Children's Gender and Investments from Nonresident Fathers

August 2010

Kristin Mammen
Department of Economics
Barnard College
Columbia University

Abstract: Evidence suggests that fathers have stronger ties to sons than daughters, which may result in differential investments in their children. This paper investigates whether girls' gender restricts their access to fathers' presence, in the form of coresidence, and to contributions from fathers if they no longer live together. The data used are the 1994-2008 March/April Match Current Population Survey Child Support Supplements, a large, nationally representative sample which identifies child support eligible mothers of all marital statuses and collects information on nonresident fathers' financial and social investments in their children. Results indicate that being a girl increases the likelihood of living in a single mother home. Small but suggestive effects of child gender are found on fathers' post-dissolution investments, but these effects disadvantage boys rather than girls. Results for court-ordered outcomes such as the existence and amounts of child support orders show that courts do not allocate child support differentially by child gender.

Keywords: Child; Child Support; Children; Gender
JEL Classifications: J120, J130, J160

Correspondence to Kristin Mammen, Economics Department, 8b Lehman Hall, Barnard College, Columbia University, 3009 Broadway, NYC 10027. Phone: 212-854-9150, e-mail: *kmm13@columbia.edu.*

Introduction

Of the estimated 73.2 million children in the United States in 2004, 26% lived with a single parent; and it is estimated that half of all American children will spend time in single parent families during their childhoods (Kreider 2008; Bumpass and Lu 2000). Given that the vast majority of these children live with their mothers and that single mother families are much more likely to be poor than married couple families and single father families (Kreider 2008), the question of whether or not children with nonresident fathers will receive child support from them is an important one for policy makers and researchers. In 2003, only about 46% of mothers whose children's fathers were nonresident received any child support payment.[1] Researchers are also concerned with the continued participation of nonresident fathers in their children's lives, because it is argued that fathers' post-dissolution involvement is important for children's well-being (Amato and Gilbreth 1999, Carlson and McLanahan 2004).

Most studies of child support outcomes have focused on how the characteristics of the parents affect the likelihood of child support payment and receipt, or on how changing child support enforcement over time has changed these likelihoods;[2] there has been little research on how the characteristics of the children themselves may affect the child support they receive.[3] One important attribute of children that affects how they are treated both by their parents and by society is gender. Recent increased attention to the effects of child gender on parental behavior in developed countries has produced findings that child gender influences families in a surprising number of dimensions, including paternal labor supply, fertility, time spent with children, marital satisfaction, and marriage formation and dissolution.[4]

The literature suggests that sons have closer ties to fathers than do daughters, and that boys therefore may have greater access to the important resources of fathers' attention and fathers' income. This paper contributes to the study of gender effects by examining whether their gender restricts girls'

---

[1] Author's calculation for children aged less than 12 from the 2004 round of the data used in this paper, the Current Population Survey Child Support Supplement.
[2] Examples are Aizer and McLanahan 2006, Beller and Graham 1993, Case, Lin and McLanahan 2003, Freeman and Waldfogel 2001, Hanson *et al.* 1996, Smock and Manning 1997.
[3] An exception is Aughinbaugh (2001), who finds that higher scores on children's achievement tests increase the likelihood of receiving child support and the amount received.

access to fathers' presence, in the form of coresidence, and to contributions from fathers if they no longer live together. Using the pooled bi-annual March/April Match Current Population Survey Child Support Supplement (CSS) from 1994 to 2008, I first tabulate how a child's gender is associated with the marital status of the parent(s) she lives with. Consistent with earlier research, I find that girls are more likely to live in single mother homes than are boys, so that they are disproportionately removed from the daily presence of fathers, and disproportionately exposed to the lower incomes of single mother homes. I then investigate whether girls are disadvantaged relative to boys in access to investments fathers make after the parental relationship has ended. I examine the effects of child gender composition on legal and informal child support, proximity and contact with fathers, and outcomes of the legal system such as the existence and amount of child support orders. I find small but suggestive effects of child gender on post-dissolution investments, but these effects disadvantage boys rather than girls. Results for court-ordered outcomes such as the existence and amounts of child support orders show that courts do not allocate child support differentially by child gender.

Background

A number of papers has presented evidence that the gender of children affects their likelihood of growing up with two married parents and has explored the channels through which children's living arrangements are affected. Fathers are more likely to be present in the homes of elementary school aged children if the child is male (Mott 1994), and women with sons are more likely than women with daughters to be married at any point in time (Teachman and Schollaert 1989). Although effects are not large, the presence of sons decreases the probability of divorce (*e.g.*, Dahl and Moretti 2008, Morgan, Lye, and Condran 1988, Spanier and Glick 1981); these authors suggest that sons create a stronger sense of attachment and obligation in fathers that keeps them in marriages.[5] Being a boy increases the

[4] Lundberg (2005) and Raley and Bianchi (2006) provide reviews.
[5] A related strand of research in the social sciences has examined whether the gender of a child or the gender composition of a sibling set is a determinant of marital satisfaction and of fathers' involvement with children. Cox *et al.* (1999), Katzev *et al.* (1994) and Mizell and Steelman (2000) report higher levels of marital satisfaction in marriages with sons compared to daughters. Father involvement has been measured in a myriad of ways including

likelihood that fathers will have custody of a child following divorce (*e.g.*, Cancian and Meyer 1998, Dahl and Moretti 2008). As nonmarital fertility has increased, scholars have increased attention to child gender effects for unmarried couples, finding that a nonmarital birth is more likely followed by marriage, and marriage occurs more quickly, if the child is a son (Dahl and Moretti 2008, Lundberg and Rose 2003).

The research on child gender effects on post-dissolution investment from fathers is more limited. Given the implication in the work noted above that fathers may be more attached to their sons, we might expect that this preference would extend after coresidence ends and manifest itself in greater incidence and magnitude of child support payments for sons. However the existing literature indicates the opposite: if anything, boys are associated with lower levels of child support. Paasch and Teachman (1991) study divorced women from the National Longitudinal Study of the High School Class of 1972 (NLSHSC) to examine whether child gender affects the regularity of contributions of various forms of assistance from divorced fathers. Some forms of assistance (*e.g.,* helping with homework and attending school events) require fathers' direct participation with their children, whereas others, such as writing a child support check, do not. The authors hypothesize that fathers will find it easier to make the direct participation contributions to their sons rather than their daughters, but that for less direct (monetary) contributions, there will be no gender difference. However, they find that the presence of a son has no significant effect on direct assistance. For two indirect forms of support, paying for dental care and carrying medical insurance for the children, for which no gender differences are predicted, a son's presence has a negative and significant effect.[6] Paasch and Teachman argue that since boys provide some protection from marital dissolution, divorced fathers of sons may be more negatively selected with regard to commitment to their children than divorced fathers of daughters. The latter would then have a higher average commitment to their children and be more likely to provide at least these two kinds of support to their girls post-

---

time diaries, time estimates, activity frequency reports, and more qualitative aspects such as warmth and closeness. Time diary evidence shows that fathers spend more time with sons (Mammen forthcoming, Yeung *et al*. 2001). Studies using other measures often analyze smaller, nonrepresentative samples; many suggest greater father involvement with sons (*e.g.*, Barnett and Baruch 1987, Ishii-Kuntz 1994, Morgan *et al.* 1988, Starrels 1994, and see the discussion in Lamb and Lewis 2004); others show no effect of gender (see discussion in Mammen forthcoming).

dissolution.

Seltzer (1991a), using the 1987-88 National Survey of Families and Households (NSFH), focuses on the broader relationship of nonresident fathers with their children, not on the gender composition of the children. However, her results for divorced, separated and never married mothers show that a child being a boy has a negative and significant effect on the incidence of fathers paying child support and visiting.

Lundberg, McLanahan, and Rose (2007) use the Fragile Families and Child Wellbeing Study (FFCWS) data to compare involvement of fathers who were married at the child's birth to those who were unmarried. They seek to distinguish between two possible causes of child gender effects on fathers' behavior: one is the notion of "preferences", where fathers devote more time to sons because they take greater pleasure in activities with sons than with daughters. The second possible motivation is "productivity," where fathers' investments in children are (or are believed to be) of greater benefit to sons than to daughters. They argue that if paternal productivity is the reason fathers are more involved with boys, we would predict greater gender effects in situations where fathers expect to have a long-term role in child-rearing and a long horizon over which to receive returns on their investments in children. Lundberg *et. al* therefore predict that gender effects will be stronger for married fathers than for unmarried fathers, and their results support this. They find only weak evidence of gender effects for unmarried fathers at the time of birth, and no gender effects in the one-year follow-up wave. Married fathers of boys, by contrast, are more likely to be living with child's mother and to have seen the child in the past 30 days at the one year follow-up, relative to married fathers of girls, consistent with the other research on gender and children's living arrangements.

Finally, Mammen (2008) uses the March CPS from 1988 - 2006 to examine the effect of children's gender on living arrangements and child support receipt. She finds that girls are more likely to live in single mother homes and boys in homes with two married parents. Divorced mothers of at least

[6] They also find that fathers are much more likely to contribute child support payments than any of the other forms of assistance.

one boy are slightly less likely to receive child support relative to divorced mothers of only girls. Never-married mothers of at least one boy are slightly more likely to receive child support relative to never-married mothers of only girls, but the average amount received is smaller.

The current investigation adds to our knowledge of child gender effects on fathers' post-dissolution investments in children in several ways. The CSS allows examination of the full range of marital statuses of child-support eligible mothers and a greater array of outcomes, for a larger and more representative sample than has been available for most other studies.[7] Paasch and Teachman use a small sample representative of divorced high school graduates only; their dependent variables measure only the regularity of contributions, rather than amounts received. In Seltzer's paper, never-married women are included along with divorced and separated women grouped together; the measures of father support are whether fathers participate in decision-making for the child, whether they visit, and whether they pay any child support. However, child support amounts are not used as a dependent variable, and the children's gender composition is not measured precisely for child support receipt.[8]

The FFCWS data in Lundberg *et. al* (2007) provide a range of father involvement measures for children of mothers who were married at the time of birth as well as those who were unmarried. However, the sample is representative only for births in cities with populations larger than 200,000, and for mothers of very young children, since outcomes are measured at birth and one year later. At the one-year follow-up, living arrangements and father-child contact are observed for all children, but whether families had a legal child support order, and how much legal and informal child support was paid, is examined only for nonmarital fathers. In Mammen (2008), the March CPS data give a sizeable, nationally representative sample of divorced, separated and never-married women with consistent data over many years. However, the only measure of nonresident fathers' investments in children is the incidence and amounts of child support receipt.

[7] I use "child-support eligible" in this paper to mean that the mothers have children with a nonresident father who could potentially pay child support, not that the mothers have been awarded a child-support order by the courts..

The CSS data used here combine the strengths of the March CPS – quantitative measures of child support amounts – with the advantages of the other datasets, which have additional measures of nonresident fathers' investments in children. The CSS is nationally representative and the sample size is substantially larger than the datasets used in the studies described above (other than the March CPS). It is likely that child support amounts are measured more accurately in the CSS than in the March CPS, because the child support supplement questions are asked directly of all household members 15 and over who have children living with them. (CPS 2001 p. 1-1); whereas in the March CPS, one household member is asked about all other members (Campanelli, Rothgeb, and Martin 2005 p. 425). The CSS provides measures of nonresident fathers' investments in children similar to those in the NLSHSC, NSFH, and FFCWS, such as receipt of informal child support and father-child contact. The CSS also provides information unavailable in any of the earlier studies. First, the CSS contains measures of outcomes of the legal system such as the amount of child support that the mother has been awarded by the court, and whether the father has joint physical custody or joint legal custody of the child(ren). Whether child gender affects these outcomes has not been studied before. Second, the CSS identifies which children of married mothers are child-support eligible - that is, which children in married-parent homes were born in previous relationships. So remarried mothers can be included in the analysis sample unlike in previous studies. This is an important group to study because in well-being measures, children living with stepfathers do no better than children of single mothers (*e.g.,* McLanahan and Sandefur 1994 p. 90). Evidence also suggest that remarriage reduces amounts of child support from nonresident fathers (Hill 1992). Third, the CSS records whether a court has awarded child support for mothers of all marital statuses. Therefore, I am able to disaggregate child-support eligible mothers into those with and without legal child support orders. There is little scope to observe child gender effects among mothers without a legal award because these mothers are the least likely to receive any child support (see Table 1). Isolating the mothers with awards therefore gives a greater chance of detecting any child gender effects.

---

[8] The decision-making and visitation questions are asked with reference to one randomly selected child, and this child's gender is used as a control in the child support payment regression. However, the child support paid is for all

Finally, this study improves on the previous studies of child gender effects on post-dissolution investments by using an indicator for whether the oldest child is a boy as the measure of child gender composition. Gender composition is endogenous: the results here show it affects parents' coresidence with their children, and it also affects fertility (*e.g.,* Angrist and Evans 1998, Dahl and Moretti 2008). However, the sex of the first child is presumably exogenous for most families (see Lundberg 2005 for a discussion).

This study makes three new contributions. First, the results show that both mothers with and without child support awards show small but similar child gender effects on child support receipt. This confirms that even for the previously unstudied group where we think child gender effects would be most evident, mothers with child support orders, child gender effects are not large. It also instills greater confidence in results from previous studies which were unable to restrict their samples to women who had child support orders. Second, the results here are the first to show for women of all marital statuses that the likelihood of obtaining an award and the amounts of awards are not affected by child gender.[9] Child gender could affect awards if the courts are gender-biased, or more benignly, if child-rearing costs depend on gender, but the findings rule out this mechanism. Third, I show that child gender has little effect on post-dissolution investments from nonresident fathers for children living with biological mothers and step fathers. This is the first information we have for these effects among this group of children.

Data and Summary Statistics

The CSS provides detailed demographic and family structure information on all household members, as well as information on which children have a parent living outside of the household, who therefore may be eligible for child support (CPS 2006). The CSS began in 1979 and has been conducted every two years since 1982. The questionnaire changed at least slightly in each round, and was significantly expanded and re-organized prior to the 1994 survey, so that comparisons are not possible

---

children, not for that particular child, and the gender of the other children is not controlled for.

[9] Recall Lundberg, McLanahan and Rose (2007) looked at award incidence and amounts in the one-year wave only for children whose parents were unmarried at the time of birth.

between the 1994 and later data and the earlier years (Grall 2009). I therefore pool the 1994 – 2008 surveys. For the living arrangements analysis, I use the sample of 131,089 children under the age of 12, which excludes children of widow(er)s, children with no listed parent in the household, and children with weights of zero. For the child support analysis, I use the sample of 12,941 child-support eligible mothers aged 18-40, with children under the age of 12. Very few mothers have a gap of greater than five years between their first and second children (Dahl and Moretti 2008). Limiting the sample to mothers of children under twelve reduces the probability that the mother has older children who have moved out of the household and therefore includes almost all children ever born to the mothers. This is important for accurately measuring the right-hand side variable of interest, the sex of the oldest child. Table 1 presents sample averages for the mother-level sample, pooled and then separately by marital status.

Column 1 shows that 43% of mothers received any child support in the previous calendar year. The average annual amount was $1,180.23 in 2002 dollars. Divorced mothers are most likely to receive child support and receive the largest amount. For both measures they are followed by married mothers (with children from a previous relationship), separated mothers and then never married mothers. The average age of the mothers was 28.22, with divorced mothers being the oldest on average and never married mothers the youngest. One in four never married mothers had not completed high school, while only 10% of divorced mothers had not. Divorced mothers also had the highest proportion of women with some college or college or more. Fifty-one percent of the pooled sample is white, 38% black and 10% other races. White women composed 66% of the divorced group but only 38% of the never married group. The mothers had on average slightly more than one and a half child-support eligible children. Note that only resident children for whom the mother is listed as the child support supplement respondent are included in this count of children; that is, any child of the mother whose father is resident is excluded from the count. Married mothers lived in the largest households and divorced mothers the smallest. The last row shows that in the pooled sample 22% of mothers are divorced, 16% married, 12% separated and 50% never married.

Analysis

Living Arrangements

Table 2 uses the child-level sample to address whether the effects of child gender on parents' marital status mean that girls are less likely to reside with fathers. The first column of Table 2 shows that the proportion of boys in the sample is 0.511. This is consistent with the biological sex ratio at birth, number of boys to number of girls born, of about 105 to 100 (Johansson and Nygren 1991). The remaining columns categorize family types in two ways, to examine whether the proportion boys differs among them. If the gender of children has no effect on divorce or the propensity of fathers to live with their children, we would expect to see no difference by family type. Columns 2- 4 classify children as living with a single mother, a married couple family or a single father. The single parents include the divorced, separated, and never-married (columns 2 and 4). The married couples include both families with two "original" parents, meaning they are the biological or adopted parents of the child, and stepfamilies, with one original parent and one step parent (column 3).[10] The proportion boys in single mother families is 0.502, significantly lower than the 0.511 average over all families, while the proportion boys living with married parents is 0.513, statistically the same as over all families.[11] Columns 3A and 3B subdivide the married couples into two-original-parent-families and step-families, showing that the proportion of boys for both these categories is not significantly different than the overall average. Column 4 shows that the proportion boys living with single fathers is 0.536, significantly greater than the overall mean. Calculating the probabilities for individual children of living in each family type shows that 23.34% of girls versus 22.50% of boys live in single mother families, a significant percentage point difference of 0.84, so that girls are 3.7% more likely to live in single mother families compared to boys.

[10] The Current Population Survey defines "own child" as "related by birth, marriage or adoption" (CPS 2001 p.7-9). The April CSS seeks more refined information for children living with married parents who have a nonresident parent (have a line number in variable HES102a-j); for these children it is asked whether the relationship with each resident parent is biological or adopted (see CPS 2001 p.6-42 variables PES105A, PES106, PES107 and PES108). For parsimony I denote biological and adopted parents as "original" parents.

[11] The single parents include those who are cohabiting. It has been estimated that about 13% of single mothers and half of single fathers cohabit (Folk 1996, Garasky and Meyer 1996, London 1998). The percentage is likely to be smaller for this sample since it includes only cohabitors who are living with a man who is not their child's father.

These calculations show that 3.92% of girls live in single father families, compared to 4.33% of boys; girls are 9.2% less likely to live with a single father, a significant difference. The average household incomes in 2002 dollars are $30,807.47 for single mother families, $45,679.19 for single father families, and $72, 427.75 for married parent families, so girls are disproportionately exposed to the lowest average income.[12] Single mother families have 50% and single fathers 74% of the average income for all families. Married parents have income higher by 16 percentage points than the average over all families. Results are quite similar when income is adjusted for household size (not shown).

Columns 5 and 6 classify children by whether they live with their original mother (single or remarried) without the original father, or with the original father (single or remarried) without the original mother.[13] Among children living with only one original parent, boys are over represented in fathers' homes and girls in mothers' homes.[14] The proportion boys living with their original father but without their original mother is 0.539, statistically significantly greater than the overall mean, while the proportion living with the original mother is 0.503, significantly lower. Compared to boys, girls are 3.2% more likely to live with their original mother (single or married) and 10.3% less likely to live with their original fathers, both significant differences.

What are the implications of the living arrangements results for children's well-being? Girls' disproportionate presence in single mother homes clearly disadvantages them, because a large literature documents that children growing up with single mothers have poorer life chances than those growing up with married original parents (see review in Sigle-Rushton and McLanahan 2004). The implications of the other household structures are not as straightforward. Children in stepfamilies do not fare much better than those in single mother homes for some outcomes (see Sigle-Rushton and McLanahan 2004), which

[12] The income averages in this table are significantly different from each other.

[13] For brevity I sometimes refer to the married women as remarried, although this group includes women who were not married to the nonresident father of their children prior to the current marriage.

[14] This is consistent with the findings of Dahl and Moretti (2008) that currently divorced fathers are more likely to have custody of their sons than of their daughters. See also Eggebeen, Snyder and Manning (1996), Meyer and Garasky (1993), and Zill (1988). Pollard and Morgan (2003) find that the effect of child gender on divorce is diminishing over time; but the effect may instead be manifesting in the living arrangements of never married parents (Lundberg 2005).

is surprising since these families have higher average incomes than single mother families, and income is an important factor in the disadvantage in single mother homes (McLanahan and Sandefur 1994 p. 90). Some research finds that all children in a stepfamily are disadvantaged relative to those with original married parents: both stepchildren - those living with one biological parent and one step parent - and joint children - their half-siblings who are the biological children of both parents (Gennetian 2005, Ginther and Pollak 2004, Hofferth and Anderson 2003). If this is the case, girls and boys are equally subject to the stepfamily disadvantage since their proportions in stepfamilies are the same as at birth. However, another strand of this work has argued that the disadvantages of stepfamilies accrue to the children lacking a genetic tie to the mother figure in the household (Biblarz and Raftery 1999; Case, Lin and McLanahan 2000, 2001; Case and Paxson 2001). This research suggests that the type of stepfamily - whether it is mother and stepfather, or father and stepmother - matters for outcomes.[15] In this scenario, boys' disproportionate allocation to father-stepmother families is a disadvantage for them.

Boys live disproportionately in single father homes. Although this is the fastest growing family type (*e.g.*, Garasky and Meyer 1996, Meyer and Garasky 1993), it is a family structure we know little about. There has been comparatively little research on how living with a single father affects child well-being, and few studies have used large representative data sets, compared single-father families to other family structures, and controlled for family background characteristics (*cf.* Bramlett and Blumberg 2007, DeMuth and Brown 2004, Eggebeen, Snyder and Manning 1996).[16] Depending on the study and the measures used, children from single father homes have been found to fare better than those in single mother homes, about the same, or worse.[17] Taken together, the literature on single fathers does not

---

[15] See also Zill (1988). Evenhouse and Reilly (2004) find results for teenagers somewhere in between these two branches.

[16] Most social scientists believe that causality and selection both play a role in family structure effects but there is a range of opinions on which has the greater influence; *cf.* Amato 2005, Cherlin 1999, Nock 2005, Sigle-Rushton and McLanahan 2004, Stevenson and Wolfers 2007, Waite and Gallagher 2000. A challenge to understanding single-father families, given their rarity, is that selection likely plays an even greater role in the formation of these families than it does for single-mother families. This selection has been discussed in Bramlett and Blumberg (2007), Buchanan, Maccoby, and Dornbusch (1997), Hoffmann and Johnson (1998), and Stewart (1999).

[17] See Bramlett and Blumberg 2007; DeMuth and Brown 2004, Downey 1994, Downey, Ainsworth-Darnell, and Dufur 1998; Hoffmann and Johnson (1998).

provide strong evidence that children in these households have consistently better outcomes than those in single mother homes. Therefore, we cannot draw firm conclusions about whether boys' greater likelihood of living in father-stepmother and single-father homes disadvantages them.[18] However, even if these family structures are detrimental to boys, it is likely that girls' disadvantage in single mother homes outweighs it because of the greater number of children in single mother homes and the wide disparity in income.

Fathers' Post-Dissolution Investments

Girls disproportionately live with single mothers. The analysis now addresses the question of whether children's gender also affect fathers' post-dissolution inputs into child well-being. The empirical specification is

$$C_i = \beta_0 + \sum_m \beta_m \cdot 1(oldest\ is\ boy)_i \cdot 1(Marital = m) +$$
$$\sum_{m-1} \lambda_{m-1} \cdot 1(Marital = m) + X_i^{'}{}'\beta_2 + \sum_{s-1} \eta_s \cdot 1(state \cdot year = s) + \varepsilon_i$$

where the unit of observation is the mother. C_i denotes the measure of investment in the child. Child gender composition is specified by an indicator function which takes on the value of one if the mother's oldest child is a boy, and is otherwise zero. To allow the effect of child gender to vary by the marital status of the mother, the dichotomous gender variable is interacted with indicators for marital status; *m* denotes divorced, married (where the mother is married to someone other than the child's father), separated, or never married. Marital status is also entered without interactions, with divorced the omitted category. For the married mothers, gender composition is calculated for her child-support eligible children, excluding children with her current husband. Other characteristics of the mother and her set of children are denoted X_i. Mother attributes are age, education, race, the number of adult men and women in her household, metropolitan statistical area status, and an indicator for receipt last year of Aid to Families with Dependent Children (AFDC) or its more recent replacement Temporary Assistance to

[18] The result in column 6 of Table 2 for father-stepmother and single father families, also holds true for father-

Needy Families (TANF). Characteristics of the children included are their number and the ages of the youngest and oldest children. State-year fixed effects (where *s* denotes each state-year) control for the child support enforcement environment. For ease of interpretation, ordinary least squares is used for the analysis. Results are robust to using logit for the dichotomous dependent variables and tobit for the monetary dependent variables such as amount received, for which many mothers report zeroes.

Table 3 presents results for financial investments nonresident fathers can make in their children. Income is important to children's outcomes and there is evidence that child support income may be particularly beneficial (Haveman and Wolfe 1995; Knox 1996). In column 1 the dependent variable is an indicator for receipt of child support. The first row shows that for divorced mothers, the oldest child being a boy reduces the likelihood of having received any child support, by about 4% (significant at $p = 0.058$). For women in the other marital status categories, the coefficients on the interactions with oldest is boy are positive but small and insignificant. The main effects for marital status illustrate that divorced women are the most likely to have received child support, followed by remarried women, then separated and never married women. These coefficients are statistically significantly different except for the comparison between the separated and never-married women.

Column 2 restricts the sample to women who have a child support order and were owed money last year. This distinguishes between the women who receive nothing because they have no order, and women who receive nothing because the fathers do not comply with the order. The gender composition interaction coefficients again are significantly negative for divorced women and insignificant for the other women, so that restricting the sample makes little difference to the results. Since marital status is correlated with whether or not a woman has a child support order (*e.g.,* Cancian and Meyer 2006), we would expect to see a reduction in marital status effects when the sample is restricted to women who have one, and this is what we find comparing column 2 to column 1. Never married women in column 2 are less likely than divorced women to receive payment, while the coefficients for married and separated mothers are not significant.

---

stepmother families (not shown).

Column 3 reports results using the amount of child support received last year as the dependent variable, for the entire sample. For divorced women, having an oldest child who is male again has a negative impact, significant at the 10% level. When the sample is restricted to the women who have child support orders in column 4, the standard errors in the specification increase and the coefficient for divorced mothers of oldest boys becomes insignificant, but its magnitude is quite similar to that of the coefficient for the larger sample. In both columns, separated and never married women receive smaller amounts than the omitted category of divorced women. The fifth column examines informal financial support. The dependent variable is an indicator coded from a question which asks whether the father gave the child(ren) any birthday, holiday, or other gifts, provided clothes or food, or paid for child care, summer camp, or any medical expenses. It is important to measure informal support because more mothers received some type of informal support than formal child support (Table 1). In addition, Nepomnyaschy (2007) finds that informal support has a role independent from formal support in increasing contact between fathers and children. The results show, however, that child gender makes no difference for informal child support.

In Table 4 we turn to measures of proximity and contact. Gender of the oldest child makes no difference for whether or not the father lives in the same state as the child in column 1. In column 2 the measure is whether the child had any contact at all with the father in the previous year. Here the coefficient for never-married mothers whose oldest child is a boy shows that their children are about two percent less likely to have had contact with the father, significant at the 10% level.

In Table 5 I examine outcomes of the legal system. Fathers of boys may possess different resources or face different costs than fathers of girls, resulting in differential incidence or levels of child support awards. Lundberg and Rose (2002) show that men work and earn more after the birth of a son than a daughter, which may lead to higher support awards for sons. There is some evidence that sons cost more in total to rear than daughters and more is spent on housing in families with sons (Olson 1983). A more recent study finds that total costs are similar but concurs that housing costs are greater for boys, which could affect child support award levels (Lundberg and Rose 2004). In Table 5, the first two columns show results for whether the mother had a child support agreement with support due last year, and the amount owed for those who had an award. The results show no significant associations between gender composition and these outcomes, which supports the idea that the negative associations between oldest child is boy and child support receipt and amount received in Table 3 are due to behavior on the part of fathers, rather than to differential effects of gender on the child support allocation process.

Next I examine whether the mothers of oldest boys are more likely to have a joint physical or legal custody arrangement. These two outcomes of the legal process are likely more subject to fathers' preferences than are the incidence and levels of awards, which are significantly influenced by states' child support guidelines (*e.g.*, Maccoby and Mnookin 1992 p. 155) Almost all states distinguish between physical and legal custody (Kelly 1994). Joint physical custody means that both parents have significant periods of physical custody; joint legal custody is defined as a "continuing mutual responsibility and involvement by both parents in decisions regarding the child's welfare in matters of education, medical care, emotional, moral, and religious development." (Buehler and Gerard 1995). There is evidence that fathers with more involvement in child rearing pre-dissolution are more likely to obtain joint custody (Gunnoe and Braver 2001, Lowery 1986). Researchers argue that joint custody encourages closer ties post-dissolution as well (Seltzer 1991b, Wolchik, Braver, and Sandler 1985); for instance, Seltzer (1988) finds that visits with the nonresident father are more frequent with joint legal custody even after controlling for unobserved differences.

Columns 3 and 4 show that having an oldest boy makes no significant difference for these two custody arrangements. However, some influence of child gender is evident in column 5, where the dependent variable is having both a child support order and shared legal custody. Mothers of oldest boys of all marital statuses are more likely to have this arrangement, significant at the 10% level, with the exception being remarried mothers. Economic theory suggests that fathers have additional incentive to maintain decision making power in their children's lives if they are required to pay child support, in order to monitor how these funds are spent by the mother (Weiss and Willis, 1985). But it appears that fathers of oldest boys are less likely to take on the additional responsibility of joint legal custody to accompany the mandate to pay child support.

To sum up, there are some small but suggestive effects of child gender on father's post-dissolution investments in children. Divorced mothers of oldest boys are less likely to receive any child support relative to divorced mothers of oldest girls, whether or not they have a child support order. They also receive smaller amounts, although this result is significant only for the entire sample, not the subset which has a child support order. For measures of proximity and contact, having an oldest boy does not affect whether the father lives in the same state, but for never-married mothers of oldest boys, there is a smaller likelihood of any father-child contact in the previous year than for never-married mothers of oldest girls. The results in Table 5 show that that the court system does not allocate child support orders differently for oldest boys, so that the differences in receipt do not stem from legal outcomes. Child gender does not make a difference for whether mothers share joint physical custody or joint legal custody with fathers, but divorced mothers of oldest boys are less likely to have both a child support order and joint legal custody with fathers than are divorced mothers of oldest girls.

Discussion

Comparison with Previous Results

The results in this paper contribute to the evidence that there are some small but suggestive child gender effects on fathers' post-dissolution contributions to their children. Despite different samples and different measures of fathers' investments, the results here are largely consistent with earlier work. Similar to the negative effect of the presence of a boy in Paasch and Teachman (1991), Seltzer (1991a), and Mammen (2008), I find that divorced mothers of oldest boys are less likely to receive child support and receive smaller average amounts than divorced mothers of oldest girls. For never-married mothers, I find a negative effect of having an oldest boy on the children's contact with father in the past year, but no gender effects on financial support. Seltzer (1991a), whose sample included never-married mothers. found that the presence of a boy negatively affected receipt of child support and visits, whereas Lundberg, McLanahan and Rose (2007) found no gender effects on unwed fathers' contributions at the one-year interview. Similar to Seltzer's data, the sample used here includes older children than that of Lundberg *et.al*, so it may be that negative effects of having a boy on visitation manifest later than one year into the child's life. The results here for never-married women here differ somewhat from those in Mammen (2008), which found a negative and significant effect of having at least one boy on the amount of child support received. In this study, the coefficients on oldest is boy are negative, but smaller and insignificant. One explanation is that since the CSS puts more effort into identifying which mothers may be child-support eligible, and asks them directly about child support, the results here are possibly more credible.

Turning to the outcomes of the legal system, we find that for divorced, separated, and never-married mothers, having an oldest boy decreases the likelihood of having both a child support order and sharing joint legal custody with the father. Child gender does not appear to affect other outcomes of the legal system, however; this is the first study to present findings on the question of child gender effects on these outcomes for mothers of all marital statuses. This is important to know because it shows that the gender effect we do find are presumably influenced only by parental behavior and not by the legal system. Another new finding of this study is that there are no significant child gender effects for any of the fathers' post-dissolution investments for married women. This group had not been studied before due to data limitations. A final notable point is that similar gender effects are found on the financial support outcomes for the child support sample and the broader sample. This gives confidence that studies which cannot observe child support orders are still able to detect gender effects if they exist.

Selection

The negative results here for having an oldest boy are not large, but they are consistent with the notion that nonresident fathers of boys may be a more negatively selected group than are those of girls. The lack of gender effects found for some of the post-dissolution investments may not represent true gender neutrality, but instead may be a result of this negative selection. The results which exhibit gender differences show that the probability that fathers make post-dissolution investments is greater, given that the relationship has ended and the child is female, than the probability for a father, given that the relationship has ended and the child is male. We can write this in notation as

$$P(\theta_H \mid disrupt \cap girl) > P(\theta_H \mid disrupt \cap boy) \tag{1}$$

where θ_H denotes a high-investing father. A behavioral explanation would be that something about the dissolution of the parental relationship changes fathers' investment behavior, resulting in the higher post-dissolution investments we see in girls. The selection story, by contrast, is that dissolution does not change father's propensity to invest, but that a greater proportion of high-investing fathers of girls experience relationship dissolution than do high-investing fathers of boys; in this explanation, θ_H is the same both pre and post-dissolution. To distinguish between these explanations we would need information on father's involvement with their children during the parental relationship. To see this we can rewrite (1) as

$$\frac{P(\theta_H \cap disrupt \cap girl)}{P(disrupt \cap girl)} > \frac{P(\theta_H \cap disrupt \cap boy)}{P(disrupt \cap boy)} \tag{2}$$

and then as

$$\frac{P(disrupt \mid \theta_H \cap girl)\; P(\theta_H \cap girl)}{P(disrupt \mid girl)\; P(girl)} > \frac{P(disrupt \mid \theta_H \cap boy)\; P(\theta_H \cap boy)}{P(disrupt \mid boy)\; P(boy)} \tag{3}$$

If gender of the oldest child is randomly assigned to fathers, we can assume that the probability that the father is high investing is the same whether the child is a boy or girl, *i.e.*, that

$$P(\theta_H \mid girl) = P(\theta_H \mid boy) \tag{4}$$

This allows us to cancel terms in (3), yielding

$$\frac{P(disrupt \mid \theta_H \cap girl)}{P(disrupt \mid girl)} > \frac{P(disrupt \mid \theta_H \cap boy)}{P(disrupt \mid boy)} \tag{5}$$

On both sides of (5) , the numerator is likely smaller than the denominator, meaning that for each child gender the risk of dissolution is lower given that the father is high-quality relative to the risk over all fathers. An argument in the selection story is that nonresident fathers differ less in terms of involvement with their children from fathers in intact families, if they have girls rather than boys (Paasch and Teachman 1991). This implies that father quality makes less of a difference in the risk of dissolution for girls than for boys; this smaller difference between the numerator and the denominator would make the term on the left hand side greater than the term on the right hand side. If data were available on fathers' investments in children prior to dissolution, we could estimate the probabilities in (5), and if the inequality in (5) were true empirically, this would support the notion that the inequality we see in (1) is influenced by selection, rather than a behavioral change.

Implications for Policy

Research on fathers' behavior suggests they have stronger ties to, and greater willingness to invest in boys than girls. In the United States gender preference has not produced the stark contrasts in well-being measures between girls and boys observed in some developing countries (Lundberg 2005); but with the introduction of sex-selection technologies, a preference for boys at its most extreme has the potential to affect the ratio for boys to girls born (Dahl and Moretti 2008). A more immediate concern is that the cumulative effect of differential investments over a child's life may affect equality between the genders in adulthood (Lundberg 2005). As an example, researchers have argued that children are disadvantaged in learning how to succeed in the labor market if their fathers are nonresident (Biblarz and Raftery 1999, McLanahan and Sandefur 1994 p. 35). But how policies might change the parental behaviors that lead to these differential investments is a difficult question, especially since there is little consensus on a theoretical framework explaining why fathers might prefer boys in developed countries (Hank 2007, Lundberg 2005).

The results in this paper show that fathers' post-dissolution investments are not strongly affected by child gender, and the effects found work against boys rather than further disadvantaging girls. Nevertheless, the financial disadvantage of growing up with single mothers is borne more heavily by girls because they are more likely to live in these homes than are boys. This suggests that improving the economic status of single mothers is a route to ameliorating the disadvantages of being a girl.

The research in Duncan and Brooks-Gunn (1997) and Haveman and Wolfe (1994) documents that poor children have poorer outcomes, and largely supports the notion that more income improves outcomes. The degree to which income is causal in improved child outcomes has not been conclusively established.[19] Nevertheless, scholars have argued that increases in income would improve the outcomes of low income children (*e.g.*, Haveman and Wolfe 1994, Sigle-Rushton and McLanahan 2004). This suggests that finding ways to increase the low incomes of single mothers would offset some of the disproportionate disadvantage shouldered by their daughters - and benefit their sons as well. This kind of policy would directly target the majority of poor children, 51% of whom live with single mothers (Fields 2003). Since women are more likely to be poor than men (Spraggins 2005), such a policy would potentially increase the gender equality of current generations as well as future ones.

Scholars have suggested that women's incomes can be raised through improving education and job skills (*e.g.*, Acs 2007, Sigle-Rushton and McLanahan 2004). Another channel would be to increase child support receipt rates, which as we saw remain less than 50% over all eligible mothers. Policy changes, especially coupled with increased expenditures, have increased rates over time (Case, Lin, and McLanahan 2003, Freeman, and Waldfogel 2001, Sorensen and Hill 2004), but more could be done. As one example, the effect of "pass-throughs" has recently received attention (*e.g.*, Bone 2009, Eckholm 2007). This refers to the amount of child support from fathers received by states that is passed on to mothers on welfare (Office of Child Support Enforcement 2007). Reinstating pass-throughs and increasing the amounts passed through would increase single mothers' income and might increase fathers' contributions as well; considerable evidence suggests that fathers are less likely to make payments when those payments go exclusively to the state (Cancian and Meyer 2006 and cites therein).

Conclusion

This study finds that girls are disadvantaged in their living arrangements by living

[19] Mayer (1997) argues that the effects of income are mostly due to selection. The findings of Blau (1999) and Berger, Paxson, and Waldfogel (2009) suggest the effects of income on children's outcomes may be too small to make income transfers (for example) a feasible approach for improving children's well-being.

disproportionately in single mother homes, which are the poorest on average. Although the difference in probabilities for individual children of living in these homes is not large, the difference in average incomes is, suggesting the cumulative effects could be important over the population of girls. For post-dissolution investments from father, some small effects are found, but the direction these effects actually disadvantages mothers of boys rather than mothers of girls.

These results highlight the value of continued research on the nuances of family structure to inform assessment of how the different types of families they live in affect girls and boys. More information on how outcomes may differ across family types and the gender of children is needed, especially for less-studied groups such as single father families. The effects of child gender also deserve continued attention given the important role gender plays in people's life chances (*e.g.*, Blau 1998). This paper also suggests that one way to target disadvantaged girls is to target single mothers. Policies to increase single mothers' income, including increasing the child support they receive, would target the gender inequity resulting from girls living disproportionately in single mother homes. Such policies would also directly target a large proportion of children who are poor in the Unites States, including the boys, and could potentially decrease the current gender inequity among adults in the likelihood of being poor.

References

Acs, Gregory. 2007. "Can We Promote Child Well-Being by Promoting Marriage?" *Journal of Marriage and Family* 69:1326–1344

Aizer, Anna and Sarah McLanahan. 2006. “The Impact of Child Support Enforcement on Fertility, Parental Investments, and Child Well-Being.” *Journal of Human Resources* 41(1):28-45.

Amato, Paul. 2005. "The Impact of Family Formation Change on the Cognitive, Social, and Emotional Well-Being of the Next Generation." *The Future of Children* 15(2):75-96.

Amato, Paul and Joan Gilbreth. 1999. "Nonresident Fathers and Children’s Well-Being: A Meta-Analysis." *Journal of Marriage and the Family* 61:557-573.

Angrist, Joshua, and William Evans. 1998. “Children and their Parents’ Labor Supply: Evidence from Exogenous Variation in Family Size.” *American Economic Review*, 88(3):450-477.

Aughinbaugh, Alison. 2001. “Signals of Child Achievement as Determinants of Child Support.” *American Economics Association Papers and Proceedings* 91(2):140- 144.

Barnett, Rosalind and Baruch, Grace. 1987. “Determinants of Father’s Participation in Family Work.” *Journal of Marriage and the Family* 49:29-40.

Beller, Andrea, and John Graham. 1993. Small Change: The Economics of Child Support. New Haven and London: Yale University Press.

Berger, Lawrence, Christina Paxson, and Jane Waldfogel. 2009. “Income and Child Development.” *Children and Youth Services Review* 31:978–989.

Biblarz, Timothy and Adrian Raftery. 1999. "Family Structure, Educational Attainment, and Socioeconomic Success: Rethinking the 'Pathology of Matriarchy.'" *American Journal of Sociology* 105: 321-365.

Blau, David. 1999. "The Effect of Income on Child Development." *Review of Economics and Statistics* 81:261-76.

Blau, Francine. 1998. “Trends in the Well-Being of American Women, 1970-1995.” *Journal of Economic Literature* 36:112-165.

Bone, Josh. 2009 (Oct. 13) . “States Should Distribute More Owed Child Support to Parents.” *In Focus* brief. Center for Law and Social Policy. <*http://www.clasp.org/issues/in_focus?type=child_support_and_fathers&id=0002*>

Bramlett, Matthew and Stephen Blumberg. 2007. "Family Structure And Children’s Physical And Mental Health." *Health Affairs* 26(2): 549-558.

Buehler, Cheryl and Jean Gerard. 1995. “Divorce Law in the United States: A Focus on Child Custody.” *Family Relations* 44 (4): 439- 458.

Buchanan, Christy, Eleanor Maccoby, and Sanford Dornbusch. 1997. Adolescents after Divorce. Cambridge, MA: Harvard University Press.

Bumpass, Larry and Hsien-Hen Lu. 2000. “Trends in Cohabitation and Implications for Children’s Family Contexts in the United States.” *Population Studies* 54: 29–41.

Campanelli, Pamela, Jennifer Rothgeb, and Elizabeth A. Martin. 2005. “The Role of Respondent Comprehension and Interviewer Knowledge in CPS Labor Force Classification.” Survey Methodology Research Report #2005-07. Washington D.C: U.S. Bureau of the Census Statistical Research Division. <*http://www.census.gov/srd/papers/pdf/rsm2005-07.pdf*>

Cancian, Maria and Daniel R. Meyer. 2006. “Child Support and the Economy.” In Rebecca Blank, Sheldon Danziger and Robert Schoeni, editors. Working and Poor: How Economic and Policy Changes Are Affecting Low-Wage Workers. Russell Sage Foundation.

Cancian, Maria and Daniel R. Meyer. 1998. "Who Gets Custody?" *Demography* 35(2):147-157.

Carlson, Marcia and Sara McLanahan. 2004. "Early Father Involvement in Fragile Families," in Conceptualizing and Measuring Father Involvement, edited by Randal Day and Michael Lamb. Mahwah, NJ: Lawrence Erlbaum Associates.

Case, Anne, I-Fen Lin, and Sara McLanahan. 2003. “Explaining Trends in Child Support: Economic, Demographic, and Policy Effects.” *Demography* 40(1): 171-189.

Case, Anne, I-Fen Lin, and Sara McLanahan. 2001. “Educational Attainment of Siblings in Stepfamilies.” *Evolution and Human Behavior* 22: 269–289.

Case, Anne, I-Fen Lin, and Sara McLanahan. 2000. "How Hungry is the Selfish Gene?" *Economic Journal* 110:781–804.

Case, Anne and Christina Paxson. 2001. "Mothers and Others: Who Invests in Children’s Health?" *Journal of Health Economics* 20:301–328.

Cherlin, Andrew. 1999. “Going to Extremes: Family Structure, Children’s Well-Being, and Social Science.” *Demography* 36(4):421-428.

Cox, Martha, Blair Paley, Margaret Burchinal and Chris Payne. 1999. “Marital Perceptions and Interactions Across the Transition to Parenthood.” *Journal of Marriage and the Family* 61:611-625.

Current Population Surveys. 2006. March/April Match 1992, 1994, 1996, 1998, 2000, and 2002 [machine-readable data files]/conducted by the Bureau of the Census for the Bureau of Labor Statistics. Washington: Bureau of the Census [producer and distributor], 1979-2005. Santa Monica, CA: Unicon Research Corporation [producer and distributor of CPS Utilities].

Current Population Survey. 2001. March/April 1994 Match File: Child Support Technical Documentation. U.S. Census Bureau for the Bureau of Labor Statistics. Washington: U.S. Census Bureau [producer and distributor].

Dahl, Gordon, and Enrico Moretti. 2008. “The Demand For Sons." *Review of Economic Studies* 75(4):1085-1120.

Demuth, Stephen and Susan L. Brown. 2004. "Family Structure, Family Processes, and Adolescent Delinquency: The Significance of Parental Absence Versus Parental Gender." *Journal of Research in*

Crime and Delinquency 41(1):58-81.

Downey, Douglas. 1994. "The School Performance of Children From Single-Mother and Single-Father Families: Economic or Interpersonal Deprivation?" *Journal of Family Issues* 15(1):129-147.

Downey, Douglas, James Ainsworth-Darnell and Mikaela Dufur. 1998. "Sex of Parent and Children's Well-Being in Single-Parent Households." *Journal of Marriage and the Family* 60(4): 878-893.

Duncan, Greg and Jeanne Brooks-Gunn. 1997. Consequences of Growing Up Poor. New York: Russell Sage Foundation.

Eckholm, Erik. 2007. "Mothers Scrimp as States Take Child Support." *New York Times* 12/1/07.

Eggebeen, David, Anastasia Snyder, and Wendy Manning. 1996. "Children in Single-Father Families in Demographic Perspective." *Journal of Family Issues* 17:441-65.

Evenhouse, Eirik and Siobhan Reilly. 2004. "A Sibling Study of Stepchild Well-being." *Journal of Human Resources* 39:248-76

Fields, Jason. 2003. *Children's Living Arrangements and Characteristics: March 2002 Population Characteristics.* Current Population Reports, P20-547. U.S. Census Bureau, Washington, DC.

Folk, Karen Fox. 1996. "Single Mothers in Various Living Arrangements: Differences in Economic and Time Resources." *American Journal of Economics and Sociology* 55(3):277-292.

Freeman, Richard and Jane Waldfogel. 2001. "Dunning Delinquent Dads: The Effects of Child Support Enforcement on Child Support Receipt by Never Married Women," *Journal of Human Resources* 36(2):207-25.

Garasky, Steven, and Daniel R. Meyer. 1996. "Reconsidering the Increase in Father-Only Families." *Demography* 33(3): 385-393.

Gennetian, Lisa. 2005. "One or Two parents? Half or Step Siblings? The Effect of Family Structure on Young Children's Achievement" *Journal of Population Economics* 18:415–436.

Ginther, Donna and Robert Pollak. 2004. "Family Structure and Children's Educational Outcomes: Blended Families, Stylized Facts, and Descriptive Regressions." *Demography* 41(4):671-696.

Grall, Timothy. 2009. *Custodial Mothers and Fathers and their Child Support: 2007.* Current Population Reports, P60-237. U.S. Census Bureau, Washington, DC.

Gunnoe, Marjorie and Sanford Braver. 2001. "The Effects of Joint Legal Custody on Mothers, Fathers, and Children Controlling for Factors that Predispose a Sole Maternal versus Joint Legal Award." *Law and Human Behavior* 25(1): 25-43.

Hank, Karsten. 2007. "Parental Gender Preferences And Reproductive Behaviour: A Review Of The Recent Literature." *Journal of Biosocial Science* 39(5):759-767

Hanson, Thomas, Irwin Garfinkel, Sara McLanahan, and Cynthia Miller. 1996. "Trends in Child Support Outcomes." *Demography* 33(4): 483-496.

Haveman, Robert and Barbara Wolfe. 1994. Succeeding Generations: On the Effects of Investments in Children. New York: Russell Sage Foundation.

Hill, Martha. 1992. “The Role of Economic Resources and Remarriage in Financial Assistance for Children of Divorce.” *Journal of Family Issues*. 13(2):158-178.

Hofferth, Sandra, and Kermyt Anderson. 2003. "Are All Dads Equal? Biology Versus Marriage as a Basis for Paternal Investment." *Journal of Marriage and Family* 65(1):213–224.

Hoffman, John P. and Robert A. Johnson. 1998. “A National Portrait of Family Structure and Adolescent Drug Use.” *Journal of Marriage and the Family* 60:633-45.

Ishii-Kuntz, Masako. 1994. “Paternal Involvement and Perceptions Toward Father’s Roles: a Comparison between Japan and the United States.” *Journal of Family Issues* 15:30-48.

Johansson, Sten, and Ola Nygren. 1991. "The Missing Girls of China: A New Demographic Account." *Population and Development Review* 17(1):35-51.

Katzev, Aphra, Rebecca Warner, and Alan Acock. 1994. “Girls or Boys? Relationship of Child Gender to Marital Instability.” *Journal of Marriage and the Family* 56:89-100.

Kelly, Joan. 1994. “The Determination of Child Custody.” *The Future of Children* 4(1): 121-142.

Knox, Virginia. 1996. “The Effects of Child Support Payments on Developmental Outcomes for Elementary School- Age Children.” *Journal of Human Resources* 31(4): 816-840.

Kreider, Rose. 2008. *Living Arrangements of Children: 2004.* Current Population Reports, P70-114. U.S. Census Bureau, Washington, DC.

Lamb, Michael, and Charlie Lewis. 2004. "The Development and Significance of Father-Child Relationships in Two-Parent Families.” In Michael Lamb, editor, The Role of the Father in Child Development, 4th edition, John Wiley and Sons.

Legler, Paul and Vicki Turetsky. 2006. “More Child Support Dollars to Kids: Using New State Flexibility in Child Support Pass-Through and Distribution Rules to Benefit Government and Families.” *Policy Brief.* Washington, DC: Center for Law and Social Policy.

London, Rebecca. 1998. "Trends in Single Mothers' Living Arrangements from 1970 to 1995: Correcting the Current Population Survey." *Demography* 35(1):125-131.

Lowery, Carol. 1986. “Maternal and Joint Custody: Differences in the Decision Process.” *Law and Human Behavior* 10(4): 303-315.

Lundberg, Shelly. 2005. "Sons, Daughters and Parental Behavior." *Oxford Review of Economic Policy* 21(3):340-356.

Lundberg, Shelly, Sarah McLanahan, and Elaina Rose**.** 2007. “Child Gender and Father Involvement with Fragile Families.” *Demography* 44(1): 79–92.

Lundberg, Shelly and Elaina Rose**.** 2004. “Investments in Sons and Daughters: Evidence from the Consumer Expenditure Survey.” In Family Investments in Children’s Potential: Resources and Parenting

Behaviors that Promote Success, edited by Ariel Kalil and Thomas DeLeire. Lawrence Erlbaum Associates.

Lundberg, Shelly and Elaina Rose**.** 2003. "Child Gender and the Transition to Marriage." *Demography* 40(2): 333-49.

Lundberg, Shelly and Elaina Rose. 2002. "The Effects of Sons and Daughters on Men's Labor Supply and Wages." *Review of Economics and Statistics* 84(1):251-268.

Mnookin, Robert, Eleanor Maccoby, Catherine Albiston and Charlene Depner. 1990. "Private Ordering: What Custodial Arrangements Are Parents Negotiating?" in Divorce Reform at the Crossroads, edited by Stephen Sugarman and Herma Kay. Yale University Press.

Mammen, Kristin. Forthcoming. "Fathers' Time Investments in Children: Do Sons Get More?" *Journal of Population Economics.* Published online August 2009.

Mammen, Kristin. 2008. "The Effect of Children's Gender on Living Arrangements and Child Support." *American Economic Review: Papers and Proceedings* 98(2):408–412.

Mayer, Susan. 1997. What Money Can't Buy: Family Income and Children's Life Chances. Cambridge, MA: Harvard University Press.

McLanahan, Sara, and Gary Sandefur. 1994. Growing Up with A Single Parent: What Helps, What Hurts. Cambridge: Harvard University Press.

Meyer, Daniel R. and Steven Garasky. 1993. "Custodial Fathers: Myths, Realities, and Child Support Policy." *Journal of Marriage and the Family* 55(1):73-89.

Mizell, C. André and Lala Carr Steelman. 2000. "All My Children: The Consequences of Sibling Group Characteristics on the Marital Happiness of Young Mothers." *Journal of Family Issues* 21(7):858-887.

Morgan, S. Philip, Diane Lye, and Gretchen Condran. 1988. "Sons, Daughters, and the Risk of Marital Disruption." *American Journal of Sociology* 94(1):110-129.

Mott, Frank. 1994. "Sons, Daughters, and Fathers' Absence: Differentials in Father-Leaving Probabilities and in Home Environments." *Journal of Family Issues* 15(1):97-128.

Nepomnyaschy, Lenna. 2007. "Child Support and Father-Child Contact: Testing Reciprocal Pathways *Demography* 44(1): 93-112.

Nock, Steven. 2005. "Marriage as a Public Issue." *The Future of Children* 15(2):13-32.

Office of Child Support Enforcement. 2007. "Glossary of Common Child Support Terms." Washington, DC: U.S. Department of Health and Human Services. <*http://www.acf.hhs.gov/programs/cse/pol/IM/2007/im-07-11a.pdf*>

Olson, Lawrence. 1983. Costs of Children. Lexington, Massachusetts: D.C. Heath and Co.

Paasch, Kathleen and Jay Teachman. 1991. "Gender of Children and Receipt of Assistance from Absent Fathers." *Journal of Family Issues* 12(4): 450-466.

Pollard, Michael and S. Philip Morgan. 2003. "Do Parents of Girls Really Have a Higher Risk of Divorce? Revisiting Father Involvement and Marital Stability." Mimeo.

Raley, Sara, and Suzanne Bianchi. 2006. "Sons, Daughters, And Family Processes: Does Gender of Children Matter?" *Annual Review of Sociology* 32:401–21.

Seltzer, Judith. 1991a. “Relationships between Fathers and Children Who Live Apart: The Father’s Role After Separation.” *Journal of Marriage and the Family* 53:79-101.

Seltzer, Judith. 1991b. “Legal Custody Arrangements and Children's Economic Welfare.” *The American Journal of Sociology* 96(4): 895-929.

Seltzer, Judith. 1988. “Father by Law: Effects of Joint Legal Custody on Nonresident Fathers' Involvement with Children.” *Demography* 35(2): 135-146.

Sigle-Rushton, Wendy, and Sara McLanahan. 2004. ""Father Absence and Child Well-Being: A Critical Review." In The Future of the Family, edited by Daniel Moynihan, Lee Rainwater and Timothy Smeeding. New York: Russell Sage Foundation.

Smock, Pamela, and Wendy Manning. 1997. “Nonresident Parents' Characteristics and Child Support.” *Journal of Marriage and the Family* 59(4): 798-808.

Sorensen, Elaine and Ariel Hill. 2004. "Single Mothers and Their Child-Support Receipt: How Well Is Child-Support Enforcement Doing?" *Journal of Human Resources* 39(1):135-54.

Spanier, Graham, and Paul Glick. 1981. “Marital Instability in the United Sates: Some Correlates and Recent Changes.” *Family Relations* July 1981: 329-338.

Spraggins, Reneé. 2005. *We the People: Women and Men in the United States*. Census 2000 Special Reports CENSR-20. Washington, DC: U.S. Census Bureau.

Starrels, Marjorie. 1994. “Gender Differences in Parent-Child Relations.” *Journal of Family Issues* 15(1):148-165.

Stevenson, Betsey and Justin Wolfers. 2007. "Marriage and Divorce: Changes and their Driving Forces." *Journal of Economic Perspectives* 21(2): 27–52.

Stewart, Susan D. 1999. "Nonresident Mothers' and Fathers' Social Contact with Children." *Journal of Marriage and the Family* 61(4): 894-907.

Teachman, Jay, and Paul Schollaert. 1989. “Gender of Children and Birth Timing.” *Demography* 26(3):411-423.

Waite, Linda, and Maggie Gallagher. 2000. The Case for Marriage. New York: Random House.

Weiss, Yoram and Robert Willis. 1985. “Children as Collective Goods and Divorce Settlements.” *Journal of Labor Economics* 3(3):268-292.

Yeung, Jean, John Sandberg, Pamela Davis-Kean, and Sandra Hofferth. 2001. “Children's Time with Fathers in Intact Families.” *Journal of Marriage and the Family* 63(1): 136-54.

Zill, Nicholas. 1988. "Behavior, Achievement and Health Problems among Children in Stepfamilies: Findings from a National Survey of Child Health." In E. Mavis Hetherington and Josephine Arasteh, editors, Impact of Divorce, Single Parenting, and Stepparenting on Children pp. 325-368. Erlbaum .

Table 1
Sample Averages
Child-support Eligible Mothers with Children under 12

	1	2	3	4	5
	All Mothers	Divorced Mothers	Married Mothers	Separated Mothers	Never Married Mothers
Received any child support	0.43	0.55	0.54	0.41	0.34
Amount received	1,180.23	1,873.92	1,681.36	1,053.75	737.64
Amount received if received any	2,758.56	3,385.06	3,130.64	2,565.32	2,168.9
Any informal support last year	0.56	0.64	0.57	0.65	0.50
Father lives in state	0.78	0.77	0.73	0.81	0.80
Any contact with father last year	0.70	0.77	0.70	0.76	0.66
Had agreement with support due	0.44	0.62	0.58	0.34	0.33
Amount owed, if had agreement	3,735.79	4,367.83	4,367.83	3,779.95	3,053.67
Joint physical custody	0.09	0.16	0.13	0.08	0.05
Joint legal custody	0.15	0.28	0.22	0.14	0.07
Has child support agreement and joint legal custody	0.10	0.20	0.17	0.08	0.04
Age	28.22	31.31	29.80	29.51	26.01
Less than high school	0.19	0.10	0.16	0.21	0.24
High school only	0.38	0.36	0.37	0.37	0.40
Some college	0.33	0.39	0.36	0.32	0.30
College or more	0.09	0.15	0.12	0.10	0.05
White	0.51	0.66	0.63	0.59	0.38
Black	0.38	0.27	0.30	0.32	0.49
Other race	0.10	0.06	0.05	0.09	0.13
Number of children	1.54	1.59	1.33	1.82	1.51
Has 1 child	0.61	0.56	0.74	0.43	0.64
Has 2 children	0.27	0.33	0.21	0.38	0.25
Has 3 children	0.09	0.09	0.05	0.14	0.09
Has 4 or more children	0.03	0.03	0.01	0.05	0.03
Central city-MSA	0.32	0.23	0.21	0.30	0.40
Household size	3.75	3.33	4.42	3.57	3.76
Proportion of sample	1	0.22	0.16	0.12	0.50
Observations (unweighted)	12,941	3,039	2,197	1,533	6,172

Notes: 1994 - 2008 March-April Match Current Population Survey Child Support weighted with April supplement sample weights. Counts of children are for the mother's resident children aged 11 and under who have a nonresident father. Receipt and amounts are for the previous calendar year; amounts are in real 2002 dollars. For married mothers the child-support eligible children are from a previous relationship.

Table 2

Proportion Boys and Total Household Income Among Children Under 12 by Family Structure

	1	2	3	3A	3B	4	5	6
	All families	Single parent or married parents?					Living without original father or without original mother?	
		Single mother	Married parents (Original or step-families)	Married original parents	Parent and step-parent	Single father	Single mother, or mother and stepfather	Single father, or father and stepmother
Proportion of children who are boys	0.511	0.502*	0.513	0.512	0.520	0.536+	0.503*	0.539+
Household Income	$61,785.67	$30,807.47	$72,427.75	$73,329.93	$56,051.95	$45,679.19	$33,724.23	$47,892.3
Number of children	131,089	28,968	96,587	91,452	5,135	5,534	33,219	6,418

Notes: March/April Match Current Population Survey Child Support Supplement data 1994-2008, weighted with the April supplement sample weights. The unit of observation is the child; the number of observations presented is unweighted. The significance tests account for correlation between observations on multiple children of the same parent. "Original" denotes biological or adopted parents. Household income is in real 2002 dollars. Children of widowed parents and with no listed parent in household are excluded; the proportion of boys is not significantly different between the excluded children and the proportion boys in this sample (column 1). Children in group quarters are not included in the CSS; author's calculations from the Integrated Public Use Microdata Series Census 2000 5% sample show that the proportion of children under 12 who reside in group quarters is miniscule (0.0015583).

* significantly less than the proportion of boys in column 1 at the 5% level.

+ significantly greater than the proportion of boys in column 1 at the 1% level.

Table 3

Effect of Oldest is Boy on Child Support Payments

Child-support Eligible Mothers with Children under 12

	1	2	3	4	5
	Received child support	Received child support; had CSO	Amount received last year	Amount received last year, had CSO	Any informal support last year
Divorced * Oldest is boy	-0.039*	-0.042*	-203.26*	-207.35	0.011
	(0.020)	(0.023)	(119.69)	(165.63)	(0.020)
Married * Oldest is boy	0.030	0.028	128.41	78.92	-0.018
	(0.024)	(0.024)	(118.47)	(172.68)	(0.024)
Separated * Oldest is boy	0.000	0.022	-35.78	97.79	0.000
	(0.028)	(0.043)	(117.46)	(251.01)	(0.027)
Never-married * Oldest is boy	-0.007	0.002	-27.67	-53.07	-0.018
	(0.040)	(0.024)	(50.74)	(118.19)	(0.014)
Divorced (omitted category)					
Married	-0.043	-0.013	-250.07	-104.34	-0.029
	(0.023)*	(0.027)	(124.08)	(181.12)	(0.023)
Separated	-0.121	-0.032	-717.55***	-497.35***	0.040*
	(0.024)***	(0.033)	(122.02)	(205.38)	(0.024)
Never-married	-0.133***	-0.044*	-688.38***	-592.01***	-0.066**
	(0.019)	(0.025)	(96.29)	(144.62)	(0.019)
Observations	12,941	5,832	12,941	5,832	12,941
R-squared	0.103	0.126	0.138	0.218	0.085

Notes: standard errors are presented in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%. Ordinary least squares regressions. The unit of observation is the mother. The CSO sample is those women who have a child support order and were owed money last year. State-year fixed effects are included in all regressions.
Other regressors are ages of the mother and of her oldest and youngest child, number of adult women and number of adult men in the household; indicators for number of children (2, 3, 4 or more); received AFDC or TANF last year; white, black; central-city-MSA, balance of MSA and non-MSA; high school only, some college, college or more, and an intercept. The omitted category for number of children is one; for race Other; for MSA status "unidentifiable"; for educational status, less than high school. Receipt and amounts are for the previous calendar year; amounts are reported in real 2002 terms using the Consumer Price Index.

Table 4

Effect of Oldest is Boy on Contact with Nonresident Father

Child-support Eligible Mothers with Children under 12

	1	2
	Father Lives in State	Any Contact with Father Last Year
Divorced * Oldest is boy	-0.009	0.000
	(0.018)	(0.017)
Married * Oldest is boy	-0.004	-0.018
	(0.021)	(0.022)
Separated * Oldest is boy	0.006	0.004
	(0.023)	(0.024)
Never-married * Oldest is boy	0.001	-0.023*
	(0.011)	(0.013)
Divorced (omitted category)		
Married	-0.028	-0.038*
	(0.020)	(0.021)
Separated	0.022	0.005
	(0.020)	(0.021)
Never-married	0.001	-0.060***
	(0.016)	(0.017)
Observations	12,941	12,941
R-squared	0.054	0.082

Notes: standard errors are presented in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%. Ordinary least squares regressions. The unit of observation is the mother. State-year fixed effects are included in all regressions.
Other regressors are ages of the mother and of her oldest and youngest child, number of adult women and number of adult men in the household; indicators for number of children (2, 3, 4 or more); received AFDC or TANF last year; white, black; central-city-MSA, balance of MSA and non-MSA; high school only, some college, college or more, and an intercept. The omitted category for number of children is one; for race Other; for MSA status "unidentifiable"; for educational status, less than high school.

Table 5

Effect of Oldest is Boy on Support and Custody Outcomes

Child-support Eligible Mothers with Children under 12

	1	2	3	4	5
	Has child support order	Amount Child Support owed last year; had CSO	Joint Physical Custody	Joint Legal Custody	Child Support Order and Joint Legal Custody
Divorced * Oldest is boy	-0.025	-68.73	0.018	-0.006	-0.027*
	(0.020)	(174.44)	(0.015)	(0.018)	(0.016)
Married * Oldest is boy	0.017	-8.37	0.008	0.025	0.027
	(0.024)	(162.49)	(0.016)	(0.019)	(0.017)
Separated * Oldest is boy	-0.017	13.51	-0.013	-0.024	-0.030*
	(0.028)	(278.52)	(0.015)	(0.020)	(0.016)
Never-married * Oldest is boy	-0.014	0.88	-0.002	-0.006	-0.010*
	(0.013)	(125.63)	(0.006)	(0.008)	(0.006)
Divorced (omitted category)					
Married	-0.072***	-207.64	-0.033**	-0.074***	-0.056***
	(0.023)	(175.27)	(0.016)	(0.019)	(0.017)
Separated	-0.232***	-408.30*	-0.039***	-0.102***	-0.096***
	(0.024)	(240.04)	(0.015)	(0.019)	(0.016)
Never-married	-0.184***	-712.27***	-0.054***	-0.137***	-0.110***
	(0.018)	(159.11)	(0.012)	(0.014)	(0.013)
Observations	12,941	5,832	12,941	12,941	12,941
R-squared	0.146	0.257	0.080	0.139	0.121

Notes: standard errors are presented in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%. Ordinary least squares regressions. The unit of observation is the mother. State-year fixed effects are included in all regressions.

Other regressors are ages of the mother and of her oldest and youngest child, number of adult women and number of adult men in the household; indicators for number of children (2, 3, 4 or more); received AFDC or TANF last year; white, black; central-city-MSA, balance of MSA and non-MSA; high school only, some college, college or more, and an intercept. The omitted category for number of children is one; for race Other; for MSA status "unidentifiable"; for educational status, less than high school. Amounts owed are for the previous calendar year, reported in real 2002 terms using the Consumer Price Index.