Race, Romance and Non-resident Father Involvement Resilience: Factors Hiding in Plain Sight

Abstract

Research frequently reports that black non-resident fathers have higher rates of visitation than white non-resident fathers. Some explanations of these differences treat race and ethnicity as markers for unspecified "cultural" differences. We test a hypothesis that explains specific race and ethnic differences as consequences of differing patterns of family formation with special attention to visiting parent unions. The study is based on five waves of the Fragile Families and Child Wellbeing Study (FFCWS) and its estimates rely upon GEE estimators. We examine three measures of visitation, one of which, sleepover visits, has been ignored in prior studies of visitation patterns among unmarried fathers. By including couples in current visiting parent unions the current study addresses a selection bias that has been present in prior studies. The results are consistent with the hypothesis under review. Results indicate that romantic involvement is related to two visitation measures. Racial differences in initial visitation are independent of racial differences in family formation patterns.

In the past half-century American non-marital births have grown from an estimated four percent of all births to a present-day mark over 40 percent (Child Trends, 2012). The increase has been steady, averaging a percentage point a year, and until recently, it rarely declined (Martin et al., 2013). A major contribution to this trend has been an increase in children born to cohabiting couples in relationships that do not last very long (Bumpass, Sweet, & Cherlin, 1991; M.J. Carlson & McLanahan, 2010; Dempsey & de Vaus, 2004; Sheela Kennedy & Bumpass, 2008).

The U.S. Census data uses a single category, births to a single parent, to classify all non-marital births to non-cohabiting couples. This procedure masks births to non-cohabiting, but romantically involved parents who are in a committed relationship (hereafter visiting parent union[1]). According to estimates based upon the Fragile Families and Child Well-Being Survey (FFCWS), 30 percent of nonmarital births in large urban areas occur in visiting parent unions (M.J. Carlson & McLanahan, 2010; M. Carlson, McLanahan, & England, 2004; McLanahan, 2009; Osborne, 2005). If the proportion of births to visiting parent unions in the FFCWS were applicable nationally, parents in visiting parent unions would account for 13 percent of all national births[2]. By comparison visiting parent unions are the source of 31 percent of all Jamaican births (Gooden, 2009) and 18 percent of all births in Britain (Kiernan, 2006).

As researchers give more attention to the substantial proportion of non-marital births to visiting parent unions (M. J. Carlson & McLanahan, 2006; Hayford, 2010; Heiland & Liu, 2006; Howard & Brooks-Gunn, 2009; Osborne & Mclanahan, 2007; Tach & Edin, 2011), there is a similar interest in what happens to the father's involvement with his child after a visiting parent

[1] We adopt this term from Osborne (Osborne & Mclanahan, 2007) and hereafter we use it to characterize parents who were in a romantic, visiting relationship at the birth of their child.

[2] (Author's calculation) We used baseline national weights from the FFCWS to produce nationally representative estimates of births to visiting parent unions.

union breaks up (K.B. Guzzo, 2009; Roy, Buckmiller, & McDowell, 2008; Tach & Edin, 2011; Tach, Mincy, & Edin, 2010).

Drawing upon the Package Deal Hypothesis (PDH), the standard model for investigating visitation by nonresident fathers, Tach, Mincy and Edin (2010; herein TME) provide the most extensive investigation yet into the visitation trajectories of nonresident fathers who formed families through visiting parent unions. The PDH was originally derived to explain the visitation trajectories of divorced or separated fathers (F.F. Furstenberg, 1995a; Frank F Furstenberg, 1991; Townsend, 2002; Willis, 2000). To make the visitation trajectory of a nonresident father who had been in a visiting parent union conform to the PDH, TME observe visitation over three waves of the FFCWS only *after* the visiting union ends.

The current study is based on all four follow-up waves of FFCWS and it too uses PDH to examine visitation trajectories of nonresident fathers who formed families through visiting parent unions. However, we adopt the perspectives of Caribbean scholars (Clarke, 1999; Hossain, 1994; J. L. Roopnarine, 2004; J. Roopnarine, 1995; Senior, 1991) who initiated the study of these unions. We term their work the Baby Father Hypothesis (BFH) and it differs from TME in that it observes visitation trajectories *before (ex-ante)* and *after* (*ex-post*) visiting parent unions have ended. Since fathers in visiting parent unions are by definition nonresident fathers, excluding their ex-ante visitation patterns introduces selection bias into an analysis of their behavior. As we discuss below, in adopting this perspective, the PDH is better fitted for explaining visitation trajectories in contemporary non-marital unions.

Prior studies have frequently reported that black nonresident fathers have higher rates of visitation than white nonresident fathers. Explanations for these differences have thus far treated race and ethnicity as markers for unspecified "cultural" differences. We contribute to the

literature by testing a hypothesis that explains these differences by specific racial and ethnic patterns of family formation. We examine three measures of visitation; one of which, sleepover visits, has been ignored in prior studies of visitation patterns among unmarried fathers. We also offer estimates of visitation trajectories free of the selection bias that has been present in prior studies. Finally, our estimates rely upon GEE estimators, which produce consistent and minimum variance estimates of the parameters despite the nonnormal distribution of our outcome variables and within-person correlation across waves.

The paper proceeds as follows. Section two reviews the literature and discusses how and why the Baby Father Hypothesis is incorporated into the Package Deal Hypothesis. Section three describes our data and analytic strategy. Section four presents our results. Finally, section five provides a summary, discusses limitations and implications for future research.

Literature Review

Theoretical Background: Package Deal Hypothesis and Baby Father Hypothesis

The 'Package Deal Hypothesis,' was developed to explain the decline in a father's involvement with his children following remarriage (F.F. Furstenberg, 1995b; Frank F Furstenberg, 1991; Townsend, 2002; Willis, 2000). It remains a central organizing concept for father involvement as its scope has widened to include families formed through non-marriage (L. M. Berger, Cancian, & Meyer, 2011; Marcia J. Carlson, McLanahan, & Brooks-Gunn, 2008; Karen Benjamin Guzzo, 2009; Laughlin, Farrie, & Fagan, 2009; W.D. Manning & Smock, 1999; Tach et al., 2010). Still some interpretations of it are more favorable to the visitation prospects of fathers formerly in visiting parent unions than other interpretations.

Guzzo (K.B. Guzzo, 2009) summarizes the least favorable interpretation beginning with the assessment that fathers in committed non-resident romantic relationships are "…men for

whom fatherhood is not part of a package deal". (K.B. Guzzo, 2009, p. 644). Since they have the least interactions with their children they have a diminished sense of parental competence; so much so, they secure their identity and instructions on parenting from the mother of their children. After their romantic relationships end, their uncertainty about their parenting skills combined with limited time with their child causes never-resident fathers to question their future as a parent and disengage from parenting. To lose attachment to the mother of one's children is to lose attachment to the idea of being a father. As the mother forms new attachments, this weakens the never co-resident father's identity and attachment still further. Conceptually this is devastating and it is difficult to imagine how such injured fathers will visit their children very much.

Guzzo (2009) goes on to argue that married and cohabiting fathers achieve "proximity and opportunity" to their child through their co-residence with the mother, i.e., the package deal. As a result, their fathering identity is firmly intact. When their marital or cohabiting unions dissolve, their father involvement declines primarily through re-partnering that leads to "proximity and opportunity" with new children in a new family, when they are said to have swapped children (W.D. Manning & Smock, 1999). Given these and other mechanisms driving visitation by fathers who formed a family through a visiting parent union and fathers who began a family through marriage or cohabitation, this version of the PDH predicts large differences in visitation trajectories between the aforementioned two groups. The differences are anchored by the idea that never-resident fathers approach visitation with a low sense of competence.

A more favorable view of the visiting father's prospects emerges from a rival hypothesis developed outside the American experience. Caribbean family scholars sometimes use the phrase "baby father" and "baby mother" to describe reciprocal expectations and obligations (Senior

1991; J. L. Roopnarine 2004; J. Roopnarine 1995) that arise out of visiting relationships. Senior (1991) indicates that fertility within visiting unions, especially among the young, may not carry social stigma. As a result, once couples who were in a visiting relationship break up and form new relationships, the expectation of high paternal involvement with the shared child remains, independent of subsequent partners. He will always be that 'Baby's Father,' hence its title, the Baby Father Hypothesis (BFH) (Mincy & Pouncy, 2007).

Mincy and Pouncy observed that many low and middle-income American Black parents display family formation patterns similar to those displayed by low and middle-income Afro-Caribbean parents, particularly Jamaicans.[3] The BFH observes that families from both contexts feature two conditions: (1) high non-marital birth rates, inclusive of cohabiting unions, and (2) fertility within non-residential unions, excluding cohabiting unions, that has become a norm. However, as Table 1 illustrates, the family formation patterns apply generally and given the racial distribution among visiting union parents these two conditions should apply as robustly to Hispanics and have begun to apply to Whites.

Given those two conditions a father in a visiting parent union will: (1) have a relationship with the child not characterized by 'proximity and opportunity,' but negotiated with the mother; (2) be highly involved with the child, more involved even than his peers who were once co-resident fathers[4], (3) remain involved with the child after his romantic relationship breaks up, but at a reduced visitation level and (4) after subsequent new family formation events occur, the

[3] Jamaican non-marital birth rates have averaged between 60 and 70 percent since 1870 (Abrahamson, 2000; Clarke, 1999) and African-Americans reached similar levels in the 1990s (Bank, 2006; King, Harris, & Heard, 2004). High levels of births to couples in visiting relationships also has been a feature of Jamaican society since the late 19th century (Abrahamson, 2000) and it is currently a feature in Black American union formation (Abrahamson, 1998; M. Carlson, McLanahan, & England, 2004).

[4] Using Early Head Start data in a sample of low-income, non-resident, teenage fathers involved in a non-marital birth, Holmes found that at least 20 percent visited several times a week over the entire five year period and 30 percent grew to 50 percent who never visited (Holmes, 2009). African American fathers were disproportionately represented in the high visitation group but also the low visitation group.

father's involvement is likely to be resilient because he and the mother often remain as interested in his involvement with the child as they both felt while they were still a couple (Mincy & Pouncy, 2007).

In summary the BFH assumes that the visiting father has a communal identity, his visits are welcomed and expected even as he and the mother re-partner. After break up, the BFH expects continued visitation and commitment and even suggests that his familiarity with visitation routines during the romantic, committed phase of his relationship will serve him well after the romance ends but contact with his child continues[5].

We create an amalgam of the two perspectives that retains the scope of the PDH but incorporates the expectation of resilience for visiting fathers from the BFH. We share with TME the idea that visiting unions should be included in the PDH; but, as we note below, we include visiting unions on terms that the BFH requires. We do this mainly by including both ex-ante and ex-post visitation observations for fathers in visiting parent unions.

The PDH's core *observation* is that father's proximity and opportunity are linked to co-residence with the mother in ways that mean that fathers swap children when they produce new households (F.F. Furstenberg, 1995a; Frank F Furstenberg, 1991; Townsend, 2002). The PDH's core *prediction* is that any change in any parental relationship status produces discontinuity in father visitation (Arditti & Keith, 1993; Lawrence M. Berger, Cancian, & Meyer, 2012; Laughlin et al., 2009; Manlove et al., 2012; W.D. Manning & Smock, 1999; Seltzer & Bianchi, 1988; Tach et al., 2010).

[5] Stack (Stack, 1975)offers only conditional support for this visitation dynamic after a visiting parent union ends. She finds that support from the father's family contributes significantly to his decision to be an involved visiting parent and such support is often not forthcoming. Anderson (Anderson, 1996) finds little ethnographic evidence for the dynamic, reporting instead on the important visitation role of grandmothers. Similarly, Edin and Kefalakas (Edin & Kefalas, 2011) emphasize the mother's often skeptical appraisal of the biological father prospects after a visiting parent union breakup in her decision to create a new 'package deal' with a new partner.

The first change in parental relationship status is union dissolution defined for married and cohabiting couples as the moment co-residence ends (Tach et al., 2010). This perturbation is observable and yields a discontinuity between a father's "proximity and opportunity" during co-residence and his visitation after union break up, but it is immeasurable. Surveys of father visitation do not include a measure for ex-ante "proximity and opportunity" "visitation." By contrast ex-post visitation is measured in many surveys at the extensive margin (any visits since the last year/wave) (Argys & Peters, 2001) and at two intensive margin measures (days visited per month) (L. M. Berger et al., 2011; Tach et al., 2010) and sleepover visits per year (Cashmore, Parkinson, & Taylor, 2008).

The Visitation Start Point

For visiting parent unions the first parental status change is also union dissolution, defined as the end of romantic involvement. At each wave in the FFCWS, a mother is asked the status of the relationship between her and the biological father. Prior studies measure the breakup of a visiting parent union when the mother reports that she is no longer in a romantic relationship (K.B. Guzzo, 2009; Laughlin et al., 2009; Tach et al., 2010). This starting point for visiting parent unions is equivalent to a mother in a cohabiting union who reports that the father is no longer co-resident. Unlike Guzzo, TME allow 'proximity and opportunity' properties to be linked to the father's romantic relationship with the mother. They, therefore, include fathers formerly in visiting parent unions in discussions about visitation trajectories and they use the measure 'time since parents stopped coresidence' to capture the expectation that his visitation will decline. These steps are entirely within the spirit of the PDH, but they limit efforts to design and test empirical hypotheses about visitation trajectories.

It is our view that, where possible, researchers should observe ex-ante and ex-post-visitation patterns of visiting parent unions to gauge the full range of visitation outcomes including the effect of the first perturbation, the union break up itself. As noted above the FFCWS measures both ex-ante and ex-post visitation for fathers in visiting parent unions. Using these data, researchers can test for the discontinuity predicted by PDH following this first perturbation on the same terms that they have tested for discontinuity following all subsequent perturbations (e.g. new partners and new children with new partners). By limiting their sample to ex-post visitation for fathers in visiting parent unions, TME introduce sample selection bias into their study.

Visitation Trajectories

Although most studies argue that the PDH predicts a secular decline in father visitation (Cheadle, Amato, & King, 2010; K.B. Guzzo, 2009; Tach et al., 2010) our PDH amalgam only predicts reductions in visitation after any parental status change[6]. We make no prediction about the rate at which visitation declines over time before or after the perturbation. This is because both trajectories are averages over all nonresident fathers and are expected to vary.

Subsequent Perturbations

Some parental status changes cause larger visitation discontinuities than others. Furstenberg nominated the father's remarriage as a unique cause of discontinuity (F.F. Furstenberg, 1995b). In cross-sectional estimates it had appeared that divorced fathers reduced contact with their children after re-marriage, but longitudinal estimates showed that reduced contact did not come from re-marriage or new partnering, it came from new children – hence

[6] Other studies suggest that the rate at which visitation declines over time, before or after a parental status change, is more reliably linked to poor overall relationship quality (Argys & Peters, 2001; M. J. Carlson & McLanahan, 2006; Sobolewski & King, 2005); maternal gate keeping (Marcia J. Carlson, McLanahan, & Brooks-Gunn, 2008; Classens, 2007)and competing paternal obligations (Arditti & Keith, 1993; Beck & McLanahan, 2010; Danziger & Radin, 1990).

child swapping (Manning and Smock 1999). Based on a sample of younger, unmarried, less-educated parents, including more men and women of color, Laughlin et al. determined that never-married parents re-partner more rapidly than divorced parents (Laughlin et al., 2010). TME expanded upon the PDH by arguing that it is not just about the non-residential fathers change of allegiance, the custodial mother's package deal is actually more important (Tach et al. 2010). Non-residential father involvement declines when the mother swaps daddies, e.g., she takes up residence with a new partner, not when he swaps kids as he begins his new family. This finding was recently confirmed in a study using NLSY data, but the maternal re-partnering impact on visitation was smaller than TME's estimates (Lawrence M. Berger et al., 2012).

We are not aware of studies that determine differences in perturbation effects by margin of visitation, that is, between visits per year, visits per month, and sleepover visits. But we expect significant differences between visitation patterns that involve overnight visits and other visitation patterns. In terms of sleepover visits, fathers without independent living arrangements will be at a logistical disadvantage compared with other fathers (Sheela Kennedy & Bumpass, 2008; Sheela1 Kennedy & Fitch, 2012; Mincy & Pouncy, 2007; Mykyta, 2012; Wimer & Kennedy, 2012). Where the visiting parent relationship still exists it is likely a child will have fewer sleepover visits at his father's residence since most sleepover visits will occur at the mother's residence. We would not expect this to be the case when a when a couple breaks up and the father has established an independent residence.

Summary of Previous Empirical Findings

Before testing our amalgam of the PDH hypothesis it will be helpful to summarize prior empirical literature. The PDH "predicts declines in involvement after breakup, but also subsequent transitions into new partner and parenting roles pose significant added barriers to

involvement" (Tach et al., 2010). At the intensive margin of visits per month and using a sample of non-marital births, TME estimate a decline in visitation of one day a month at each wave for a father whose cohabiting or visiting parent union has dissolved. These perturbations add up to such an extent that all other variables held equal, a non-resident father's visitation could decline up 7 days a month at each wave if the mother re-partners through marriage or cohabitation (3 days a month at each wave), the father re-partners in a similar way (2 days a month at each wave) and the mother has subsequent children (1 day). Berger et al. (2011) suggest that TME over-estimate the effect of perturbations, commenting that a mother's re-partnering only reduces visitation by a day per month rather than two days.

Cheadle et al. (2010) put a remarkably different picture of father visitation on the table. They find that more than a third of fathers begin their careers as a non-resident father with a high level of involvement and that this level of involvement remains stable for at least 12 years. Another third are barely involved in the life of their child from the start and this low level of involvement is sustained for at least 12 years. Nonresident fathers followed the declining trajectory outlined by TME in only a quarter of cases. Another eight percent show involvement increases from very low initial levels of involvement.

TME's empirical findings did provide strong support for the stable visitation trajectory reported by Cheadle et al. Specifically TME's model controls for time since coresidence ended, their main variable of interest, and the wave of the FFCWS, which measures the secular trend in visitation. The former was negative and statistically significant, as expected. The latter was not statistically significant, though TME offered no comment on this finding.

Finally, a consistent finding of many studies over the last 20 years is that black non-resident fathers are more likely to have contact with their non-resident children than white non-

resident fathers (Danziger and Radin 1990; Mott 1990; Huang 2006; King 1994; King et al. 2004; Seltzer 1991; Seltzer and Bianchi 1988). TME and to some extent Cheadle et al. (2010) put a different picture on the table. TME find little difference in visitation by race among non-resident fathers and Cheadle et al. explain differences in visitation by race with differences in incarceration rates. The BFH offers a third possibility. Race and visiting parent unions are correlated to such an extent that racial differences in visitation will diminish once the model controls for whether or not parents are currently in visiting parent unions.

To our knowledge no study has estimated the visitation trajectories of fathers in an active visiting union. Nor have prior studies accounted for the non-normal distribution of visitation measures and the within-individual correlation over time.

We expect the BFH to explain the contact patterns of fathers in visiting parent unions. We predict a strong association between current romantic involvement and visitation trajectories at the extensive and one of our two intensive margins. Racial differences in initial visitation may well depend on contemporaneous romantic involvement.

To test these predictions and avoid sample selection bias, our sample includes unmarried fathers originally involved in cohabiting unions and originally involved in visiting parent unions, before and after these unions broke up.

Data

We use five waves of the Fragile Families and Child Wellbeing Study (FFCWS), a longitudinal birth cohort study of 4,898 children who were born between 1998 and 2000 in large U.S. cities (for more details see (Reichman, Teitler, Garfinkel, & McLanahan, 2001). Baseline interviews with the mothers and fathers took place in 75 hospitals in 20 cities just after the baby's birth, and subsequent interviews were conducted after about one year, three years, five

years, and nine years later. The study substantially oversampled non-marital births. As a result, FFCWS families are less economically advantaged, but are ideal to study non-residential father involvement because of the large sample of unmarried fathers. This sample is advantageous because of the rich data on economic, behavioral, and subsequent partnership and parental role information collected from both the mother and father.

Our analyses exclude children who were born in a marital relationship (N = 1,187). Of the 3,709 children born in non-marital relationships, our analytical sample was further reduced based on father's residency and information on mother's relationship status. At each survey wave, our analytical sample is based on fathers who do not reside with the mothers and for whom we have relationship status information from the mother. The sample sizes are: 1,805 at the one-year survey, 1,939 at the three-year survey, 2,129 at the five-year survey, and 1,942 at the nine-year survey. We pooled observations across the four survey waves, yielding nearly 3,500 person-year observations, in the most complete model.

Non-response and attrition rates are higher for unmarried mothers and fathers than for married respondents in the sample. Fathers have higher attrition rates than mothers at each wave, and fathers who dropped out are less likely to be involved with their child and less likely to reside with the mother of the focal child (Cooper, McLanahan, Meadows, & Brooks-Gunn, 2009). Akin to previous studies using the FFCWS and investigating nonresident father involvement, we use mothers' report of father involvement, because this variable is correlated with fathers' attrition. For fathers' independent variables, we used a combination of his report and the mother's report in order to capture full information on the fathers.

Samples

We estimated models based on an *unrestricted* and a *restricted* sample. Both samples include nonresident fathers who were not involved in romantic or cohabiting relationships with the mother at birth. The *unrestricted sample* includes formerly cohabiting nonresident fathers and nonresident fathers still in visiting relationships. This sample extends the conceptual range of the PDH to include previously unobserved (ex-ante) visitation as well as visitation following the initial family transition when visiting couples break up. As a result, with this model we can assess predictions made by the BFH. The *restricted* sample adopts the TME selection criteria, which includes nonresident fathers in cohabiting or visiting-parent *unions that have ended.*

Measures

Dependent variables. Our outcome variable is visitation by nonresident fathers assessed when the focal child was approximately one, three, five, and nine years old and measured three ways. (1) Mothers reported if the *father had contact with the child since the previous interview or in the last year*. Fathers are coded as 1 if they saw the focal child since the last wave or in the last year and 0 otherwise. (2) For mothers who reported that the father had contact since the previous interview or in the last year, we assess the *number of days in the past month* the father visited the child. This variable ranges from 0 to 30 days. The zero values indicate that the father saw the child since the previous interview or in the last year but had no visitation in the last month. (3) Conditional on the father's contact since the previous interview or in the last year, we assessed the number of *overnight visits in the last year.* This variable ranges from 0 to 365. Fathers, who have zero values, have seen their child since the last interview but had no sleepover nights in the last year.

Independent variables. To properly estimate the variation in visitation by non-resident fathers' involvement we measure and control for a number of factors that have been linked to the

decline in non-resident father visitation. First we use several indicators to capture the current relationship status and the history of romantic involvement of the mothers and non-resident fathers in our sample. We measure if the mother and non-resident father are *romantically involved* at each wave. This variable is a departure from TME who do not include current romantic involvement in their multivariate analyses. We measure *time since romance ended* as an ordinal variable that indexes the number of waves the parents are no longer cohabiting or in visiting relationships. For example, in the fifth survey wave, a mother was coded as 0 if she was still romantically involved or residing with the father, 1, if she was romantically involved or residing with the father at the fourth survey wave but not at the fifth, 2, if she was involved or living with the father at the third wave but not at the fourth or fifth, 3, if she was romantically involved or residing with the father at the second wave but not in the subsequent waves, and 4, if she was involved with the father at the first wave but not thereafter. A mother is coded as 5 if she never resided with or was never romantically involved with the father. This measure was repeated for each survey wave.

At each wave, mothers and fathers were asked if they were romantically involved with a new partner and if they were cohabiting or married to this new partner. Mothers were asked if the fathers were residing with a new partner. We used this information to measure subsequent relationship characteristics. Thus, at each wave we measured if the *mother has a new partner* (both resident and non-resident), *the father has a new partner* (both resident and non-resident), *the mother has subsequent children with a new partner*, and *the father has subsequent children with a new partner*. With respect to multiple-partner fertility, each parent is asked whether s/he had children with someone other than the focal child's mother or father. Mothers were also asked about father's subsequent children. Using birthdates of the children and answers to these

questions, we determined whether the mother and father had children with a new partner after the birth of the focal child. We also control for multiple-partner fertility prior to the birth of the focal child.

Time-varying controls. We included a variable for *mother's age* at each wave. At each wave, we have an indicator if the *father was ever in jail or prison*. We rely on both the mother's and the father's report for this characteristic. Additionally, we code the father as *employed* if he did regular work for pay during the week prior to the interview. Finally, we include an indicator at each wave if the father reported *drug or alcohol abuse/interference*. We relied on available fathers' reports and supplemented with mothers' reports when there was no information from the father.

Time-constant controls. Mothers' race/ethnicity was specified as *non-Hispanic white* (reference group), *non-Hispanic black, Hispanic*, and *non-Hispanic other race*. One of the key observations arising from the BFH is that blacks were more likely to have children in visiting parent unions than whites, and therefore, race is highly correlated with romantic involvement. Prior studies estimating visitation trajectories have not estimated visitation trajectories controlling for contemporaneous romantic involvement, and therefore, the association between race/ethnicity and visitation trajectories in such studies may reflect omitted variables bias. To explore this possibility we estimated alternate versions of our model some of which excluded the control for visiting parent unions. The BFH also claims that visitation trajectories will be resilient when nonmarital births and nonmarital births in visiting parent unions are prevalent. As we showed in Table 1, this is already the case for all race/ethnic groups, though there are race/ethnic variations. Therefore, we also estimated versions of our models with interactions

between race/ethnicity and the secular time trend as well as time since romance ended. These interactions explore whether the resilience of visitation varies by race/ethnicity as well.

Maternal education was coded into mutually exclusive categories: *less than high school* (reference group*), high school or GED, some college,* and *college or higher*. We included whether the father made financial contributions to the mother during her pregnancy. Lastly, we included the baseline relationship status between the mother and father as either *cohabiting, romantically involved,* or *no relationship/just friends.*

Analytic Strategy

We estimated generalized estimating equations (GEEs) to examine the likelihood that a non-resident father visited his child since the last wave and to what extent this likelihood is associated with mothers' and fathers' romantic relationship, subsequent relationship changes, and subsequent children. This modeling strategy relies on variation between and within mothers and includes time constant and time varying controls. GEEs are an extension of generalized linear models and use quasi-likelihood methods to estimate parameters (Ballinger, 2004). GEE models have two virtues over other techniques used in longitudinal data analysis. One, this method accounts for correlation within individual. Two, GEE models are flexible to account for dependent variables that are not normally distributed. This modelling strategy produces more efficient and unbiased estimates than those produced by OLS regressions. Lastly, all our models specified independent error structures after confirming no evidence of autocorrelation within our sample. Our modeling strategy is a departure from previous techniques used in the father involvement literature that do not focus on the distributional assumptions of variables measuring visitation. We argue that GEE places fewer distributional assumptions on the data and is a more

appropriate technique given the count nature of our dependent variables, the absence of a normal distribution of these variables, and the panel data format.

The data is in a person-year format and a mother enters our sample when she is no longer residing with the focal child's father. Thus, information at each wave is only collected from non-resident fathers. We estimate the following equation:

$$Y_{it}(Contact\ with\ child\ since\ last\ wave) =$$

$$\beta_o + \beta_2 Wave_{it} + \beta_3 Race_i + \beta_4 Romantically\ Involved_{it} +$$

$$\beta_5 Time\ since\ Romance\ ended_{it} + \beta_6 Race\ x\ Time\ since\ romance\ ended_{it} +$$

$$\beta_7 NewPartner_{it} + \beta_8 NewChild_{it} + \beta_n X_i + \beta_s X_{it} + \varepsilon_{it}$$

where *t* indexes the interview wave for which non-resident father involvement is measured for child *i*, at each of the four follow-up waves. β_2 and β_3 estimate the association between time and race and non-resident father involvement. β_4- β_8 measure the association between relationship status, changes post-breakup between the mother and father, and subsequent children with new partners and non-resident father involvement. This model has *n* time-invariant controls and *s* time-varying controls. We run the equivalent model for the two other dependent variables in our analyses, days of visitation last month and number of sleepover nights in the last year.

Results

Table 2 shows descriptive statistics by unrestricted and restricted samples at the 1-year and 9-year follow up waves for mothers who report that the focal child's father was non-resident at the wave. The first column includes couples that are in current visiting parent unions. Nonresidential father visitation remained at high levels at one year and when the child was nine. Cheadle et al. (2010) used *any contact with the father in the last year* to define their lower bound of visitation and it is such a low bound for visitation that by the child's ninth birthday, nearly

90% of nonresident children had seen their fathers since the last survey, and of these children, nearly fourth-fifths had seen their father in the last month. Overall, these children saw their fathers an average of 9 days per month, or about twice a week, on average, and an average of 48 sleepover visits last year, or about 4 overnight visits a month. Thirty percent of this sample was in visiting unions by the child's first birthday, but most of these relationships dissolved by the nine-year survey. By the nine-year follow-up, nearly a third of mothers had a new residential partner, over half had a new romantic partner, and over 40% of mothers and fathers had a subsequent child with a new partner. There were small differences in socio-demographic variables between the two follow-up waves. The sample was predominantly black and had low levels of educational attainment and employment. About a fifth of nonresidential fathers reported using drugs and nearly forty percent had spent time in jail or prison by the last follow-up wave.

The restricted sample is in the second column and excludes couples who were in visiting unions. This sample mirrors the unrestricted sample in its high level of visitation by the nine-year survey at the extensive and intensive margins of involvement. Subsequent relationship transitions and children for mothers and fathers increased between the two follow up waves. The subsequent relationships and children for mothers and fathers were at similar rates as compared to the restricted sample. Economic disadvantage also characterized this sample and rates of incarceration and drug use were similar to rates found in the unrestricted sample.

Table 3 details change in the size and racial/ethnic composition of visiting parent unions over time. As the prevalence of non-resident fathers increased at each subsequent wave, the group's racial composition changed moderately. Among nonresident fathers, the percent of blacks remained stable (nearly 65%); the percentage of whites grew from 11 to 14 percent. The proportion of Hispanics and other race remained stable (20 and 3 percent, respectively). At each

wave, there was little variation over time in the racial/ethnic composition of romantically involved, non-resident couples, our main variable of interest in this analysis. These couples were mostly black (nearly 70%), but Hispanics made up about a fifth of the sample of visiting parent unions and declined to ten percent by the 9-year follow-up.

Visitation Since the Last Interview (Extensive Margin): Unrestricted and Restricted Samples

The models in Table 4 estimate nonresident father visitation at the extensive margin, whether there has been *any father-child contact since the last survey.* The first column reports results for the unrestricted sample. Overall, its results provide strong support for the BFH. The ex-ante behavior of visiting couples is estimated by the coefficient of *romantically involved*. Romantic involvement with the biological father is strongly associated with a higher likelihood of father involvement since the last survey. The odds that a father in an active visiting relationship maintained contact with his child are almost 16 times the odds that other non-resident fathers will have had contact. With a difference this great between fathers in a current visiting union and all other non-resident fathers, the visitation level of visiting union fathers approaches the access of a co-resident father.[7] The result is consistent with the expectations of the BFH, but it is also consistent with our expectation of visitation under the PDH when ex-ante visitation is observable. The model demonstrates how much visitation among visiting union parents is *hidden* by restricted samples.

We also find that *time since romance ended* is not associated with nonresident father visitation. In the second column (Model 2) where we repeat the analysis with TME's restricted sample using a GEE model[8], that coefficient also predicts lower odds of visitation and is not

[7] This conclusion comes from simulations we did predicting monthly visitation patterns of fathers in a visiting parent union. Typically such fathers saw their child over 25 days a month.

[8] The sample replicates TME's work with three important differences: (1) the estimates are made using generalized estimating equations, not fixed or random effect models, (2) there is an additional wave of data so that focal children

significant. Our GEE estimates do not support the hypothesis that father-child contact declines once romance or residence ends. This contrasts sharply with estimates generated by TME's random effects model. They find that *time since co-residence ended* is linked to significantly lower odds of visitation, particularly, the odds double at each wave of non-residence.

The variable *wave* estimates the "secular time trend of father involvement as children get older" (TME, 2010). The *wave* result in column 1, our preferred model, predicts significantly lower odds of visitation with every survey wave. The odds of visitation decrease by nearly 30%. The *wave* coefficient in the second column, the restricted sample, is also negative but not significant. Of TME's five extensive margin models, one reports a significant *wave* coefficient (1.51**). After adjusting their odds ratio in order to make comparisons between our results, results from TME suggests 34% lower odds of any visitation, which is proximate to the result in our preferred model.

In both samples, with the exception of Hispanic mothers, race and ethnicity coefficients indicate that there is no significant difference by race/ethnicity in the odds that fathers had contact with their children since the previous survey. These results are consistent with TME's results that Hispanic fathers are unique in their lower odds of visitation at the extensive margin. They posit that at this lower bound of father visitation there are few differences by race. Our estimates and those of TME differ from a previous literature that reports Black fathers are more likely to maintain contact with their child (Carlson & McLanahan, 2009). Additionally, relationship status at birth has no significant association with visitation at the extensive margin in either the unrestricted or the restricted sample.

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are about four years older than those in TME's sample and (3) the omitted variable is white fathers, not black fathers.

Taken together the models in Table 4 consolidate previous perturbation findings. For both models a mother's new residential partner (through marriage or cohabitation) reduces the odds of visitation by 50% as compared to a mother who does not re-partner. When we invert TME's results and express them in a similar way to ours, their estimate indicates 50% lower odds of contact[9]. Our results and TME's are within range of BCM's results for mother re-partnering; they find a 39% reduction in the odds of visitation. In both samples our GEE models show that father's and the mother's subsequent fertility have a significant and negative link to nonresident father visitation. These results are surprising given large differences in mothers' and fathers' subsequent multiple partner fertility (MPF)[10]. For TME, only the mother's subsequent fertility was relevant for visitation. Lastly, fathers who had previous children with someone other than the focal child's mother are less likely to have contact with their children than fathers who had no prior MPF. A mother's prior child is not significantly associated with reduced visitation.

Visitation at the Intensive Margin: Unrestricted and Restricted Samples

Table 5 repeats the analysis of unrestricted and restricted samples at the intensive margin, *the number of days the father saw the child last month,* given that he had contact with the child since the previous survey. As indicated above, to investigate the role of race/ethnicity, which has been prominent in the visitation literature, we estimate our unrestricted model with a number of variations, including and excluding an interaction between race/ethnicity and the secular trend and excluding our main variable of interest, romantically involved.

[9] Unlike TME and BCM we include observations for both mothers who re-partner through marriage or co-habitation (the variable discussed here) and mothers who re-partner through a new nonresidential romantic partner. TME and BCM exclude the latter group of mothers.

[10] At the five-year mark in TME's descriptive tables when mothers report a new child, 44% of nonresident fathers visited the focal child in the last year. When fathers have a new child, 75% of nonresident fathers visited the focal child in the last year.

Model 1 is based on the unrestricted sample and the ex-ante visitation of fathers in a current visiting parent union is estimated by the variable *romantically involved*. Romantic involvement with the focal child's father is significantly associated with 1.5 more days per month of visitation as compared to his peer non-resident father. This result is essentially unchanged when we exclude interactions involving race/ethnicity and the secular trend (Model 4).

The *wave* coefficient is not significant in the unrestricted sample. Ex-post visitation of all fathers in the sample is estimated by the coefficient for *time since the romance ended*. It is negative and statistically significant (Model 1), estimating declines in visitation of one day per month for every wave of nonromantic involvement; a result that is consistent with TME's estimate of the decline in visitation (1.26 days) at this intensive margin.

Results for race/ethnicity are sensitive to the model specification. In our preferred version, Model 1, race/ethnicity and the coefficients of interactions between race/ethnicity and the secular time trend are statistically significant, with the expected signs. Initially, the fathers of children born to black, Hispanic and other race mothers visit 1.5 to 1.78 more days per month than the fathers of children born to white mothers. However, the race/ethnicity interactions with the secular trend show that these fathers lose a day of visitation a month at each wave. Taken together, fathers of children born to mothers of color still visit nearly 1.4 days per month more than white fathers at each wave. Here at the intensive margin these results are broadly consistent with the findings of several studies referenced earlier (page 12). Only in Model 4, which excludes the race/ethnicity interactions with the secular trend, are black and Hispanic coefficients not significant. In this regard, Model 4 replicates TME's results and their finding of

equal days of visitation for non-resident white and black fathers[11]. Note, however, that when romantically involved is also excluded (Model 3), the black coefficient becomes statistically significant. This follows from the high correlation between race/ ethnicity and romantic involvement at birth, which we identified in Table 3.

Returning to our preferred Model (1), we find a significant difference between visitation by fathers who had been in cohabiting relationships at baseline and fathers who had been "just friends" or had no relationship with the mother at baseline. Fathers who were cohabiting at baseline visited 1.2 days more per month than their peers.

Several of the family perturbation variables are statistically significant in Model 1. When a mother re-partners through marriage or cohabitation, visitation declines by 1.2 days per month. A father's re-partnering through marriage or cohabitation does not significantly affect visitation. In TME's random effects models a mother's new partner through marriage or cohabitation is associated with a decline in visitation by nearly three days a month and a father's re-partnering through marriage or cohabitation decreased visitation by two days a month. A mother's new romantic partner reduces visitation by 1.3 days. The father's new romantic involvement reduces visitation by 1.1 days per month. Only fathers' subsequent fertility is significantly and negatively associated with visitation. In TME's random effects models only mothers' subsequent children are significantly associated with visitation. A father's previous fertility is associated with a decline in visitation by 1.2 days per month, while the mothers' previous children are not consequential to father visitation. TME find no relationship between either parent's prior children and visitation.

[11] Model 4 differs from TME with regard to Hispanic mothers. TME's Hispanic coefficient is significant and negative. The Hispanic coefficient in Model 4 is positive but not significant.

The GEE results confirm perturbation superiority for the mother's re-partnering through marriage or cohabitation but does not corroborate the effect for the father re-partnering. It re-affirms perturbation superiority only when the father has subsequent children. It confirms the effects of a father's prior MPF.

Model 5 repeats the analysis with the restricted sample. The coefficient for *time since romance ended* is negative and statistically significant. Given the significant downward slope of the *time since romance ended* coefficient, it is surprising that the secular trend (wave) is positive and significant. However, at each wave the sample is replenished with fathers who had romantic or cohabiting relationships that previously had been intact. Further, fathers who did not visit at least once in the past year are purged from the sample. Days of visitation per month are likely to be high for the former group and low for the latter group.

Notice the large, positive and significant coefficients for mothers of color in this restricted sample. Initially, children of black, Hispanic, and other race mothers experience nearly two more days of visitation per month than children of white mothers. These larger race/ethnicity intercepts in the restricted sample capture higher initial visitation levels for many minority fathers after their visiting parent unions have dissolved. This is consistent with the BFH and its expectation that high initial visitation rates will be a consequence of a visiting parent union break up. The large race/ethnicity coefficients in the restricted sample also reflect the selection bias produced by excluding fathers who are still in visiting parents unions from the sample. Together with our coefficients the secular trend, *time since romance ended* and the race/ethnicity dummy variables, these results suggest that children of color see their fathers nearly 2 days more per month than their white peers over time[12].

[12] For children of black mothers, we add the significant coefficients on wave (.11), black (.68), and black * wave (-.15) and exponentiate the result. For children of Hispanic mothers, we add .11, .73, and -.18 before exponentiating.

With two exceptions, there is little difference in perturbation results between this model based on the restricted sample and most results based on the unrestricted sample: (1) fathers new romantic partnership does not reduce his visitation and (2) a mother's subsequent children reduces fathers' visitation.

Sleepover Visits in the Last Year at the Intensive Margin: Unrestricted and Restricted Samples

Table 6 examines *sleepover visits in the last year* with an unrestricted and a restricted sample, conditioning on fathers who have seen their child in the last year. Model 1 is based on the unrestricted sample. For the first time the visiting parent union variable is not significant, although the sign is negative. Fathers in a current visiting parent union are no more likely to have sleepover visits than other non-resident fathers. Sleepovers are less meaningful for a couple in a current visiting parent union because the mother's household is more likely to host a sleepover visit. The coefficient for *time since romance ended* is negative and significant and the coefficient for the secular time trend (*wave*) is not significant, indicating that there is no secular trend but sleepover visits decline for each additional wave since the breakup.

The black coefficient is significant and negative, which is substantively different from our previous GEE results. It reflects, perhaps, some difficulties young, low-income fathers may have establishing independent households (Mincy & Pouncy US Civil Rights Commission Report).[13] . Sleepover visits are costly for fathers because they involve him hosting the child's visit at his household (Cashmore et al., 2008; Sheela Kennedy & Wimer, 2012; Mykyta, 2012; Wimer & Kennedy, 2012).

None of the new partner perturbations are significant, but surprisingly, the mother's subsequent MPF is positive and statistically significant, indicating that having children by a new

[13]Mykvta does not find important differences by race in this respect just by differences in education (Mykyta, 2012).

partner *promotes* sleepover visits. By contrast both the father's prior and subsequent children reduce visitation. Recall that Townsend(Townsend, 2002) and Furstenberg (F.F. Furstenberg, 1995a) first used the PDH to explain visitation by divorced nonresident fathers for whom visitation is most likely to take the form of sleepovers. Our results, using this form of visitation as the outcome support their hypothesis.

Model 2 excludes all couples in current visiting parent unions. The surprisingly positive association between sleepover visits and a mother's subsequent MPF is confirmed, as are the negative associations between a father's subsequent and prior MPF and his visitation. Note that both the father's prior and subsequent MPF have slightly larger coefficients than in the unrestricted model, which is likely a consequenc3e of excluding fathers still in romantic relationships from the sample.

Discussion and Conclusion

Our study is not without limitations. First, we were not able to incorporate the child support payments and in-kind support into our models even though the literature shows significant effects for both on father visitation. The loss in the number of records that included this information for fathers reduced the sample size too greatly. Second, although we excluded formerly married couples in order to compare our analyses to previous studies, subsequent research should include formerly married couples in analytic samples when investigating the BFH, PDH and visiting parent unions. Third, we may miss short-term relationships occurring between follow-up waves. Given that previous research indicates frequent partnership transitions among women who experience a birth outside of marriage (Graefe & Lichter, 2007), our models may underestimate the effects of perturbations in our analyses. Lastly current and retrospective romantic involvement in Fragile Families may have measurement error. Previous literature on

couple discordance on reporting cohabitation start dates could also be extended to measuring romantic involvement (Manning & Smock, 2005; Teitler & Reichman, 2001). Specifically, the boundary between cohabitation and dating can be ambiguous and the process involving a partner moving in may unfold over a long period of time.

Our study addresses a selection bias present in other studies of non-resident, never-married fathers because they exclude fathers in current visiting parent unions. The selection bias occurs because prior studies are guided by the Package Deal Hypothesis, which was not initially designed to explain the visitation trajectories of fathers in visiting parent unions. Incorporating such fathers required entirely new thinking like that offered by the Baby Father Hypothesis. Although the BFH was singularly focused on family formation patterns of Black Americans, our study suggests that the BFH applies to any racial or ethnic group for whom non-residential births are commonplace[14]. This study's also uses a GEE estimator, rather than TME's random effects and fixed effects estimators, in order to incorporate the non-normal distribution of visitation measures and within-person correlation across waves. The empirical results demonstrate that in prior studies significant levels of nonresident father visitation 'are hidden in plain sight.' After including this visitation, we find large, positive and significant associations between being in a current visiting parent union and visitation since a previous interview (extensive margin), visits per month (intensive margin), but not sleepover visits.

The study also addresses a puzzle in the literature when it comes to race. Until recently studies consistently found that Black fathers were more likely to visit their children more frequently than their peer non-minority father. With one exception discussed in the body of this

[14] Studies associate serial cohabitation (Lichter & Qian, 2008) or very-lived short-lived cohabitation (Golub, Strickler, & Eloise Dunlap, 2012) with low-income and African American respondents. Is this the way visiting parent unions present themselves to researchers in surveys that do not otherwise ask parents without a resident partner whether they are in a committed non-resident relationship at the time of a birth?

study, TME find no difference by race in father visitation among never-married fathers at either the extensive or intensive margin. Cheadle et al. report less visitation by race and they attribute the difference to differences in incarceration patterns. At the extensive margin our study confirms TME's results, finding no significant difference by race in visitation with the exception of Hispanic fathers who visit less. However, at the intensive margin our study confirms and amplifies the pattern reported previously in the literature of more frequent visitation by Black fathers. The differences in visitation by race occur at the intensive margin at the onset of nonresident fatherhood – however a study chooses to define the onset of visitation. Initially, minority fathers visit their children up to two days a month more than their non-minority peers. From that point onward, however, the visitation trajectories of minority fathers decline more rapidly than the trajectories of their non-minority peers. As a result, although minority fathers visit their children more frequently than nonminority fathers initially, rates of visitation by race converge over time.

Our results confirmed the work of TME and others who find that a large reduction in father visitation when the mother re-partners through marriage or cohabitation. Father's subsequent children also reduces visitation. TME's finding that that mother's subsequent children also reduce visitation could be attributed to selection bias. The father's prior MPF also affects visitation.

The sleepover results support the original perturbation predictions of Package Deal Hypothesis that the father's subsequent children reduce visitation. This is not surprising because sleepover visits are the measure of visitation most relevant for the fathers in this analysis sample who are no longer in romantic or cohabiting relationships with the mothers of their children. This

measure is least relevant for the fathers who are still romantically involved. The unexpected finding is that the mother's subsequent children promote sleepover visitation.

There are several policy implications to these results but we note two. The national census should follow the lead of Caribbean governments, the Millennium Cohort Study in the United Kingdom ((Kiernan, 2006) and the Fragile Families and Child Well-Being Survey and include a 'births by visiting relationship' category in its non-marital births supplemental reports. Secondly, recent reforms proposed by the Federal Office of Child Support Enforcement to establish access and visitation responsibilities in all initial child support orders are promising because they offer the possibility that children born to fathers in cohabitating and visiting parent unions will have some of the same protections for father-child contact after their parents cohabiting or visiting break up that a divorce settlement offers children in marital unions that break up.

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Table 1 The Baby Father Hypothesis in Fragile Families

	Non-Hispanic White	Non-Hispanic Black	Hispanic
Non-marital birth rate[a]	29	72	53
Non-resident at birth[b]	11	64	22
Romantically involved at birth[c]	49	71	61

[a]National Vital Statistics Reports, National Center for Health Statistics,(Martin et al. 2013). Percent is estimated within race/ethnic group.
[b]Percents are unweighted and calculated within race/ethnic group at the baseline survey
[c]Percents are unweighted and calculated among non-resident couples within race/ethnic group

Table 2 Demographic, Economic, and Relationship Characteristics After a Nonmarital Birth

	Unrestricted Sample		Restricted Sample	
Variable	Year 1	Year 9	Year 1	Year 9
Visitation				
Saw child since previous survey	96.7	89.5	95.4	88.9
Saw child in last month	81.2	81.0	74.7	80.1
Mean number of days father saw child last month	14.6	8.7	10.4	8.0
Mean sleepover nights father had in the last year/since last wave	71.8	48.4	69.1	46.8
Romantically involved	31.0	5.6	—	—
Time since romance ended (in waves)	0.9	2.5	1.2	2.6
Baseline relationship status				
Cohabiting	35.1	46.3	34.1	46.8
Romantic nonresident	46.8	40.9	42.5	40.5
No relationship	18.1	12.8	23.4	12.7
Subsequent Relationship and Children				
Mother has new partner (married or cohabiting)	8.6	30.0	12.5	31.7
Mother has new romantic partner	22.7	53.8	32.2	56.4
Father has new partner (married or cohabiting)	13.2	8.1	18.0	8.6
Father has new romantic partner	24.0	11.1	32.0	11.7
Mother's subsequent MPF	1.6	42.1	2.1	43.6
Father's subsequent MPF	7.1	45.2	8.5	46.7
Mother's Demographics				
Race/Ethnicity				
Non-Hispanic White	12.6	15.0	13.4	15.3
Non-Hispanic Black	67.0	63.1	65.7	62.2
Hispanic	17.4	18.9	17.9	19.5
Other	3.1	3.0	3.0	3.1
Age at birth (in years)	23.4	23.5	23.3	23.4
Education				
Less than high school	40.7	34.9	41.6	34.7
High school	31.9	36.0	31.9	35.8
Some college	23.5	26.2	23.0	26.4
College or more	3.9	2.9	3.6	3.1

Health is excellent/very good	84.0	82.9	84.4	83.6
Lived with 2 parents at age 16	31.2	32.0	29.7	32.1
Prior MPF	41.8	43.2	42.5	42.8
Father's Demographics				
Employed last week	61.9	64.2	61.4	64.9
Used drugs	16.4	20.2	16.8	21.0
Ever been in jail or prison	47.2	37.7	49.5	38.1
Prior MPF	40.3	40.6	43.4	40.2
Financial contribution in pregnancy	82.8	86.9	78.8	86.7
N	972	799	671	754

Notes: The sample is restricted to couples who were unmarried at child's birth and in which the father was nonresident. Restricted samples exclude romantically involved couples. All values are percentages unless otherwise indicated. Number of days in past month and sleepover nights in the last year are calculated based on the subsample of fathers who saw their nonresident child in the past year.

Table 3 Nonresident Fathers and Romantic Involvement by Race/Ethnicity and Wave

	Non-Hispanic White	Non-Hispanic Black	Hispanic	Other
Baseline				
Nonresident	10.9	64.4	21.9	2.8
Romantic nonresident	8.0	69.2	20.0	2.8
One-Year Follow-up				
Nonresident	11.8	64.4	21.0	2.8
Romantic nonresident	9.2	71.1	16.7	3.1
Three-Year Follow-up				
Nonresident	12.6	64.9	20.0	2.6
Romantic nonresident	10.3	70.3	17.2	2.2
Five-Year Follow-up				
Nonresident	12.6	63.9	21.4	2.1
Romantic nonresident	8.1	71.3	18.4	2.2
Nine-Year Follow-up				
Nonresident	13.5	64.6	19.4	2.5
Romantic nonresident	9.9	77.8	9.9	2.5

Notes: The sample is restricted to couples who were unmarried at child's birth. All values are percentages.

Table 4 GEE regressions predicting any contact with child in the past year (Odds Ratios)

	Unrestricted Sample	Restricted Sample
Variable	Model 1	Model 2
Time Paths		
Romantically Involved	15.81***	___
	(11.55)	
Time since romance ended	0.91	0.91
	(0.07)	(0.07)
Wave (time)	0.73*	0.73
	(0.12)	(0.12)
Mother's Race/Ethnicity		
Black	0.44	0.46
	(0.31)	(0.32)
Hispanic	0.14*	0.16*
	(0.11)	(0.13)
Other	0.20	0.19
	(0.30)	(0.30)
Black * Wave	1.28	1.27
	(0.22)	(0.22)
Hispanic * Wave	1.65*	1.60*
	(0.32)	(0.31)
Other * Wave	1.62	1.63
	(0.65)	(0.66)
Mother's Baseline Relationship		
Cohabiting	1.52	1.51
	(0.37)	(0.37)
Romantically involved	1.16	1.18
	(0.25)	(0.26)
Perturbations		
Mother has new partner (married or cohabiting)	0.50***	0.50***
	(0.10)	(0.10)
Mother has new romantic partner	0.82	0.82
	(0.16)	(0.16)

Father has new partner (married or cohabiting)	1.14	1.15
	(0.30)	(0.30)
Father has new romantic partner	1.40	1.39
	(0.33)	(0.33)
Mother's subsequent MPF	0.69*	0.69*
	(0.13)	(0.13)
Father's subsequent MPF	0.61**	0.61**
	(0.11)	(0.11)
Mother's prior MPF	0.96	0.97
	(0.16)	(0.16)
Father's prior MPF	0.54***	0.54***
	(0.09)	(0.09)
Person-years	3,542	2,936
N	1,787	1,568

Notes: The sample is restricted to couples who had a nonmarital birth and are not co-residing. Unrestricted samples include couples who are romantically involved and restricted samples exclude such couples. Not shown here, the models include controls for mother's age, mother lived with both parents at age 15, mother's education, mother's physical health, father's employment status, father's financial contributions at birth, homogamy flags for age, education, and race, father's incarceration history, and father's drug history.

* $p<0.05$, ** $p<0.01$, *** $p<0.001$

Table 5 GEE regressions predicting the number of days father saw child in the last month

	Unrestricted Samples				Restricted Sample
Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Time Paths					
Romantically Involved	0.44***	___	___	0.45***	___
	(0.04)			(0.04)	
Time since romance ended	-0.09***	-0.22***	-0.22***	-0.09***	-0.08**
	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)
Wave (time)	0.07	0.08	-0.01	-0.02	0.11*
	(0.04)	(0.04)	(0.02)	(0.02)	(0.05)
Mother's Race/Ethnicity					
Black	0.41**	0.44**	0.13*	0.11	0.68**
	(0.15)	(0.16)	(0.06)	(0.06)	(0.21)
Hispanic	0.48**	0.49**	0.08	0.09	0.73**
	(0.17)	(0.18)	(0.07)	(0.07)	(0.24)
Other	0.58*	0.66**	0.24*	0.23*	0.77*
	(0.24)	(0.25)	(0.10)	(0.10)	(0.36)
Black * Wave	-0.09*	-0.10*	___	___	-0.15**
	(0.04)	(0.05)	___	___	(0.06)
Hispanic * Wave	-0.12*	-0.13*	___	___	-0.18**
	(0.05)	(0.05)	___	___	(0.06)
Other * Wave	-0.11	-0.13	___	___	-0.15
	(0.08)	(0.08)	___	___	(0.10)
Mother's Baseline Relationship					
Cohabiting	0.18*	0.08	0.09	0.18*	0.20*
	(0.08)	(0.07)	(0.07)	(0.08)	(0.09)
Romantically involved	0.13	0.06	0.06	0.13	0.13
	(0.07)	(0.07)	(0.07)	(0.07)	(0.09)
Perturbations					
Mother has new partner (married or cohabiting)	-0.16*	-0.14	-0.14	-0.16*	-0.17*
	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)
Mother has new romantic partner	-0.26***	-0.33***	-0.33***	-0.26***	-0.24***
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
Father has new partner (married or cohabiting)	-0.15	-0.15	-0.15	-0.15	-0.13
	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)

Father has new romantic partner	-0.12*	-0.17**	-0.17**	-0.12	-0.13
	(0.06)	(0.06)	(0.06)	(0.06)	(0.07)
Mother's subsequent MPF	-0.11	-0.10	-0.10	-0.11	-0.14*
	(0.06)	(0.06)	(0.06)	(0.06)	(0.07)
Father's subsequent MPF	-0.11*	-0.10	-0.10*	-0.11*	-0.15*
	(0.05)	(0.05)	(0.05)	(0.05)	(0.06)
Mother's prior MPF	0.06	0.06	0.06	0.06	0.05
	(0.04)	(0.04)	(0.04)	(0.04)	(0.05)
Father's prior MPF	-0.14***	-0.14***	-0.14***	-0.14***	-0.21***
	(0.04)	(0.04)	(0.04)	(0.04)	(0.05)
Person-years	3,197	3,197	3,197	3,197	2,595
N	1,697	1,697	1,697	1,697	1,463

Notes: The sample is restricted to couples who had a nonmarital birth and are not co-residing. Unrestricted samples include couples who are romantically involved and restricted samples exclude such couples. All models predict visitation among fathers who had contact with their children since the previous survey. Not shown here, the models include controls for mother's age, mother lived with both parents at age 15, mother's education, mother's physical health, father's employment status, father's financial contributions at birth, homogamy flags for age, education, and race, father's incarceration history, and father's drug history.

* p<0.05, ** p<0.01, *** p<0.001

Table 6 GEE regressions predicting sleepover nights in the last year

	Unrestricted Sample	Restricted Sample
Variable	Model 1	Model 2
Time Paths		
Romantically Involved	-0.26	___
	(0.14)	
Time since romance ended	-0.22***	-0.21***
	(0.04)	(0.04)
Wave (time)	-0.06	-0.07
	(0.07)	(0.07)
Mother's Race/Ethnicity		
Black	-0.60*	-0.55
	(0.27)	(0.30)
Hispanic	-0.05	0.09
	(0.34)	(0.38)
Other	-0.08	0.09
	(0.49)	(0.55)
Black * Wave	0.10	0.10
	(0.07)	(0.08)
Hispanic * Wave	0.01	-0.02
	(0.08)	(0.09)
Other * Wave	0.02	-0.00
	(0.13)	(0.14)
Mother's Baseline Relationship		
Cohabiting	0.16	0.27
	(0.16)	(0.17)
Romantically involved	-0.16	0.03
	(0.16)	(0.17)
Perturbations		
Mother has new partner (married or cohabiting)	-0.19	-0.15
	(0.12)	(0.12)
Mother has new romantic partner	-0.08	-0.13
	(0.10)	(0.10)
Father has new partner (married or cohabiting)	-0.05	0.04
	(0.15)	(0.15)

Father has new romantic partner	-0.15	-0.22
	(0.14)	(0.14)
Mother's subsequent MPF	0.36**	0.37**
	(0.11)	(0.11)
Father's subsequent MPF	-0.29**	-0.32**
	(0.10)	(0.11)
Mother's prior MPF	0.10	0.04
	(0.09)	(0.10)
Father's prior MPF	-0.31***	-0.36***
	(0.09)	(0.09)
Person-years	1,819	1,614
N	1,154	1,044

Notes: The sample is restricted to couples who had a nonmarital birth and are not co-residing. Unrestricted samples include couples who are romantically involved and restricted samples exclude such couples. All models predict visitation among fathers who had contact with their children since the previous survey. Not shown here, the models include controls for mother's age, mother lived with both parents at age 15, mother's education, mother's physical health, father's employment status, father's financial contributions at birth, homogamy flags for age, education, and race, father's incarceration history, and father's drug history.

* $p<0.05$, ** $p<0.01$, *** $p<0.001$