# Parenting as a "Package Deal": <br> Trajectories of Child Involvement among Unmarried Fathers* 

Laura Tach<br>Harvard University<br>Ronald Mincy<br>Columbia University<br>Kathryn Edin<br>Harvard University

This paper will be presented at the Annual Meeting of the Population Association of America in New Orleans, LA on April 17-20, 2008.

[^0]Parenting as a "Package Deal":<br>Trajectories of Child Involvement among Unmarried Fathers


#### Abstract

Fatherhood has traditionally been viewed as part of a "package deal," where a father's relationship with his child is contingent upon his relationship with the mother. We evaluate the accuracy of this hypothesis in light of the high rates of multiple-partnered fertility among unmarried parents using evidence from the Fragile Families and Child Wellbeing Study, a recent longitudinal survey of nonmarital births in large cities. We find that father involvement drops sharply after relationships between unmarried parents end. These declines are particularly dramatic when the father and mother enter subsequent relationships and have new biological and social children. Mothers' transitions into new romantic partnerships and new parenting roles are associated with particularly large declines in biological father involvement. We discuss the implications of our results given the high levels of relationship instability and multiple-partnered fertility among unmarried parents.


# Parenting as a "Package Deal": Trajectories of Child Involvement among Unmarried Fathers 

In the late 1990s, over eighty percent of nonmarital births in the United States were to couples who were romantically involved, and over half of urban unmarried parents were living together at the time of the birth (McLanahan et al. 2003). Even though they express a desire to stay together and eventually marry, the romantic relationships between unmarried parents dissolve rapidly in the first few years after the child's birth. Over forty percent of nonmarital relationships end by the child's first birthday and by the time the child is five years old, over sixty percent of parents are no longer romantically involved (Center for Research on Child Wellbeing 2007). The fragility of nonmarital unions has led to concern about whether fathers will remain in contact with their children after their relationships with mothers end.

There is reason to be skeptical. In the American context, fatherhood has traditionally been viewed as part of a "package deal" (Furstenberg and Cherlin 1991; Townsend 2004), where fatherhood is a relationship that is contingent upon the relationship between the father and the child's mother. In this view, men attempting to father outside of the context of a marriage or a co-residential union will have difficulty staying involved with their children. Fatherhood roles may be even more difficult to fulfill if fathers have competing familial obligations, a challenge that is particularly salient given the high rate of multiple-partnered fertility among unmarried parents. Close to sixty percent of unmarried couples who gave birth to a shared child during the 1990s had previous children by different partners (Carlson and Furstenberg 2006).

In this paper we extend the package deal hypothesis, arguing that it not only predicts declines in involvement after breakup, but also that subsequent transitions into new partner and parenting roles pose significant added barriers to involvement. As the father and mother of a
child enter into new "family-like" relationships they may feel considerable pressure to recreate the package deal with the new family, without the interference of prior partners or children from past relationships. In particular, we examine the impact of multiple-partnered relationships and fertility on father involvement among parents who had a nonmarital birth.

## THEORY AND RESEARCH

Over the last three decades, a number of in-depth qualitative studies found that the salience of the father role and engagement in fathering activities is high (Hamer 2001; Sullivan 1993; Waller 2002; Young 2003). Two panel studies, the National Longitudinal Survey of Youth, which began to follow a sample of youth aged 14-19 in 1979, and the National Survey of Families and Households, a national probability sample of all U.S. households which was launched in 1981, provided the first nationally representative portraits of unmarried fathers (Lerman 1993; Seltzer 1991; Mott 1990). Thus, beginning in the mid 1980s, we learned that unmarried fathers with very young children were usually quite involved. These statistical portraits also demonstrated, though, that involvement declined quite dramatically as the children got older (Lerman 1993; Seltzer 2000). Additional surveys conducted in the 1990s showed consistent evidence of a downward trend in involvement as the children aged, though the rates differed considerably across the studies (Argys et al. 2007). By the time nonmarital children reach adolescence, their chances of having a regularly involved father are very low (Argys and Peters 2001).

This decline in somewhat puzzling, as evidence from the baseline wave of the Fragile Families and Child Wellbeing Study, a representative survey of nonmarital children in large cities that began following families between 1998 and 2000, has shown that the vast majority of
fathers who have a nonmarital birth are present at the time of the birth and say that they wish to remain involved in their child's life. When the surveyors interviewed the mothers of these children just after the birth, eight in ten said the father had been supportive during pregnancy. Furthermore, nearly all— 99.8 percent-of the fathers interviewed said they intended to stay involved (McLanahan et al. 2003).

Studies that consider all nonresidential children, both marital and nonmarital, find lower rates of father involvement for nonmarital children. Father involvement also varies by race and ethnicity—typically, rates for African Americans are higher and rates for Hispanics are lower than for the average American father (Danziger and Radin 1990; Huang 2006; King 1994, King, Harris and Heard 2004; Mott 1991; Seltzer 1991; but see Seltzer and Bianchi 1988). Additional factors associated with father involvement include parental education (Argys and Peters 2001; Huang 2006; King, Harris and Heard 2004), fathers' age (Lerman and Sorenson 2000), earnings (Lerman and Sorensen 2000; Seltzer 1991), work status (Danziger and Radin 1990); child gender (King, Harris and Heard 2004; Manning and Smock 1999; but see Cooksey and Craig 1998), the presence of additional children, father's current marital status, the number of years since the father left the home (Argys and Peters 2001), payment of child support (Seltzer 1991), and the quality of the co-parenting relationship (Sobolewski and King 2005; but see Amato and Rezac 1994). Waller and Swisher (2006) focus solely on unmarried fathers and find that a wide array of risk behaviors, such as physical abuse, drug and alcohol use, and incarceration are associated with lower odds of father-child contact.

## The "Package Deal" and Nonmarital Father Involvement

In the American context fatherhood has traditionally been viewed as part of a "package deal" (Furstenberg and Cherlin 1991; Townsend 2004). Fatherhood is a relationship that is not
independent of, but largely flows through and is contingent upon, the relationship between the father and the child's mother. This explanation is often used to account for the surprisingly low levels of father-child contact and child support payment following a divorce (Furstenberg and Cherlin 1991). To the extent that notions of "the package deal" are still strongly institutionalized within American society, men attempting to father outside of the context of a marriage, a coresidential union, or a romantic relationship will have more difficulty staying involved with their children. Beyond the additional transaction costs fathers must pay to retain contact with children after a co-residential or romantic partnership ends, the package deal hypothesis holds that there are normative barriers as well. As Cherlin has repeatedly reminded family scholars (1978, 2004), much of family behavior is "automatic"-it relies on ready-made solutions to daily problems based on widely shared normative expectations. These normative expectations not only guide and constrain the behavior of the father, but also of the mother who, as the custodial parent, must cooperate in order for father-child contact to occur.

Following Furstenberg (1995) we extend the application of the package deal hypothesis, arguing that it not only predicts declines in involvement after breakup, but also that subsequent transitions into new partner and parenting roles may also pose significant added barriers to involvement. As the father and mother of a child enter into new "family-like" relationships they may feel considerable pressure to enact the cultural norm of the package deal with the new family without the interference of prior partners or children from past partnerships. These processes are especially relevant for couples who bear children outside of marriage, as such transitions are far more common among them (Graefe and Lichter, 2007). The impact of these subsequent transitions is also particularly important in the U.S. context, as Andersson (2002) has shown that American couples with children, both married and cohabiting, are significantly more
likely to break up than couples in other industrialized countries, and they are also far more likely to repartner than in most other countries.

With one exception (Stewart 1999), the study of transitions into subsequent partnerships have been limited to divorce and remarriage, thus ignoring the many transitions that occur outside of a marital bond. When divorced fathers and mothers remarry, paternal visits and child support payments decline (Stephens 1996; Juby et al. 2006; Seltzer and Bianchi 1988), though the effect of a mother's remarriage is weak. The sole study (Stewart 1999) which considers fathers' transitions into both cohabiting and marital relationships finds that the dampening effect of father's new partnerships is stronger for cohabitation than for marriage. No similar study we know of considers mothers' transitions to new partnerships outside of marriage. In terms of transitions to parental roles, while the impact of nonresident fathers' transitions into new parental roles have been studied (Manning and Smock 2000; Manning, Stewart and Smock 2003; Juby et al. 2006), the impact of mothers' transitions in this domain have not. In these studies, the findings on involvement are inconsistent, though effects on support payment are significantly negative.

Beyond the lack of attention to mothers, these studies have several other limitations. First, all the data sources used suffer from significant under-representation problems, problems which are minimized in the data set we use. Second, none consider both the mother's and father's transitions together. Third, no study focuses specifically on fathers and mothers of nonmarital children; indeed, because of the tendency to focus on divorced couples and remarriage behaviors, many studies do not even include them. The lack of attention to the impact of subsequent relationship transitions on father involvement among unmarried parents in particular is somewhat surprising, as levels of multiple-partner fertility are dramatically higher among them.

Recent data suggests that about 60 percent of all fathers of nonmarital children born between 1998 and 2000 already had at least one child by another partner at the time of this child's birth (Carlson and Furstenberg 2006). Given that the average father surveyed in this study was only in his mid-20s at the time, the proportion of unmarried fathers who will eventually split up, repartner, and have subsequent children with new partners is likely to be very high.

For this large and growing subset of parents, we expect that transitions into subsequent relationships, and subsequent fertility within those relationships, are key mechanisms though which father involvement declines over time. First, it is likely that as fathers move on to subsequent partners and parental roles, the demands inherent in maintaining these new relationships could supersede obligations to children from prior relationships. Second, it is equally likely that mothers' transitions into subsequent partnerships and parent roles might cause them to exclude the biological father in favor of the new father figure in the home.

## DATA AND METHODS

## Data

In the analyses that follow, we use four waves of the Fragile Families and Child Wellbeing Study to examine levels and changes in father involvement among fathers who had a nonmarital birth, focusing on how subsequent partnerships and new parental roles of both mothers and fathers affect this involvement. The Fragile Families and Child Wellbeing Study follows a cohort of nearly 5,000 children born in 20 U.S. cities between 1998 and 2000. The study interviews mothers and fathers at the time of the child's birth and again after one year, three years, and five years. The survey contains a large oversample of nonmarital births and, when weighted, the data are representative of all U.S. cities with populations larger than 200,000. Both
the mother and father are interviewed at each follow-up, regardless of their relationship status. These data are ideal for the study of father involvement not only because of the large sample of unmarried and nonresidential fathers, but because they contain detailed longitudinal economic, attitudinal, and behavioral information collected independently from both the mother and the father.

At each survey wave, our analyses are based upon the subsample of children in the Fragile Families Study who were born outside of marriage, who live with their biological mother, whose mother responded to the survey, and for whom we have nonmissing data on parents' relationship status and father involvement from mothers' surveys. This results in sample sizes of 3,243 at the 1-year survey, 3,123 at the 3-year survey, and 3,050 at the 5 -year wave of the study. In our analyses we pool data across survey waves and restrict the sample to unmarried fathers who are non-resident at the time of the interview, which yields 4,890 person-observations for 2,266 unique cases.

Nonresponse and attrition were higher for unmarried mothers and fathers in the Fragile Families data than for married parents. At baseline $87 \%$ of eligible mothers agreed to participate in the survey, and $75 \%$ of the fathers were interviewed. At subsequent survey waves, response rates for unmarried mothers were $90 \%$ at Wave $2,88 \%$ at Wave 3, and $87 \%$ at Wave 4. Mothers who dropped out of the study were more likely to be White or Latino, were less likely to be married to the father when the child was born, and had lower average socioeconomic status (Cooper et al. 2007). Fathers had higher attrition rates, at $70 \%, 68 \%$, and $66 \%$ for Waves 2, 3, and 4, respectively. Fathers who dropped out of the study were less likely to be involved with their children and were less likely to be residing with the mother of the focal child. Because fathers' attrition is nonrandom and correlated with our outcome of interest, we use mothers'
reports of father involvement. For fathers' independent variables, we use fathers' reports if they are available, mothers' reports if fathers' reports are unavailable, and single imputation if neither mothers' nor fathers' reports are available. ${ }^{1}$ Item-nonresponse for our analysis variables was generally low, in most cases less than 5 percent. The items for which nonresponse was higher include whether the father repartnered (9\%), whether the father was employed ( $8 \%$ ), father's earnings ( $20 \%$ ), and whether the father had subsequent children ( $10 \%$ ).

## Measurement

The main dependent variable in our study is father involvement. We use mothers' reports of fathers' involvement because fathers have higher rates of attrition which are systematically related to their level of involvement. Fathers were coded as seeing child yearly if the mother reported that the father had seen the child since the last interview. This measure captures one extreme of father involvement - whether fathers have any contact at all with their child. We also use a more intensive measure of father involvement, the number of days in the past month a father saw the child. This is a continuous variable ranging from 0 to 30 days.

We use several measures to capture the subsequent relationship characteristics of unmarried mothers and fathers in our sample. We measured the time since parents stopped coresiding as an ordinal variable which indexes the number of survey waves the parents have not lived together. For example, in the fourth survey wave, parents were coded as 0 if they still lived together, 1 if they were living together at the third wave but are not living together at the fourth, 2 if they were living together at the second wave, but not in the third or fourth wave, and 3 if they were living together at the first wave but not any of the subsequent ones. Parents who never lived together during the study period were coded as 4 . This indexing was repeated for each of the survey waves. We also measured at each wave whether the father has a new partner, the
mother has a new partner, the father has subsequent children with different partner, and the mother has subsequent children with different partner. Fathers' relationship and fertility measures were taken from their own reports if available and from mothers' reports if they were unavailable. For the purposes of this paper, we are concerned primarily with relationships and fertility that occur after the birth of the focal child. Many parents in the Fragile Families sample had children by different partners prior to the birth of the focal child (Carlson and Furstenberg 2007). While this is important to consider in the overall role that multiple-partnered fertility has on the wellbeing of children, it does not directly bear on our examination of how father involvement changes for this particular focal child after parents stop living together.

Time-Constant Controls. Father's race and ethnicity was determined using his own report if available, and using the mother's report if his own was not available. Fathers were classified into the mutually exclusive categories: non-Hispanic white, non-Hispanic black, non-Hispanic other race, and Hispanic. Father's age was measured at the time the child was born. Father's education was coded as a series of dummy variables for less than high school, high school or $G E D$, some college, and college plus. We experimented with also including comparable measures for mothers' background characteristics, but mothers' and fathers' measures are highly correlated so we include only father's measures in our regression analyses. We also include a dummy variable indicator for whether the child is male, whether the parents have additional shared children together, and a dummy variable indicating whether the mother lived in a twoparent family when she was a child. Finally, we include a dummy variable indicator for whether the father made financial contributions to the mother during her pregnancy. All of these measures were taken from the Wave 1 baseline survey taken shortly after the child was born.

Time-Varying Controls. The parents' relationship status was categorized as married, cohabiting, romantically involved, or no relationship based upon the mothers' reports at each wave. Couples were defined as cohabiting if they were romantically involved and living together all or most of the time. Parents' residential status was defined as living together if mothers reported they lived together all or most of the time and as not living together otherwise. Fathers were coded as employed if they reported doing any regular work for pay during the week prior to the interview. Father's annual earnings was measured in $\$ 1,000$ s of dollars. Father ever in jail is a dummy variable coded 1 at each survey wave if the father (or mother) reported that he had ever been in jail. Finally, we include a dummy variable indicator at each wave if the father used drugs. Again, we relied on the fathers' reports if they were available and the mothers' reports if they were not available from the fathers.

## Analysis

Our central research question asks what happens to father involvement after parents stop living together and father-child contact is no longer "automatic." To address this question, we structure the data in person-period format where child enters the sample at the first survey wave when his or her two biological parents are no longer living together. Children and their parents contribute observations to the dataset at each wave that the father is nonresident. The number of survey waves the father is nonresident is indexed by the time since coresidence ended variable, which ranges from 1 to 4 waves. We experimented with using dummy variables to index survey waves but found that an ordinal variable for survey wave fit the data just as well as the dummy variables so we use the ordinal measure in our analyses.

We first use random effects models to examine what happens to father involvement after coresidence ends. The models use variation within and between couples to estimate how
fatherhood declines after parents stop living together, after parents enter new romantic relationships, and after parents have subsequent children with new partners. We also include a series of time-invariant and time-varying controls to account for potential confounders that could influence both fathers' involvement and parents' subsequent relationship and fertility behavior.

We also estimate fixed effects regression models that examine only within-couple variation in father involvement and control for all time-constant differences between couples. In these models, we identify how changes in parents' subsequent relationship or fertility status are related to changes in the father's contact with his nonresident biological child. In the fixed effects models we also include time-varying controls for changes certain father characteristics known to be associated with involvement including employment, earnings, prior incarceration, and drug use.

One potential concern is that our measures of subsequent relationships are endogenous to father involvement. That is, the subsequent relationships transitions are themselves a product of father involvement, rather than vice versa as we test in this paper. Our fixed effects models using the monthly father involvement measure provide the most stringent test of this because our $t-1$ measure of father involvement was measured prior to the subsequent relationship variables while our measure of involvement at time $t$ was measured after the subsequent relationships were formed. We exclude relationships that were formed during the period of time in which the measure of father involvement at time $t$ was measured. We also draw on qualitative research about fathers in low-income families that finds that subsequent relationships for both parents reduce the amount of contact fathers have with their children (Edin, Tach, and Mincy forthcoming).

## RESULTS

Table 1 shows descriptive statistics at baseline for all fathers who had a nonmarital birth and for fathers who both had a nonmarital birth and become non-resident by the 5-year follow-up. In general, there are only small differences between all unmarried fathers and unmarried fathers who become non-resident. All unmarried fathers have relatively low levels of education, employment, and earnings. Many of them have spent time in jail, and about 10 percent report problems with drugs. Unmarried fathers are also disproportionately black. About 30 percent of unmarried parents have a prior shared child together, and over 80 percent made financial contributions to the mother during her pregnancy. About half of unmarried fathers are cohabiting with the mother at the time of the child's birth, and only 18 percent are not romantically involved with the mother.

Fathers who eventually become non-resident are only slightly more disadvantaged than unmarried fathers as a whole. They have slightly less education and lower earnings, are a bit more likely to be black, and fewer of them made financial contributions to the mother during her pregnancy. The major difference between non-resident fathers and other unmarried fathers is that they are less likely to have been in a coresidential relationship and more likely to be in no romantic relationship with the mother at the time of the birth.

The relationships between unmarried parents change rapidly over the five years after a nonmarital birth. Table 2 shows that while fathers' characteristics remain relatively stable across the follow-up survey waves, their romantic and cohabiting relationships with mothers end quickly. By the 5 -year follow-up, about 16 percent were married, about 18 percent remained in cohabiting unions, less than 5 percent were romantically involved, and over 60 percent were no longer in a relationship. This does not mean that the parents remained single for long, because
the transition out of a coresidential relationship is associated with rapid transitions into new romantic relationships for both mothers and fathers. Around one year after the child's birth, onequarter of unmarried parents where the father is nonresident had new romantic partners. By five years, about half of unmarried couples with nonresident fathers had a new romantic partner, and over a quarter had a subsequent child with a new partner.

Table 2 also details the proportions of nonmarital children that had contact with their biological father at 1,3 , and 5 years. Both coresidence and involvement rates among unmarried fathers begin high but decline throughout the first five years of a child's life. Over half of nonmarital children reside with their father around the time of their first birthday, but this figure declines to only 35 percent by the time of their fifth birthday. At the first birthday, 63 percent of non-resident fathers saw their child in the past month. By the child's third birthday, only 73 percent had seen their child since the previous survey. And by the time children reached five years of age, only about a quarter ( 26 percent) still saw their father several times a week.

Next, we examine non-resident father involvement at the five-year follow-up by parents' subsequent relationship and fertility statues. The first panel of Table 3 shows levels of fatherchild contact when neither parent has a new partner, when only the mother has a new partner, when only father has a new partner, and when both parents have a new partner. Involvement declines by all measures when one parent has a new partner, but the declines are particularly strong when the mother has repartnered. When neither parent has repartnered, children saw their father on average 10 days in the past month, but when the mother or both parents have new partners this number drops to 4 .

The second panel examines father involvement by parents' subsequent multi-partnered fertility. In only 6 percent of cases do both parents have subsequent children with new partners,
and involvement in these cases is quite low. What is most striking is the low level of involvement once the mother has had a subsequent child, where only 42 percent of fathers have seen their children in the past year, for an average of two days in the past month. Compare this to the rates where there is father-only or no multi-partnered fertility, where involvement rates are substantially higher at over 70 percent since the past survey wave and over five days in the past month. From these top two panels it is clear that mothers subsequent partners and children are strongly associated with lower levels of father involvement, much more so than fathers' own subsequent partners and children.

The next two panels in Table 3 focus in detail on levels of father involvement when each parent is in different stages of forming new relationships and families. Mothers' repartnering and new children are strongly associated with lower levels of father involvement. In contrast, fathers' subsequent relationships not as strongly associated with their involvement: 63 percent of fathers have had contact with their child since the last survey wave when they have a new partner and new child, compared to only 45 percent when mothers have both a new partner and new child.

In the bottom panel of Table 3, we compare these associations with other known factors that influence father involvement. The lower involvement rates associated with subsequent partners and children for mothers are comparable in magnitude to the lower involvement rates among fathers who have been in jail, abused drugs, and who are unemployed. ${ }^{2}$

Despite the strong descriptive findings in Table 3, we must be cautious about their interpretation for several reasons. First, it is possible that there are unobserved characteristics associated with entering new relationships and having children with new partners that are also associated with low levels of father involvement. In this case, the associations may be spurious
and due to omitted variable bias. Second, it is possible that those who are in subsequent relationships and have new children simply ended their unions earlier than those who did not. If father involvement declines after parents stop living together, the observed associations could be simply due to having more time to create a new family. Finally, it is possible that subsequent partners and children are themselves affected by low levels of initial father involvement and couples where fathers initially had low levels of involvement were more likely to repartner than couples where involvement was high. In this case, it is possible that the observed associations are due to reverse causality. To address these concerns, we next examine father involvement in a longitudinal framework that accounts for observed and unobserved differences between couples, takes into account the duration since coresidential unions ended, and properly specifies the causal ordering of the independent and dependent variables.

In Table 4 we show the results from random and fixed effects logistic regression models predicting whether a father had no contact with his child since the previous survey. Model 1 includes exogenous background characteristics. The length of time since coresidence ended is strongly related to having no father-child contact. For every survey wave that parents have not been in a relationship, the odds that the father has no contact with his child increase three fold. Both Hispanic and white fathers are less likely to have any contact with their nonresident children than black fathers. Father contact is higher in couples where there were prior shared children and when the father made financial contributions during the pregnancy. In Model 2 we add the indicators for whether each parent has a subsequent partner at that survey wave and whether they had a new child. Mothers' subsequent partners and children are strongly associated with a lower likelihood of father-child contact, while fathers' subsequent partners and children are not. Model 3 adds fathers' time-varying characteristics. Fathers' employment and earnings
increase the likelihood of contact, while fathers who used drugs had lower odds of contact. The strong effects of mothers' subsequent relationships and children persist after including these characteristics of the fathers, suggesting that it is not behaviors or characteristics of the fathers driving this association. ${ }^{3}$

In Models 4 and 5 we estimate fixed effects, or conditional, logit models that predict the likelihood of having no contact, conditional on having contact in the prior wave. This is regressed on whether each parent got a new partner or had a new child with a new partner between survey waves. Mothers' subsequent relationship transitions remain highly significant in these models, suggesting that it is not other, time-constant unobserved factors driving these results. In the fixed effects models, fathers' transitions into employment are associated with an increased likelihood of child contact, while fathers who spent time in jail increased their odds of no contact by half.

Next, we repeat the analyses in Table 4 for our second measure of father involvement, number of days in the past month father saw the child. These are shown in Table 5. The coefficients can be interpreted as the number of days that a particular independent variable increases or decreases father involvement. For example, Model 1 shows that each wave fathers are nonresident lowers involvement by about 2 days per month. Fathers who made financial contributions during pregnancy saw their children about 4.5 days more per month. Hispanic and white fathers see their children about one day less per month. We add the subsequent relationship variables in Model 2, and find that fathers see their children three days less per month when mothers who have new partners. When fathers themselves have new partners, they see their children about two fewer days per month. Finally, fathers see their children about one day less per month when mothers have subsequent children, but there is no difference when
fathers have subsequent children. These findings hold up when we include the time-varying controls for fathers' characteristics in Model 3, even though each of them is also strongly related to father involvement. Fathers who were employed at the previous wave see their children about two more days per month, while fathers who used drugs saw their children about three days less per month. In Models 4 and 5 we run the fixed effects regressions. The dependent variable is the change in the number of days fathers saw their children between survey waves, and the changes in the independent variables occurred between those two points in time. Father involvement declines by about two days per month after a mother gets a new romantic partner, and by about one day per month when a father gets a new romantic partner. The transitions to having new subsequent children are not significant in the fixed effects models. These results also hold net of changes in fathers' employment, earnings, incarceration, and drug use in Model 5. To estimate the consequences of father involvement for a combination of these factors, the coefficients can be added together. (Interaction models were tested but they were usually not statistically or substantively significant.) For example, when both the mother and the father repartner between waves, this is associated with a three day decline in father contact.

Subsequent models (not shown) tested whether the duration of these subsequent unions mattered, but we found that the declines in involvement occur very quickly - by the next survey wave and do not continue to decline significantly in future follow-ups.

Our analyses demonstrate that mothers' subsequent relationships, not fathers, are the main factor driving declines in father involvement. At one extreme, mothers' subsequent partners and children are associated with increases in the probability that the biological father will have no contact with his child. In this case, fathers' own subsequent partners and children are not nearly as important as mothers. At the other extreme, both mother's and father's subsequent romantic
partnerships are associated with declines in the intensity of father involvement in the past month, although mothers' subsequent relationships are still nearly twice as strong as fathers. Fathers' economic and behavioral characteristics play a stronger role in this more intense measure father involvement. In the following section, we discuss the interpretation of our findings and their implications for child wellbeing and public policy.

## DISCUSSION

Our analysis shows that transitions to subsequent partner and parental roles, especially those of the mother, may bring additional risk to children via declines in father involvement. Changes in mothers' partner and parental status are strongly related to declines in paternal involvement, and are at least as great in magnitude as changes in fathers' economic characteristics or personal characteristics. If mothers are indeed partnering up, one can see how, given the often undesirable characteristics of their children's fathers, they might be tempted to trade "old dad" for "new dad." Changes in fathers' status are not predictive of whether or not the father has contact with the child, but they are related to the intensity of his involvement, suggesting a "crowding out" effect. This is consistent with evidence from a recent qualitative study of 165 low-income nonresident fathers, most of whom have had at least one nonmarital birth, which indicates that fathers hold strong norms about maintaining involvement with past cohorts of children even while in new partnerships and parenting roles. However, their limited resources are often strained by such arrangements, and a decline in the frequency of contact often results (Edin, Tach, and Mincy 2007). All in all, the evidence points more strongly to the role of mothers "swapping daddies" than it does to the role of fathers "swapping kids."

We should note several limitations to our study. First, our analyses are restricted to parents' relationships and fathers' involvement during a short five year window of time. We therefore miss relationships before the focal child was born and relationships that will occur after our five year window of observation ends. Our findings thus underestimate the prevalence of multiple partner relationships and fertility in the lives of the children in our sample. Second, it is likely that we underestimate the extent of multiple partner relationships and fertility among the unmarried fathers in our sample. We rely on either fathers' or mothers' reports of fathers behavior and involvement, and if that father has completely lost contact with the mother it is possible that he was not surveyed and the mother did not know about his subsequent relationships or children. Finally, our study focuses on only one narrow measure of father involvement, which is his frequency of contact with his biological child. This does not reflect the types of activities the father and child do together and it does not reflect the parenting that fathers do with other biological or social children.

Unmarried couples with children are far more likely than couples who bear children within marriage to break up and have children in multiple unions (Graefe and Lichter 2007; Carlson and Furstenberg 2006). Demographers have shown that the typical woman who has a first child outside of a marital bond is likely to experience a series of partnership transitions, both inside and outside of marriage (Graefe and Lichter 2007). The emerging literature on this topic shows that the consequences for child wellbeing of these transitions for children are usually either neutral or negative (Bzostek 2007, but see Coleman et al. 2000), but can be positive if the tie with new surrogate father is strong (Amato and Sobolewski 2004) and the partnership is stable (Yuan and Hamilton 2006). Two analyses show that such women do typically "trade up"-that is, improve the quality of their partners via this process of serial partnering-over time (Bzostek
et al., 2007; Graefe and Lichter, 2007; see also Hofferth 2006). However, it is also likely that these new partnerships are quite unstable (Lichter and Graefe 2007). The coming and going of multiple surrogate fathers may well be harmful to child wellbeing (Lichter, Qian and Crowley 2005, Manning and Lamb, 2003; Fornby and Cherlin 2007; Osborne and McLanahan 2006).

Especially for the mother, new partnerships may provide strong motivation to give the new partner the role of father, particularly once the mother has a child with that partner. For his part, the father may be under considerable pressure to use his scarce emotional and financial resources to fulfill the demands of his new partner and parenting roles, which he can enact within the context of a conjugal relationship. Because fatherhood is generally enacted in a meaningful way within the context of a conjugal union, because the fragility of these unions is high, and because repartnering and subsequent childbearing is common, children born to unmarried parents are likely to experience multiple father figures who represent a series of temporary commitments rather than a life long obligation. As stability is critical for child wellbeing, the shifting cast of fathers and father figures in children' lives is likely to detract from, not add to, their wellbeing (Fornby and Cherlin 2007).

[^1]${ }^{2}$ Of course, lack of biological father involvement does not mean that there is no involvement on the part of a social father and we address the role of social fathers in greater detail at the end of the paper.
${ }^{3}$ We also ran these models with mother's background characteristics in the models rather than father's. The results remained the same.

## REFERENCES

Amato, Paul and Julie M. Sobolewski. 2004. "The Effects of Divorce on Fathers and Children: Nonresidential Fathers and Stepfathers." In The Role of the Father in Child Development. Fourth Edition. Michael E. Lamb, Editor. Hoboken, NJ: John Wiley and Sons. Pp 341-267.

Amato, Paul and Sandra J. Rezac. 1994. "Contact with Nonresident Parents: Interparental Conflict, and Children's Behavior." Journal of Family Issues. 15:191-207.

Argys, Laura M. and H. Elizabeth Peters. 2001. "Patterns of Nonresident Father Involvement." In Social Awakenings: Adolescent Behavior as Adulthood Approaches. Robert T. Michael, Editor. New York: Russell Sage Foundation. Pp. 49-78.

Argys, Laura M., Elizabeth Peters, Steven Cook, Steven Garasky, Lenna Nepomnyaschy, and Elaine Sorenson. 2007. "Measuring Contact between Children and Nonresident Fathers." In Handbook of Measurement Issues in Family Research. Sandra L. Hofferth and Lynn M. Casper, Editors. Mahwah, NJ: Erlbaum. Pp. 375-398

Andersson, Gunnar. 2002. "Children's Experience of Family Disruption and Family Formation: Evidence from 16 FFS Countries." Demographic Research. 7(7):343-364.

Bzostek, Sharon. 2007. "Social Fathers and Child Wellbeing: A Research Note." Working Paper \#2007-17-FF. Center for Research on Child Wellbeing, Princeton University, Princeton, NJ.

Bzostek, Sharon, Marcia J. Carlson and Sara S. McLanahan. 2007. "Repartnering After a Nonmarital Birth: Does Mother Know Best?" Working Paper \#2006-27-FF. Center for Research on Child Wellbeing. Princeton University, Princeton NJ

Carlson, Marcia, Sara McLanahan, and Paula England. 2004. "Union Formation in Fragile Families." Demography. 41(2): 237-261.

Carlson, Marcia and Frank Furstenberg. 2006. "The Prevalence and Correlates of Multipartnered Fertility among Urban U.S. Parents." Journal of Marriage and Family 68(3):718-732.

Cherlin, Andrew. 1978. "Remarriage as an Incomplete Institution." American Journal of Sociology. 84:634-650.
$\qquad$ . 2004. "The Deinstitutionalization of American Marriage." Journal of Marriage and Family. 66:848-861.

Coleman, Marilyn, Lawrence Gagong and Mark Fine. "Reinvestigating Remarriage: Another Decade of Progress." Journal of Marriage and the Family. 62:1288-1307.

Cooksey, Elizabeth C. and Patricia H. Craig. 1998. "Parenting from a Distance: The Effects of Parental Characteristics on Contact between Nonresidental Fathers and their Children." Demography. 35:187-200.

Cooper, Carey, Sara S. McLanahan, Sara Meadows and Jeanne Brooks-Gunn. 2007. "Family Structure Transitions and Maternal Parenting Stress." Working Paper \#2007-16-FF. Center for Research on Child Wellbeing. Princeton University, Princeton, NJ.

Danziger, Sandra K. and Norma Radin. 1990. "Absent Does Not Equal Uninvolved: Predictors of Fathering in Teen Mother Families." Journal of Marriage and the Family. 52:636-642.

Edin, Kathryn, Laura Tach, and Ronald B. Mincy. 2007. "Claiming Fatherhood: Race and the Dynamics of Paternal Involvement among Unmarried Men." Paper presented at The Moynihan Report Revisited Conference, Harvard University, Cambridge MASS, October.

Fornby, Paula and Andrew J. Cherlin, 2007. "Family Instability and Child Wellbeing." American Sociological Review. 72:181-204.

Furstenberg, Frank. F. 1995. "Changing Roles of Fathers." In Escape from Poverty: What Makes a Difference for Children? P. Lindsay Chase-Lansdale \& Jeanne Brooks-Gunn, Editors. New York: Cambridge University Press. Pp. 189-210

Furstenberg, Frank F. and Andrew J. Cherlin. 1991. Divided Families: What Happens to Children when Parents Part. Cambridge, MA: Harvard University Press.

Graefe, Deborah R and Daniel T. Lichter, 2007. "When Unwed Mothers Marry: The marital and Cohabiting Partners of Midlife Women." Journal of Family Issues. 28:595-622.
. 2001. What it Means Ro Be a Daddy: Fatherhood Among Black Men Living Away From Their Children. New York: Columbia University Press.

Hofferth, Sandra. 2006. "Residential Father Family Type and Child Well-Being: Investment versus Selection." Demography. 43(1):53-77.

Hofferth, Sandra L., Joseph Pleck, Jeffrey L. Stueve, Suzanne Bianchi, and Liana Sayer. 2002. "The Demography of What Fathers Do." Handbook of Father Involvement, Catherine S. Tamis-LeMonda and Natasha Cabrera, Editors. Mahwah, NJ: Lawrence Erlbaum Associates.

Huang, Chien-Cung. 2006. "Child Support Enforcement and Father Involvement for Children in NeverMarried Mother Families." Fathering. 4(1): 97-111.

Juby, Heather, Jean-Michel Billette, Benoît Laplante, and Céline Le Bourdais. 2007. "Nonresident Fathers and Children: Parents' New Unions and Frequency of Contact."
Journal of Family Issues. 28:1220-1245.
King, Valarie. 1994. "Variation in the Consequences of Nonresident Father Involvement for Children's Wellbeing." Journal of Marriage and Family. 56:963-972.

King, Valarie, Kathleen Mullan Harris and Holly E. Heard. 2004. "Racial and Ethnic Differences in Nonresident Father Involvement." Journal of Marriage and Family. 66:1-21.

Lerman, Robert I. 1993. "A National Profile of Young Unwed Fathers." In Young Unwed Fathers: Changing Roles and Emerging Policies. Robert I. Lerman and Theodora J. Ooms, Editors. Philadelphia: Temple University Press. Pp. 27-51.

Lerman, Robert I. and Elaine Sorensen. 2000. "Father Involvement with Their Nonmarital Children: Patterns, Determinants and Effects on Their Earnings." In Fatherhood: Research, Interventions, and

Policies. H. Elizabeth Peters, Gary W. Peterson, Suzanne K. Steinmetz and Randal D. Day, Editors. New York: The Haworth Press. Pp. 137-159.

Lichter, Daniel T., Zhenchao Quain, and Martha L. Crowley. 2005. "Child Poverty Among Racial Minorities and Immigrants: Explaining Trends and Differentials." Social Science Quarterly. 86:10371059.

Manning, Wendy D. and Kathleen Lamb. 2003. "Adolescent Well-Being in Cohabiting, Married, and Single Parent Families." Journal of Marriage and Family. 65:876-893.

Manning, Wendy. D., Stewart, S. D., \& Pamela J. Smock. 2003. "The Complexities of Fathers' Parenting Responsibilities and Involvement with Nonresident Children." Journal of Family Issues. 24:645-667.

Manning, Wendy. D., \& Pamela J. Smock. 2000. "Swapping" families: Serial parenting and economic support for children." Journal of Marriage and the Family. 62:111-122.

Manning, Wendy D. and Pamela J. Smock. 1999. "New Families and Nonresident Father-Child Visitation." Social Forces. 78:87-116.

McLanahan, Sara, Irwin Garfinkel, Nancy Reichman, Julien Teitler, Marcia Carlson, and Christina Norland Audigier. 2003. "The Fragile Families and Child Wellbeing Study: Baseline National Report." Center for Research on Child Wellbeing. Princeton University, Princeton NJ.

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

McKenry, Patrick C., Mary W. KcKelvey, Diana Leigh and Linda Wark. 1996. "Nonresidental Father Involvement: A Comparison of Divorced, Separated, Never Married, and Remarried Fathers." Journal of Divorce and Remarriage. 25(3/4):1-13.

Mott, Frank L. 1990. "When is a Father Really Gone? Paternal-Child Contact in Father-Absent Homes." Demography. 27(4):499-517.

Osborne, Cynthia and Sara S. McLanahan. 2007. "Partnership Instability and Child Wellbeing." Journal of Marriage and the Family. 64(4):1065-1083.

Seltzer, Judith A. and Suzanne M. Bianchi. 1988. "Children’s Contact with Absent Parents." Journal of Marriage and Family. 50:663-667.

Seltzer, Judith A. 1991. "Relationships between Fathers and Children Who Live Apart: The Father's Role after Separation." Journal of Marriage and Family. 53:79-101. . 2000. "Child Support and Child Access: The Experiences of Marital and Non-Marital Families." In Child Support: The Next Frontier. Thomas Oldham and Marygold Melli, Editors. Ann Arbor, MI: University of Michigan Press. Pp. 69-87.

Sobolewski, Juliana M. and Valarie King. 2005. "The Importance of the Coparental Relationship for Nonresident Fathers' Ties to Children." Journal of Marriage and Family. 67:1196-1212.

Stephens, L. S. (1996). Will Johnny see Daddy this Week? An Empirical Test of Three Theoretical Perspectives of Postdivorce Contact." Journal of Family Issues. 17:466 - 494.

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

Sullivan, Mercer L. 1993. "Young Fathers and Parenting in Two Inner City Neighborhoods." In Young Unwed Fathers: Changing Roles and Emerging Priorities. Philadelphia: Temple University Press. Pp. 5273.

Townsend. Nicholas W. 2004. The Package Deal: Marriage, Work, and Fatherhood in Men's Lives. Philadelphia PA: Temple University Press.

Waller, Maureen R. 2004. My Baby's Father: Unwed Parents and Paternal Responsibilities. Ithaca, NY: Cornell University Press.

Waller, Maureen R. and Raymond Swisher. 2006. "Fathers' Risk Factors in Fragile Families: Implications for "Healthy" Relationships and Father Involvement." Social Problems. 53(3):392-420.

Wu, Lawrence and Elizabeth Thompson. 2001. "Race Differences in Family Experience and Early Sexual Initiation: Dynamic Models of Family Structure and Family Change." Journal of Marriage and the Family. 63:682-696.

Young, Alford. 2003. The Minds of Marginalized Black Men: Making Sense of Mobility, Opportunity, and Future Life Chances. Princeton, NJ: Princeton University Press.

Yuan, Anastasia S. Vogt and Hayley A. Hamilton. 2006. "Stepfather Involvement and Adolescent Wellbeing: Do Mothers and Nonresident Fathers Matter?" Journal of Family Issues. 27(9):1191-1213.

Table 1. Descriptive Statistics for Couples who had a Nonmarital Birth

|  | All Unmarried Couples | Father Non-Resident at Wave 4 |
| :---: | :---: | :---: |
| Baseline Characteristics |  |  |
| Father Race/Ethnicity |  |  |
| Hispanic | 40 | 35 |
| Non-Hispanic White | 13 | 13 |
| Non-Hispanic Black | 43 | 48 |
| Non-Hispanic Other | 5 | 3 |
| Father Age (in years) | 26.9 | 26.2 |
| Father Education |  |  |
| Less than high school | 40 | 43 |
| High school or GED | 38 | 39 |
| Some college | 16 | 14 |
| College or more | 4 | 2 |
| Intact Family at 16 | 36 | 31 |
| Mother Age (in years) | 23.4 | 22.9 |
| Mother Education |  |  |
| Less than high school | 44 | 45 |
| High school or GED | 38 | 36 |
| Some college | 16 | 16 |
| College or more | 2 | 1 |
| Mother Health | 3.8 | 3.8 |
| Child is Male | 53 | 52 |
| Prior Shared Children (\#) | 28 | 25 |
| Financial Contributions in Pregnancy | 80 | 74 |
| Father Employed | 79 | 77 |
| Father Earnings (\$) | 17,341 | 16,691 |
| Father Drug Use | 7 | 8 |
| Relationship Status |  |  |
| Married | 0 | 0 |
| Cohabiting | 51 | 38 |
| Romantically Involved | 31 | 36 |
| No Relationship | 18 | 26 |
| N | 3,710 | 2,019 |

Notes: Weighted by national sampling weights for each survey wave.
All values are percentages unless otherwise indicated.

Table 2. Behavioral and Relationship Characteristics after a Nonmarital Birth

|  | 1 Year | 3 Year | 5 Year |
| :--- | :---: | :---: | :---: |
| All Unmarried Fathers |  |  |  |
| Father Employed | 74 | 71 | 76 |
| Father Earnings (\$) | 19,507 | 20,669 | 22,757 |
| Father Ever in Jail | 39 | 50 | 53 |
| Father Drug Use | 10 | 12 | 15 |
| Relationship Status with Biological Mother |  |  |  |
| $\quad$ Married | 11 | 15 | 16 |
| $\quad$ Cohabiting | 37 | 26 | 18 |
| $\quad$ Romantically Involved | 12 | 6 | 5 |
| $\quad$ No Relationship | 40 | 53 | 61 |
|  |  |  |  |
| Resident Fathers | 48 | 44 | 36 |
| Non-Resident Fathers | 52 | 56 | 65 |
|  |  |  |  |
| Non-Resident Fathers | 26 | 41 | 51 |
| Mother New Partner | 23 | 44 | 51 |
| Father New Partner | ----- | 18 | 24 |
| Mother New Child by New Partner | ---- | 9 | 26 |
| Father New Child by New Partner |  |  |  |
|  | 87 | 73 | 66 |
| Saw child since previous survey | 63 | 49 | 46 |
| Saw child in past month | 8.9 | 6.6 | 5.8 |
| Mean number of days father saw child |  |  |  |
|  | 3,243 | 3,123 | 3,050 |

Notes: Weighted by national sampling weights for each survey year.
All values are percentages unless otherwise indicated.

Table 3. Non-Resident Father Involvement by Economic, Behavioral, and Subsequent Relationship Characteristics at 5-Years

|  | Past Year | Past Month | Number of Days in Past Month | \% Nonresident Fathers |
| :---: | :---: | :---: | :---: | :---: |
| All Nonresident Fathers | 66 | 46 | 5.8 | 100 |
| Both Parents' Subsequent Relationships |  |  |  |  |
| New Partner |  |  |  |  |
| Neither Parent | 77 | 60 | 9.7 | 34 |
| Mother Only | 62 | 38 | 3.8 | 20 |
| Father Only | 65 | 44 | 5.1 | 18 |
| Both Parents | 59 | 39 | 3.8 | 28 |
| New Child with New Partner |  |  |  |  |
| Neither Parent | 73 | 53 | 7.3 | 59 |
| Mother Only | 42 | 24 | 2.3 | 15 |
| Father Only | 71 | 47 | 4.8 | 20 |
| Both Parents | 53 | 37 | 4.5 | 6 |
| Mother Only Subsequent Relationships |  |  |  |  |
| No Partner or Child | 77 | 58 | 8.6 | 45 |
| Partner but No Child | 67 | 44 | 4.3 | 33 |
| Child but No Partner | 44 | 28 | 3.3 | 7 |
| Partner and Child | 45 | 27 | 2.7 | 15 |
| Father Only Subsequent Relationships |  |  |  |  |
| No Partner or Child | 71 | 51 | 7.4 | 44 |
| Partner but No Child | 60 | 41 | 4.7 | 30 |
| Child but No Partner | 75 | 56 | 7.9 | 9 |
| Partner and Child | 63 | 40 | 3.5 | 17 |
| Father Characteristics |  |  |  |  |
| No Drugs in Past Year | 69 | 50 | 6.7 | 80 |
| Drugs in Past Year | 54 | 30 | 2.4 | 20 |
| Never Been in Jail | 70 | 54 | 7.1 | 36 |
| Ever Been in Jail | 64 | 41 | 4.9 | 64 |
| Employed at Prior Survey Wave | 70 | 52 | 6.6 | 68 |
| Not Employed at Prior Survey Wave | 60 | 32 | 3.8 | 32 |
| Earned More than \$15,000 | 65 | 43 | 5.2 | 62 |
| Earned Less than \$15,000 | 68 | 50 | 6.7 | 38 |

Notes: $\mathrm{N}=2,019$. Figures are weighted by national sampling weights. Sample is restricted to couples who were un at child's birth and father is nonresident at 5-year followup.

Table 4. Random and Fixed Effects Logistic Regression Models Predicting No Contact With Child In Past Year

|  | Model 1 |  | Model 2 |  | Model 3 |  | Model 4 |  | Model 5 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \hline \text { Coef. } \\ \text { (S.E.) } \end{gathered}$ | OR | Coef. (S.E.) | OR | $\begin{gathered} \hline \text { Coef. } \\ \text { (S.E.) } \end{gathered}$ | OR | $\begin{gathered} \text { Coef. } \\ \text { (S.E.) } \end{gathered}$ | OR | Coef. (S.E.) | OR |
| Subsequent Relationships |  |  |  |  |  |  |  |  |  |  |
| Mom has new partner | ----- |  | $\begin{array}{r} 0.59 \\ (0.13) \end{array}$ | 1.81 *** | $\begin{array}{r} 0.57 \\ (0.13) \end{array}$ | 1.77 *** | $\begin{array}{r} 0.60 \\ (0.18) \end{array}$ | 1.82 ** | $\begin{array}{r} 0.61 \\ (0.19) \end{array}$ | $1.83 \text { ** }$ |
| Dad has new partner | --- |  | $\begin{gathered} -0.03 \\ (0.13) \end{gathered}$ | 0.97 | $\begin{gathered} -0.02 \\ (0.13) \end{gathered}$ | 0.98 | $\begin{gathered} -0.08 \\ (0.18) \end{gathered}$ | 0.92 | $\begin{gathered} -0.06 \\ (0.18) \end{gathered}$ | 0.94 |
| Mom has new child | --- |  | $\begin{gathered} 0.98 \\ (0.17) \end{gathered}$ | 2.66 *** | $\begin{array}{r} 0.96 \\ (0.17) \end{array}$ | 2.62 *** | $\begin{array}{r} 0.70 \\ (0.27) \end{array}$ | 2.01 ** | $\begin{array}{r} 0.69 \\ (0.27) \end{array}$ | 1.99 |
| Dad has new child | ----- |  | $\begin{gathered} -0.12 \\ (0.17) \end{gathered}$ | 0.89 | $\begin{gathered} -0.12 \\ (0.18) \end{gathered}$ | 0.89 | $\begin{array}{r} 0.11 \\ (0.26) \end{array}$ | 1.11 | $\begin{array}{r} 0.11 \\ (0.26) \end{array}$ | 1.11 |
| Dad Employed at Prior Wave | ----- |  | ----- |  | $\begin{gathered} -0.36 \\ (0.13) \end{gathered}$ | 0.70 ** | --- |  | $\begin{array}{r} -0.55 \\ (0.19) \end{array}$ | 0.58 |
| Dad Earnings (in \$1,000s) | ----- |  | ----- |  | $\begin{gathered} -0.01 \\ (0.00) \end{gathered}$ | 1.00 ** | ----- |  | $\begin{array}{r} -0.00010 \\ (0.0009) \end{array}$ | 1.00 |
| Dad Ever in Jail | -- |  | ----- |  | $\begin{gathered} -0.0014 \\ (0.1475) \end{gathered}$ | 1.00 | -- |  | $\begin{array}{r} -0.71 \\ (0.29) \end{array}$ |  |
| Dad Used Drugs | ----- |  | ----- |  | $\begin{array}{r} 0.32 \\ (0.16) \end{array}$ | 1.38 * | ----- |  | $\begin{gathered} -0.13 \\ (0.24) \end{gathered}$ | 0.88 |
| Time Since Coresidence Ended | $\begin{array}{r} 1.02 \\ (0.07) \end{array}$ | 2.79 *** | $\begin{array}{r} 0.86 \\ (0.07) \end{array}$ | 2.36 *** | $\begin{array}{r} 0.86 \\ (0.07) \end{array}$ | 2.35 *** | $\begin{gathered} 0.88 \\ (0.10) \end{gathered}$ | $2.41^{* * *}$ | $\begin{array}{r} 0.97 \\ (0.11) \end{array}$ | $2.63 * * *$ |
| Father Race |  |  |  |  |  |  |  |  |  |  |
| Hispanic | $\begin{array}{r} 1.12 \\ (0.18) \end{array}$ | 3.07 *** | $\begin{array}{r} 1.12 \\ (0.17) \end{array}$ | 3.08 *** | $\begin{array}{r} 1.24 \\ (0.18) \end{array}$ | 3.45 *** | --- |  | ----- |  |
| Non-Hispanic White | $\begin{array}{r} 0.36 \\ (0.26) \end{array}$ | 1.44 | $\begin{array}{r} 0.35 \\ (0.26) \end{array}$ | 1.41 | $\begin{array}{r} 0.46 \\ (0.27) \end{array}$ | $1.59+$ | ----- |  | ----- |  |
| Non-Hispanic Other | $\begin{array}{r} 0.10 \\ (0.44) \end{array}$ | 1.11 | $\begin{array}{r} 0.13 \\ (0.44) \end{array}$ | 1.14 | $\begin{array}{r} 0.14 \\ (0.44) \end{array}$ | 1.15 | ----- |  | ----- |  |
| Father Age (in years) | $\begin{array}{r} 0.013 \\ (0.010) \end{array}$ | 1.01 | $\begin{array}{r} 0.025 \\ (0.011) \end{array}$ | 1.03 * | $\begin{array}{r} 0.030 \\ (0.011) \end{array}$ | 1.03 ** | ----- |  | ---- |  |
| Father Education |  |  |  |  |  |  |  |  |  |  |
| Less than high school | $\begin{array}{r} 0.22 \\ (0.16) \end{array}$ | 1.24 | $\begin{gathered} 0.18 \\ (0.16) \end{gathered}$ | 1.20 | $\begin{array}{r} 0.09 \\ (0.16) \end{array}$ | 1.09 | ----- |  | ----- |  |
| Some college | $\begin{gathered} -0.67 \\ (0.22) \end{gathered}$ | 0.51 ** | $\begin{gathered} -0.64 \\ (0.22) \end{gathered}$ | 0.53 ** | $\begin{gathered} -0.54 \\ (0.22) \end{gathered}$ | 0.58 * | ----- |  | ----- |  |
| College or more | $\begin{array}{r} 0.09 \\ (0.45) \end{array}$ | 1.09 | $\begin{array}{r} 0.10 \\ (0.45) \end{array}$ | 1.11 | $\begin{array}{r} 0.40 \\ (0.46) \end{array}$ | 1.49 | ----- |  | ----- |  |
| Child is male | $\begin{array}{r} 0.06 \\ (0.14) \end{array}$ | 1.06 | $\begin{array}{r} 0.00 \\ (0.14) \end{array}$ | 1.00 | $\begin{array}{r} 0.01 \\ (0.14) \end{array}$ | 1.01 | ----- |  | ----- |  |
| Prior Shared Children (\#) | $\begin{gathered} -0.38 \\ (0.17) \end{gathered}$ | 0.68 * | $\begin{gathered} -0.39 \\ (0.17) \end{gathered}$ | 0.68 * | $\begin{gathered} -0.44 \\ (0.17) \end{gathered}$ | 0.64 * | ----- |  | ----- |  |
| Non Intact Family at 16 | $\begin{array}{r} 0.30 \\ (0.16) \end{array}$ | $1.35+$ | $\begin{array}{r} 0.33 \\ (0.16) \end{array}$ | 1.39 * | $\begin{array}{r} 0.34 \\ (0.16) \end{array}$ | 1.41 * | --- |  | --- |  |
| Financial Contributions in Pregnancy | $\begin{gathered} -1.45 \\ (0.16) \end{gathered}$ | 0.23 *** | $\begin{gathered} -1.47 \\ (0.16) \end{gathered}$ | 0.23 *** | $\begin{gathered} -1.46 \\ (0.16) \end{gathered}$ | $0.23 \text { *** }$ | ----- |  | ----- |  |
| Constant | $\begin{array}{r} -4.62 \\ (0.41) \end{array}$ |  | $\begin{gathered} -4.88 \\ (0.41) \end{gathered}$ |  | $\begin{gathered} -4.64 \\ (0.42) \end{gathered}$ |  |  |  |  |  |
| Fixed Effects |  |  |  |  |  |  | X |  | X |  |

$+\mathrm{p}<.10^{*} \mathrm{p}<.05^{* *} \mathrm{p}<.01^{* * *} \mathrm{p}<.001$
Notes: Sample is restricted to couples who had a nonmarital birth and father is nonresident at at least one survey wave.
Regressions are based on 2,266 unique cases and 4,890 person-wave observations.

Table 5. Random and Fixed Effects Regression Models Predicting Days Father Saw Child In Past Month

|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Coef. <br> (S.E.) | Coef. (S.E.) | Coef. <br> (S.E.) | Coef. (S.E.) | $\begin{aligned} & \text { Coef. } \\ & \text { (S.E.) } \end{aligned}$ |
| Subsequent Relationships |  |  |  |  |  |
| Mom has new partner | ----- | $\begin{aligned} & -2.84 \text { *** } \\ & (0.15) \end{aligned}$ | $\begin{aligned} & -2.62 \text { *** } \\ & (0.28) \end{aligned}$ | $\begin{aligned} & -2.26 \text { *** } \\ & (0.34) \end{aligned}$ | $\begin{aligned} & -2.10 \text { *** } \\ & (0.33) \end{aligned}$ |
| Dad has new partner | ----- | $\begin{aligned} & -1.84 \text { *** } \\ & (0.29) \end{aligned}$ | $\begin{aligned} & -1.85 \text { *** } \\ & (0.28) \end{aligned}$ | $\begin{aligned} & -0.94 \text { ** } \\ & (0.35) \end{aligned}$ | $\begin{gathered} -0.86 \text { * } \\ (0.34) \end{gathered}$ |
| Mom has new child | ----- | $\begin{aligned} & -0.86 \text { * } \\ & (0.41) \end{aligned}$ | $\begin{aligned} & -0.68+ \\ & (0.40) \end{aligned}$ | $\begin{array}{r} -0.22 \\ (0.51) \end{array}$ | $\begin{array}{r} -0.16 \\ (0.50) \end{array}$ |
| Dad has new child | ----- | $\begin{gathered} -0.17 \\ (0.40) \end{gathered}$ | $\begin{gathered} -0.04 \\ (0.39) \end{gathered}$ | $\begin{gathered} -0.31 \\ (0.49) \end{gathered}$ | $\begin{array}{r} -0.27 \\ (0.48) \end{array}$ |
| Dad Employed at Prior Wave | ----- | ----- | $\begin{aligned} & 1.75^{\text {*** }} \\ & (0.29) \end{aligned}$ | ----- | $\begin{aligned} & 1.79 \text { *** } \\ & (0.36) \end{aligned}$ |
| Dad Earnings (in \$1,000s) | ----- | ----- | $\begin{gathered} 0.03 \text { ** } \\ (0.00) \end{gathered}$ | ----- | $\begin{aligned} & 0.04 \text { ** } \\ & (0.01) \end{aligned}$ |
| Dad Ever in Jail | ----- | ----- | $\begin{aligned} & -1.75 \text { *** } \\ & (0.29) \end{aligned}$ | ----- | $\begin{aligned} & -2.05 \text { ** } \\ & (0.60) \end{aligned}$ |
| Dad Used Drugs | -- | ----- | $\begin{aligned} & -2.72 \text { *** } \\ & (0.38) \end{aligned}$ | ----- | $\begin{aligned} & -2.08 \text { *** } \\ & (0.49) \end{aligned}$ |
| Time Since Coresidence Ended | $\begin{aligned} & -1.90^{* * *} \\ & (0.13) \end{aligned}$ | $\begin{aligned} & 1.32 \text { *** } \\ & (0.15) \end{aligned}$ | $\begin{aligned} & -1.188^{* * *} \\ & (0.14) \end{aligned}$ | $\begin{aligned} & -1.09 \text { *** } \\ & (0.19) \end{aligned}$ | $\begin{aligned} & -0.93 \text { *** } \\ & (0.19) \end{aligned}$ |
| Father Race |  |  |  |  |  |
| Hispanic | $\begin{aligned} & -1.23 \text { ** } \\ & (0.46) \end{aligned}$ | $\begin{aligned} & -1.25 \text { ** } \\ & (0.44) \end{aligned}$ | $\begin{aligned} & -1.69 \text { *** } \\ & (0.44) \end{aligned}$ | ----- | ---- |
| Non-Hispanic White | $\begin{aligned} & -1.11+ \\ & (0.67) \end{aligned}$ | $\begin{array}{r} -0.73 \\ (0.65) \end{array}$ | $\begin{array}{r} 0.62 \\ (0.64) \end{array}$ | ----- | ---- |
| Non-Hispanic Other | $\begin{gathered} -1.11 \\ (1.08) \end{gathered}$ | $\begin{gathered} -0.99 \\ (1.04) \end{gathered}$ | $\begin{gathered} -0.88 \\ (1.02) \end{gathered}$ | ----- | ---- |
| Father Age (in years) | $\begin{array}{r} 0.009 \\ (0.027) \end{array}$ | $\begin{array}{r} -0.029 \\ (0.027) \end{array}$ | $\begin{gathered} -0.051 \text { * } \\ (0.026) \end{gathered}$ | ----- | ----- |
| Father Education |  |  |  |  |  |
| Less than high school | $\begin{gathered} -1.02 \text { * } \\ (0.43) \end{gathered}$ | $\begin{gathered} -0.98 \text { * } \\ (0.41) \end{gathered}$ | $\begin{array}{r} -0.32 \\ (0.40) \end{array}$ | ----- | ---- |
| Some college | $\begin{array}{r} 0.40 \\ (0.37) \end{array}$ | $\begin{array}{r} 0.47 \\ (0.51) \end{array}$ | $\begin{array}{r} -0.16 \\ (0.50) \end{array}$ | -- | ----- |
| College or more | $\begin{array}{r} 0.37 \\ (1.19) \end{array}$ | $\begin{array}{r} 0.15 \\ (1.15) \end{array}$ | $\begin{gathered} -1.98+ \\ (1.14) \end{gathered}$ | ---- | ----- |
| Child is male | $\begin{array}{r} 0.41 \\ (0.37) \end{array}$ | $\begin{array}{r} 0.54 \\ (0.36) \end{array}$ | $\begin{array}{r} 0.48 \\ (0.35) \end{array}$ | ----- | ----- |
| Prior Shared Children (\#) | $\begin{gathered} 1.09 \text { * } \\ (0.42) \end{gathered}$ | $\begin{gathered} 1.13 \text { ** } \\ (0.41) \end{gathered}$ | $\begin{aligned} & 1.54 \text { *** } \\ & (0.40) \end{aligned}$ | ----- | ----- |
| Non Intact Family at 16 | $\begin{array}{r} 0.38 \\ (0.41) \end{array}$ | $\begin{array}{r} 0.27 \\ (0.39) \end{array}$ | $\begin{array}{r} 0.24 \\ (0.38) \end{array}$ | ---- | ----- |
| Financial Contributions in Pregnancy | $\begin{aligned} & 4.52 \text { *** } \\ & (0.45) \end{aligned}$ | $\begin{aligned} & 4.43 \text { *** } \\ & (0.43) \end{aligned}$ | $\begin{aligned} & 4.25 \text { *** } \\ & (0.42) \end{aligned}$ | ----- | ----- |
| Constant | $\begin{aligned} & 8.73 \text { *** } \\ & (0.95) \end{aligned}$ | $\begin{aligned} & 10.23 \text { *** } \\ & (0.93) \end{aligned}$ | $\begin{aligned} & 10.44 \text { *** } \\ & (0.95) \end{aligned}$ | $\begin{aligned} & 11.39 \text { *** } \\ & (0.39) \end{aligned}$ | $\begin{aligned} & 10.59 \text { *** } \\ & (0.56) \end{aligned}$ |

Fixed Effects X X
$+\mathrm{p}<.10^{*} \mathrm{p}<.05^{* *} \mathrm{p}<.01^{* * *} \mathrm{p}<.001$
Notes: Sample restricted to couples who had a nonmarital birth and father is nonresident at at least one survey wave.
Regressions are based on 2,266 unique cases and 4,890 person-wave observations.


[^0]:    * The authors wish to thank Julien Tietler, Marcia J. Carlson, Jean Knab, Judith Seltzer, and Frank Furstenberg for helpful comments on earlier tables and drafts. The Fragile Families and Child Wellbeing Study was supported by Grant Number R01HD36916 from the National Institute of Child Health and Human Development and other private funders. The contents of the paper are solely the responsibility of the authors and do not represent the official views of the NICHD.

[^1]:    ${ }^{1}$ Single imputation was conducted using Stata's impute command for missing values in mother's and father's survey reports. The imputation model includes variables reported by mothers and fathers that are associated with either the dependent variable of interest, father involvement, or the likelihood of having missing data (Allison 2002). This includes parents' relationship status at baseline, parents' employment and educational characteristics, fathers' race, child gender, and fathers' history of drug use and incarceration.

