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Abstract

The stepparent relationship provides a source of potential conflict in remarriage families, since the biological parent and stepparent may have different interests in the well-being and even survival of children from the wife's prior union. From an evolutionary perspective, there are circumstances in which stepparents benefit from providing care for and investments in their stepchildren, and circumstances in which they do not. From a sociological perspective, ambiguity and incomplete institutionalization provide little guidance for stepparents in managing these complex living arrangements, which may lead to equal investment in all children, regardless of relationship. Men who take on the stepparent role may be selected for either negative or positive characteristics. This paper compares parenting patterns of residential fathers in two-biological-parent, married-stepparent, and cohabiting father-figure families to see whether there are systematic differences in paternal investments in these types of families. The data come from 2,531 children and their parents who were interviewed during the 1997 wave of the Child Development Supplement to the Panel Study of Income Dynamics. Results support the incomplete institutionalization hypothesis and positive selectivity in that differences in investments are small in families with both biological children and stepchildren, and stepchildren benefit substantially from being in this family type.

Datasets used:
1997 Child Development Supplement to the Panel Study of Income Dynamics

Introduction

With the rise in divorce and out-of-wedlock childbearing in the last quarter of the 20th century, an increasing proportion of children today have been exposed not only to life with a single mother, but also to life in a stepfamily; that is, a family in which one parent is a biological parent and the other parent is an unrelated stepparent. In 1990, about 80 percent of American children lived with married parents, and 16 percent of American children under age 18 living with married parents lived with a biological and a nonbiological parent (U.S. Bureau of the Census 1994). Because family structure changes through time, children who do not currently have a stepparent may nonetheless eventually come to live with one; current estimates suggest that about one-third of children in the U.S. will live with a stepparent before reaching age 18 (Bumpass, Raley and Sweet 1995). Most of these stepparents will be stepfathers.

Family structure has important implications for children's outcomes. Research has shown that, on measures of school achievement and adjustment, children living with other than two biological or adoptive parents are less well-off than children of two parents. Children raised by single parents or by a parent and a stepparent do less well in school and have more behavior problems (McLanahan and Sandefur 1994). One of the most important contributors to differential child outcomes is the lower level of resources available to single parent families (Duncan and Brooks-Gunn 1997; McLanahan and Sandefur 1994). But, if income were the determining factor, it could be expected that children would do as well in two-parent stepfamilies as in two-parent biological families, since the family incomes of children of the former are comparable to those in the latter (McLanahan and Sandefur 1994). Yet such children are more similar to children in single-parent than to those in two-parent families in terms of their risk of high school drop-out, teen childbearing, and productive activity as young adults (McLanahan and Sandefur 1994). Some of the differences between stepparent and two-parent families have been attributed to residential mobility at divorce or remarriage, disrupting the social capital invested in that community. In recent years, interest has increased in whether differences are due to differential treatment, such as to differential involvement, warmth, supervision, aspirations, and parenting practices (Amato 1987; Case, Lin and McLanahan 2000a; Cooksey and Fondell 1996; McLanahan and Sandefur 1994; Thomson, McLanahan and Curtin 1992; Thomson, Hanson and McLanahan 1994).

Few researchers have detailed data on parenting and parental investments in children in biological and stepparent families. Most studies examine the association between biological or stepparent relationship, for example, and subsequent child outcomes (Thomson, Hanson and McLanahan 1994). For an exception, see (Thomson, McLanahan and Curtin 1992). This paper will use direct measures of parental investment in and involvement with children to compare parenting patterns of fathers in two-biological-parent, married-stepparent, and cohabiting-stepparent families to see whether there are systematic differences in paternal investments in these types of families. It also examines the extent of parental conflict over children in each family type versus the extent of conflict over other matters. The analysis focuses on children living in blended-family households (e.g., with half-siblings) as well as on all children living with a father or father figure.

Theoretical Perspective

While expectations for investments of biological fathers in their children are substantial and enforced by legal means, including child support if the marriage breaks down or the parents do not marry, expectations for stepfathers are more ambiguous. In fact, literary, legal, and social science evidence lead to the strong expectation that children living with stepfathers will be at risk for a variety of ill treatments, ranging from neglect to abuse, which lead to poorer developmental trajectories or, in extreme cases, death (Daly and Wilson 1998). This paper develops hypotheses from evolutionary theory and sociological theory to explain positive investment or its absence in stepchildren, lacking data on abusive treatment. The paper initially focuses on factors that may affect parental expectations regarding what the appropriate level of investment should be in children prior to entering marriage. It then examines different contexts in which investment occurs. Finally, it adjusts for demographic factors differentiating family structures and variables such as relative hours and wages within marriage, which are important to bargaining and exchange theories, which are likely to operate in this and other contexts, but which are not necessarily specific to stepparent families.

The first set of expectations comes from an evolutionary perspective. According to evolutionary theory, genetic benefits arise from fathering and investing in one's own natural offspring. Such "parental investment," which includes both things requiring production (food, money) and direct caregiving (time), increases the reproductive fitness of the next generation. "A conflict of interest exists when two or more members of a social group would each enhance its inclusive fitness by engaging in opposing behaviors (Emlen 1997)." For example, stepfathers gain no direct genetic benefit by investing in the care of stepchildren. To the extent to which investing in these offspring reduces the chances of reproducing or the chances of biological offspring surviving, investment in stepchildren by men may reduce their "reproductive fitness." However, the children's mother will benefit from investing in the children, and would benefit if the stepparent invested highly as well. Close genetic relatedness of family members is expected to maximize cooperation and minimize conflict, a balance which is upset by the introduction of an individual with a different set of interests, such as a stepparent. This approach leads to expectations of high investment by men in biological children coupled with low conflict over parenting strategies with the mother, and low investment by men in nonbiological children coupled with high conflict with the mother over investment in them. A substantial body of empirical work on stepparent investment in stepchildren has shown a range of behavior from reduced investment in college education to neglect, abuse and even homicide by fathers of stepchildren (Daly and Wilson 1998; Emlen 1998; Anderson, et al. 1999a; Anderson, Kaplan and Lancaster 1999b; Zvoch 1999).

However, from a pragmatic standpoint, we know that not only do human fathers and mothers invest in children that are not their own biological offspring but there are even examples from other species of tolerant or caring behavior by stepparents (Rohwer, Herron and Daly 1999). Paternal investment in nonbiological offspring takes place under a variety of circumstances (Emlen 1995). An ornithologist (Rohwer et al. 1999) describes a number of social and environmental factors that influence whether stepparenting occurs (compared with no mate replacement or infanticidal mates). He predicts stepparents will be more tolerant/provide more caregiving when replacement mates are scarce and when unions are of substantial duration--in other words, when there are future reproductive opportunities for the stepparent with the new mate.

A recent set of papers develops a theory to explain the evolutionary mechanisms behind such investment or lack of it (Anderson, et al. 1999a; Anderson, Kaplan and Lancaster 1999b). These authors focus not only on parenting investment, but also on what they call "relationship investment." Relationship investment includes behaviors that increase sexual access to partners, access to the division of labor, and reciprocal exchange relationships between partners. That is, by investing in their spouse's children from a prior union, remarried men increase the prospect of further childbearing as well as continuation of supportive and reciprocal exchanges with their partner. In another example of variation in male parenting in context, male vervet monkeys behaved much more aggressively towards unrelated juveniles when the mothers were not visible than when they were (Keddy Hector, Seyfarth and Raleigh 1989). Similarly, in an observational study of people in Trinidad, men were more likely to fight with and/or threaten their stepchildren when the mothers were not present (Flinn 1988).

The conceptual framework is depicted in Figure 1. From this figure we see six different levels of investments, from the full parental and relationship investment of a genetic parent living with the child's mother (Class 1) to the minimal investment of a former cohabiting partner no longer living with the mother of that stepchild (Class 6). The level of investment by Class 2 men (genetic fathers no longer in a relationship with the child's mother) should be relatively high from an evolutionary perspective, and Anderson et al. (1999b) found considerable paternal investment in college by genetic fathers no longer living with their children. However, day-to-day investments are likely to be small since the parent and child no longer live together, and trade-offs from investing in subsequent mates and/or children will reduce the level of investment to below that received by Class 1 children (genetic children of current mates). Our study has very little data on fathers and father figures who are no longer in relationships with children's mothers (classes 2,4, and 6); our focus is on the first column of the figure, men currently in unions with the mothers of the children they are parenting. Class 3 investment (from resident stepfathers) should be high if only because the day-to-day interaction of parent and stepchild requires substantial relationship effort which leads to greater parental investment. However, we still expect substantially lower investment in stepchildren than in biological children. Other research clearly shows that while investment of stepfathers in stepchildren may be high in an early stage, such closeness often declines over time and distancing increases (Hetherington and Jodl 1994).

In this paper we extend the analysis to children in families living with their mother and a cohabiting male partner or father-figure (class 5); these men are functionally stepfathers, but are not legally married to their partners. Cohabiting men provide an interesting test of both evolutionary and selection perspectives. We expect lower investment by cohabiting partners in their partners' children than stepparents in stepchildren, because the level of investment in the relationship as a whole is not as great. On the other hand, cohabiting men who invest more in the children are more likely to marry and become bona fide stepfathers; unions in which men invest less are more likely to dissolve over time, all else being equal. Investment is likely to be an even more important relationship strategy for cohabiting males. Thus the prediction is ambiguous.

(Figure 1 about here)

The second perspective is sociological. Berger and Luckmann (1966) argued that an important source of family unity is routinization or habituation which provides normative guidelines for behavior, narrows the range of choice, and reduces the number of decisions which could lead to disagreement. Cherlin (1978) argues that, in contrast to first marriages, in

remarriage families such habit is missing. The stepparent relationship, in particular, is imbued with ambiguity and, therefore, incompletely institutionalized. Expectations for such families are not well-established and agreed upon. The ambiguity becomes even more marked in blended families, which contain both biological and stepchildren. From this perspective, parents may not be able to make a clear distinction between biological children and stepchildren living in the same family. The ambiguity should affect all family members. Parents may feel uncomfortable about treating children differently, and attempt to treat them all equally well or equally poorly. This perspective leads to an expectation of no differential treatment of children.

A third approach states that it is not the stepparent relationship that leads to differential treatment; rather, stepfathers differ in a variety of unmeasured ways from biological fathers, and it is these factors rather than stepparenthood that matters to how men invest in children and how children's lives are affected (Ginther and Pollak 2000). For example, their family incomes may be lower, they may be less attractive partners, and they may be unable to find a childless woman willing to marry them. As a result, they may be willing to marry someone who already has children (Anderson 2000). Controlling for these unmeasured differentials should reduce the differential. This "negative selectivity" also leads to an expectation of a lower overall level of investment in children in blended families because of the shortcomings of the stepparent. Recent research has found evidence both for a high degree of selectivity and for a more modest degree. Ginther and Pollak (2000) find that differential treatment by stepparents disappear when siblings within the same family are examined. However, using a large sample of adolescents, Evenhouse and Reilly (Evenhouse and Reilly 2000) find only a small reduction in the effects of stepparenting within families compared to between families. Case et al. (2000b) find that, although differences in outcomes are smaller for step- and biological children within families than for comparisons across families, stepchildren in blended families nonetheless complete less education than biological children from the same households. These varying results may be due to differences in ages of children or to different samples.

Another type of selection may be operating in blended families, that for childbearing (Anderson 2000). As suggested earlier, stepparents who have genetic children by the parent of their stepchildren are the most selected of all; they have been selected on the basis of being good stepparents and, subsequently, good likely genetic parents as well. A stepfather who marries a woman with children and then goes on to have his own biological child with her is highly selected for being a parent who gets along well, who likes children, and who is a nicer and better caregiver. Therefore, investment in blended families may reflect the effects of selection for whether the couple has another child or not and this may offset the effects of the genetic relationship. This is not inconsistent with the evolutionary perspective, which argues that stepparent investment may be adaptive under certain circumstances, when care for stepchildren serves as mating effort and a signal of mate quality. This "positive selection" may offset some of the negative effect of being a stepparent.

In sum, from an evolutionary perspective, fathers should invest less in nonbiological than in biological offspring, regardless of the circumstances (blended or nonblended families), and the least investment should be in children of a cohabiting partner. From the negative selection and incomplete institutionalization perspectives, fathers should not invest differentially in step and in biological children in blended families, though, from the selection perspective, overall investment in children in blended families may be lower than in nonblended families. Finally, from the positive selection perspective, fathers may invest more in children in blended families, because of the positive selectivity associated with bearing children in a remarriage family.

To test these hypotheses, in this paper we not only compare the treatment of stepchildren and biological children across different families (between families) but also compare the treatment of stepchildren and biological children within the same family, and, therefore, who have the same resident investing male. Support for the evolutionary perspective is signaled by differential investment of nonbiological compared with biological fathers in children both across and within families. If negative selection of who becomes a stepparent is the cause of differential treatment, differential treatment of stepchildren and biological children within the same family may still exist but it will be smaller than across families. Negative selection alone may not be the sole explanation for the decline in differential treatment with controls for other variables, since the incomplete institutionalization hypothesis would also lead us to expect more equal treatment. Lowered investment in biological as well as stepchildren in blended families compared to nonblended families provides evidence for the negative selection hypothesis, since evolutionary theory would not predict lowered investments in biological children in blended families. Positive selection can be signaled by increased investment in stepchildren in blended families, relative to such children in nonblended families. While legally married stepfathers may be selected for being good partners (and father figures), cohabiting men may have undergone much less positive selection for getting along with children. Thus even if lower investment does not hold for stepchildren in blended families, it may hold for children of cohabiting partners. Earlier research has found evidence that different types of outcomes may be more affected by differential treatment or selection than others (Evenhouse and Reilly 2000), suggesting the importance of examining a variety of different parental behaviors. This study utilizes a recent data source which provides such information.

The Data

The study sample is drawn from the 1997 Child Development Supplement (CDS) to the Panel Study of Income Dynamics (PSID). The PSID is a 30-year longitudinal survey of a representative sample of U.S. men, women, children, and the families in which they reside. In 1997, the PSID added a refresher sample of immigrants to the United States (since 1968) so that the sample represents the U.S. population in 1997. When weights are used, the PSID has been found to be representative of U.S. individuals and their families (Fitzgerald, Gottschalk and Moffitt 1998a). With funding from the National Institute of Child Health and Human Development (NICHD), data were collected in 1997 on up to two randomly selected 0-12-year-old children of PSID respondents both from the primary caregivers and from the children themselves (Hofferth, et al. 1999a).The CDS survey period began in March 1997 and, with a break from mid-June through August, ended on December 6, 1997. Interviewers were completed with 2,380 child households containing 3,563 children under age 13. The response rate was 90% for those families regularly interviewed in the core PSID and 84% for those contacted the first time this year for the immigrant refresher to the sample, for a combined response rate for both groups of 88%. Post-stratification weights based upon the 1997 Current Population Survey are used to make the data nationally representative. Weights are also used to adjust for the lower response rate by partners to the survey instruments (60 percent).

In this paper we focus on a sample of 2,531 children who are living with either their biological father, a stepfather who is a nonbiological father married to the mother, or their

mother's cohabiting partner.[1] The 1,032 remaining children were living with only the mother (940), were not living with a parent (88) or were missing data on family structure (4). Our focus is on the genetic relationship of the child's primary caregiver and partner; though we also know whether the parents are married or not, this was only considered if the child was not living with a biological parent. Eighty-six percent of the children in our analysis sample live with a biological father and mother, 2.4 percent live with a biological single father, 7.5 percent live with one biological parent and one stepparent, and 4.2 percent live with their biological mother and a cohabiting father-figure.[2] We then focus on a subsample of 1,674 study children who live with two parents and have a sibling in the study; 94 study children live in a two-parent family which contains at least one biological child and one nonbiological child of the father, and 1,580 live in a family which contains either two biological children, two stepchildren, or two children not related to the mother's cohabiting partner.

Variables

Measures of Parental Involvement and Parenting

The advantage of the Child Development Supplement to the PSID is that a variety of measures of fathering which are crucial to testing the theory and which are key concepts from the point of view of father involvement (Pleck 1997) are directly measured. These include time children spend with their fathers and the number of activities they do together. No other study provides this type of detailed information. In addition, the CDS contains information obtained directly from the father on warmth of the relationship and the extent of monitoring and control of children's activities, two of the key dimensions of parenting according to developmental psychologists (Maccoby and Martin 1983). Finally, the study contains information on the extent of responsibility the father takes for his children, and the degree of conflict with the mother over children. Adult conflict is also measured.

Time Children Spend Engaged with or with Access to their Parents. The CDS collected one weekday and one weekend day diary for each child age 0-12 in the family. Time diaries are relatively easy to obtain from children, although complicated and expensive to code. The data obtained are generally considered superior to those obtained using standard questions asked in most surveys because of internal consistency and reduced social desirability (Juster and Stafford 1985; Hofferth 1999b). The time diary, which was answered primarily by the mother or by the mother and the child, asked several questions about the child's flow of activities over a 24-hour period beginning at midnight of the randomly-assigned designated day. These questions ask the primary activity that was going on at that time, when it began and ended, and whether any other activity was taking place. Two additional questions—"Who was doing the activity with child?"

[1] These categories are based upon reports by the primary caregiver of the child (usually the mother) who reports on whether the child lives with his or her biological father, stepfather and what the relationship of the "other caregiver" is to the primary caregiver. The relationship between male and child is primary. A child is a biological child first. If the child does not live with a biological father but lives with a stepfather, then the child is a stepchild. If the child does not live with the biological father or stepfather, but the mother reports that the "other caregiver" is her boyfriend, then the child is coded as living with the mother's partner, whom we call a cohabiting father-figure.

[2] These distributions are very similar to those calculated from the 1996 SIPP—85 percent with two biological parents, 3.3 percent with a single biological father, 8.8 percent with one biological and one stepparent, and 2.8 percent with their biological mother and a cohabiting father-figure (Federal Interagency Forum on Child and Family Statistics 2000).

and “Who else was there but not directly involved in the activity"—when linked to activity codes such as “playing” or “being read to,” provide unbiased details on the extent of one-on-one interactions of others with the child. Codes were provided for fathers, stepfathers, and for “other adult nonrelatives” of the child. For this analysis, times in which the father was engaged in activities with a child were coded as father engaged. Times in which the stepfather was engaged were coded as stepfather engaged. If the child lived with a partner of the mother, then times in which an “other nonrelative” was engaged were coded as cohabiting father-figure engaged time. This could potentially overestimate the cohabiting partner’s time with the child if the child also spent time with other nonrelated adults. Because some mothers may call her partner a “stepfather” we first checked to see whether time with the child was reported as stepfather time and used that report if it was nonzero. In the same way, time in which the stepfather or other nonrelated father-figure was present (e.g., at home) but not actively involved with the child were coded as cohabiting father-figure accessible. The analysis focuses upon the involvement of the residential father or father-figure.[3] Times engaged and accessible were summed over all activities for weekdays and weekends for each child. Weekly time was computed by multiplying weekday time by 5 and weekend day time by 2. Variables indicate whether any time was spent with that parent and the total number of hours, with “0” for none.

Types of Activities with Parents. Previous research has demonstrated lower participation of stepfathers in activities with children (Thomson, McLanahan and Curtin 1992; Thomson, Hanson and McLanahan 1994). Besides gathering data in a time diary, the CDS asked fathers directly about 13 different activities each parent may do together with children 3 and older. These include washing or folding clothes, doing dishes, cleaning house, preparing food, looking at books or reading stories, talking about the family, working on homework, building or repairing something, playing computer or video games, playing a board game, card game or puzzle, and playing sports or outdoor activities. The total score reflects the number of activities fathers reported doing with their children in the past month and has a reliability coefficient (Cronbach’s alpha) of 0.78.

Parental Warmth. Previous studies have found stepparents to score lower than biological fathers on the warmth of their relationship with the child (Amato 1987; Hetherington and Jodl 1994). The CDS uses a 6-item scale in measuring the warmth of the relationship between child and parent. (Hofferth, et al. 1999e} The questions ask how often each parent hugged the child, told the child they love him/her, spent time with child, joked or played with child, talked with child, and told child they appreciated what he/she did. The response categories range from 1) not in the past month to 5) every day. A scale was created by summing the number of behaviors that the parent said they did with the child in the past month. The reliability coefficient (Cronbach’s alpha) was 0.77.

Parental Monitoring and Control. Previous research has shown less monitoring by stepfathers compared with biological fathers (Hetherington and Jodl 1994). Parental monitoring is measured by a set of 9 items asking each parent of children age 3 and older whether they have rules setting limits on their children’s activities, their schedules, their food, their whereabouts, and their homework, and whether they discuss these rules with their children. In contrast to the other scales, this scale measures control across all children and thus represents an overall parenting style. The response categories (reverse coded) range from 1) never to 5) very often, with 45 the highest possible score. The reliability coefficient was 0.73.

[3]We also report the total summed time children of stepfathers spend with both nonresidential biological fathers and residential stepfathers since data on any nonresidential father time is reported in the time diary.

Responsibility. The 8 responsibility items used here focus upon the care of children, including bathing children and changing diapers, disciplining children, choosing children's activities, buying children's clothes, driving children to activities, selecting a pediatrician and making appointments, selecting a child care program, preschool, or school, and playing with children. Each parent answered for themselves. Response categories are: 1) I do this, 2) another household member does this, 3) I share this task, and 4) someone else does this task. If the respondent did the task, the response was coded 2, if the respondent shared it, it was coded 1; otherwise the task was coded 0. Scores were summed over all items. Overall scale reliability was 0.73.

Conflict in the Household. The CDS asked 9 questions of both husbands and wives about disagreements or arguments: How often do you and your partner disagree about completion of household chores/duties, how children are raised, disciplining children, how money is spent on children by you, by partner, the amount of time spent with children, the friends your partner spends time with, your partner's use of alcohol or drugs, and leisure time activities? Response categories were often, sometimes, not very often and never. The five items involving children were included in a scale called "conflict over children." The other four items were included in an "adult conflict" scale. The reliability of the adult conflict scale is .84 and that of the child conflict scale .79.

Measurement of Control Variables

Key factors that may differ by family type and are controlled in our analyses are described in Table 1.

Child Characteristics. About half of the children are female. The gender ratio varies by family structure, with marginally fewer girls in stepfather families. Children average 6 years of age. As might be expected due to the fact that it takes time for parents to bear children, separate from their original partners, and find new partners, children in stepfamilies and cohabiting father-figure families are older, averaging 7.8 and 6.9 years of age, respectively, compared to 5.9 for children in biological-father families. To adjust for different lengths of time children have lived with their father, and, therefore, had a chance to get to know him, we controlled for the percentage of months of their lifetime the child had lived with this father or father-figure. For biological children, the average percentage of months was 98. However, for stepchildren the average was 50 and for children of a cohabiting partner, 54.

(Table 1 about here)

Family Structure, Composition, Race/Ethnicity. Family composition includes father's age, number of children, and family type. Fathers/father figures are about 37 years old; on average they have 2.3 coresident children. Father's age does not vary by family type nor does family size. While overall 59 percent of children are white, 28 percent black, 9 percent Hispanic and 4 percent of other race/ethnicities, a substantially higher proportion of children living with a stepfather are black, 47 percent, and a lower proportion, 40 percent, are white. Children living with a cohabiting-father-figure are more likely than children living with biological fathers to be black (42 versus 26 percent); the proportion of children with cohabiting father-figures who are Hispanic is quite low.

Economic Characteristics. Economic variables are measured, first, by the education and employment of the child's mother and father. Educational levels of fathers average about 13 years. Fathers' educational levels in stepfather and cohabiting father-figure families are significantly lower than in a biological-father family, consistent with selection models of becoming a stepparent (Anderson 2000).

Employment status describes the employment of the head of the household and wife, if any—29 percent of children living with a father or father-figure live in a male breadwinner-female homemaker family; 54 percent live in a dual earner family; 4 percent live in a female breadwinner-male non-employed family; 3 percent live in a two parent-neither employed family; 4 percent live with a male head; and 6 percent live with a female head.[4] Fathers work 44 hours per week and mothers about 27 hours, on average. Cohabiting father-figures work 5 fewer hours than biological fathers while stepmothers work almost 7 hours more per week than biological mothers. Fathers' earnings average $35,000 per year and their wives' or partners' earnings average $14,000, with total family income averaging $55,000. In contrast to what was found in other research (McLanahan and Sandefur 1994), in our data fathers earn significantly less in stepparent and cohabiting-father families, $28,000 and $27,000. As a result, total income is significantly lower in stepparent and in cohabiting parent families, $39,000 and $29,000, respectively.

Finally, to control for whether the father has obligations to a nonresidential family, which may affect his economic situation and his time commitment to his residential family, we controlled for whether or not the father was paying child support to another household. About 4 percent of biological children had a father paying child support to another household, compared with 2.5 percent of children of stepfathers and 4.8 percent of children of cohabiting father-figures. We also included a dummy variable for whether or not we were able to determine if the father had such an obligation (whether we could match the father to outgoing child support information). In 4 percent of the cases we could not make such a determination.

Results

Mean Differences between Nonbiological and Biological Children

Mean values on father involvement and conflict measures by whether the child lives with a biological parent, a stepparent, or a cohabiting father-figure are shown in Table 2. The sample includes all children living with a father. As expected, such children are significantly more likely to spend time with a biological father than with a stepfather (94 percent versus 54 percent), and spend more time with them (15.6 hours versus 5.5 hours per week). Stepfathers are also less available to children (91 percent of biological versus 51 percent of stepfathers). Biological fathers are available about 12.9 hours per week, compared with 5.6 hours for stepfathers. Surprisingly, and contrary to expectation, the hours children spend engaged with a cohabiting father-figure (9.5), while significantly lower than that of biological fathers (15.5), is higher than that of stepfathers (5.5). Cohabiting father-figures do not differ significantly from biological fathers on available time (12.1 hours). Since the time of nonrelatives other than cohabiting father-figures is included, time spend by cohabiting father-figures may be overestimated. There is no reason to expect inaccurate reporting of time with a stepfather, however.

[4]These categories do not have to correspond to those of the parent of the child, since not all parents head their own households; some live with their own parents, for example.

(Table 2 about here)

Part of the explanation for the relatively low time of stepchildren with stepfathers appears to be that stepchildren receive considerable time and attention from their nonresidential fathers. In row 3 we show the total time stepchildren spend engaged with either their nonresidential biological father or their residential stepfather. While the total time spent by stepchildren with all fathers is still significantly lower than that spent by biological children with a residential biological father, the difference is much smaller. Time spent with nonresidential biological fathers makes up for much of the shortfall with residential stepfathers, though not all. Similarly, the time stepchildren have available from either their nonresidential biological father or residential stepfather (row 6) is much higher than time with the latter alone, though still lower than the time biological children have available from residential biological fathers. The time children living with a cohabiting father-figure spend engaged with or have available from either a biological father or stepfather (rows 3 and 6) is much lower than that of either biological children or stepchildren, as anticipated.

The story obtained from other measures of parenting differs from that described above for parental time. While stepfathers rank lowest in their investments of time, biological fathers highest, and cohabiting father figures in-between biological fathers and stepfathers, on most of the non-time and self-reported measures of parenting, stepfathers and cohabiting father-figures are similar and lower on measures of desirable parenting practices and investments than biological fathers. For example, on our self-reported measure of activities done together in the past month, children living with a biological father report doing more activities with them (9.2), compared with either stepfathers (7.8) or cohabiting father figures (7.6). The latter do not differ from each other.

Differences between biological fathers and stepfathers also hold for other aspects of fathering. Warmth and control are key measures of parenting. Children's biological fathers score above 5 on warmth, compared with 4.3 for stepfathers and 4.0 for cohabiting father-figures. The one area in which stepfathers score as high as biological fathers is on control. Stepfathers do not differ from biological fathers on monitoring and control of children's behavior. Cohabiting father-figures, in contrast, score lower. Thus, to summarize, stepfathers are less warm but no less controlling than biological fathers. Cohabiting father-figures are both less warm and less controlling.

Biological fathers are also more likely to take responsibility for their children, scoring 6.2 on responsibility, compared to 5.4 for stepfathers and 5.6 for cohabiting father-figures. Cohabiting father-figures score lower than biological fathers and lower than stepfathers on all the parenting measures except responsibility, on which they score about the same as stepfathers.

Finally, we examined the amount of conflict in families of biological children and stepchildren. We find that conflict between partners about all resident children is significantly higher in stepparent and cohabiting-parent families than in biological-father families, and does not differ among nonbiological fathers. However, conflict is not limited to conflict over children; conflict among partners over non-child-related behaviors is also greater in stepparent and cohabiting-parent families. Thus, conflict is higher, but the conflict is not just over children but, rather, over a variety of aspects of family life.

While these results are consistent with both evolutionary and sociological theory, it is not possible from this to tell which theory better fits the data. To test whether fathers actually treat

children differently or whether differences are due to unmeasured differences between biological and stepparent families, we selected only those children living with two parents and who were living with a sibling who was also in the study. This group of 1,674 children looks very much like the entire group of children living with a father (not shown), so we have not selected a group with substantially different characteristics. This group was divided into two subgroups—those who were living in a blended family, where children had a half-sibling (94 children), and those in families whose sibling was a full sibling (1,580 children) (Appendix Table 1). The differences in the overall sample of biological and stepparent families are due primarily to between-family differences, whereas the differences between children in blended families are true within-family differences in treatment.

In Table 3 we focus on the fathering experiences of the 94 children living in 48 blended households; each household contains one child with a coresident biological father and one child with a stepfather or cohabiting father figure; these two children are half-siblings, sharing the same biological mother. The number of children living with cohabiting fathers is small and results are rarely significant, though generally the results are in the same direction as for children living with stepfathers.

(Table 3 about here)

The conclusions about parental investments have to be modified when biological children and stepchildren coreside in the same household (Table 3). Differences in time spent are still considerable; these differences do not decline in blended families and even increase. When total father time is considered, stepchildren do not spend significantly less time with fathers than biological children; nonresidential fathers make up most of the difference. On the other parenting measures, the differences between children's investment from biological and nonbiological fathers are much smaller within blended families than they were between families, and the differences are no longer statistically significant (though sample sizes are quite small). Thus, except for time, these results are inconsistent with evolutionary predictions. They are more consistent with a selection hypothesis which suggests that fathers treat biological and stepchildren similarly within families, but fathers differ in their parenting across families. The results are also consistent with the incomplete institutionalization perspective in that they indicate that it may be difficult to treat one's biological and stepchildren within the same family very differently. While the time results support the negative selection model in that biological as well as stepchildren receive lower investments in blended families as a result of fathers being negatively selected, this is not so for other investments. Levels of non-time investment seem to be the same for biological children across family types and even a little higher for stepchildren in blended families. Differences in fathering biological and stepchildren occur both between stepfather and biological-father families and within blended families. However, the differences are much reduced in the latter. Stepchildren appear to benefit from living with a biological sibling. There are too few children of cohabiting father-figures to draw firm conclusions. In addition, biological and stepfather families differ on many of the demographic characteristics of importance in the study, such as age of child, income, and race/ethnicity. Because of the small sample sizes and the large number of other differences between biological, stepfather, and cohabiting father families, we need to move to a multivariate approach.

Multivariate Analyses of Fathering Behavior

In our multivariate analyses, we regress each fathering variable on the characteristics of fathers, children, and families to examine the factors explaining father involvement with children (Table 4). To test overall hypotheses regarding investments of fathers, we first use the full sample of children in all families in which there is a father (column 1). We then use the subsample of children in two-parent, two-sibling families (columns 2 and 3). (The specification in column 2 is identical to that in column 3, for comparison.) Using this sample we can test the mean investments and outcomes of children in blended versus non-blended families and the benefit to stepchildren of living in a blended family.

(Table 4 about here)

Consistent with Table 2, children living with a stepfather spend about 10 hours fewer per week (all children) and 7.8 fewer hours per week (children in two-parent, two-child families) engaged with their residential father than children living with a biological father. Children living with a cohabiting father-figure spend 6.5 fewer hours (all children) and 2.7 fewer hours (children in 2-parent, 2-child families) engaged with a father-figure. The difference in available time is almost 10 hours for stepchildren in two-parent, two-child families, and only 1.8 hours for children of cohabiting father-figures. These differences are highly significant for stepchildren but not for children of cohabiting father-figures in two-parent, two-child families.

Examining other types of involvement, children of stepfathers and cohabiting father-figures participate in significantly fewer activities with father-figures, but the difference is only significant for stepfathers in all families, not in two-parent, two-child families. It is significant for cohabiting fathers in both samples. Similarly, stepfathers and mothers' cohabiting partners rate significantly lower on warmth, but these are only statistically significant at conventional levels in all families. Cohabiting fathers are significantly lower than biological fathers on monitoring and control, whereas stepfathers are similar to biological fathers. Stepfathers are lower on responsibility than biological fathers, but this is only significant at conventional levels for children of all fathers. Cohabiting fathers do not differ from biological fathers on responsibility.

In all families there is significantly greater conflict between partners in stepfather families and in cohabiting partner families over the child. The coefficient is smaller and only marginally significant for other types of conflict in these two types compared with biological-father families. These results are much weaker in two-parent, two-child families.

In sum, living with a man who is cohabiting with one's mother is substantially detrimental to children's well-being in terms of warmth and monitoring/control, and joint activities. Living with a stepfather is detrimental in terms of less time spent with him and the fact that he takes less responsibility for the child. On the positive side, stepfather and cohabiting father-figures have neither more nor less conflict with their partner over children or adult behaviors, at least in two-parent, two-child families. The pattern of significant effects of control variables is similar in the two samples, which supports the argument that the results on the subsample hold for the broader sample of children with fathers.

In column 3 of each model in Table 4 we add a control for whether the family is blended or not to the sample of two-parent, two-child families. The pattern of coefficients on the stepfather and cohabiting father variables is similar to that of column 2. What is interesting is

that the coefficient of "blended" is not uniformly significant. Where it is significant, however, it is negative. Being a blended family is associated with less time engaged with or accessible to children. It is also associated with less monitoring and control of children's behavior. This lends support to the negative selection hypothesis which suggests that such fathers might spend less time with all children because they are worse rather than better parents. However, we also saw that lower time with stepfathers is made up for children by nonresidential fathers. There are no differences on warmth, responsibility, activities, or conflict between blended and nonblended families.

The last question is whether stepchildren are advantaged or disadvantaged in blended families relative to stepchildren in nonblended families. In the third column of each set, we add the interaction between whether a stepchild and whether in a blended family. (There are too few children of cohabiting father-figures to include an interaction.) While being in a blended family does not improve parental time with stepchildren, some advantages accrue to the stepchildren. Based upon a set of simulations setting the control variables at their mean and altering only the relationship of child to father-figure, whether or not the family was blended, and the interaction between relationship and blended, we calculated the mean values on each of the measures of residential father involvement for biological children, stepchildren, and cohabiting father-figures. Normally a stepchild would engage in 4.6 fewer activities with their stepfather than a biological child with his biological father. However, if they live in a blended family, the number of activities a stepchild does with a stepfather (9.1) is only 1.2 fewer than stepchildren in nonblended families and is similar to the number of activities biological children do with their fathers in nonblended families, 9.3 (Figure 2).

Stepchildren in blended families also experience advantages on warmth, control and responsibility of fathers. While children in stepparent families experience less warmth from stepfathers, if they also have a half-sib, the warmth level is about equal to that of a biological child in a nonblended two-biological-parent family (Figure 3). Similarly, while stepfathers tend to take less responsibility for stepchildren, in blended families, stepfathers take as much responsibility as biological fathers in nonblended families and more than biological fathers in blended families (Figure 4). A similar effect holds for monitoring and control, though the results are not statistically significant (Figure 5)

(Figures 2-5 about here)

Summary and Conclusions

This study has compared evolutionary and sociological explanations as to why children of stepfathers and cohabiting father-figures may suffer emotionally and have lower school achievement than children of biological fathers. The former predicts that fathers will not invest either materially, cognitively, or emotionally as much in nonbiological as in biological offspring. One modification of this theory is that the context of the relationship with the mother and the desire to engage in activities which aid in this relationship, regardless of immediate genetic benefits, increase the level of investment in nonbiological children over that predicted by a relative fitness approach. The sociological model, in contrast, predicts equal investment and outcomes due to the ambiguity of the situation. While ambiguity could produce differential investments in stepchildren, given the difficulties of differential treatment of biological and stepchildren when both are living in the same family, it is hypothesized, instead, that ambiguity

leads to more equal treatment in blended families.

Finally, selection operates in several ways. Men who choose to enter the stepparent relationship may be negatively selected (lack of alternative opportunities, less attractive), and this may affect the outcomes for children. However, men who choose to have children with a woman who has children from a former union may be positively selected for better relationship and fathering skills.

These hypotheses were tested using a sample of children living with a father or father figure. The evolutionary theory received substantial support when we compare across families. Consistent with other research, fathers invest less in stepchildren and in nonrelated children of their partner. While the difference in time remains strong, the difference in parenting practices of stepfathers and biological fathers is much reduced among those living in blended families. And this is not because both stepchildren and biological children are treated more poorly in blended families. There is little difference in the treatment of biological children in blended versus nonblended families when controls are included for demographic differences between these two types of families. Two types of selection operate. First, stepparent families are negatively selective for who becomes a stepparent. When children of different relationships to the same father are compared, these differences are reduced. However, it may be that a second type of selection is operating, which is that families with good relationships are more likely to have a biological child, and this is good for all the children.

The results for stepfathers lead us to conclude that selectivity is at least partially responsible for the commonly found step-biological parent difference in investments, because differential parenting investments decline in blended families. It is not the only explanation, since a difference in time remains to support the differential treatment hypothesis. We find support for the differential treatment hypothesis only with respect to the time biological, step, and cohabiting father-figures spend with children and are available to them. The disadvantage for stepchildren is at least partially due to moving back and forth between the household of a nonresidential father. This reduces the time that the stepparent can spend with the child. Even when all time with residential and nonresidential fathers is considered, however, stepchildren still spend less time with fathers than biological children.

Incomplete institutionalization as an hypothesis is also supported, because investments are more equal in blended families. Since investments in stepchildren in blended families increase without reductions among biological children, we suspect that positive selection into who has an additional child outweighs any negative selectivity into stepfamilies. Longitudinally, we expect the stepfather who invests the most to be the most likely to go on to have a child in this union, an hypothesis testable with data from future waves of the PSID-CDS. Future research also needs to focus upon the outcomes for children and how investments from parents contribute to these outcomes.

Including children living with cohabiting fathers suggests that children of the mother's cohabiting partner are worse off than biological children on two important items – warmth and monitoring. They are also worse off on frequency of activities with that father-figure. Unfortunately, data limitations led us to conclude that measures of time with father-figures were probably overestimated. In addition, sample sizes are small. Further research is needed with larger samples of cohabiting couples and more detailed measurement of the time nonbiological residential father-figures spend with children. This is especially important as cohabitation comprises a larger fraction of unions and the proportion of children living in these cohabiting unions increases.

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Relatedness to Child	Relationship with Child's Mother: Current Mate	Relationship with Child's Mother: Previous Mate
Genetic	Parental & Relationship Investment Class 1	Parental investment Class 2
Step	Relationship Investment Class 3	Minimal investment Class 4
Cohabiting	Relationship Investment Class 5	No Investment Class 6

Figure 2:
Fathers' Number of Activities With Children

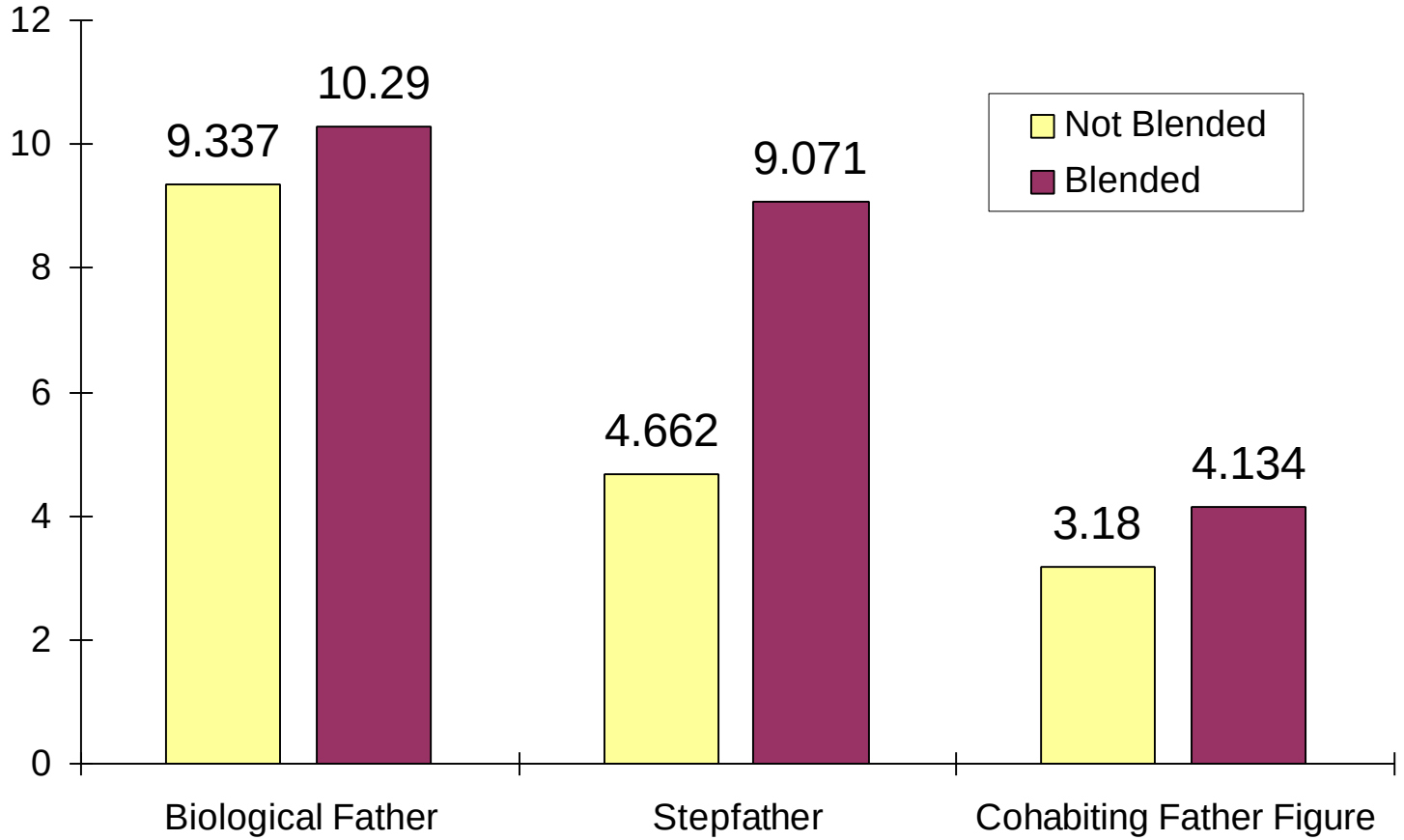

Figure 3:
Fathers' Warmth Exhibited Towards Children

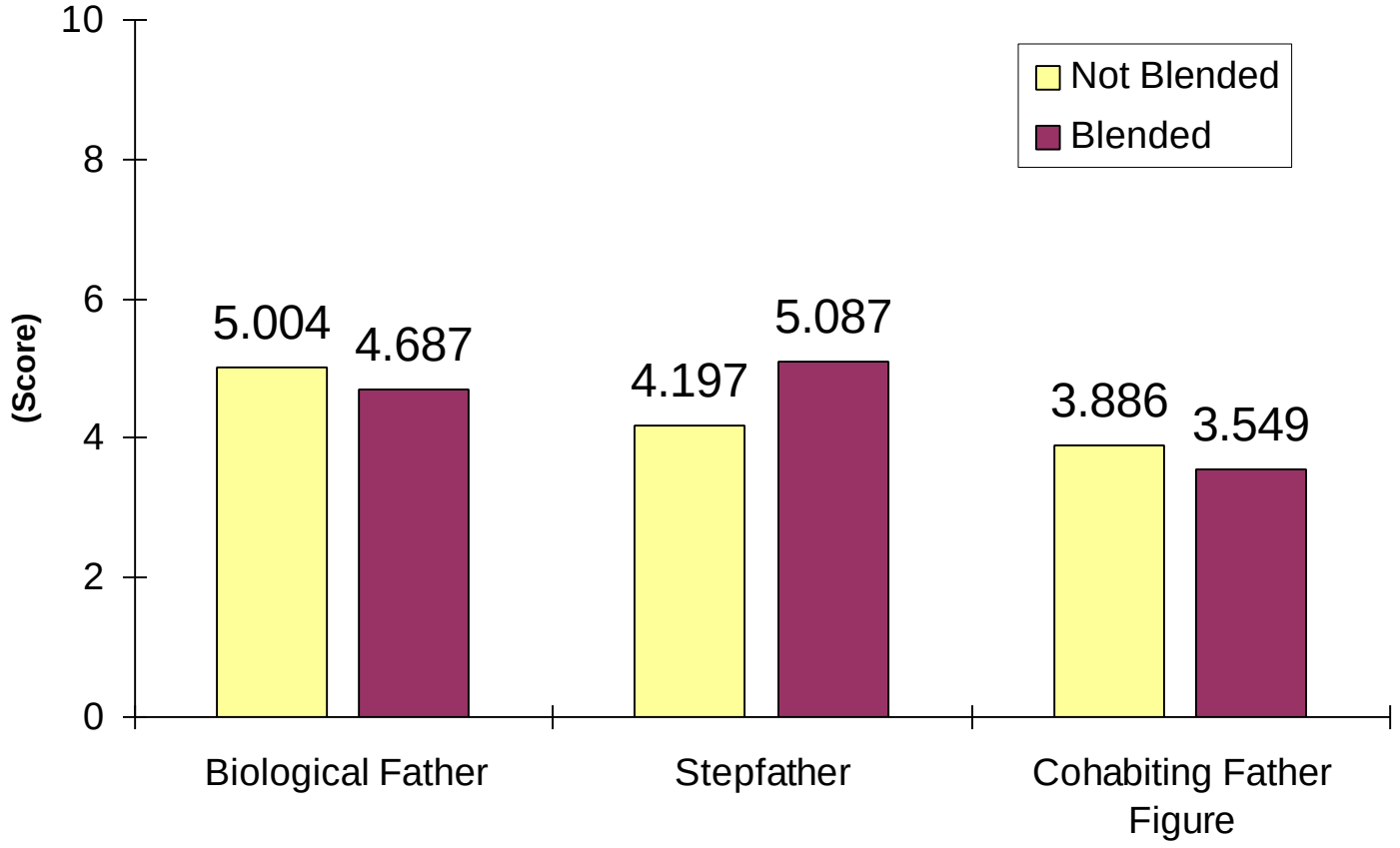

Figure 4:
Fathers' Responsibility Towards Children

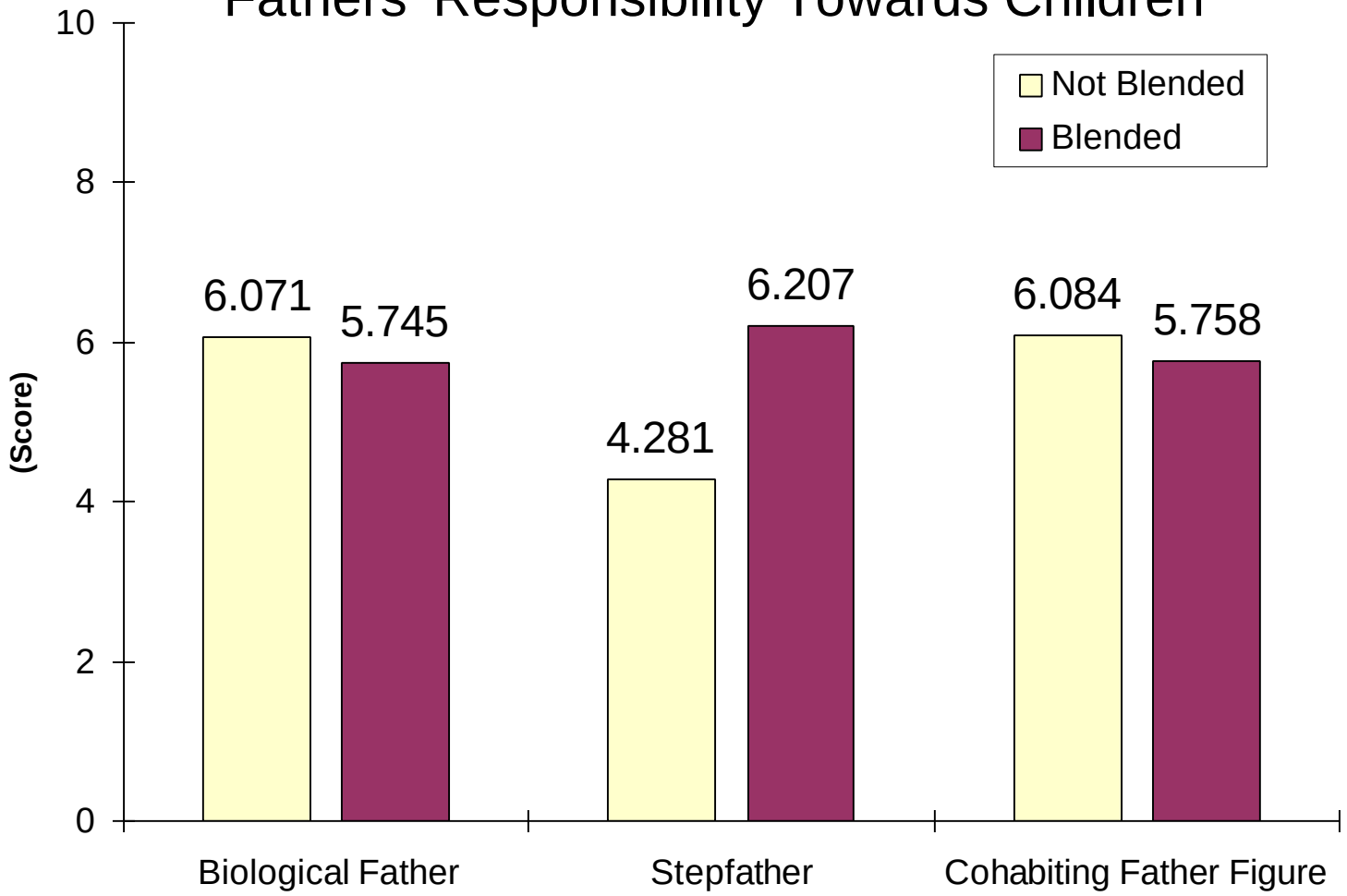

Figure 5:
Fathers' Control Over Children

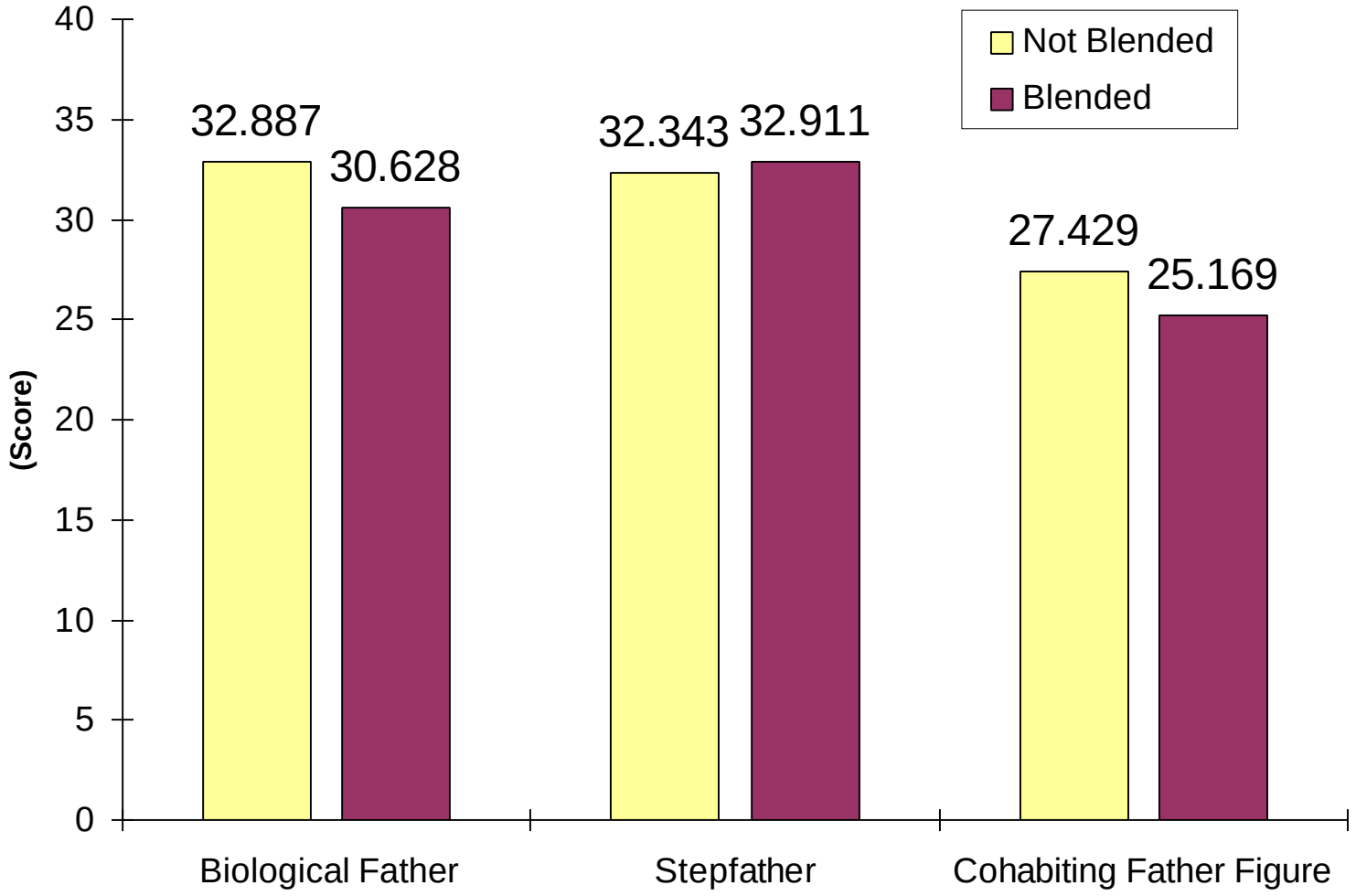

Table 1: Means on Characteristics of All Children Living with a Father, by Relationship to Father

Variable	Label	ALL		BIO		STEP		COHAB	
		Mean	N	Mean	N	Mean	N	Mean	N
NEWSEX	gender of child, 1= female	0.490	2531	0.491	2265	0.469 +	162	0.519	104
NEWAGE	Age of child	6.028	2528	5.860	2262	7.821 *	162	6.885 *	104
UNDER3	age 0-2	0.238	2531	0.255	2265	0.068 *	162	0.125 *	104
THREE5	age 3-5	0.235	2531	0.238	2265	0.204	162	0.231	104
SIX8	age 6-8	0.218	2531	0.213	2265	0.253	162	0.269 *	104
NINE12	age 9-12	0.309	2531	0.294	2265	0.475 *	162	0.375 *	104
PMOSLIVE	% of months lived with father	92.964	2531	97.832	2265	50.095 *	162	53.741 *	104
DADAGE	father's age	36.500	2531	36.558	2265	35.469 *	162	36.846	104
SIBNUM	number of siblings (including child)	2.271	2528	2.251	2265	2.562	162	2.250	104
WHITE	white	0.587	2531	0.603	2265	0.401 *	162	0.529	104
BLACK	black	0.283	2531	0.263	2265	0.469 *	162	0.423 *	104
HISPANIC	Hispanic	0.086	2531	0.090	2265	0.080	162	0.010 *	104
ORACE	other race	0.044	2531	0.044	2265	0.049	162	0.038	104
TWOBIO	two biological parents	0.859	2531	0.960	2265	0.000	162	0.000	104
BIOMSTED	biological mother, stepfather	0.064	2531	0.000	2265	1.000	162	0.000	104
BIODSTEM	biological father, stepmother	0.011	2531	0.013	2265	0.000	162	0.000	104
COHAB	cohabiting	0.042	2531	0.001	2265	0.000	162	1.000	104
SDAD	single father	0.024	2531	0.026	2265	0.000	162	0.000	104
OTHBIO	other	0.000	2531	0.000	2265	0.000	162	0.000	104
DADED	father's education	13.007	2531	13.046	2187	12.722 *	162	12.596 *	104
TWOEARN	dual earner family	0.539	2531	0.562	2265	0.432	162	0.212 *	104
MALBREAD	male breadwinner, female homemaker	0.292	2531	0.306	2265	0.167 *	162	0.173 *	104
FEMBREAD	female breadwinner, male unemployed	0.038	2531	0.036	2265	0.056	162	0.058	104
NOBREAD	two parents, no breadwinner	0.028	2531	0.026	2265	0.043	162	0.029	104
FHEADWK	female working head	0.041	2531	0.020	2265	0.216	162	0.240 *	104
FHEADNWK	female nonworking head	0.024	2531	0.015	2260	0.068	162	0.163 *	104
MHEAD	male head	0.036	2531	0.033	2265	0.019	162	0.125 *	104
FHEAD	female head	0.060	2531	0.035	2265	0.284 *	162	0.403 *	104
MOMHRS	mother's work hours/week	26.634	2437	26.183	2171	32.799 *	159	26.692	91
DADHRS	father's work hours/week	43.621	2531	43.816	2265	43.472	162	39.621 *	104

*p<.05, +p<.10 compared to children living with a biological father

Table 1 Continued

Variable	Label	ALL		BIO		STEP		COHAB	
		Mean	N	Mean	N	Mean	N	Mean	N
MOMINC	mother's earnings (in 0000s)	1.406	2437	1.409	2260	1.593	159	1.010 +	91
DADINC	father's earnings (in 0000s)	3.492	2531	3.572	2107	2.832 *	162	2.771 *	104
INCTHOU	income (in 0000s)	5.400	2526	5.618	2265	3.980 *	162	2.867 *	104
DSUPP	father paying child support	0.041	2531	0.042	2265	0.025 *	162	0.048 +	104
NODADID	no dad ID	0.041	2531	0.021	2265	0.167 *	162	0.279 *	104

*p<.05, +p<.10 compared to children living with a biological father

Table 2: Means on Fathering, Child Behavior and Achievement, by Relationship to Father, All Children Living with Fathers

Variable	Label	ALL		BIO		STEP		COHAB	
		Mean	N	Mean	N	Mean	N	Mean	N
DPR	whether spends time with residential father	0.910	2067	0.940	1866	0.535 *	129	0.792 *	72
DADTIMEE	weekly time engaged with residential father (hrs)	14.800	2067	15.645	1866	5.498 *	129	9.565 *	72
DAPAR	weekly time engaged with bio/step fathers (hrs)			15.541	1864	10.975 *	128	4.661 *	70
DV	whether residential father available	0.886	2067	0.912	1866	0.512 *	129	0.903	72
DADTIMEA	weekly time residential father available (hrs)	12.377	2067	12.851	1866	5.645 *	129	12.151	72
DAAVA	weekly time bio/step fathers available (hrs)			12.869	1866	10.478 *	129	2.431 *	70
DADACTT	number of activities with father in last month	9.055	998	9.160	921	7.864 *	59	7.611 *	18
DADWMTH	father's warmth	5.005	1306	5.059	1220	4.311 *	61	4.040 *	25
DADCONT	father's monitoring and control	32.191	1079	32.249	1003	32.539	57	28.100 *	19
DADTKID	father's responsibility	6.121	1236	6.170	1152	5.369	58	5.624	26
DADCHCF	father's conflict over children	4.872	1206	4.808	1122	5.771 *	58	5.600 *	26
DADADCF	father's conflict over adult activities	2.879	1206	2.836	1122	3.426 *	58	3.484 *	26

*p<.05, +p<.10 compared to children living with a biological father

Table 3: Means on Fathering, Child Behavior and Achievement, by Relationship to Father, Children in Blended Family

Variable	Label	ALL		BIO		STEP		COHAB	
		Mean	N	Mean	N	Mean	N	Mean	N
DPR	whether spends time with residential father	0.745	94	0.936	47	0.457 *	35	0.833 +	12
DADTIMEE	weekly time engaged with residential father (hrs)	9.320	74	14.689	36	3.765 *	31	6.314 *	7
DAPAR	weekly time enaged with bio/step fathers (hrs)			14.685	36	13.849	31	6.295 *	7
DV	whether residential father available	0.713	94	0.915	47	0.400 *	35	0.833	12
DADTIMEA	weekly time residential father available (hrs)	8.207	74	12.494	36	3.381 *	31	7.529	7
DAAVA	weekly time bio/step fathers available (hrs)			12.697		14.267		3.498 *	7
DADACTT	number of activities with child in last month	9.700	30	10.545	11	9.333	18	7.000	1
DADWMTH	father's warmth	4.872	39	5.050	20	4.667	18	5.000	1
DADCONT	father's monitoring and control	32.059	34	31.500	18	32.467	15	36.000	1
DADTKID	father's responsibility	6.206	34	6.056	18	6.467	15	5.000	1
DADCHCF	father's conflict over children	4.935	34	4.772	18	4.993	15	7.000	1
DADADCF	father's conflict over adult activities	3.170	34	2.994	18	3.460	15	2.000	1

*p<.05, +p<.10 compared to children living with a biological father

Table 4. Regression of Fathers' Investments in Children Living in Families with a Father

	Engaged (Hours)			Available (Hours)			Activities		
		Children			Children			Children	
Variable	All Children	in 2-parent/2-child Families		All Children	in 2-parent/2-child Families		All Children	in 2-parent/2-child Families	
Intercept	23.053 ***	18.504 ***	17.889 ***	14.692 ***	17.410 ***	17.217 ***	9.266 ***	9.409 ***	11.451 ***
Black	-3.066 **	-2.457 *	-2.425 *	-1.098	0.096	0.118	-0.157	-0.155	-0.220
Hispanic	0.145	0.468	0.576	0.331	-0.846	-0.792	0.247	-0.098	-0.103
Other Race	-0.794	0.316	0.504	-0.314	-0.605	-0.486	0.218	0.364	0.212
Age of Child, 3-5	-0.708	-0.312	-0.229	-1.829 *	-1.936 *	-1.916 *	0.156	1.209	0.536
6-8	-3.218 ***	-2.711 **	-2.677 **	-1.826 *	-2.379 **	-2.377 **	0.830	2.044 *	1.389 *
9-12	-3.239 ***	-2.333 **	-2.316 *	-1.018	-1.594 +	-1.674 +	0.454	1.376 +	0.641
Sex of Child	-0.997 *	-1.086 +	-1.141 *	-0.503	0.176	0.134	-0.143	0.070	0.097
Father's Age	-0.076 +	-0.105 *	-0.112 *	0.002	0.035	0.031	-0.050 **	-0.095 ***	-0.087 ***
Number of Children	-1.017 ***	-0.516 +	-0.522 +	0.606 **	0.519 +	0.517 +	0.145	0.258 *	0.263 *
Father's Education	0.222 *	0.214 +	0.218 +	0.178 +	0.061	0.063	0.144 ***	0.136 **	0.135 **
Mother's Work Hours		0.016	0.015		0.040 +	0.039 +		-0.004	-0.004
Father's Work Hours	-0.045 *	-0.074 **	-0.078 **	-0.103 ***	-0.119 ***	-0.121 ***	-0.009	0.005	0.009
Dual Earners	0.319	-0.559	-0.461	0.431	-0.720	-0.632	-0.002	-0.664 *	-0.719 *
Female Breadwinner	0.804	-0.795	-0.694	1.430	0.238	0.410	-0.601	0.500	0.562
No Breadwinner	-0.285	-1.368	-1.408	1.854	0.408	0.486	-0.479	-1.230 +	-0.879
Single Male Head	2.294			4.445 **			0.080		
Mother's Earnings		0.581 **	0.571 **		-0.047	-0.057		0.338 ***	0.370 ***
Father's Earnings	-0.145 +	0.018	0.010	-0.028	0.008	-0.001 ***	-0.058 *	-0.050	-0.046
Stepfather	-10.341 ***	-7.783 ***	-4.980 *	-7.951 ***	-9.991 ***	-8.797	-1.100 *	-1.115	-4.675 ***
Cohabiting Father	-6.509 ***	-2.651	-1.819	-0.235	-1.807	-1.242	-1.646 *	-5.087 ***	-6.156 ***
Blended Family			-3.440 +			-3.897 *			0.954
Step Child in Blended Family			-1.768			1.503			3.455 *
% of Months Lived with Father	-0.002	0.034	0.045 +	0.003	-0.012	-0.007	-0.001	-0.005	-0.024 *
Father Pays Child Support	-2.672 +	-2.770	-2.341	2.490 +	-2.340	-2.037	-0.982 +	-1.568 *	-1.852 *
No Father ID	-4.859 +	-1.339	-0.856	-0.110	2.773	3.652	2.039	1.521	1.564
N	2025	1304	1304	2025	1304	1304	991	634	634
R-square	0.107	0.100	0.105	0.057	0.065	0.069	0.049	0.109	0.131

+p<.10, *p<.05, **p<.01, ***p<.001

Table 4, continued

Variable	Warmth			Control			Responsibility		
	All Children	Children in 2-parent/2-child Families		All Children	Children in 2-parent/2-child Families		All Children	Children in 2-parent/2-child Families	
Intercept	5.924 ***	5.569 ***	5.871 ***	29.865 ***	33.464 ***	33.907 ***	7.565 ***	8.255 ***	8.979 ***
Black	-0.514 **	-0.257	-0.276	1.978 **	2.484 **	2.428 **	0.393	0.373	0.339
Hispanic	-0.141	-0.235	-0.235	-2.207 ***	-2.527 ***	-2.571 ***	1.899 ***	2.209 ***	2.210 ***
Other Race	-0.239	-0.224	-0.257	0.613	0.671	0.651	1.665 ***	2.205 ***	2.170 ***
Age of Child, 3-5	-0.081	0.050	0.031	0.579	0.877	0.875	0.021	0.326	0.295
6-8	-0.475 ***	-0.311 *	-0.329 *	1.074 +	1.025 +	1.014 +	0.222	0.490 +	0.454 +
9-12	-1.086 ***	-0.879 ***	-0.925 ***	-0.363	-0.027	-0.101	0.047	0.191	0.113
Sex of Child	-0.052	-0.005	-0.005	0.496	0.474	0.466	-0.050	0.152	0.152
Father's Age	-0.008	-0.030 **	-0.029 **	-0.014	-0.034 +	-0.035	-0.019	-0.065 ***	-0.063 *
Number of Children	-0.012	-0.009	-0.006	0.544 ***	0.366	0.377 *	0.137 *	0.303 ***	0.306 ***
Father's Education	0.005	-0.015	-0.014	0.093	0.062	0.064	-0.023	0.013	0.014
Mother's Work Hours		-0.008 *	-0.007 *		-0.008	-0.008		-0.007	-0.007
Father's Work Hours	-0.002	0.001	0.001	-0.008	-0.006	-0.006	-0.016 **	-0.026 ***	-0.025 ***
Dual Earners	0.070	0.023	0.016	-0.831 +	-0.774	-0.776	-0.201	-0.849 ***	-0.862 ***
Female Breadwinner	-0.206	0.120	0.166	0.167	0.221	0.347	-1.351 **	-2.236 ***	-2.192 ***
No Breadwinner	-0.402 +	-0.818 **	-0.725 *	-3.439 ***	-3.941 ***	-3.823 **	1.950 ***	0.552	0.703
Single Male Head	0.412 *			0.629			0.791		
Mother's Earnings		0.092 *	0.095 *		0.200	0.198		0.357 ***	0.368 ***
Father's Earnings	0.033 **	0.032 *	0.031 *	0.112 +	0.121 *	0.116 +	-0.041 +	-0.050 +	-0.050 +
Stepfather	-0.597 **	-0.104	-0.807	1.225	0.037	-0.544	-1.065 **	-0.320	-1.790 +
Cohabiting Father	-1.457 ***	-0.959 +	-1.138 *	-3.637 *	-4.948 +	-5.458 *	-0.556	0.401	0.013
Blended Family			-0.317			-2.259 +			-0.327
Step Child in Blended Family			1.208 *			2.828			2.252 *
% of Months Lived with Father	0.001	0.012 *	0.008	0.001	-0.019	-0.023	-0.002	0.000	-0.009
Father Pays Child Support	-0.148	-0.501 +	-0.532 +	-0.459	-2.275 +	-2.252 +	-0.348	-0.691	-0.766
No Father ID	-0.002	-0.164	-0.071	-5.316 **	-4.926 **	-3.993 *	-0.481	-0.648	-0.516
N	1298	796	796	1038	722	722	1193	755	755
R-square	0.169	0.170	0.174	0.096	0.112	0.116	0.180	0.240	0.244

+p<.10, *p<.05, **p<.01, ***p<.001

Table 4, continued

Variable	Child Conflict			Other Conflict		
	All Children	Children in 2-parent/2-child Families		All Children	Children in 2-parent/2-child Families	
Intercept	3.510 ***	5.270 ***	4.654 **	3.897 ***	4.982 ***	5.313 ***
Black	0.759 *	0.418	0.439	0.866 ***	0.906	0.903 **
Hispanic	0.776 *	0.349	0.340	0.291	0.409	0.422
Other Race	0.480	0.468	0.497	0.091	0.079	0.064
Age of Child, 3-5	0.180	-0.093	-0.062	0.207	0.004	-0.017
6-8	0.277	0.045	0.078	0.460 *	0.288	0.266
9-12	0.348	-0.461	-0.401	0.642 **	0.237	0.211
Sex of Child	-0.323 +	-0.209	-0.211	-0.006	0.048	0.051
Father's Age	0.040 **	0.049 *	0.047 *	-0.013	-0.016	-0.015
Number of Children	0.087	-0.012	-0.012	-0.082	-0.105	-0.107
Father's Education	0.003	0.032	0.032	-0.021	-0.002	-0.003
Mother's Work Hours		0.022 **	0.023 **		0.006	0.006
Father's Work Hours	-0.009	-0.014	-0.015	-0.007	-0.007	-0.006
Dual Earners	-0.172	-0.446	-0.434	-0.145	-0.307	-0.316 +
Female Breadwinner	1.077 *	0.829	0.817	1.017 **	0.891	0.872 +
No Breadwinner	-1.483 **	-1.963 **	-2.081 **	0.305	0.532	0.584
Single Male Head	0.831			-0.352		
Mother's Earnings		-0.233 *	-0.244 *		0.003	0.011
Father's Earnings	0.013	0.013	0.012	-0.020	-0.020	-0.019
Stepfather	1.128 *	1.224	2.518 *	0.533 +	0.585	-0.157
Cohabiting Father	1.331 +	1.023	1.304	0.815 +	0.637	0.534
Blended Family			-0.215			0.609
Step Child in Blended Family			-1.519			0.423
% of Months Lived with Father	-0.002	-0.019 +	-0.012	-0.002	-0.013	-0.017 *
Father Pays Child Support	0.272	0.482	0.562	-0.176	0.249	0.191
No Father ID	-1.032	-1.153	-1.063	-0.295	-0.551	-0.802
N	1192	755	755	1192	755	755
R-square	0.055	0.077	0.08	0.073	0.097	0.101

+p<.10, *p<.05, **p<.01, ***p<.001

Appendix Table 1: Means on Fathering, Child Behavior and Achievement, Children living in Nonblended two-parent family

Variable	Label	ALL		BIO		STEP		COHAB	
		Mean	N	Mean	N	Mean	N	Mean	N
DPR	whether spends time with residential father	0.941	1580	0.954	1458	0.676 *	68	0.926	54
DADTIMEE	weekly time engaged with residential father (hrs)	14.525	1263	14.976	1175	5.738 *	52	12.475	36
DAPAR	weekly time engaged with bio/step fathers (hrs)			14.878	1175	8.205 *	52	4.243 *	
DV	whether father available	0.923	1580	0.932	1458	0.691 *	68	0.963	54
DADTIMEA	weekly time residential father available (hrs)	12.661	1263	12.822	1175	6.858 *	52	15.803 *	36
DAAVA	weekly time bio/step fathers available (hrs)			12.823	1175	8.168 *	52	1.519 *	
DADACTT	numer of activities with father in past month	9.169	634	9.279	609	6.563 *	16	6.333 *	9
DADWMTH	father's warmth	5.038	790	5.091	761	3.588 *	17	3.750 *	12
DADCONT	father's monitoring and control	32.645	711	32.708	685	33.000	16	27.791 *	10
DADTKID	father's responsibility	5.994	744	6.004	716	5.586	16	5.948	12
DADCHCF	father's conflict over children	4.913	730	4.841	702	7.250 *	16	5.983 *	12
DADADCF	father's conflict over adult activities	2.847	730	2.796	702	4.375 *	16	3.816 *	12

*p<.05, +p<.10 compared to children living with a biological father