Published in final edited form as:

Soc Sci Res. 2019 March ; 79: 247–257. doi:10.1016/j.ssresearch.2018.10.012.

Parental influence and private school enrollment among children in blended families

Kevin J.A. Thomas

Department of Sociology, Pennsylvania State University, 211 Oswald Tower, University Park, PA 16801, kjt11@psu.edu

Abstract

In this study, the analysis examines how variations in parental influence shape private school enrollment among children in blended families. The results show that investment in private schooling for children is higher in families with notable parental income differences than in families with parents with similar incomes. Net of these factors, however, parents in nuclear families are more likely to invest in the provision of private schooling compared to parents in blended families. In blended families, the analysis underscores the significance of two dimensions of biological relatedness for developing nuanced understandings of inequalities among children. On average, parents in these families make greater investments in the provision of private schooling for their shared biological children than for their stepchildren, broadly defined. Disaggregating stepchildren based on their own biological ties with parents, however, reveals substantially higher investments in private schooling for stepchildren biologically related to household heads than for either shared biological children or other stepchildren. The advantage of stepchildren with biological ties to household heads is more pronounced in families where household heads earn more than their spouses. However, it remains statistically significant even when the opposite is true.

Introduction

Recent transformations in the structure and composition of American families have resulted in the growing significance of blended families as critical contexts where contemporary child rearing occurs. Following the end of intimate partnerships, individuals with children are now more likely to form new families than they were in the past. As a result, there has been a notable increase in the number families consisting of parents and their stepchildren (Kennedy and Bumpass 2008; Manning, Brown, and Stykes 2014; Sweeney 2010). Today, estimates indicate that about 12 % of U.S. children live in families with stepsiblings (Parker et al. 2015). In recent studies, scholars have paid attention to the question of what these changes imply for the outcomes of children. The resulting evidence paints a bleak picture on the consequences of blended families for the welfare of children. These scholars have shown that children in blended families are more likely to be expelled from school, have poor

Publisher's Disclaimer: This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

health outcomes, engage in acts of delinquency, and generally have worse attainment outcomes compared to children in nuclear families (Bramlett and Blumberg 2007; Halpern-Meekin and Tach 2008; Manning and Lamb 2003).

Another strand of the literature suggests that in some cases the negative implications of living in blended families may not be that severe. Some studies indicate, for example, that children in blended families are not necessarily disadvantaged in terms of the attention they receive from their parents (Hofferth and Anderson 2003; Kalil, Ryan, and Chor 2014). Research on the educational outcomes of children similarly suggests that the disadvantage of stepchildren in blended families is relatively modest (e.g., Ginther and Pollak 2004). This implies that at least in terms of educational outcomes, the significance of children's biological relationships with their parents for understanding inequalities among children in blended families is limited.

While the importance of these findings is without question, few studies have examined whether biological relationships are specifically associated with inequalities in parental financial investments in the education of children in blended families. Furthermore, attempts to understand the mechanisms that contribute to schooling inequalities among children in these contexts have been constrained by two gaps in the literature. First, limited attention has been given to the question of how differences in parental economic influence mediate the processes through which household resources are invested in children's schooling. We now know, for example, that parents in blended families manage household resources quite differently compared to parents in nuclear families (Raijas 2011). However, the extent to which educational inequalities among children in blended families are dependent on variations in parental contributions to these resources remains unclear. The second gap in the literature is related to the inadequate assessment of whether differentials in parental resource endowments within families can modify our understanding of the significance of biological relatedness for inequalities among children. Most blended families are formed by parents, their children from previous relationships, and in many cases, their shared biological children. Yet, few studies have examined the extent to which the attainment outcomes of stepchildren depend on the relative contributions of their sole biological parents to total household resources.

To address these gaps in the literature, this study uses data from the American Community Survey (ACS) to examine the relationship between parental economic influence and private school enrollment among children in blended families. Notwithstanding the debate on the significance of private schools for children's educational attainment (Goldhaber 1996; Stevans and Sessions 2000), public perception on the advantages of these schools largely remains positive (Lubienski and Lubienski 2005)¹. Focusing on the outcomes of school-aged children, this study investigates inequalities in parental investment in the provision of private education. The analysis is conducted from two perspectives. The first examines how economic indicators such as parental income differences mediate inequalities in investment in private schooling between children in blended and their peers in nuclear families. The

¹While this perception is well documented in the literature it does not preclude the possibility that some public schools could offer a higher quality of schooling than that observed among private schools.

second perspective focuses on blended families, and investigates whether there are inequalities in parental investments in shared biological children and stepchildren that are conditional on parental contribution to overall household resources.

Theoretical background

Family structure remains one of the key determinants of the resources children can access from their parents, and two-parent families continue to provide the best environments where these resources are provided. Children in two-parent families have been found to have higher educational aspirations, receive higher levels of parental supervision, and have more access to resources necessary for educational success than children in single-parent families (Garg et al. 2007; McLanahan and Sandefur 1994). However, the question of whether these same advantages accrue to children in two-parent, blended families remains a source of debate.

One perspective indicates that the advantages found in two parent families are less accessible to children in blended families than to children in families with two biological parents (Astone and McLanahan 1991). Not only do the former have lower levels of attainment relative to the latter (Case et al. 2001; Manning and Lamb 2003), their parents are also less likely to invest in their physical, emotional, and social wellbeing compared to parents in nuclear families (Astone and McLanahan 1991; Zvoch 1999). But the evidence on these differences is far from settled. Other studies indicate, for example, that total time spent with parents is quite similar for stepchildren as that for biological children living in two parent families (Hofferth and Anderson 2003; Kalil, Ryan, and Chor 2014). Similarly, the relative disadvantage of children in blended families is not always found to be statistically significant after other factors are controlled (Gennetian 2005), or becomes less substantial after accounting for the marital status of their parents (Kalmijn 2013).

Among blended families, much of what we know about inequalities in the outcomes of children is shaped by theoretical discourses underscoring the significance of biological relatedness (Antfolk et al. 2017; Anderson 2005; Becker et al. 2013). Central to these perspectives is the notion that parents are discriminatory in the ways in which they invest resources among their children and give greater preferences to children with whom they are biological related. Support for this argument is found in several studies (Becker et al. 2013; Hamilton et al. 2007; Zvoch 1999). Among these are some that demonstrate explicit patterns of parental favoritism toward offspring with whom they have high certainty of relatedness as well as those with whom they have a high degree of resemblance (Antfolk et al. 2017; Apicella and Marlowe 2004).

Previous research on the significance of biological relatedness is far from conclusive. One reason for this is analytical. They tend to focus on one dimension of biological relatedness - that which examines differences in how parents invest in their biological children, broadly defined, and their stepchildren. While this perspective is important, it limits our ability to understand whether parents discriminate in their investments towards their shared biological children, their own biological children from previous relationships, and step children with whom they are not biologically related. Some comparisons of the outcomes of biological children and stepchildren have further discounted the significance of biological relatedness

by finding limited differences between the two groups of children or more favorable outcomes among the latter than the former (Ginther and Pollak 2004; Hofferth and Anderson 2003). Accordingly, stepchildren have been found to receive equal or more investment the form of time-spent with fathers in blended families compared to children in two parent families (Hofferth and Anderson 2003; Kalil, Ryan, and Chor 2014). Research also indicates that both groups of children have similar years of completed schooling (Ginther and Pollak 2004). In other studies, stepchildren have been found to have a stronger relationship with their married, non-biological fathers than with their divorced biological fathers (Kalmijn 2013; King 2006). This finding undercuts the basic premise of the biological relatedness perspective. In fact, the apparent benefits of these non-biological ties between children and step-parents has been interpreted as implying that living with married parents may help to offset the disadvantage typically found among these children (Kalmijn 2013).

With few exceptions a common feature of studies that discount the notion of lower attainment outcomes among stepchildren is that the bases of their comparisons are centered on parental resources that can be shared among children (e.g., time and relationship with parents). In other words, within blended families, one child's access to these resources does not necessarily imply the loss of access to another. Economic resources such as parental incomes are however different. First, they are usually resources earned by parents, and second, there are opportunity costs associated with the utilization of these resources. Competition for these resources, therefore, implies that incomes used to invest in private schooling of one child cannot at the same time be used to invest in that for another. These dynamics have critical conceptual implications and may be even more important in contexts where there are more children than the amount of resources required for equitable investment. Previous research thus suggests that it is especially in contexts where parents incur high costs of raising children that biological relatedness becomes a major determinant of their investment patterns (Hamilton et al. 2007).

Disparities in the investment of household resources among children can also be affected by parents' demographic characteristics, their level of decision-making authority, and their overall contribution to household resources. For example, children have been found to have higher levels of nutrition when mothers rather than fathers exert a greater control over household resources (Kennedy and Peters 1992). In terms of parental income differences, research further indicates that families tend to spend more on the welfare of children as wives' proportional contribution to household resources increase (Kornrich and Furstenberg 2013).

How these mechanisms shape the ways in which parents allocate resources in blended families, as well as their ensuing implications for children's schooling inequalities, remain unknown. Further complicating our understanding of these mechanisms is the fact that parents in blended families manage resources quite differently compared to parents in nuclear families. While resources and expenditures are jointly managed by parents in nuclear families, parents in blended families usually keep separate accounts and bear the sole responsibility for expenditures regarding their children from previous relationships (Raijas 2011). Marital status can further accentuate these disparities because married couples are more likely to pool resources than are couples in cohabiting relationships

(Smock 2000). Moreover, because divorce has a negative effect on incomes (DeWilde and Uunk 2008; Peterson 1996), couples in blended families are more likely to have limited resources available for discretionary investment in children's schooling compared to married couples whose partners have never been divorced.

A final set of influences that could mediate resource allocation patterns in blended families is that associated with selection. Parents in blended families are not representative of all parents with children (Halperin-Meehin and Tach 2008). Fathers in blended families are less educated, have lower levels of income, and are less likely to be in stable, long-term relationships with their spouses than are fathers in traditional nuclear families (Hofferth 2006; Manning et al. 2004). Moreover, parental selection into blended families can have mixed implications for the welfare of children. Low socioeconomic attainment among stepparents can negatively affect their ability to make the economic investments needed to positively affect the welfare of their children (Halperin-Meehin and Tach 2008; Hofferth 2006). Yet stepparents can also be positively selected on attributes such as good parenting skills that could help them have a more positive influence on the outcomes of children (Gennetian 2005; Hofferth and Anderson 2003).

Previous research therefore provides a useful basis for understanding how factors such as family structure, biological relatedness, and parental influence contribute to inequalities among children in blended families. By examining inequalities in parental investment in private schooling in these families, the current analysis extends the literature in several important ways. First, it highlights the significance of non-shared resources for mediating inequalities in how parents invest in children in blended families and their counterparts in nuclear families. Second, it underscores the role of differentials in parental economic influence as key mechanisms that influence how these investments are channeled toward children. Finally, the study provides a nuanced perspective on the importance of biological relatedness for understanding inequalities among children in blended families. In particular, it demonstrates that the influence of biological relatedness does not operate in isolation, but is modified by variations in parental economic influence found within blended families.

Hypotheses

To make these contributions to the literature, the study examines the following three hypotheses.

H1: Parents in blended families are less likely to invest in the provision of private schooling for their children than are parents in nuclear families.

The analysis specifically investigates whether this relationship holds even after accounting for differences in parental marital status. Moreover, it expects these between family differences to be driven by, among other things, variations in parental resources between families.

H2: Within blended families, parents are more likely to invest in the provision of private schooling for their shared biological children than for their stepchildren.

Drawing from research on the role of biological relatedness (e.g. Zvoch 1999), this hypothesis examines general differences between shared biological children and stepchildren, broadly defined.. In line with research on the significance of marriage (e.g., Kalmijn 2013), the study expects to find that the lack of a biological relationship with parents will be less of a constraint to parental investment among stepchildren with married parents.

H3: Although stepchildren have generally low attainment outcomes compared to shared biological children, their relative disadvantage is attenuated in contexts where their sole biological parent makes a greater contribution to household income.

Accordingly, the third hypothesis examines the integrated influences of parental economic influence and biological relatedness while exploiting the fact that stepchildren have at least one biological parent living with them in blended families. It suggests that the difference between step children and biological children may, in some cases, be driven by differences in resources, but these differences are not the only explanations for the inequalities among these children.

Data and Methods

These hypotheses are examined using data from the 2011-2015 sample of the ACS available in the Integrated Public Use Microdata Sample (IPUMS) database (Ruggles et al. 2010)². The ACS provides a rich source of information on children in the United States and contains one of the largest available samples of children in blended and non-blended families. Within these data, there are unique household-level identifiers that can be used to link the characteristics of children with those of their parents and households. These identifiers are used to construct a master file containing information on children as well as the characteristics of their household heads, spouses/cohabiting partners,³ and selected indicators of household contexts.

Data on the type of schools in which children are enrolled are used to construct the dependent variable used in the analysis. Accordingly, private school attendance is defined using a binary variable equal to 1 if children are enrolled in private school, and 0 if they are enrolled in public school. This variable is used to examine the enrollment outcomes of school-age children, defined as children between the ages of 6 and 17. Non-enrolled adolescents, who account for less than 3% of all children in this age group are excluded from the analysis⁴.

Three broad measures of family structure are used to develop the first set of independent variables. *Non-blended families* are defined as family households with two biological parents and their shared biological children. This group is further distinguished into two family subtypes based on children's parental marital status. The first contains families with

²These data are publicly available at <https://usa.ipums.org/usa/>. For information on the scripts used in the analysis please contact the corresponding author.

³Henceforth referred to as spouses because cohabiting partners, defined as unmarried partners in the ACS, account for a very small number of individuals in relationships with household heads.

⁴A small percentage of children who are enrolled in college (less than 1%) are also excluded from the study.

children and their parents who are married (i.e., traditional nuclear families) and the second captures their counterparts in families with unmarried parents. *Blended families* are families with two-parents who live with children who were born in their previous relationships. Children in blended families can therefore live either in families containing only stepchildren or in families with stepchildren and the shared biological children of both parents. As in non-blended families, blended families are also distinguished on the basis of differences in parental marital status.

Another set of independent variables is used to measure children's relationships with their parents. These measures are based on two sources of information. The first is children's relationship with their household head because the primary way in which household relationships are defined in the ACS is by identifying each household resident's relationship to the household head. These household heads are defined as the individuals who own or rent their housing units. The second source is information on whether or not children have a parent who does not live in their household. On the basis of these data, three child relationship codes are identified in the analysis. Shared biological children are children born to household heads in two-parent families who do not have any parent living outside their household. Stepchildren are separated into two groups. The first consists of the biological offspring of household heads who live in two-parent families and are also coded as not having another parent living in that family. The second are the children born to spouses in two-parent families but are not biologically related to household heads. These children are the stepchildren of household heads and are identified as such in the ACS⁵.

Parental economic influence is measured using three measures of relative parental income. Economically egalitarian families have household heads and spouses earning similar incomes. This similarity is operationalized as an earnings difference of less than 5 %. Two additional measures are used to further capture families where household heads earn higher incomes compared to their spouses and those where household heads earn lower incomes.

The analysis uses a diverse set of other child- and parental-level variables as controls. At the child-level, these measures include age, sex, and racial-ethnic characteristics. Race-ethnicity is measured using dummy variables that identify whether children are Asian, Black, Hispanic, non-Hispanic white, or identify as other race-ethnic groups. Levels of schooling in which children are enrolled are controlled to account for the higher prevalence of private schools at the elementary level compared to the middle or high school levels (Broughman & Swain 2013). Parental level characteristics used as controls include parents' gender, education attainment, and current employment status. Additionally, the analysis accounts for differences in total family income and family size, with the latter being used as a proxy measure for competition for resources within families.

Analytically, the study's objective is not to examine the causal effect of blended families on private school enrollment but to examine what we can learn from identifying the correlates associated with private school enrollment among children in these families. These

⁵Children in the analysis could also be considered as shared and non-shared children. Shared children are shared biological children who have both biological parents in the family. Non-shared children are stepchildren who live in two parent families but with only of these parents being their biological parent.

associations are examined using logistic regression models with household level random effects. The dependent variable is the logit of the probability of private school enrollment among children and is predicted by several child- and household- level characteristics. The fact that children are nested within families is however a potential source of bias in the analysis that can increase the likelihood of underestimating the standard errors and p-values from the models.

Results

Summary estimates of the characteristics of children in the two broad family groups are presented in Table 1. Children in both groups are similar in terms of their demographic and schooling level distributions. In blended families, however, there is a notable variation in children's relationship with their parents. Most of these children are not the shared biological offspring of both parents, but the stepchildren of household heads. In terms of parental marital status, almost all children living in two-parent, non-blended families have parents who are married parents. In contrast, marriage is less prevalent among the parents of their counterparts in blended families. The household demographic differences found in both types of two-parent families, however, extend beyond disparities in parental marital status. Blended families, for example, are more likely to be headed by males than non-blended families, while their average family size is slightly higher than that for the latter. Table 1 further shows that variations in parental economic influence are the norm rather than the exception in both two-parent family types. Much of this is driven by the relative income advantage of household heads, especially in blended families where close to three-fourths of all children have household heads who earn more than their spouses.

Children in non-blended families live in contexts with socioeconomic characteristics that are most likely to facilitate enrollment in private schools. In other words, they are more likely to have two employed parents, parents who graduated from college, and live in families with higher levels of income. Not surprisingly, the prevalence of private school attendance is more than twice as high among children in these families as among children in blended families.

A more robust analysis of the question of whether parental investment in private schooling is lower in blended than in non-blended families is presented in Table 2. Model 1, the baseline model, provides mixed evidence on the relationship between family structure and private school enrollment. As expected, nuclear families (i.e., non-blended families with two married biological parents) are most likely to invest in the provision of private schooling for their children. At the same time, the likelihood of attending private schools in non-blended families varies considerably depending on the marital status of parents. This suggests that having two biological parents outside of blended family contexts does not necessarily imply that children have access to the resources needed to facilitate private school enrollment. Living in non-blended families with unmarried parents is thus associated with a much lower likelihood of attending private schools compared to living with married parents. In fact, the coefficients suggest that of the two groups of children with two unmarried parents, children in non-blended families are comparatively *less* likely to attend private schools compared to their peers in blended families.

Model 2 examines the mediating influence of household economic factors such as relative parental income and total family income on private school enrollment. After these factors are controlled, the coefficients for the two groups of children with married parents are considerably reduced. Children in non-blended families with two married parents nevertheless continue to have the highest likelihood of private school attendance among children in the sample. High levels of parental investment in private schooling among these children thus appear to occur for reasons other than economic factors. Another finding presented in Model 2 is that the buffering influence of marriage largely disappears among children in blended families. In other words, although the influence of marriage on investment in children is important, it does not result in a convergence in the outcomes of both groups of children with married parents. Thus, having married parents does not result in parity in the parental investment outcomes of children in blended families and in nuclear families.

Besides these between family differences, Model 2 provides our first impression of the relationship between private school enrollment and differences in parental economic influence. Net of family income, families are less likely to provide private education for children when parents have similar earnings than when these earnings differ. However, the positive influence of these earnings differences is stronger in families where household heads have a relative income advantage.

Much of the disparity between children in blended and non-blended families remains robust after other child and familial attributes are controlled. As such, in Model 3, the buffering influence of marriage continues to persist. After adding the full set of controls in Model 4, however, the buffering effect of marriage for the two groups of children with married parents returns, while the overall advantage of children in nuclear families remain. This finding suggests that the prior private school enrollment differences observed among children were possibly driven by differences in the demographic and socioeconomic attributes of these families.

Beyond the inequalities conditional on differences in family type and parental economic influence, Model 4 shows a wide range of other inequalities among children. The most notable include the fact that girls have a slightly higher likelihood of private school enrollment than boys and that non-Hispanic Whites are considerably more likely to be enrolled in private schools than are racial or ethnic minorities. As expected, increases in family incomes are positively associated with the likelihood of private school enrollment. Overall, the coefficient for family incomes implies that there is a 75% increase in the odds of private school enrollment for each unit increase in household income. Net of family income, however, having parents who graduated from college is associated with a considerably high likelihood of private school enrollment in the sample. Net of family income, however, having parents who are employed is associated with a lower likelihood of private school enrollment, suggesting that the income influence may be more important than the mere fact that parents have jobs.

Taken together, the evidence presented thus far is consistent with the hypothesis that parents in blended families are less likely to invest in the provision of private education for their

children than are parents in nuclear families. It is also true that these differences are mediated in part by household economic factors such as relative income difference. However, the findings indicate that neither these factors nor differences in parental marital status explains why parents in blended families make lower investments in private schooling for their children.

To better understand inequalities among children in blended families, Table 3 examines differences in the likelihood of attending private school between shared biological children and all stepchildren combined. Both significant results shown in the baseline model (Model 1) confirm the salience of marriage for minimizing differences in parental investments in the welfare of children within these families.. Tests of significance differences between the two groups of children with married parents indicate that the differences are statistically significant ($p<0.05$, $\chi^2=12.35$). However, Model 1 reports no statistically significant differences between shared biological children with unmarried parents and stepchildren with unmarried parents.

The main inequalities across the four subtypes of blended families are attenuated after relative parental income and total family income are controlled (Model 2), implying that these factors are critical mediators of the baseline inequalities observed in Model 1. In other words, Model 2 suggests that resource differences only explain some of the inequalities observed between step children and biological children. These inequalities nevertheless reappear in the full model (Model 3) after other factors are controlled, which is consistent with the possibility that the preceding disparities were suppressed by variations in other child and parental characteristics found between these families. The full model shows more distinctively higher levels of investment in schooling for shared biological children with married parents than for their peers who are stepchildren. In fact, in relative terms, the outcomes of the former remain the most favorable among children in the sample. While their outcomes are closely followed by those of stepchildren with married parents, tests of the differences between these estimates indicate that the two sets of outcomes statistically differ ($p<0.05$; $\chi^2=12.23$).

Among blended families, therefore, the primary dimension of biological relatedness - that between shared biological children and stepchildren - remains a critical basis for identifying differential levels of parental investments in children. In contrast to studies showing limited differences in the educational outcomes of children in these two groups, these findings suggest that biological relatedness continues to matter for understanding inequalities in the financial resources parents choose to invest in the education of these children. Once again, the results also show that having married parents helps to somewhat mitigate the scale of inequalities among children in blended families. Nevertheless, as in the findings reported in the analysis of differences among family types (Table 2), the results show that this buffer does not result in parity in outcomes among children. Despite the significance of these findings they still leave unanswered the question of whether the secondary dimension of biological relatedness is important for understanding inequalities in parental investments in children in blended families.

Table 4 examines the association between private school enrollment, the three critical parent-child dyads found in blended families, and the extent to which the association is modified by the economic influence of stepchildren's biological parents. Model 1 presents overall disparities between the three types of children, net of all controls, including those for differences in parental marital status. A clear finding that emerges from Model 1 is that a more comprehensive view of inequalities in blended families can be developed when stepchildren are disaggregated based on their biological relationships with parents. As the results indicate, all stepchildren are not necessarily disadvantaged compared to shared biological children. Stepchildren who are the biological children of household heads are considerably *more* likely to be enrolled in private schools than are shared biological children. In contrast, stepchildren who are the offspring of spouses of household heads are significantly *less* likely to be enrolled in these schools compared to shared biological children. In combination, these results suggest that the question of whether stepchildren are disadvantaged relative to shared biological children in blended families depends to a large extent on their degree of biological relatedness with their household heads.

Restricting the analysis to families where household heads have the primary economic influence (Model 2), the results continue to show a comparatively higher likelihood of enrollment among stepchildren who are biologically related to household heads. What's more, in these families, fewer resources appear to be available for private school enrollment for those stepchildren born to spouses (i.e., the subgroup of stepchildren with no biological relationship with household heads). Surprisingly, biological ties between stepchildren and spouses are not associated with a higher likelihood of private school enrollment in families where the latter earn more than household heads (Model 3). Instead, the only notable disparity observed within these families is that between the stepchildren born to household heads and shared biological children. In relative terms, the disparity between the two is also lower in these families than in families where household heads are the primary income earners. Results for families with parents who have similar earnings are slightly different from those with parental earnings differences. In these contexts (Model 4), none of the inequalities among their resident children is statistically significant. Nevertheless, the direction of the coefficients suggests that both types of stepchildren are less likely to be enrolled in private schools compared to shared biological children in these types of families.

On the whole, the findings presented in Table 4 are important for two reasons. First, they imply that, on average, stepchildren whose biological parents are their household heads receive preferential investments in their schooling even in contexts where household heads earn less than their spouses. Second, they point to the possibility that there are underlying power dynamics within blended families that allow stepchildren who are biological children of households to still receive premium schooling investments regardless of the size of the relative contributions of household heads to household incomes.

Discussion and Conclusion

Following the recent increase in the number of children living in blended families, there has been an expansion of research examining what these families imply for inequalities among children. Evidence from these studies, however, provides a somewhat complicated picture of

the ways in which blended families contribute to disparities in the outcomes of children. In previous research, for example, there is a lack of consensus on the implications of these families for the welfare of stepchildren. Focusing on parental investments in the provision of private schooling, however, this study contributes to these discourses by examining the economic and biological mechanisms that shape these inequalities. In the process, this study provides important clarifications to our understanding of these inequalities while advancing the literature in three specific ways. First, it underscores the significance of non-mutually shared resources for developing a clearer picture of the nature of schooling inequalities among children in blended families. Second, it highlights the role of differences in parental economic influence in mediating inequalities among their children. Finally, the study suggests that there is a need to reassess existing notions about how stepchildren compare with other children in blended families. These notions imply that at best, stepchildren have similar outcomes as shared biological children, or that, as worst, that they have lower indicators of attainment than those of the latter. Shifting attention from these competing perspectives, the analysis posits that the strength of the relationship between stepchildren and their parents can act in combination with the influence of parental influence to modify their access to household resources.

One limitation of the study is that it is primarily based on research on U.S. families. However, they are generally consistent with studies conducted in non-U.S. contexts that separately demonstrate the significance of biological relatedness (e.g., Antfolk et al. 2017) and the importance of parental control of resources (e.g., Kennedy and Peters 1992) for the wellbeing of children. More specific research is thus needed in non U.S. contexts to examine the implications of stepchildren's relationship with household heads for various socioeconomic outcomes.

In this study, however, the results show that in terms of between family differences, we cannot reject the hypothesis that parental financial investments in children's education are lower in blended families than in traditional nuclear families. Even after other factors were controlled, private school enrollment was much higher among children in the former than in the latter. Moreover, the findings indicate that having married parents does not necessarily eliminate these differences between families. At the same time, they clarify that the inequalities found between children in blended families and their peers in nuclear families are partly mediated by variations in familial economic influences. As in research highlighting the significance of unequal parental contributions to child wellbeing in two-parent families (Kennedy and Peters 1992; Roushdy 2004), the results show that familial investment in private schooling for children is enhanced when there are clear differences in parental incomes rather incomes similarities among parents.

A critical finding reported in the analysis is that inequalities among children in blended families can also be understood by paying attention to two dimensions of biological relatedness. The first relates to overall inequalities between shared biological children and stepchildren, broadly defined. Comparisons between both groups of children imply that non-shared resources are more likely to be invested in the former relative to the latter. The results also show that the relative difference between the two is smaller among children with married parents; however, having married parents does result in similar levels of parental

investment in private schooling for stepchildren and shared biological children. Also important is the fact that stepchildren with non-married parents are among the least likely to have parents who invest in the provision of private schooling. Part of this may reflect the fact that couples in non-marital relationships are less likely to make investments in their relationships than are couples within an institutionalized commitment of marriage (Smock 2000). Combined with the limited filial bonds that exist between parents and their stepchildren (Becker et al. 2013), reluctance to invest outside the context of marriage therefore seems to have an additionally constraining influence on the welfare of stepchildren.

Apart from these differences, the findings highlight the importance of a second dimension of biological relatedness – that between stepchildren and their sole biological parents – for developing nuanced understandings of the determinants of child well-being in blended families. The results provide qualified support for the hypothesis that the disadvantage of stepchildren is mitigated in families where their sole biological parent is the main income earner. In particular, they demonstrate that stepchildren who are biologically related to their household heads tend to have a higher likelihood of private school enrollment when these household heads are the major income earners. Surprisingly, the benefits of this dimension of biological relatedness do not seem to accrue to stepchildren who are the offspring of spouses. Yet another nuance found in the analysis of the biological links between stepchildren and their parents is the fact that stepchildren born to household heads continue to receive major investments in their schooling, in contexts where household heads' make a lower relative contribution to household income. In this sense, the importance of these biological links appears to rest more on the within-family social position of the biological parents of stepchildren than on their relative contributions to household income.

While these findings are important, the mechanisms that drive these relationship are generally unclear. Theoretically, there is no doubt that a key determinant of the wellbeing of stepchildren (non-shared children) within families is the economic power wielded their biological parents. As the results imply, the role of this economic power is most notable when this parent is the household head and it persists even after family income is controlled. Another possible mechanism is that parents with a long history of investing in their biological children from previous relationships may find it easier to direct resources to their non-shared biological children when they head households formed with spouses in new relationships. Alternatively, social norms on intra-familial configurations of power may limit the ability of spouses to direct resources toward children from their previous relationships. Inequalities in the outcomes of stepchildren may therefore reflect the consequences of structural forces that constrict their parents' ability to shape the dynamics of resource allocation within blended families. Overall, these possibilities are intriguing but they cannot be fully examined with the data used in the analysis. However, they can provide a rich set of hypotheses that can be more systematically addressed in future studies.

Acknowledgments

The study was supported by a grant from the NICHD (P2CHD041025), which supports the activities of the Population Research Institute at the Pennsylvania State University.

References

- Anderson KG (2005). Relatedness and investment in children in South Africa. *Human Nature*, 16(1), 1–31. [PubMed: 26189514]
- Antfolk J, Karlsson LC, Söderlund J, & Szala A (2017). Willingness to invest in children: Psychological kinship estimates and emotional closeness. *Evolutionary Psychology*, 15(2) 1–10.
- Apicella CL, & Marlowe FW (2004). Perceived mate fidelity and paternal resemblance predict men's investment in children. *Evolution and Human behavior*, 25(6), 371–378.
- Astone NM, & McLanahan SS (1991). Family structure, parental practices and high school completion. *American sociological review*, 309–320.
- Becker OA, Salzburger V, Lois N, & Nauck B (2013). What narrows the stepgap? Closeness between parents and adult (step) children in Germany. *Journal of Marriage and Family*, 75(5), 1130–1148.
- Bramlett MD, & Blumberg SJ (2007). Family structure and children's physical and mental health. *Health affairs*, 26(2), 549–558. [PubMed: 17339685]
- Broughman SP, and Swaim NL (2013). Characteristics of Private Schools in the United States: Results From the 2011–12 Private School Universe Survey (NCES 2013-316) U.S. Department of Education. Washington, DC: National Center for Education Statistics Retrieved [July 2017] from <http://nces.ed.gov/pubsearch>
- Case A, Lin I-F, & McLanahan S (2001). "Educational Attainment of Siblings in Stepfamilies." *Evolution and Human Behavior* 22:269–89.
- Dewilde C, & Uunk W (2008). Remarriage as a way to overcome the financial consequences of divorce—A test of the economic need hypothesis for European women. *European sociological review*, 24(3), 393–407.
- Gennetian LA (2005). One or two parents? Half or step siblings? The effect of family structure on young children's achievement. *Journal of Population Economics*, 18(3), 415–436.
- Garg R, Melanson S, & Levin E (2007). Educational aspirations of male and female adolescents from single-parent and two biological parent families: A comparison of influential factors. *Journal of Youth and Adolescence*, 36(8), 1010–1023
- Ginther DK, & Pollak RA (2004). Family structure and children's educational outcomes: Blended families, stylized facts, and descriptive regressions. *Demography*, 41(4), 671–696. [PubMed: 15622949]
- Goldhaber DD (1996). Public and private high schools: Is school choice an answer to the productivity problem?. *Economics of Education Review*, 15(2), 93–109.
- Halpern-Meekin S, & Tach L (2008). Heterogeneity in two-parent families and adolescent well-being. *Journal of Marriage and Family*, 70(2), 435–451.
- Hamilton L, Cheng S, & Powell B (2007). Adoptive parents, adoptive parents: Evaluating the importance of biological ties for parental investment. *American Sociological Review*, 72(1), 95–116.
- Hofferth SL(2006) "Residential father family type and child well-being: Investment versus selection." *Demography* 43(1): 53–77. [PubMed: 16579208]
- Hofferth SL, & Anderson KG (2003). Are all dads equal? Biology versus marriage as a basis for paternal investment. *Journal of Marriage and Family*, 65(1), 213–232.
- Kalil A, Ryan R, & Chor E (2014). Time investments in children across family structures. *The ANNALS of the American Academy of Political and Social Science*, 654(1), 150–168.
- Kalmijn M (2013). Adult Children's Relationships With Married Parents, Divorced Parents, and Stepparents: Biology, Marriage, or Residence?. *Journal of Marriage and Family*, 75(5), 1181–1193.
- Kennedy S, & Bumpass L (2008). Cohabitation and children's living arrangements: New estimates from the United States. *Demographic research*, 19, 1663. [PubMed: 19119426]
- Kennedy E, & Peters P (1992). Household food security and child nutrition: the interaction of income and gender of household head. *World development*, 20(8), 1077–1085.
- King V (2006). The antecedents and consequences of adolescents' relationships with stepfathers and nonresident fathers. *Journal of Marriage and Family*, 68, 910–928 [PubMed: 18270551]

- Kornrich S, & Furstenberg F (2013). Investing in children: Changes in parental spending on children, 1972–2007. *Demography*, 1–23. [PubMed: 22987208]
- Lubienski ST, & Lubienski C (2005). A new look at public and private schools: Student background and mathematics achievement. *Phi Delta Kappan*, 86(9), 696–699.
- Manning WD, Brown SL, & Stykes JB (2014). Family complexity among children in the United States. *The ANNALS of the American Academy of Political and Social Science*, 654(1), 48–65. [PubMed: 25332509]
- Manning WD, & Lamb KA (2003). Adolescent well-being in cohabiting, married, and single-parent families. *Journal of Marriage and Family*, 65(4), 876–893.
- Manning W, Smock P, & Majumdar D (2004). “The Relative Stability of Cohabiting and Marital Unions for Children.” *Population Research and Policy Review* 6:135–59.
- McLanahan S, & Sandefur G (1994). *Growing Up with a Single Parent. What Hurts, What Helps*. Cambridge; Harvard University Press
- Peterson RR (1996). A re-evaluation of the economic consequences of divorce. *American Sociological Review*, 528–536.
- Parker K, Horowitz JM, & Rohal M (2015). *Parenting in America*. Pew Research Center.
- Raijas A (2011). Money management in blended and nuclear families. *Journal of Economic Psychology*, 32(4), 556–563.
- Roushdy R (2004). Intrahousehold Resource Allocation in Egypt: Does Women's Empowerment Lead to Greater Investments in Children?. *Economic Research Forum*.
- Smock PJ (2000). Cohabitation in the United States: An appraisal of research themes, findings, and implications. *Annual Review of Sociology*, 26(1), 1–20.
- Stevens LK, & Sessions DN (2000). Private/public school choice and student performance revisited. *Education Economics*, 8(2), 169–184.
- Sweeney MM (2010). Remarriage and stepfamilies: Strategic sites for family scholarship in the 21st century. *Journal of Marriage and Family*, 72(3), 667–684.
- Zvoch K (1999) "Family type and investment in education: A comparison of genetic and stepparent families." *Evolution and Human Behavior* 20 (6): 453–464.

Table 1:

Descriptive characteristics of the demographic and familial characteristics of children in the sample.

	Non-Blended families	Blended families
Age	11.47	11.79 *
Female	48.59	49.03 *
White	64.9	65.43 *
Black	5.55	8.25 *
Hispanic	19.18	19.0 *
Asian	5.7	1.91 *
Other	4.6	5.41 *
Shared biological children	100	28.09 *
Step children (born to household heads)	-	3.5
Step children (born to spouses)	-	66.8
Level of schooling		
Elementary School	45.91	42.0 *
Middle School	33.8	36.3 *
High school	20.2	21.6 *
Married household head	94.34	85.60 *
<i>Parental earnings differences</i>		
Head earns more than spouse	61.93	72.43 *
Spouse earns more than head	34.52	24.18 *
Head and spouse have equal earnings	3.55	3.39 *
Head is employed	82.59	85.26 *
Spouse is employed	68.7	58.80 *
Male Head	57.31	72.64 *
Head has bachelors degree	39.37	25.31 *
Spouse has bachelors degree	40.34	24.42 *
Total family income	109,750	84,270 *
Family size	4.71	5.12 *
Enrolled in private school	13.47	6.33 *
N	1,375,115	132,424

Notes:

* p<0.05 compared to children in two parent non-blended families.

Data Source: 2011 to 2015 American Community Survey

Table 2:

Log odds from random-effects logistic regression models examining differences in private school enrollment between children in non-blended and blended families.

	Model 1	Model 2	Model 3	Model 4
Children in non-blended families				
with married parents	2.34 ***	1.45 ***	1.49 ***	2.74 ***
	(0.11)	(0.10)	(0.11)	(0.11)
with non-married parents	-0.26	-0.16	-0.00	0.20 *
	(0.14)	(0.12)	(0.12)	(0.12)
Children in blended families				
with married parents	0.88 ****	0.05	0.03	1.36 ***
	(0.12)	(0.11)	(0.11)	(0.11)
with non-married parents (Ref)	(0.00)	(0.00)	(0.00)	(0.00)
Age			-0.61 ***	-0.04 ***
			(0.00)	(0.00)
Females			0.03 **	0.03 **
			(0.01)	(0.01)
<i>Schooling level</i>				
Elementary			-0.12 ***	-0.15 ***
			(0.03)	(0.03)
Middle school			0.08 ***	0.07 ***
			(0.02)	(0.02)
High school (Ref)			(0.00)	(0.00)
Hispanic			-1.20 ***	-1.00 ***
			(0.03)	(0.04)
Blacks			-0.54 ***	-0.39 ***
			(0.04)	(0.04)
Asian			-0.82 ***	-1.17 ***
			(0.04)	(0.04)
White			0.31 ***	0.38 ***
			(0.03)	(0.03)
Other race(Ref)			(0.00)	(0.00)
<i>Parental Income differences</i>				
Head earns more		0.69 ***	0.69 ***	0.25 ***
		(0.03)	(0.03)	(0.04)
Spouse earns more		0.40 ***	0.35 ***	0.19 ***
		(0.03)	(0.03)	(0.04)

	Model 1	Model 2	Model 3	Model 4
Similar incomes (Ref)		(0.00)	(0.00)	(0.00)
Total family income (log)		0.90 ***	0.81 ***	0.57 ***
		(0.01)	(0.01)	(0.01)
Head is employed				-0.76 ***
				(0.02)
Male household head				0.25 ***
				(0.15)
Heads is a college grad				1.08 ***
				(0.01)
Spouse is employed				-0.94 ***
				(0.02)
Spouse is college grad				1.05 ***
				(0.01)
Family size				0.33 ***
				(0.01)
Constant	-8.62 ***	-18.49 ***	-16.82 ***	-15.42 ***
Log likelihood	-433,487.9	-428,057.1	-424,305.8	-415930.25
Rho	0.90	0.90	0.90	0.90
N	1,507,539	1,507,539	1,507,539	1,507,539

Note:

*
p<0.05

**
p<0.01

p<0.001. Standard errors are in parentheses.

Table 3:

Log odds from random-effects logistic regression models examining differences in private school enrollment among shared biological children and stepchildren blended families.

	Model 1	Model 2	Model 3
Shared biological child			
with married parents	0.75 ***	0.25 *	1.48 ***
	(0.12)	(0.10)	(0.12)
with non-married parents	0.07	0.05	0.09
	(0.17)	(0.15)	(0.15)
Step children			
with married parents	0.56 ***	0.07	1.31 ***
	(0.14)	(0.09)	(0.12)
with non married parents (Ref.)	(0.00)	(0.00)	(0.00)
Age			-0.04 *
			(0.01)
Females			0.03
			(0.04)
<i>Schooling level</i>			
Elementary			-0.11
			(0.12)
Middle school			0.06
			(0.07)
High school (Ref)			(0.00)
Hispanic			-0.56 ***
			(0.13)
Blacks			-0.43 **
			(0.15)
Asian			-0.32
			(0.20)
White			0.05
			(0.11)
Other race(Ref)			(0.00)
<i>Parental Income differences</i>			
Head earns more		0.40 **	0.30
		(0.15)	(0.16)
Spouse earns more		0.26	0.26
		(0.15)	(0.16)
Similar incomes (Ref)		(0.00)	(0.00)

	Model 1	Model 2	Model 3
Total family income (log)		0.54 ***	0.33 ***
		(0.05)	(0.04)
Head is employed			-0.40 ***
			(0.09)
Male household head			-0.06
			(0.07)
Heads is a college grad			1.07 ***
			(0.06)
Spouse is employed			0.95 ***
			(0.07)
Spouse is college grad			0.96 ***
			(0.07)
Family size			-0.06 *
			(0.02)
Constant	-7.13 ***	-12.18 ***	-10.25 ***
Log likelihood	-26293.6	-26302.8	-25725.6
Rho	0.83	0.78	0.78
N	132,424	132,424	132,424

Note:

*
p<0.05

**
p<0.01

p<0.001. Standard errors are in parentheses.

Table 4:

Log odds from random effects logistic regression models examining differences in private school enrollment among across blended family contexts.

	Model 1	Model 2	Model 3	Model 4
	All Children	Head earns more	Spouse earns more	Similar incomes
Step children				
Child of spouse	−0.20 ***	−0.22 ***	−0.12	−0.32
	(0.05)	(0.06)	(0.09)	(0.26)
Child of household head	1.08 ***	1.13 ***	0.93 **	−0.15
	(0.13)	(0.15)	(0.28)	(0.85)
Shared biological children (Ref)	(0.00)	(0.00)	(0.00)	(0.00)
<i>Parental Income differences</i>				
Head earns more	0.28	-	-	-
	(0.16)			
Spouse earns more	0.26	-	-	-
	(0.16)			
Similar incomes (Ref)	(1.00)	-	-	-
Total family income (log)	0.33 ***	0.27 ***	0.63 ***	0.96 ***
	(0.04)	(0.04)	(0.09)	(0.25)
Constant	−10.40 ***	−9.76 ***	−11.94 ***	−13.01 ***
Log likelihood	−25665.9	−18556.4	−6253.66	−840.50
Rho	0.79	0.79	0.75	0.72
N	132,424	95,918	32,023	4,488

Note: All models include additional controls for the demographic characteristics of children and the social and economic characteristics of parents and families.

*
p<0.05

**
p<0.01

p<0.001