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**GENDER DIFFERENCES IN UNION FORMATION FOLLOWING  
A NON-CORESIDENTIAL, FIRST BIRTH**

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Although there is a large body of research on union formation after a nonmarital birth, this literature has disproportionately focused on births in cohabiting unions and largely ignored the possibility of gender differences in post-birth union formation. Drawing from marriage market theories, we apply discrete time event-history models to the 2006-2010 NSFG to compare gender differences in union formation among parents who had their first birth outside the context of marital or cohabiting unions. Results indicate that experiencing a non-coresidential first birth is more detrimental to mothers' subsequent union formation than fathers'. Among parents who form unions, fathers are more likely to marry directly as their next union whereas mothers are more likely to cohabit. Further, the odds of ever marrying are also higher for fathers than for mothers, although marriage remains elusive as fewer than half of single parents marry within 10 years of their non-coresidential, first birth.

The changing patterns of childbearing in the United States are well-documented, with recent estimates showing that over two-fifths of all births (43%) occur outside of marriage (Payne, Manning, & Brown, 2012). The instability of unmarried families has been widely documented (McLanahan & Beck 2010), but most of this research has focused on cohabiting parents (e.g., Bumpass and Lu, 2000; Harknett, 2008; Lichter, Qian, & Mellott, 2006; Lichter, 2012; Manlove et al., 2012). We suggest that research into another context of nonmarital childbearing – non-coresidential fertility – is also warranted. A sizable minority, about 40%, of nonmarital births occur to parents who are neither married nor cohabiting at the time of birth (Lichter, 2012; Payne et al., 2012), and these parents are likely to be particularly disadvantaged, both in absolute terms and in their ability to form unions in the future.

Concerns over the implications of these changes in childbearing, combined with evidence that non-traditional family structures are concentrated among the disadvantaged, have led researchers to focus on the consequences of nonmarital childbearing. Although much of this work has examined children's outcomes and family trajectories (e.g., Brown, 2004; Manning, Smock, & Majumdar, 2004; Osborne & McLanahan, 2007), research has also focused on how well unmarried parents fare after a nonmarital birth, looking at the stability of cohabiting birth unions (e.g., Manlove et al., 2012; Osborne & McLanahan, 2007), patterns of union formation (e.g., Bzostek, McLanahan, & Carlson, 2012; Qian, Lichter, & Mellott, 2005), and the benefits of marriage (e.g., Lichter, Graefe, & Brown, 2003; Williams, Sassler, & Nicholson, 2008). An important aspect missing from research on the union formation of unmarried parents, however, concerns fathers' perspectives, as this work has almost exclusively analyzed mothers. The omission of unwed fathers merits attention, as union formation after a nonresidential nonmarital birth is almost certainly gendered, given differences in child coresidence. In this paper, we

examine gender differences in union formation following a nonmarital, non-cohabiting first birth. We focus on two union experiences – the type and timing of the first coresidential union formed after a birth and the likelihood of marriage. Findings have important implications for the well-being of parents as well as the family experiences of children born to unmarried parents, and this work compliments the well-established literature on relationship trajectories of cohabiting parents (see Manlove et al., 2012; Wu & Musick, 2008).

We situate this research in the framework of the marriage market and use the term “relationship market” to include coresidential unions more broadly. Oppenheimer’s (1988) theory of marital timing suggests that an individual’s characteristics affect his or her standing in the market for potential mates. In general, the argument is that people with less desirable characteristics are less likely to form unions, and the “quality” of their matches is lower. The notion of “marriageability” (Wilson, 1987; Manning, Trella, Lyons, Du Toit, 2010) encapsulates the idea that some characteristics, like higher income, are more desirable – making a person more competitive on the market – whereas other characteristics, such as unemployment, reduce attractiveness to potential mates. Match quality has been measured in various ways, such as partner’s education, income, and racial homogamy (see Bzostek et al., 2012; Oppenheimer, 1988; Qian et al., 2005). Another indicator, type of union formed, is the focus in this paper. To the extent that marriage is the preferred union type in the United States (Manning, Longmore, & Giordano, 2007; Thornton & Young-DeMarco, 2001), individuals with lower standing in the relationship market may settle for cohabitation over marriage.

#### *Unmarried parents on the relationship market*

Parents on the relationship market face a number of disadvantages, both in terms of their ability to fully search for new partners and how they are evaluated by potential partners, which in

term affect their performance in the relationship market. For instance, single parents have less time to engage in leisure activities and socialize than their childless counterparts due to the time obligations parenting entails, which are quite high among both married and single parents (Bianchi, 2000; Sayer, Bianchi, & Robinson, 2004; Kendig & Bianchi, 2008). Yet the higher time demands single parents have compared to their childless counterparts are not the only factors that might affect searching for new partners. Research notes that much of parents' leisure activities centers around their children's activities (see Bittman and Wajcman, 2000). Further, because the majority of children live with two parents (Payne, 2013), many of the people single parents meet during their leisure time are likely to be partnered parents. Together, time constraints and limited social networks would diminish single parents' opportunities to meet potential partners or develop relationships. Another factor that influences performance in the relationship market is that single parents who do enter the marriage market are likely evaluated more negatively than their childless peers by potential partners. Potential partners may have concerns about former sexual relationships and the threat of infidelity (Murphy, Vallacher, Shackelford, Bjorklund, & Yunger, 2006), and some, especially men, may be reluctant to take on potential step-parent and provider roles (Goldscheider and Kaufman, 2006).

Existing research on single parents in the relationship market supports these expectations, at least for women. On average, unmarried mothers do not fare well on the relationship market compared to childless peers, as they are more likely to cohabit than marry, and their unions are more likely to be with less-educated, older men (Qian et al., 2005). In addition, unwed mothers are more likely to form heterogamous marriages (Qian et al., 2005), which tend to be less stable (Schwartz, 2013). Research limited to disadvantaged mothers finds that the majority of unwed mothers who eventually re-partner do "partner up," but many other mothers fail to re-partner at all

and some form unions with less-advantaged men (Bzostek et al., 2012). Thus, because parents with a non-coresidential first birth (subsequently referred to as single parents) are disadvantaged on the relationship market, we would expect they are less likely to form unions and have a greater chance of cohabiting rather than marrying after the birth. An exception might occur at the “magic moment” surrounding the birth itself, in which biological parents may enter coresidential unions with each other shortly after the birth (Reichman, Teitler, Garfinkel, & McLanahan, 2001). Conversely, as time passes after the birth it becomes more likely single parents have re-entered the relationship market and must form unions with partners who are not the child’s other parent.

#### *Gender and the relationship market*

Research on unmarried parents and union formation has largely neglected gender because studies usually include only single mothers or, less commonly, focus only on men (rather than comparing mothers and fathers), yet the experiences of single parents on the relationship market are certainly gendered. Part of the focus on mothers stems from concerns about the quality of men’s data on childbearing, fertility, and parenthood (Bachu, 1996; Joyner, Peters, Hynes, Sikora, Tabor, & Rendall, 2012; Rendall, Clark, Peters, Ranjit, & Verropoulou, 1999; Stykes, Manning, & Brown, 2013). However, we caution that omitting men from this equation might have led scholars to overlook another domain of gender inequality in families. First, single mothers are more likely to live with their children than single fathers. This would translate into a greater disadvantage in terms of union formation as coresidential parents invest more time in their children and are more likely to be viewed negatively by potential partners. Second, research finds that women are more willing than men to form a union with a partner who has children from a past relationship (Goldscheider & Sassler, 2006; Goldscheider, Kaufman, &

Sassler, 2009). Perhaps this reflects the greater likelihood that a mothers' stepparent role is essentially "part-time," given differences in custody and coresidence, whereas a stepfather is likely to be living with stepchildren on a full-time basis, which may entail more parenting and even financial support. Gender differences in the intensity of the stepparent role may translate into gender differences in willingness to enter the role. However, this may also reflect differences in the qualities potential mates are evaluating. Women seem to view men's childrearing responsibilities favorably, whereas men do not seem to value the same characteristics in women (Stewart, Manning, & Smock, 2003). In sum, gendered patterns of child coresidence and gender differences in willingness to stepparent lead us to hypothesize that experiencing a first birth outside of a coresidential union is likely more detrimental for mothers' subsequent union formation than fathers'. As such, we expect single fathers form unions more quickly after a birth and that, compared to mothers, the union is more likely to be a marriage than a cohabitation.

#### *Long-term marriage among single parents*

In the U.S., marriage continues to be a desirable union, both among individuals and among policymakers. Although cohabitation has become increasingly common, most Americans still want to marry (Manning, Longmore, & Giordano, 2007; Pew Research Center, 2010; Thornton & Young-DeMarco, 2001), and this is true even among low-income single parents (Edin & Kefalas, 2005; Edin, Kefalas, & Reed, 2004; Edin & Nelson, 2013). Further, high poverty levels among children born outside of marriage (Edin and Kissane, 2010; Williams, 2012) have prompted public policy efforts to promote marriage among unmarried parents. The assumption is that if single parents marry, this will directly reduce poverty rates for their children, although research has demonstrated that marriage is a not panacea for low-income

single parents (Lichter et al., 2003). The desire to marry at the individual level, combined with policy efforts to promote marriage among single parents (of whom those whose children are born outside of a coresidential union are the most disadvantaged), makes analyzing whether single parents ever marry particularly important. Again, we know little about how gender operates in this context as the existing literature has overwhelmingly focused on mothers, meaning we know little about how unmarried fathers ultimately fare in terms of marriage. Further, the inclusion of all unmarried mothers (including those cohabiting at birth) may overstate the chances of marriage among those likely to be the most disadvantaged. We expect that once again, single mothers will incur a greater relationship market disadvantage than fathers and are thus less likely to ever marry.

#### *Other factors influencing union formation*

Analyses of union formation among single parents must account for the higher level of socioeconomic disadvantage among this group, given the link between socioeconomic status and union formation. For instance, unmarried parents are disproportionately members of a racial or ethnic minority, have low levels of education, higher rates of poverty, are younger than married parents, are more likely to have additional births, and are more likely to have lived outside of a two-parent union during childhood (see Campa & Eckenrode, 2006; Carlson et al., 2013; Carlson & Furstenberg, 2006; Edin & Kefalas, 2005; Guzzo & Furstenberg, 2007a, 2007b; Musick, 2002; Musick, England, Edgington, & Kangas, 2009; Smock & Greenland, 2010). The same characteristics are also associated union formation (e.g., Carlson et al., 2004; Lichter et al., 1992, 2006; Oppenheimer, 2003; Sassler & Goldscheider, 2004; Sweeney, 2002). In addition, research finds that mothers who have sons are more likely to transition into marriage than mothers who have daughters (see Lungberg & Rose, 2003).

In sum, the current study addresses important gaps in the literature on union formation among unmarried parents. First, we focus on union formation among those who are neither married nor cohabiting at birth and who have largely been overlooked in past research, and we consider both subsequent union formation and overall chances of ever marrying. Second, we consider the role of gender in union formation, hypothesizing that transitioning to parenthood outside of a coresidential union is more detrimental for mothers' subsequent union formation than fathers'.

## METHOD

Analyses use the 2006-10 cycle of the National Survey of Family Growth (NSFG). The 2006-2010 NSFG is a nationally representative cross-sectional survey of 22,682 men and women aged 15-44. The data include retrospective birth and coresidential relationship histories, allowing researchers to identify the relationship status for each birth as well as identify the timing and type of relationships formed after a birth. In the 2006-2010 cycle, 11,369 respondents (50%) had children, of whom 3,001 were neither married nor cohabiting at their first birth and provided valid dates for their first child's birth. These 3,001 parents (26% of parents in the NSFG) comprise our analytic sample. We use the dates of cohabitation and marriage from the coresidential relationship history to identify unions formed after the respondent's non-coresidential first birth.

*Sociodemographic characteristics and other indicators.* In addition to examining gender differences, we include both time-variant and time-invariant sociodemographic characteristics. The first time-variant indicator included is a categorical indicator of exposure to risk of union formation. *Duration* is coded as a time-varying piecewise linear spline: within six months (reference), seven to 12 months, 13-48 months, and more than 48 months. In addition to

duration, we include two other time-variant predictors: *education* at each month (no high school diploma/GED, high school diploma/GED (reference), and Bachelor's degree or higher) and *experienced an additional birth*, where respondents are coded as 0 for every month they did not have another birth and coded 1 the month another birth occurred and all months thereafter.

Analyses also include six time-invariant indicators. *Race/ethnicity* is coded into four mutually exclusive, exhaustive categories: white, black (reference), Hispanic, and other (including Asian and multi-racial). Three dichotomous indicators of *family background characteristics* are included: respondent's parents were married at his/her birth, respondent's mother reported a high school diploma/GED or higher, and respondent lived with both biological parents at age 14.

Analyses also include a continuous variable for the *respondent's age at the first birth*, which is measured in years. Finally, we control for whether the focal first birth was a *male child*.

#### *Analytic strategy*

We first present descriptive statistics for our analytical sample by gender, including information about subsequent union formation. Next, we present hazard curves by gender for first union formation (separately for cohabitation and marriage) within 5 years of a non-coresidential first birth and present a hazard curve by gender for marrying within 10 years of birth. We then conduct two sets of analyses, using discrete-time event history methods. We convert the data into person-months, with respondents entering the month of their first birth and leaving the analyses upon union formation or censorship at the time of interview. First, we look at the first union formed after a non-coresidential first, birth. The dependent variable considers three categories for subsequent union formation -- remaining single (reference), forming a cohabiting union, and entering directly into a marital union. These analyses estimate a multinomial logistic regression model on the 185,743 person-months the 3,001 parents in our

analytical sample contributed from the time of their first birth to entering a union or being censored by interview. Second, we consider single parents' odds of ever marrying net of sociodemographic characteristics; in this analysis, we also include a time-varying indicator of cohabitation. This analysis estimates logistic regression models on the 273,892 person-months the 3,001 single parents contributed. All descriptive statistics are weighted, and multivariate models adjust for clustering within individuals.

## RESULTS

Table 1 provides descriptive statistics by gender for our analytical sample. Similar shares of single mothers and single fathers had not entered any type of union between their first birth and being interviewed (28% for mothers and 26% for fathers), but considerable differences emerge in the types of unions mothers and fathers formed after having a first non-coresidential union birth. Nearly 60% of single mothers form a cohabiting relationship, but only about 15% of these women enter directly into a marital union as their first union after a non-union birth. In contrast, less than half of single fathers (43%) form cohabiting relationships after a first non-union birth, but nearly one-third enter directly into marriage. Turning to the next set of numbers, we see the percentage who ever married. Although the differences are not large, fewer mothers (44%) than fathers (49%) have married by the time of the survey. Taken together, these findings support the notion that single fathers fare better than single mothers on the relationship market.

[Table 1 about here]

We next discuss the socioeconomic and demographic characteristics of our sample. As expected, the parents in our sample are relatively disadvantaged and disproportionately concentrated among minorities. For instance, the largest share of single mothers in our sample are black (38%) followed by white (35%), Hispanic (20%), and other (7%). Although the largest

share of single fathers are white (37%), both blacks and Hispanics are overrepresented among fathers in our sample (33% and 24%, respectively) with 6% of single fathers being an “other” racial/ethnic group. Single mothers and fathers are quite young, on average (19.9 years old for mothers and 21.9 years old for fathers), and at the time of the survey, the average age is just over 30 (32.0 for mothers and 32.9 for fathers). Men and women having a non-coresidential first birth are not well-educated; about half of the single mothers and fathers did not have a high school diploma or GED at the time of their child’s birth (54% and 47%, respectively). In terms of family background, less than two-thirds of single mothers and about three-fourths of single fathers report that their own parents were married when they were born, and only a slight majority of mothers and fathers report living with both parents at age 14 (51% and 59%, respectively). About two thirds of single mothers (69%) and single fathers (71%) had a mother who earned her high school diploma or GED. Approximately half of mothers (51%) and fathers (53%) had a firstborn son rather than daughter, and almost one-third of mothers (33%) and fathers (31%) had a second birth between their first non-coresidential birth and either forming a union or being interviewed. In general, differences in socioeconomic and demographic characteristics between mothers and fathers are minimal. However, well over half (64%) of the parents in our sample are mothers, even though the full NSFG sample is fairly equally gender-distributed. This may reflect the difficulty in identifying single fathers in household surveys; we return to the implications of this gender imbalance in the discussion.

[Figures 1 and 2 about here]

Figures 1 and 2 show the hazards of cohabiting and marrying, respectively, as the first union within five years of a non-coresidential union first birth by gender. Figure 1 suggests that single mothers’ and fathers’ risk of forming cohabiting unions within five years of their first non-

coresidential birth are quite similar. Indeed, approximately 40% of single mothers and fathers form a cohabiting union within five years of their first birth. In contrast, Figure 2 highlights gendered differences in single parents' direct entry into marriage. Although the hazards of marrying directly are lower than forming cohabiting unions for both mothers and fathers, Figure 2 shows that single fathers are considerably more likely to marry directly than single mothers. Moreover, the gender gap continues to widen as time progresses, such that approximately one in four single fathers will enter directly enter a marriage within five years of his first birth compared to one in ten single mothers.

[Figure 3 about here]

Figure 3 provides additional evidence that single fathers fare better in marriage markets than single mothers by showing single parents' risk of ever marrying within 10 years of their first birth. Again, fathers report higher hazards for ever marrying, though the gender gap appears relatively stable after the first few years following the birth. Still, it is worth noting that less than half of single parents have entered a marital union 10 years after a first, non-coresidential birth (approximately 45% of fathers and 35% of mothers).

[Table 2 about here]

Table 2 presents relative risk ratios (RRR) from the multinomial logistic event history analysis predicting the first union type following a non-coresidential, first birth. Model 1 only includes an indicator for parents' gender, and Model 2 adds socioeconomic and demographic characteristics. Consistent with Figures 1 and 2, Model 1 shows stark differences in mothers' versus fathers' odds of marrying directly but minimal differences in mothers' and fathers' odds of cohabiting rather than remaining single. Compared to fathers, mothers are less than half as likely to marry directly rather than remaining single or cohabiting. Gender differences are robust

to the inclusion of socioeconomic and demographic characteristics and in fact become even stronger, as seen in Model 2. Here, we see that mothers are less likely to form any type of union than their male counterparts. Specifically, compared to single fathers, mothers are 40% as likely to marry and 70% as likely to cohabit relative to remaining single, and they are 55% as likely to marry relative to cohabit. Thus, our hypothesis is supported – even when accounting for socioeconomic, demographic, and exposure factors, single mothers are less likely than single fathers to ever form any type of union, and they are more likely than fathers to enter cohabiting unions rather than enter directly into marital unions.

The results for other sociodemographic characteristics are consistent with previous research. For instance, all race-ethnic groups are more likely to marry than remain single and to marry than cohabit compared to blacks. On average, older ages at first birth decrease a parent's likelihood of forming a union rather than remaining single, although older parents who did form a union are more likely to enter directly into marriage rather than cohabit (RRR = 1.11). Respondents without high school diploma or GED (compared to those with a high school diploma or GED) have lower odds of forming either marital or cohabiting unions relative to remaining single (RRR = 0.57 and RRR = 0.71, respectively). Child gender affects union formation to some extent; parents of boys are more likely to cohabit than remain single compared to parents of girls. In addition, having a second birth increases single parents' odds of marrying directly versus remaining single but is unrelated to the chances of cohabiting versus remaining single or marrying directly. Finally, consistent with Figure 1, single parents are less likely to form unions at longer durations, but the odds of marrying directly rather than cohabiting increase at longer durations.

[Table 3 about here]

Table 3 presents the odds ratios (OR) from the logistic event history analysis predicting the odds of ever marrying. Again, Model 1 is an unconditional model with only gender, and Model 2 includes controls for socioeconomic, demographic, and duration covariates. As expected, Model 1 demonstrates that single mothers are less likely to marry than single fathers, by 30%. Once socioeconomic and demographic characteristics are included in Model 2, the gender effect becomes more pronounced, with single mothers only 60% as likely to marry as single fathers. Other characteristics are also associated with the odds of marriage. White single parents are more likely to marry than black single parents (OR = 1.73), though Hispanics and those in the other category do not differ from blacks. On average, older parents are less likely to ever marry. Only some socioeconomic measures are associated with marriage; for instance, the respondent's own education is unrelated to the likelihood of marriage but having a mother with a high school degree or GED reduces the odds of marriage relative to those whose mothers did not finish high school (OR = 0.75). Having parents who were married at birth increases the odds of marriage by about a third (OR = 1.35). Family factors, such as child gender, subsequent fertility, and cohabitation status, are not associated with the odds of marriage, but longer durations since the first birth reduce the odds of every marrying.

## DISCUSSION

Recently, family scholars have turned their attention to the increasing diversity in patterns of family formation that has accompanied the decoupling of marriage and childbearing (Smock & Greenland, 2010). Scholars have taken great strides in advancing our understanding of nonmarital fertility, the relationship context of nonmarital births, and relationship stability and trajectories of unwed parents (e.g. Bzostek et al., 2012; Edin & Kefalas, 2005; Gibson-Davis, 2011; Lichter et al., 2003; Manlove et al., 2012; Rackin & Gibson-Davis, 2012). However, the

field's current understanding of nonmarital childbearing and subsequent union formation still has notable limitations, namely more focused attention to non-coresidential childbearing and to gender differences. We contribute to this body of research by focusing specifically on union formation among those who had a first birth outside of both marriage *and* cohabitation and by explicitly examining gender.

Our first contribution lies in differentiating between nonmarital childbearing and single parenthood. As has been widely documented, an increasing proportion of all births are nonmarital, but many of these births are to cohabiting parents (Raley, 1996, 2001). The field has taken great strides in documenting cohabitation as a viable family form and context for childrearing (see Lichter, 2012), but the overwhelming focus on cohabiting parents comes at the expense of research on single, un-partnered parents (Bumpass and Lu, 2000; Harknett, 2008; Lichter et al., 2006; Manlove et al., 2012). We do not discount the importance of understanding the context of cohabitation as a childrearing context, especially considering that the dramatic increase in nonmarital fertility is largely due to childbearing among cohabitators (see Smock & Greenland, 2010). Rather, we caution that much less is known about a non-negligible segment of unmarried parents, given that 40% of nonmarital births occur to parents who are neither married or living with a partner. Thus, by limiting our discussion to those who experienced a non-coresidential first birth, we provide a compliment to the well-established body of research on the stability of cohabiting parents (see Manlove et al., 2012). Arguably, by focusing solely on single parents, our sample comprises parents – and children – who stand to gain the most, at least in terms of economic resources, from entering unions. We find that the majority – about 75% – of single parents do form a coresidential relationship but less than half reported ever being

married at the survey. Thus, the unions formed among single parents tend to be cohabiting unions.

Second, the vast majority of research on nonmarital fertility has been limited to analyses of mothers. While some scholars have questioned the quality of data from fathers (see Bachu, 1996; Joyner et al., 2012), others have urged the field to include men's perspectives on families in spite of these concerns over data quality (Greene & Biddlecom, 2000; Goldscheider & Kauffman, 1996). By including both men and women in our analyses, we can examine how gender and parenthood jointly influence experiences in the relationship market. Taken together, these contributions provide insight into our understanding of nonmarital fertility, gender, and union formation.

Our overarching hypothesis, drawn from gendered patterns of coresidence and gender differences in evaluating potential partners, is that experiencing a non-coresidential first birth is more detrimental for mothers' than fathers' subsequent union formation. Both analyses supported this hypothesis. First, we found that fathers are more likely to enter directly into marriage than mothers. Moreover, these gender differences are robust when accounting for a number of sociodemographic characteristics. Thus, although mothers who have a child outside of a coresidential union form cohabitations at a similar rate as men, overall they are less likely than their male counterparts to enter directly into marriage and enter marriages much more slowly. Not only does this confirm that the relationship market is indeed gendered, as expected, but that single mothers are at a substantial disadvantage compared to single fathers – and to childless women. This, in turn, has implications for the well-being of children born outside of unions; these children are likely to spend a considerable amount of time living with only their mother, and if their mother does repartner, the long gap between birth and union formation means the

new partnership is almost certainly with someone other than their biological parent. Second, we considered a particularly policy-relevant question and hypothesized that single fathers were more likely than single mothers to ever marry. The first set of analyses clearly demonstrated that fathers were more likely to form marriages compared to cohabitations relative to their female counterparts (and to do so sooner), but this did not necessarily mean single mothers did not marry at all or were disadvantaged in the long-term. The results in our second analysis, focusing on the odds of ever marrying, correspond with our findings from the first analysis. Single fathers are indeed much more likely to ever marry compared to single mothers. This suggests that the disadvantage single mothers face on the relationship market persists over time, complicating simple policy proscriptions promoting marriage among unwed mothers.

### *Limitations*

The current study makes important contributions to our understanding of single parenthood and its effects on subsequent union formation, but it is not without its limitations. First and foremost, women are disproportionately represented in our sample. This is not surprising given concerns over the quality of male fertility data and selection concerns regarding fathers as a target population (see Bachu, 1996; Joyner et al., 2010). We do not discount that there are problems with male parenthood data; in fact, our sample – parents who experienced a first birth outside the context of marriage or cohabitation – might automatically omit a number of fathers who never knew the birth mother became pregnant. Still, although disadvantaged and minority men are more likely to be missing from household-based surveys (Hernandez & Brandon, 2002), both the men and the women in our sample are fairly – and equally – disadvantaged. This suggests that while our sample might be missing some fathers, these missing fathers may not be substantially different than the disadvantaged men we do capture in

our sample. However, we acknowledge that it is possible that these results could have overestimated fathers' greater likelihood of forming unions by systematically omitting some of the most disadvantaged fathers, who may be less likely to accurately report their fertility.

Nonetheless, we think it more likely that the gender differences found here stem from a more proximate cause – child coresidence. We largely situated our expectations regarding single mother's lower likelihood of forming unions on the premise that single mothers are more likely to live with their children than single fathers. Although this is a reasonable assumption, the cross-sectional nature of the NSFG does not allow us to model child coresidence at the time of the birth, as information only includes whether the respondent ever lived with the child (with no specific time information) or whether the respondent lives with the child at the time of interview. Modeling current coresidence status is problematic because fathers who live with a child that was originally born outside the context of marriage or cohabitation likely live with the child now because they went on to form a relationship with the child's birth mother. This brings us to a related limitation. Like most data containing birth information, the NSFG does not identify birth partners for both men and women for their births outside of a coresidential union; thus, we could not test whether subsequent unions were formed with the child's other biological parent.

Finally, we focus on union formation, particularly the timing and type of union, as the primary indicator of performance in the relationship market. Due to data limitations, we could not look at other indicators of "quality," such as the characteristics of the partner (i.e., education, income, parenthood, etc) or any actual measures of relationship quality. We also did not examine the stability of the unions formed. It is also worth reiterating that the NSFG only surveys individuals 44 or younger, and the average age in our sample at the time of interview was the early 30s. The age limits of our sample, combined with the censoring of observations at

the time of survey (regardless of age), means we cannot decisively say that someone will not *ever* marry, merely that they had not married by the time they were surveyed.

### *Conclusion*

By including both mothers and fathers, focusing on those most likely to actually be single parents, this research contributes to several different literatures – work on single parents, on the family context in which children live, on gender, and on union formation. In addition, this study has policy implications. Political officials and policy makers have largely viewed marriage promotion strategies as a viable solution to the feminization of poverty and the social problems accompanying it. Prior work has suggested that marriage promotion strategies are not necessarily the best answer (see Lichter et al., 2003; Williams et al., 2008) and that low income parents face substantial barriers to marriage (see Edin et al., 2004; Edin & Kefalas, 2005). Our analyses provide further evidence that single mothers – who tend to live with their children and thus whose union formation behaviors have real implications for children’s living arrangements and well-being – face substantial barriers to forming either marriages or cohabiting relationships.

Aside from policy implications, these findings also spur new research questions. Family scholars have paid increasing attention to nonmarital childbearing, its correlates, and effects on parent and child well-being, but we caution scholars to be careful in defining the nonmarital childbearing context. In this paper, we focus on births to parents who were not in a coresidential union – marital or cohabiting – at the time of the birth as a compliment to well-established scholarship on cohabiting parents and their relationship trajectories. However, more nuanced distinctions are possible; for instance, distinguishing between those who are romantically involved with their child’s parent from those who are not romantically involved, as done in some Fragile Families research, would be a welcome addition. Unfortunately, most data sources have

not kept pace with the rapid changes in family behaviors, which means researchers often lack the ability to examine many of the behaviors that are considered worrisome. As such, we encourage existing data collection programs to incorporate more information about the context of non-coresidential relationships and births as well as continue to improve the collection of family information among men.

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**Table 1. Weighted Sample Characteristics by Gender (Standard Errors in Parentheses Where Appropriate)**

	Mothers	Fathers
<b>Union Formation</b>		
<i>First union after non-union first birth</i>		
Never formed a union	28.0	25.5
Formed a cohabiting union	57.6	42.8
Entered directly into a marital union	14.5	31.7
<i>Ever formed a marital union</i>	43.8	49.1
<b>Socioeconomic and Demographic Characteristics</b>		
Race/ethnicity		
White	35.2	37.3
Black	37.8	32.9
Hispanic	19.6	24.1
Other	7.4	5.7
Age at birth (in years)	19.9	21.9
	(0.1)	(0.2)
Age at survey (in years)	32.0	32.9
	(0.2)	(0.3)
Education		
Bachelor's degree at birth	1.3	0.6
HS/GED degree at birth	44.9	52.8
Less than HS/GED at birth	53.8	46.6
Parents married at birth	64.2	74.2
Lived with both biological Parents at 14	51.2	58.7
Mom has a HS/GED	68.7	71.3
Firstborn was a Son	50.9	52.9
Additional birth	32.8	30.5
Duration		
6 months or less	12.1	10.3
7-12 months	8.2	12.9
1-2 years	32.9	32.7
More than 2 years	46.8	44.1
Total	64.0	36.0
N (unweighted)	2,125	876

Source. 2006-10 NSFG Male and Female Data Files.

**Table 2. Relative Risk Ratios from Multinomial Event History Models Predicting Subsequent Union Formation following a Non-coresidential First birth**

	Model 1			Full Model		
	(No Union)		(Cohabiting)	(No Union)		(Cohabiting)
	Marital Union	Cohabiting Union	Married	Marital Union	Cohabiting Union	Married
(Father)						
Mother	0.43***	0.97	0.44***	0.39***	0.70*	0.55***
(Black)						
White				4.16***	1.29†	3.21***
Hispanic				2.38***	1.16	2.04**
Other				2.68**	1.14	2.33**
Age at Birth				0.90***	0.80***	1.11***
(Reported having a HS/GED)						
Less than a high school diploma/GED				0.57***	0.71**	0.79
Bachelor's degree or higher				1.69	1.42	1.19
Parents married at birth				1.27	1.24	1.02
Lived with both biological Parents at 14				1.05	1.04	1.01
Mom has a HS/GED				0.74	0.81	0.91
Firstborn was a son				1.20	1.30*	0.91
Additional birth				1.44*	1.15	1.25
(Less than 6 months since birth)						
7-12 months since birth				0.93***	0.90***	1.02†
1-2 years since birth				0.79***	0.74***	1.07
More than 2 years since birth				0.45***	0.33***	1.38**
N (observations)				185,743		
$\chi^2$				31.00***		502.64***

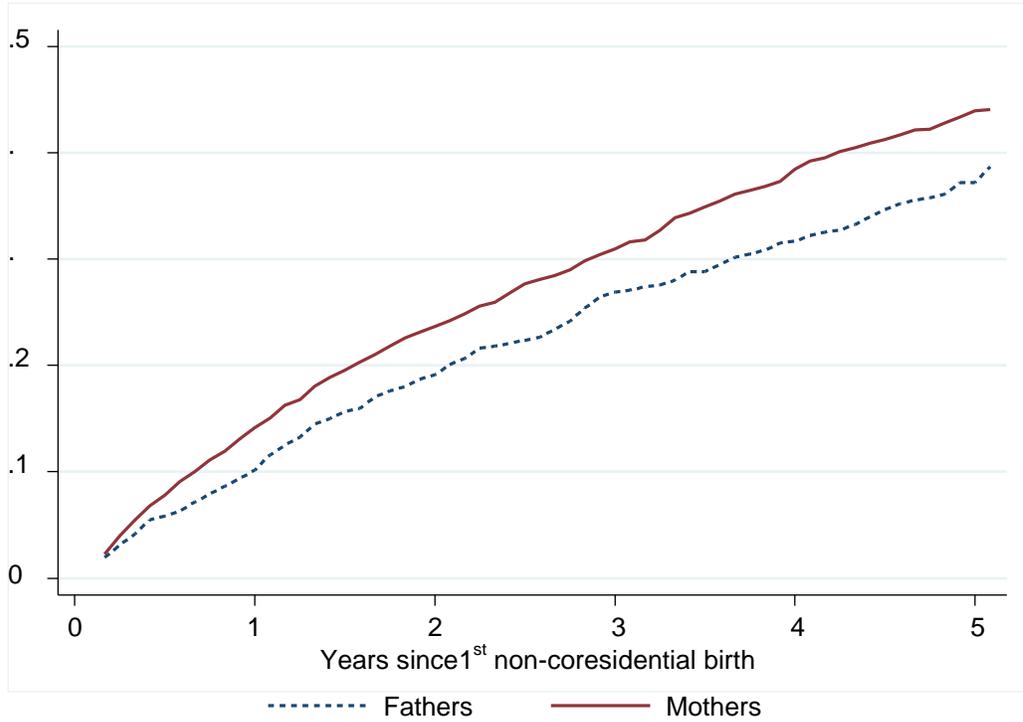
Source. 2006-10 NSFG Male and Female Data Files. Note: †p≤.10 p\* p≤.05 \*\*p≤.01 \*\*\* p≤.001

**Table 3. Odds Ratios from Event History Models Predicting the Odds of Ever Marrying**

	Model 1	Model 2
(Father)		
Mother	0.70***	0.60***
(Black)		
White		1.73***
Hispanic		1.14
Other		1.15
Age at Birth		0.87***
(Reported a HS/GED)		
Less than a high school diploma/GED		0.86
Bachelor's degree or higher		1.14
Parents married at birth		1.35*
Lived with both biological Parents at 14		1.05
Mom has a HS/GED		0.75*
Firstborn was a Son		1.04
Additional birth		0.96
(Less than 6 months since birth)		
7-12 months since birth		0.95***
1-2 years in since birth		0.86***
More than 2 years since birth		0.51***
Current cohabiting status		0.98
N (person-months)		273,892
Model $X^2$	10.56**	324.9***

Source. 2006-10 NSFG Male and Female Data Files. Note: † $p \leq .10$  \* $p \leq .05$  \*\* $p \leq .01$  \*\*\* $p \leq .001$

**Figure 1. Gender Differences in Hazards of Forming a Cohabiting Union within 5 Years**



**Figure 2. Gender Differences in Hazards of Marrying Directly within 5 Years**

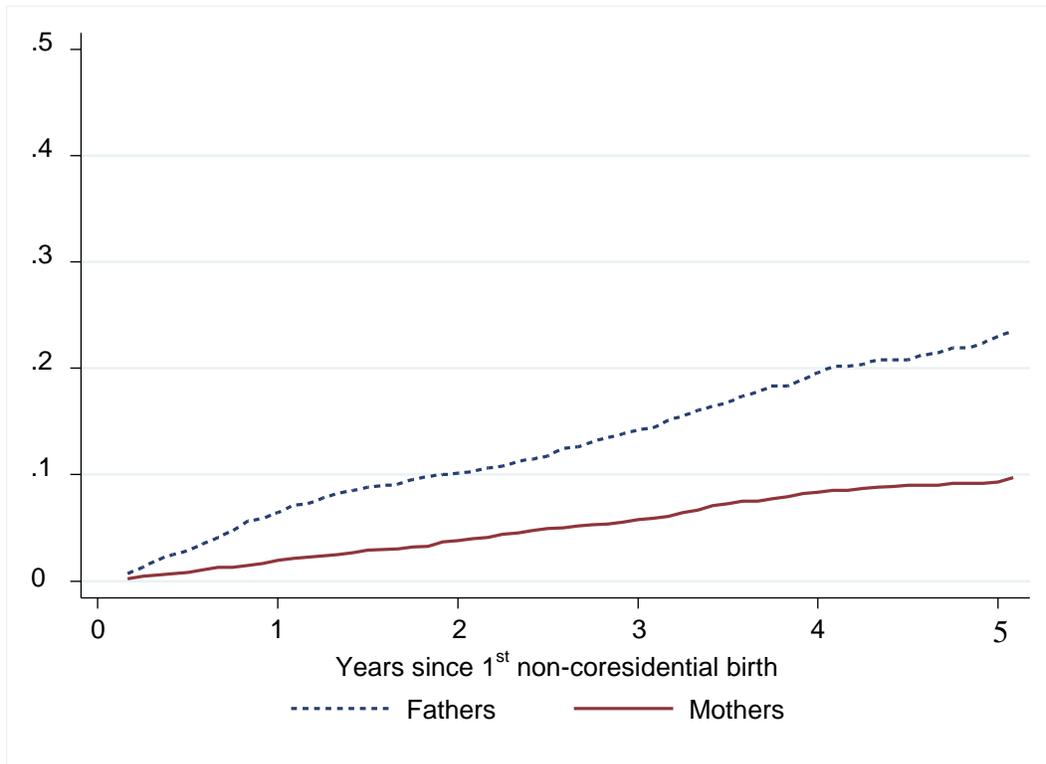


Figure 3. Gender Differences in the Hazards of Marrying within 10 Years

