of the standardized education and occupation variables. This robustness check confirmed the results of our SEM model and it also enabled us to calculate the VIF. The VIF scores, calculated for the second model in Table 3, were not higher than 1.46 and had a mean of 1.18. These scores were all considerably smaller than 10, a general threshold used in the literature (Chatterjee & Hadi, 2015), and hence we could argue that there were no multicollinearity problems in our models.

In Models 3 through 6, Hypotheses 1a and 1b on the potentially moderating role of duration in the transmission process were tested. We hypothesized that the association between the socioeconomic status of (step)fathers and the educational attainment of children would be stronger if the (step)father lived for a longer period of time in the same household as the

Table 3. Structural Equation Model With Full Information Maximum Likelihood on Child's Educational Attainment in Years: How Years of Coresidence Moderates the Effects of (Step)Father's SES, N = 1,540

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
SES biofather	0.261 ^{***} (0.048)	0.230 ^{***} (0.048)	0.227 ^{***} (0.049)	0.248 ^{**} (0.083)	0.231 ^{***} (0.049)	0.205 [*] (0.089)
SES biomother	0.400 ^{***} (0.057)	0.314 ^{***} (0.063)	0.318 ^{***} (0.063)	0.315 ^{***} (0.063)	0.315 ^{***} (0.063)	0.315 ^{***} (0.063)
SES stepfather		0.159 ^{***} (0.043)	0.159 ^{***} (0.043)	0.256 ^{***} (0.076)	0.157 ^{***} (0.043)	0.057 (0.083)
Years biofather			0.017 (0.019)	0.016 (0.019)		
Years biofather × SES biofather				-0.003 (0.010)		
Years biofather × SES stepfather				-0.015 (0.010)		
Years stepfather					0.008 (0.017)	0.008 (0.017)
Years stepfather × SES stepfather						0.004 (0.009)
Years stepfather × SES biofather						0.012 (0.009)
Constant	11.319 ^{***} (0.485)	11.557 ^{***} (0.485)	11.414 ^{***} (0.499)	11.414 ^{***} (0.499)	11.414 ^{***} (0.499)	11.506 ^{***} (0.500)
CFI	.985	.980	.981		.980	
SRMR	.014	.016	.015		.015	
RMSEA ^a	.041 [0.028–0.055]	.043 [0.033–0.052]	.040 [0.031–0.049]		.040 [0.031–0.049]	
AIC	56,692	74,337	82,702	82,701	83,042	82,940
BIC ^b	56,784	74,625	82,840	82,844	83,181	83,082

Note: Models are controlled for age, gender (female = 1), parents' marital status at birth (married = 1), and the presence of a stepmother (= 1). Standard errors in parentheses. AIC = Akaike information criterion; BIC = Bayesian information criterion; CFI = Comparative Fit Index; RMSEA = root mean square error of approximation; SES = socioeconomic status; SRMR = standardized root mean square residual. ^aIncluding 90% confidence intervals in brackets. ^bSample size adjusted.

* p < .05. ** p < .01. *** p < .001.

Table 4. Linear Regression of Children's Educational Attainment: How Postdivorce Contact Frequency Between Biological Fathers and Children Moderates the Effects of (Step)Father's SES, N = 1,540

Variables	Model 1		Model 2	
SES biofather	0.227***	(0.048)	-0.094	(0.106)
SES biomother	0.306***	(0.063)	0.304***	(0.063)
SES stepfather	0.159***	(0.043)	0.414***	(0.099)
Postdivorce contact biofather \geq monthly (= 1)	0.543**	(0.187)	0.623	(0.190)
Postdivorce Contact biofather \times SES biofather			0.393***	(0.112)
Postdivorce Contact biofather \times SES stepfather			-0.310**	(0.104)
Constant	11.074***	(0.510)	11.058***	(0.506)
CFI	.979			
SRMR	.016			
RMSEA ^a	.041 [.032-.050]			
AIC	75,754		75,741	
BIC ^b	75,893		75,884	

Note: Models are controlled for age, gender (female = 1), parents' marital status at birth (married = 1), and the presence of a stepmother (=1). Standard errors in parentheses. AIC = Akaike information criterion; BIC = Bayesian information criterion; CFI = Comparative Fit Index; RMSEA = root mean square error of approximation; SES = socioeconomic status; SRMR = standardized root mean square residual. ^aIncluding 90% confidence interval. ^bSample size adjusted.

* $p < .05$. ** $p < .01$. *** $p < .001$.

child. We included interactions between the socioeconomic status of the (step)father and the father-specific duration variables to test the hypotheses. Model 4 tested the duration hypothesis for biological fathers (H1a), and Model 6 was designed to test the same hypothesis for stepfathers (H1b). Models 3 and 5 provided the main effect of duration for biological fathers and stepfathers, respectively. The coefficients of the interaction effects of duration were all close to zero and not statistically significant. In other words, the models did not provide evidence that living longer together in one household moderated the intergenerational transmission process. Hence, we did not find support for Hypothesis 1a or Hypothesis 1b. This is consistent with previous research by De Leeuw et al. (2018).

Next, we conducted an analysis examining the moderating role of postdivorce contact frequency (Table 4) and involvement (Table 5). The first model, in Table 4, indicated that there was a strong main effect of postdivorce contact frequency on the educational attainment of the child (0.543). In the second model, we interacted postdivorce contact frequency with the socioeconomic status of biological fathers and stepfathers. Consistent with our hypothesis, we found a large positive interaction effect for biological fathers. The association between

the socioeconomic status of biological fathers and the educational attainment of children was not significantly different from zero and even slightly negative (-0.094) if there was less than monthly contact during childhood. However, if the father had at least monthly contact, the coefficient rose to 0.299 (-0.094 + 0.393 = 0.299). At the same time, if the father had less than monthly contact with the child, the role of the stepfather was relatively large (0.414), whereas the coefficient decreased to 0.104 (0.414 - 0.310 = 0.104) when there was at least monthly contact with the biological father. In other words, an absent biological father seemed to be "replaced" by a stepfather, but the role of the stepfather was much smaller when the biological father stayed in regular contact with the child. In this latter scenario, the biological father remained also more important in the transmission process than the stepfather. The interaction effect is visualized in Figure 1. This figure shows clearly that there were large differences between families with respect to the absolute and relative importance of biological fathers vis-à-vis stepfathers in the transmission process. We also examined the interaction between the socioeconomic status of the biological mother and postdivorce contact frequency of biological fathers, but these results were not statistically significant.

Table 5. Linear Regression of Children's Educational Attainment: How Paternal Involvement Moderates the Effects of (Step)Father SES, N = 1,540

Variables	Model 1	Model 2	Model 3	Model 4
SES biofather	0.206*** (0.049)	-0.017 (0.098)	0.229*** (0.049)	0.389*** (0.109)
SES biomother	0.320*** (0.063)	0.316*** (0.063)	0.316*** (0.063)	0.320*** (0.063)
SES stepfather	0.153*** (0.043)	0.182* (0.087)	0.159*** (0.046)	-0.023 (0.103)
Biofather—involvement with anchor in youth	0.222** (0.080)	0.187* (0.080)		
SES biofather × Involvement biofather		0.118** (0.041)		
SES stepfather × Involvement biofather		-0.016 (0.039)		
Stepfather—involvement with anchor in youth			-0.013 (0.082)	-0.022 (0.082)
SES biofather × Involvement stepfather				-0.072 (0.044)
SES stepfather* × Involvement stepfather				0.081* (0.041)
Constant	10.924*** (0.536)	10.864*** (0.534)	11.590*** (0.525)	11.536*** (0.523)
CFI	.981		.981	
SRMR	.015		.015	
RMSEA ^a	.040 [.031–.049]		.040 [.031–.049]	
AIC	78,263	78,256	78,399	78,398
BIC	78,401	78,399	78,537	78,541

Note: Models are controlled for age, gender (female = 1), parents' marital status at birth (married = 1), and the presence of a stepmother (= 1). Standard errors in parentheses. Standard errors in parentheses. AIC = Akaike information criterion; BIC = Bayesian information criterion; CFI = Comparative Fit Index; RMSEA = root mean square error of approximation; SES = socioeconomic status; SRMR = standardized root mean square residual. ^aIncluding 90% confidence interval. ^bSample size adjusted.

* p < .05. ** p < .01. *** p < .001.

FIGURE 1. VISUALIZATION INTERACTIONS SES (STEP)FATHER AND POSTDIVORCE CONTACT FREQUENCY BIOLOGICAL FATHER. STANDARDIZED COEFFICIENTS ON Y AXIS. SES = SOCIOECONOMIC STATUS.

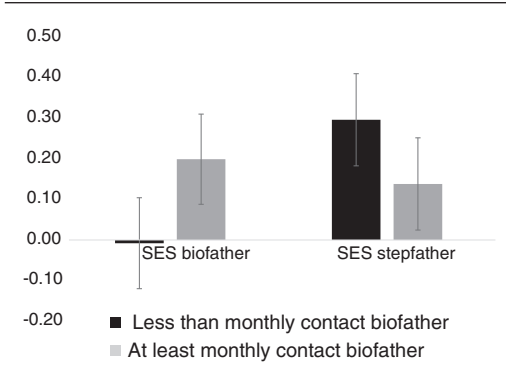


Table 5 tests the role of parental involvement in the transmission process (H3a and H3b). One of the advantages of this measure is that, unlike postdivorce contact frequency, it was available for biological fathers as well as stepfathers. In the first model, a strong main effect indicated that having a father who discusses school-related matters with the child on a regular basis was beneficial for his or her educational attainment. The interaction effect with the socioeconomic status of the biological father indicated that the association between his socioeconomic status and the educational attainment of the child was stronger if he was more involved; the association between the socioeconomic status of the biological father and the educational attainment of the child increased by 0.118 with every step increase on the involvement scale (1–4). A similar pattern was found for stepfathers. For stepfathers who never discussed school-related matters with their stepchildren, the coefficient was only 0.058 ($-0.023 + 0.081 = 0.058$), but with every step up on the scale the coefficient increased by 0.081. In conclusion, the results supported Hypotheses 3a and 3b and suggested that involvement in the school life of children moderated the transmission process of both father figures. Finally, we studied the association between the involvement of both father figures and the intergenerational transmission process of the biological mother (not presented in the table). However, the results indicated that neither the involvement of the stepfather nor that of the biological father was associated with the transmission process of the mother.

DISCUSSION AND CONCLUSION

This study examined the role of biological fathers and stepfathers in the intergenerational transmission of socioeconomic status. The focus on pre- and postdivorce contact in this study is an important contribution to the literature. We hypothesized that the strength of the transmission process of biological fathers and stepfathers depends on (a) the number of years they live in the same household as the child, (b) the postdivorce contact frequency (biological fathers only), and (c) the involvement in the school life of the child. As a result of this focus on moderators in the transmission process, our analyses tell a more nuanced story than the handful of previous studies on the transmission process in divorced families.

Our first analysis indicates that on average the stepfather is as successful in the transmission process as the biological father. However, further analyses reveal that there are different stepfamilies and the relative importance of the father figures varies accordingly. On the one hand, there are families in which the biological father is absent after divorce: Contact between the biological father and child is minimal or even nonexistent. In these families, the association between the socioeconomic status of the biological father and the educational attainment of the child is reduced to a minimum, whereas the stepfather's socioeconomic status has a sizeable effect. On the other hand, there are families where the biological father stays closely involved in the socialization of the child and sees the child regularly. In these families, the biological father's status is a more important determinant of the child's educational attainment than in the families with an absent biological father. Moreover, in families where the biological father sees the child regularly, his socioeconomic status seems to be more relevant than the status of the stepfather.

In families with an absent father, the phenomenon of a replaced biological father as described by Erola and Jalovaara (2017) could be recognized: The role of the biological fathers is minimal, whereas the socioeconomic status of the stepfathers is strongly associated with the educational attainment of the child (the dark gray bars in Figure 1). However, our analysis reveals that there are also stepfamilies where the biological father is able to maintain his role. These fathers have visitation schedules due to which they see their children regularly

and are able to maintain a large influence in the lives. This suggests that postdivorce contact is an important mechanism in the intergenerational transmission of socioeconomic status in stepfamilies. In contrast, we do not find any evidence for the existence of duration effects. With regard to involvement in the school life of the child, we find for biological fathers as well as stepfathers that the association between the socioeconomic status of the (step)father and the educational attainment of the children is stronger when the (step)father is more closely involved in the child's school life.

The absence of a duration effect could be considered puzzling and might raise questions on the association between duration and involvement. The main reason to expect a positive association between duration and the intergenerational correlation of socioeconomic status is because there is more frequent contact between parents and children who live together. In this way, children have easier access to parental resources. Coresidence could pave the way for children to be able to ask for help with homework, discuss what happened at school, or talk about choices that have to be made throughout the educational career. However, our results, which show no duration effect but a statistically significant positive interaction of paternal involvement, suggest that duration is not a good proxy for involvement. There are too many fathers who are not closely involved despite a large number of years in coresidence and the other way around. This is also supported by the finding that, for stepfathers, the correlation between the duration variable and involvement is only .24. Hence, these findings suggest that it is not about coresidence but about what fathers and children actually do together. Future studies should keep these results (and the results of De Leeuw et al., 2018) in mind when they use duration variables and preferably focus as much as possible on actual behavior instead of duration.

The aim of this study was not to identify the relative importance of biological relatedness and socialization in the transmission process. Other designs, such as adoption or twin studies, are more suitable to answer that question (e.g., Plug, 2004). Nevertheless, our study is related to this type of research. The role of stepfathers that we detected in the transmission process suggests, for example, that biological relatedness is not vital for the transmission process because a stepfather seems to be able to take over if a

biological father loses contact with his child. However, a more important contribution of this study to the literature is the indication that the transmission process depends, at least partly, on an interplay between the relationship children have with the different parent figures. For instance, one parent figure could become more important if the role of the other diminishes. Therefore, it could be argued that we should not study the role of parents in the transmission process in isolation. The relative roles of the parents are intertwined and dynamic and might change when the family situation changes or one of the parents alters his or her behavior.

Although this study is an important contribution to the emerging literature on the intergenerational transmission of socioeconomic status in nonintact families, some interesting questions remain unanswered. We decided to focus on families where the child lived with a stepfather as well as a biological father to study the relative importance of both father figures and the interdependencies between them. However, as a result, we study one specific family form. In the future, one could focus on other family forms such as those with a stepmother and a biological mother. Are the processes in these families similar or is the relative importance of biological parents and stepparents in the transmission process gendered? Also, the relative importance of parents could be compared between family types. For instance, how does the transmission of biological fathers differ between stepfamilies and intact or widowed families? In addition, it is likely that, despite our step forward, we have not unraveled the full complexity of the effects of parental background yet. For example, in classic mobility studies, cross tables are used to build log-linear models. Applying these methods in the context of divorced families would enable scholars to say more about the direction of mobility and the concrete implications of the low intergenerational associations for some nonresidential fathers. Another option that might be worthwhile to look further into are differences between parents with a low and high socioeconomic background.

A potential weakness of studies on the intergenerational transmission of socioeconomic status in nonintact families is the selectivity of missing values. In this study, we combined several indicators of socioeconomic status to strengthen our measurements and to reduce the number of missing values. This has most likely

reduced our selectivity bias to a minimum. Moreover, we used the full information maximum likelihood approach to avoid dropping cases. Nevertheless, selectivity remains present in our data, as a result of which we have less “real” data on parents with less close ties to their children. It is important that future research pays more attention to this bias. We should try to limit the missing values as much as possible and study the consequences of the selectivity in more depth. Not only are missing values important for future studies but also the initial nonresponse. Those with the worst relationships might not even participate in a survey on family related topics at all.

Finally, we discuss the role of the Dutch context in this study. Just as other Western countries, the Netherlands has experienced the Second Demographic Transition, with large increases in divorce, remarriage, and single motherhood since the 1960s. Maternal residence is by far the most common living arrangement after divorce (Statistics Netherlands, 2016). However, the relatively weak position of divorced fathers has improved recently (Poortman & Van Gaalen, 2017). Country comparisons of correlations of educational attainment of fathers and children show that these correlations are of moderate size in the Netherlands, just as in other countries in the west and north of Europe (around .3; in the OKiN data the correlation is .32 in intact families; Blanden, 2013). Authors have argued that the intergenerational correlations are not higher in these countries due to the fact that their extensive welfare systems ensure free or relatively cheap education for the entire population (Breen, Luijkx, Müller, & Pollak, 2009). Consistent with this, the financial resources of parents are of relatively little importance for children’s educational attainment in the Dutch context (De Graaf, Ganzeboom, & Kalmijn, 1989; De Graaf, 1986). These considerations also raise the question of whether our findings on parental involvement and postdivorce contact frequency are specific to a context with an extensive welfare state. In countries with a less extensive welfare state and with high educational costs, such as the United States, the financial resources of parents might overshadow the role of contact and involvement in the transmission process. Nevertheless, there are more indirect reasons why involvement can still be relevant in contexts where financial resources play a major role. Although money in these countries is a more

important mechanism, it is closely related to the contact-based mechanisms we identify in this article. It has been shown that contact patterns of nonresidential fathers are strongly correlated to the payment of child support (Nepomnyaschy, 2007; Seltzer, Schaeffer, & Charng, 1989). That is, there is a strong reciprocal pathway between child support and contact, which means that children who have more regular contact with their father are also more likely to have access to their father’s financial resources. Hence, we expect to find a similar pattern in contexts with high educational costs: Fathers who have more frequent contact with their children are more likely to pay child support and therefore the association between the socioeconomic characteristics of the father and the educational attainment of the child is stronger if there is more frequent contact.

In conclusion, this study has used newly collected data to add to the literature in important ways. Moreover, the context of the stepfamily offered a unique opportunity to test Coleman’s theory of social capital. We studied the relative importance of biological fathers and stepfathers and showed the importance of postdivorce contact on the transmission process. Not only is the (step)father’s own contact with the child relevant in this respect but also we showed that the importance of the stepfather depends partly on the contact frequency between the biological father and the child. This is an important finding in the field of research, which could inspire future studies to investigate the interdependencies between parents in other family types.

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