**Women's Marital Expectations and Subsequent Union Outcomes
Among Fragile Families**

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Abstract: We explore how single mother's views regarding the prospect of marriage to their baby's father are shaped by his economic circumstances. In particular, we examine whether women whose partners have higher levels of earnings or education have greater expectations regarding marriage than do women involved with less economically attractive men, and if father's attributes shaped subsequent relationship transitions. Data are from unmarried couples in the Fragile Families Study, and make use of multiple imputation techniques to account for non-response of fathers. While women's expectations for marriage to the father of their child are high regardless of their partner's economic characteristics, those whose partners have some post-secondary schooling and higher earnings are the most likely to become more seriously involved, as well as marry. Nonetheless, women with the highest earning partners were no more likely to wed than their poorer counterparts, highlighting the possibility of earnings thresholds that could discourage marriage. Our results suggest that men's economic attributes play a larger role than has heretofore been reported in prior studies utilizing the Fragile Families data that has not accounted for the substantial amount of non-response among new fathers.

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Changes in the family formation behavior of young adults, particularly the growing prevalence of non-marital childbearing and marital delay, have recently taken front stage in contemporary public policy debates. In particular, the current administration has proposed setting aside money for various marriage-promotion demonstration programs and evaluation, linked to the reauthorization legislation for TANF (Temporary Assistance for Needy Families). Although marriage delay is evident across all social classes (Martin 2004), the link between marriage and childbearing in the United States is weakest for those in the lower socioeconomic stratum (Ellwood & Jencks 2004). An emerging body of research has therefore endeavored to better understand the factors hindering marriage among disadvantaged populations.

Much of the research attempting to explain the retreat from marriage focuses on either the deterioration in men's economic position or women's greater economic independence. Yet neither perspective adequately explains the extent of marital delay. Challenges to men's ability to attain a suitable living standard do not sufficiently explain declining marriage rates (Mare and Winship 1991; McLanahan and Casper 1995), while women with the best prospects for economic independence are also more likely to marry than women with poorer earnings prospects (Goldstein and Kenney 2001; Martin 2004; Qian and Preston 1993; Sassler and Schoen 1999; Sweeney and Cancian 2004). A major shortcoming of these studies is their failure to examine the dyadic nature of relationships.

In other words, a given partner's attributes may shape union intentions, as well as relationship progression.

Even if one has very positive views of marriage – as studies of women across the income spectrum generally find (Lichter, Batson, and Brown 2004; Maulden et al. 2000; Sassler and Schoen 1999) – shortages of suitable marriage partners could hinder attainment of the desired goal. In fact, ethnographic research on low-income single mothers finds that this is frequently the case. These women's romantic partners generally have poor earnings and employment histories and prospects; the women are therefore apprehensive of marriage, believing that a legal tie to these men may further diminish their economic prospects rather than improve them (Edin 2000; Edin and Kafalis 2005). Results from quantitative studies substantiate these fears. Never married single mothers who do marry have partners who are considerably more heterogamous, and of lower quality (in terms of economic standing) than non-mothers who wed (Graefe and Lichter 2002). Furthermore, those who subsequently marry and subsequently divorce are even worse off than single mothers who remain unmarried, economically as well as in terms of their physical and mental health (Lichter, Graefe, and Brown 2003; Williams, Sassler, and Nicholson 2005).

This paper explores how single mother's views regarding the prospect of marriage to their baby's father are shaped by his economic circumstances. In particular, we examine whether women whose partners have higher levels of education or earnings have greater expectations regarding marriage than do women involved with less economically attractive men. Next we examine union transitions about a year following the initial interview, focusing first on relationship progression and then on entrance into marital

unions. Data are from the Fragile Families and Child Wellbeing Study, a longitudinal survey of unmarried parents that includes information on both mothers and fathers of a newborn child. Our analysis differs from previous studies utilizing the Fragile Families data to explore union transitions in several ways. First, we focus on the relationship between men's economic characteristics and women's expectations regarding marriage, to assess what kinds of fathers are seen as "marrying material." Second, we examine all unmarried couples, and make use of multiple imputation techniques to account for non-response of fathers. Our incorporation of what is ostensibly the most disadvantaged segment of the population of unmarried fathers yields results that differ from the published literature using the more selective sample (Carlson et al., 2004; Osborne 2005; Waller and McLanahan 2005). Women's expectations for marriage are high for fathers with both good and poor economic attributes. Nonetheless, those whose partners have better economic characteristics are significantly more likely to progress into more serious relationships and marriage than when fathers have low levels of schooling and earnings. Results are discussed in light of current marriage promotion strategies.

Examining Predictors of Marriage

Transformations in how sexual activity, childbearing, and marriage are linked, particularly among low-income populations, suggest the weakening of normative expectations regarding marriage. Over the past few decades, cohabitation has become increasingly prevalent (Bumpass, Cherlin, and Sweet 1991; Bumpass and Lu 2000; Raley 2000). Births outside of marital unions have also become more common; by the close of the twentieth century, one-third of all births were to unmarried women (Ventura et al. 2001). Many new mothers are living with a romantic partner. As of the mid-1990s,

nearly 40 percent of non-marital births occurred within cohabiting unions (Musick 2002), and recent data suggest that the share has risen even higher in the early years of the 21st century, approaching half of all births in large metropolitan areas (Sigle-Rushton and McLanahan 2002). We explore several explanations for the retreat from marriage among young adults who become parents outside of marriage.

Men's Providing Ability

Men's ability to provide for a family has long been an important predictor of marriage. In fact, family theorists have long presumed that when men are economically established they will proceed to marry (Becker 1981; Oppenheimer, Kalmijn, and Lim 1996). Empirical evidence largely supports the importance of the link between men's fiscal readiness to support a family and subsequent marriage (Goldscheider and Waite 1986; Hogan 1978; Mare and Winship 1991; Sassler and Goldscheider 2004). Individual-level studies of the unmarried population find that men's earnings, education, and employment are significantly related to subsequent marriage (Lloyd and South 1996; Oppenheimer et al. 1996; Sassler and Goldscheider 2004), while women's economic fortunes do not have the same effect (Clarkberg 1999; Sassler and Schoen 1999).

Despite the increase in dual-worker families and new expectations about gender role equality, the empirical evidence suggests that women continue to emphasize men's ability to adequately play the provider role when considering marriage partners. In the abstract, men's achievements – their educational attainment, employment status, and future earning potential – matter a great deal to women (Bulcroft and Bulcroft 1993; Lichter et al. 1995; Sassler and Schoen 1999; South 1993). Black women in particular place great emphasis on prospective spouse's being economically established before

marriage (Bulcroft and Bulcroft 1993; Sassler and Schoen 1999). For low-income women, men's poor economic prospects may deter cohabitation as well as marriage (Edin 2000; Edin and Kafalas 2005). Such attitudes clearly matter for subsequent union formation. In fact, the more importance women (and men) attach to potential partners' economic readiness for marriage, such as being established at a job, the less likely they are to marry (Sassler and Schoen 1999). Economic standards are often quite high. Qualitative studies reveal that the optimistic wishes new mothers hold regarding their baby's fathers' ability to obtain (and keep) a good job are rarely sustained (Edin and Kefalas 2005; Gibson, Edin, and McLanahan 2002; Waller 2002).

Selectivity of Unmarried Parents

Dramatic increases in cohabitation and non-marital parenting have caused some to question the appropriateness of the economic perspective for explaining changes in marriage. Standard economic predictors of union stability or marriage may not apply for particular populations (Brines and Joyner 1999; Sassler and McNally 2003; Schoen and Weinick 1993). In particular, those experiencing non-marital births may differ from young adults who delay childbearing until after marriage, as well as from those couples who conceive outside of marriage but wed prior to the birth of their child.[1] For these populations, the usual predictors of marriage – men's earnings, educational attainment, or employment – may not have the expected effects.

For example, findings regarding the effect of single men's economic attributes as they relate to subsequent marital transitions are mixed when examined for cohabitors.

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[1] Normative expectations regarding marriage prior to childbearing remain much stronger for those who are highly educated, as shares of non-marital births remain quite low despite its growing prevalence in the population overall (Ellwood and Jencks 2004; Martin 2004). Marriage following a conception but preceding birth is also far more common among non-Hispanic whites than for racial minorities (Loomis and Landale 1994; Manning 1993, 2001; Manning and Landale 1996; Musick 2002).

Several studies of cohabiting couples utilizing data from the National Survey of Families and Households (NSFH) have reported that men's earnings are positively associated with marrying rather than continuing to cohabit (Brown 2000; Smock and Manning 1997). Smock and Manning (1997) also report that cohabiting couples where the male partner had high levels of educational attainment were significantly more likely to marry, though a similar effect was not found in Brown's (2000) study. Yet a growing body of evidence suggests that among cohabiting couples, men's economic attributes are **not** predictive of subsequent marriage (Blackwell and Lichter 2004; Brines and Joyner 1999; Oppenheimer 2003; Sassler and McNally 2003; Wu and Pollard 2000). Utilizing NSFH data that had been repaired for missing data and sample attrition, Sassler and McNally (2003) report that cohabiting men's earnings reduced the odds of breaking up, as well as marrying, relative to remaining in a cohabiting union, a finding replicated by Oppenheimer (2003) with data from the national Longitudinal Study of Youth (NLSY). Wu and Pollard (2000) find similar results in their study of Canadian cohabitors; while men's contributions deterred union dissolution, they had little effect on marriage.

Reported effects of men's employment on transitions from cohabitation to marriage also are inconsistent across studies. Examining cohabitors from the mid-1980s and earlier, Manning and Smock (1995) found that men's full-time employment increased the stability of cohabiting unions relative to dissolution or marriage. Neither Brown (2000) nor Sassler and McNally (2003) find a significant relationship between cohabiting men's employment and union transitions. However, Oppenheimer (2003) indicates that cohabiting men who were employed full-time, year round *were* more likely to wed. While reliance on different data sets and measurements may account for some of

these variations, what is evident is that men's positive economic attributes are **not** clearly linked to subsequent marriage among cohabiting couples.

Although the findings regarding what predicts marriage transitions among cohabitors are mixed, even less is known about the characteristics of women's partners. Information on these men is rarely sufficient in surveys, unless the couple lives together or marries. Finally, few studies have focused on low-income or disadvantaged individuals. It is therefore difficult to ascertain what level of men's earnings or educational attainment might be considered 'sufficient' for marriage. Is the threshold for marriage lower among single mothers, particularly if they are disadvantaged in the marriage market?

Previous studies suggest that the relationship between earnings and marriage is weaker than for the general population at large. For example, Carlson and McLanahan (2004) do not find that men's higher earnings predicted marriage at conventional significance levels after controlling for the mother's attitudes and beliefs and other individual factors; the non-significance of men's earnings is also replicated by Waller and McLanahan (2005). Focusing only on unmarried parents who were romantically involved or living together, Osborne (2005) also reports that father's earnings and education are not predictive for marriage among cohabiting couples that share a child. There is little consensus, however, on the impact of men's educational attainment on union transitions, as Waller and McLanahan (2005) find that couples are significantly more likely to marry (relative to separating) when the father has some post-secondary schooling. Men's economic attributes are not robust predictors of marriage or

relationship progression among unmarried parents. In fact, these studies frequently assert that *women's* economic characteristics often drive relationship progression.[2]

Goals of Paper

This paper seeks to clarify the role that men's economic attributes play in both women's assessment of the relationships future and whether relationships progress in the year following the birth of a shared child. We first explore whether new mothers' expectations about marrying their baby's father varies by the father's economic characteristics. Are women's marital expectations associated with men's economic prospects? That is, are women more likely to indicate that they have a very good or pretty good chance of marrying their baby's father higher when their male partners have more education or higher earnings? We next examine whether men's economic attributes are predictive of subsequent union transitions. Finally, we explore what affect accounting for missing data, by imputing possible responses, has on women's marital expectations and outcomes.

Data and Methods

Data from the Fragile Families Study provides a unique opportunity to examine how partner attributes shape women's marital expectations. The study follows a sample of new parents, the majority of whom are not married. Information is gathered from both mothers and fathers, allowing us to assess how men's and women's characteristics shape relationship expectations and transitions. The data are not representative of all single

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[2] Although not discussed in these studies, mother's and father's educational attainment are highly correlated. Tests for association between mother's education and father's education yield a chi-square of 1881.438 (16 df, $p \leq .001$). Osborne (2005) only enters women's education levels; Waller and McLanahan (2005) examine father's educational attainment, but also includes a measure of relative schooling to assess what happens when the father has more education than the baby's mother; Carlson et al. (2004) incorporate both mother's and father's educational attainment.

men and women, as the event qualifying respondents for inclusion was a child's birth. It is most representative of lower-income men and women, whose likelihood of experiencing non-marital births has increased substantially over the past few decades (Ellwood and Jencks 2004; Martin 2004). The weighted sample of unmarried parents is representative of all non-marital births to parents residing in cities with populations over 200,000. No other data source provides such detailed longitudinal information on non-coresidental romantic partners. This paper utilizes data from the initial data collection and the first follow up, conducted 12 to 18 months following the birth of the child.

Methodological Issues: The Need for Multiple Imputation

While clearly a select sample, limited to new parents, the wealth of data on those who were romantically or sexually involved as well as living together enables us to explore a wider array of couples than is generally available in large-scale data collections. Despite these strengths, the data also presents some challenges. A primary one is the extent of missing partner responses. Matching father data is not there for 22 percent of the women who responded to the baseline interview. Father's data are not missing at random; among women not married to their child's father, cohabiting fathers having the greatest representation (almost 90% responded). Not surprisingly, fathers who were not romantically involved with the baby's mother at the time of the interview had the lowest representation in the survey, with only a 38% response rate.

The fathers available in the data set, then, are not representative of the population being studied – new fathers – in that they are move supportive and involved during the pregnancy, better educated, and therefore may be considered better marriage prospects by their partners. As previous studies have shown, analyses conducted on populations not

corrected for data loss and sample attrition often misspecify outcomes (Kohlschmidt, Sassler, and Stasny 2003; Mirowsky and Reynolds 2000; Sassler and McNally 2003). On at least some variables the missing fathers appear to be very different from the ones interviewed, based on the mother's reports (see Table 1). Almost two-thirds of mothers whose partners participated in the initial survey report having received financial assistance from their baby's father during their pregnancy, compared to less than half (48.6%) of women whose partners did not complete the survey. Fathers who participated in the study were also less likely to have suggested the mother have an abortion upon learning of the pregnancy. The largest discrepancies, not unexpectedly, can be seen upon examining the marital expectations of mothers whose partners completed the initial interview and those whose partners did not. Among new mothers where the baby's father participated, the proportion reporting that their chances of marrying the birth father were almost certain or pretty good were over twice as great as when the father did not complete the survey, 63.3% compared to 29.4%, respectively. Relying only on responses of women whose partner participated in the interview, then, appears to inflate marital expectations, as the proportion of missing fathers was not insubstantial.

[Table 1 about Here]

A methodological contribution of our paper is that we 'correct' the data, utilizing multiple imputation to approximate information for fathers with missing responses on key variables (Rubin 1987; Little and Rubin 2002). Using a stochastic imputation procedure, we estimate plausible values repeatedly. Given the size of the data set, five imputations suffice for the estimation of results that are reliable (see Rubin, 1987). The

following variables were imputed when they were missing for the father: age, race, race-ethnicity, household relationship, level of education, and income.

Note that with the exception of age, the variables for which we impute missing data are categorical. While statistical packages such as SAS include imputation programs, these procedures assume that the data to be imputed are from a continuous multivariate distribution (SAS Support, 2005). It is not recommended that such a procedure be used on categorical values, or for values that are not normally distributed (Horton, Lipsitz, and Parzen 2003). We therefore have chosen to do the multiple imputations ourselves. By writing our own code, we were also able to account for constraints in the data. For example, we imputed with constraints on the allowable education for 16 through 20 year olds.

Information on the father's age, race, race-ethnicity, household relationship, and education was collected both mothers and fathers; father's earnings, however, was asked only of fathers. Imputations for these four variables were performed separately from those for the income variable. When both mothers and fathers reported an answer to the above questions, responses were compared to determine the goodness of the match. Responses for these 3,830 cases were then used to find the conditional probability of a father being in a certain category, given the mother's report. For the 1,068 fathers who were not interviewed, a random number was generated that was a cumulative probability. This random number, as well as the conditional probability of the father being in a certain category, given the mother's response, was used to impute possible categories that might include the missing father. This procedure was repeated five times. The point estimates of the five estimates are then averaged. The variance reflects both average within-round

variance and adjusted between-round variance, which accounts for the additional bias introduced by the imputation process itself, and results in more conservative estimates (Freedman and Wolf 1995; Rubin 1987). Additional information on the imputation procedures is presented in Appendix 1 and 2. Response patterns for data not adjusted for missing responses (heretofore 'Complete' data) and adjusted through multiple imputation procedures (subsequently referred to as 'Repaired' data) are presented in Appendix 3. We discuss differences in the distribution of fathers in the 'complete' and 'repaired' data upon reviewing the variables used in our analysis.

On the basis of these imputed results, we next reestimate the effect of men's economic attributes on women's expectations regarding marriage to that specific partner. We focus on the proportion of mothers reporting they had an almost certain or pretty good chance of marrying the baby's father, by father's attributes. Table 2 depicts the extent to which imputed responses differed from the 'complete' data, and how incorporating both into one 'repaired' data set effectively lowers the proportion of women having such high hopes for marrying their baby's father. In all instances, the proportion of affirmative responses among the imputed cases is substantially lower.

[Table 2 about Here]

The large discrepancies in the marriage expectations of women across the data sets, and how these beliefs vary by the birth father's economic characteristics, are depicted in Figures 1 and 2. Figure one details how mother's expectations for marriage to baby's father's vary by men's education level. Results from the 'Complete' data indicate quite high expectations for marriage across all levels of education, though mothers had the most positive assessment of their marriage odds when the father had

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some college; the decline in positive assessments regarding the chance of marriage for men with a college degree or more may be the result of the selective nature of that group or due to very small cell size in this category.[3] Variation in mother's expectations for marriage is greater for the imputed cases, and when fathers' information is missing marital expectations are far lower. Focusing on the 'repaired' data indicates that regardless of the birth father's educational attainment, over half of new mothers expect to marry their baby's father, and there appears to be little variation across the father's level of schooling. In other words, women whose partners are high school drop-outs are no less likely to have high expectations to marry than women whose partners have at least a college degree. This is not what the extant literature on the effect of men's schooling on marriage would predict.

How do reports of father's earnings shape mother's expectations for marriage? Expectations for marriage are again lower among the repaired data than for the complete responses (Figure 2). Optimistic assessments of marriage to their baby's father increase as men's earnings rises, leveling off once men are earning between $15,000 and $25,000, before decreasing somewhat for men earning between $25 and $35,000. Expectations rise modestly for women whose partners are earning $35,000 or more at the initial interview, though they do not surpass expectations for women whose partners earned between $15,000 and $25,000. In sum, women whose partners earn $35,000 or more a year have no higher expectations for marriage than women whose partners' earnings are at about the poverty level for a family of four ($17,050 for a family of four in 2000) (U.S. Department of Health and Human Services, 2000).

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[3] In fact, mother's reported the lowest marriage expectations when their baby's father had a college degree or more, though the sample size here was quite small (even for the imputed results, the sample size ranged only between 97 and 102), and over half (57.6%) were still quite positive that they would wed.

Variables Used in Multivariate Analyses

We use measures of stable respondent characteristics taken at the initial survey for our independent variables. Because we are interested in how men's attributes shape women's expectations for marriage, as well as subsequent union transitions, we incorporate variables for both partners. We first include several measures of fathers' attributes, such as his educational attainment,[4] earnings in the prior year, and his race and ethnicity.[5] Because earnings and employment status are highly correlated we do not include employment in our estimates.[6] Dummy variables indicate whether females have the same or more education than their male counterpart; couples where the man has higher levels of educational attainment serve as the reference category here.[7] Reports from the mother's responses are used to construct the next few measures. We consider the type of relationship the parents had at the birth of the child, distinguishing among parents living, parents romantically involved but not living together, and parents no longer in an intimate relationship. Finally, we measures whether the mother had had other children with the baby's father, gender distrust, and lastly, the mother's assessment of her likelihood of marrying the baby's father.

Sample frequencies for the independent variables used in the analysis are shown in Table 3. As reported earlier, there are substantial differences in the distributions for several variables. The largest discrepancies are apparent in measures of relationship type

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[4] While we initially imputed results for men with a GED separate from those with a high school degree, we subsequently combined these two for the multivariate analyses, as only a relatively small share of men had obtained a GED.

[5] We initially included an indicator of whether the couple was of the same race/ethnicity, but it never attained significance and was therefore dropped from the model.

[6] Results for a test of the association between regular employment in the past week and father's earnings result in a chi-square of 44.39 (8 df, $p \leq .000$), indicating that the two measures are not independent.

[7] This measure relies on the mother's reports, the father's reports, and our imputed results (when father's reports are missing).

and certainty of marriage, though there are also notable differences in the shares of

fathers who have less than a high school degree and couples where the mother has more

schooling than the baby's father. Whether these discrepancies have significant effects on

subsequent union transitions is subsequently explored with multivariate analysis.

[Table 3 about Here]

Analytic Approach

We begin by presenting estimates of the proportion of couples that experienced

union transitions in the intervening year from the birth of their child. Next, we discuss

the proportion of new parents who subsequently marry. Finally, we perform multivariate

analysis utilizing information on the father's economic attributes and the mother's

assessment of the likelihood of marriage. Our multivariate analysis proceeds in two

stages. First we utilize multinomial logistic regression to examine the likelihood of

moving into a more serious relationship or a less serious one between the two surveys.

Transitions to more or less serious relationships are treated as separate risks; that is, a

couple can become more serious about their relationship, relative to remaining in the

same kind of union. Alternatively, they can downscale the seriousness of their

relationship, for example ceasing to live together or moving from being romantically

involved to barely talking. Next, we rely on logistic regression to predict the odds of

marrying relative to remaining a single mother.

Results

An examination of the relationship transitions of disadvantaged unwed parents

over the course of the year following the birth of a child provides cause for both

optimism and pessimism. Over one half of all couples, 52%, were still in the same type

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of relationship at the second interview as they were at the first. As yet, they have neither married nor split up. On the other hand, a greater share of the couples had relationships that had regressed. Almost a third (29%), however, were in relationships that had changed for the worse in the ensuing year. Less than one-fifth of unmarried new parents had become more serious in the ensuing year, whether by moving in together or transitioning from living together to marriage. Furthermore, despite very high expectations regarding marriage, only 8.09% of unmarried new parents had wed by their second interview.

Relationship Transitions: Becoming More Serious or Downgrading

Results of the multinomial logistic regression model of relationship transitions into more or less serious unions are presented in Table 4. We present parallel results for both the complete and repaired data set, and discuss issues of selection into the complete data set where appropriate. The first column for each group presents coefficients predicting the odds of entering into a more serious relationship relative to remaining in the same type of relationship. The second column of coefficients predicts the likelihood of becoming less seriously involved relative to the status quo. Underlined coefficients indicate significant differences in the likelihood of becoming more serious relative to less involved (p ≤ .05).[8]

[Table 4 about Here]

We present sequential models, the first without expectations for marriage, and the second including it, to address endogeneity issues. Marital expectations may be endoganeous if the reported probability of marrying is correlated with unobservables that

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[8] The coefficient for the likelihood of becoming more involved relative to less involved can be determined by subtracting the numbers in the second column from those in the first. Exponentiating this coefficient gives the odds of progressing up rather than down in relationship seriousness.

affect relationship progression. Furthermore, mother's reported expectations for marriage may be highly correlated with men's educational attainment or earnings. For instance, if less educated or lower paid fathers are viewed as poorer marriage prospects (ceteris paribus), then failure to control for this correlation will yield an estimated effect of marriage expectations that is biased up. Although we do not observe substantial differences in marital expectations by father's educational attainment in Figure 1, there are greater variations in women's marital expectations across men's earnings levels. The premise of our paper, that marriage expectations are dependent on men's economic characteristics, is born out by the results from these sequential models. This association, however, is more evident in the repaired data than in the complete data set, as it accounts for selectivity of the men with the poorest economic prospects due to non-response.

The results suggest that men's economic attributes play a larger role than has heretofore been reported, highlighting the importance of accounting for non-response. While none of the coefficients for men's education attain significance in the complete data (Columns A and B), results from the repaired data indicate that more highly educated men *are* significantly more likely to progress into more serious relationships, rather than either treading water or becoming less involved (Columns C and D). Mother's marital expectations moderate the impact of men's educational attainment, demonstrating the important mediating effect of men's perceived opportunities. Net of mother's marital expectations (Column D), couples where the baby's father has some college were 1.43 times more likely to become more serious, and 1.68 times more likely to transition into more serious relationships than less serious ones, relative to couples where the man had less than a high school degree. Men with at least a bachelor's degree

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were also more likely to progress in relationship seriousness over staying in the same type of arrangement (significant at the .10 level), and they were almost 2.5 times more likely to become more rather than less serious. Parents' relative levels of education also emerge as an important predictor. Educationally homogamous couples or those where the mother has more schooling are substantially more likely to experience relationship progression than those where the father has the educational advantage.

The relationship between men's earnings and union transitions is less clear-cut. Incorporating controls for women's marital expectations elevates the size and significance of several income categories in both the complete and repaired data sets. However, the only earnings category that attains standard levels of significance in the imputed data is when men reported earning between $25,000 and $35,000 in the prior year. Net of marital expectations (Column D), such men were 1.66 times more likely to move into more serious relationships than men reporting the lowest earnings. However, relationships do not appear to become more or less serious for couples where the man reported earning $35,000 or more. The relationship between earnings and relationship progression appears somewhat curvilinear, or perhaps subject to particular thresholds requiring further examination.

The relation between father's race and ethnic background, mother's reported relationship type, and relationship progression are consistent across samples (if smaller for the repaired results), and largely replicate the findings of previous studies. Relationship stability is greater among non-Hispanic whites and Hispanics than for non-Hispanic blacks, and Hispanics are significantly more likely to transition into more

serious relationships than are non-Hispanic blacks.[9] With regard to how relationship type shapes union progression, those who are romantically involved (as well as those in the Other category) are substantially more likely than cohabitors to become more seriously involved; whereas those already living together can only become more serious by marrying, those who are not living together at the birth of the child can either cohabit or marry. Notably, the romantically involved are also over 2 ¼ times more likely to reduce their involvement levels compared to those living together at the birth of their child. As those who study cohabitation have noted, living together often takes on a kind of momentum of its own, as those who share a child often think they should be living together for the sake of that child (Edin and Kafalas 2005).

Couples with more than one child together are 1.37 times more likely to become more serious, net of marital expectations and accounting for non-response (exp (.314), Column D). This finding emerges in both the complete and repaired data set, though the effects are larger and more significant when missing accounts of father's economic attributes have been imputed. We find no significant effects of gender distrust on relationship progression, perhaps because the repaired sample incorporates more complete information on men whose partners are already less trusting.

Not surprisingly, mother's reported expectations for the future of the relationship predict relationship progression quite well. Furthermore, incorporating these expectations moderates the size of men's economic attributes. Interacting mother's marriage expectations by indicators of men's economic attributes provides additional support for the premise that father's ability to become good providers matter in

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[9] As reported by Osborne (2005), racial distinctions are somewhat less evident in this sample of disadvantaged couples, suggesting that the whites in the sample are quite selective.

advancing new parents' relationships (see Table 5). The effect of reporting an "almost certain" or "pretty good" chance of marrying one's partner is different if the baby's father has a Bachelors degree or more relative to lower levels of schooling, if he reports being in the highest rather than the lowest income category, as well as if he is white rather than black. For example, when the baby's father has a college degree and mothers believe their chances of marrying are high, the odds of increased relationship seriousness are 11.7 times greater than when the father is a high school drop out and mother's have high hopes. A similar effect is not observed when male partners have only some college. The effect of marital expectations on subsequent union transitions also differs across earnings levels, though only to reduce movement into less serious relationships. Women who are optimistic about their chances of marrying their partner have significantly lower odds of relationship regression when their partners earn $35,000 or more a year than when he makes less than $5,000. Finally, the effect of marriage expectations on subsequent union transitions differs significantly for whites and blacks. White mothers with high marriage expectations are significantly more likely to transition into increasingly serious relationships (odds = 5.56) than are black mothers who are optimistic about their chances of marrying their baby's father; they are also only one-third as likely as positive black mothers to experience reduced involvement.

[Table 5 about Here]

Transitions into Marriage

While the development of more serious relationships following the birth of a child can be viewed as progress, the gold standard of success under welfare reform is reserved for couples that marry. This percentage, however, was quite small – only 8 percent of

unmarried new parents initially interviewed. The factors shaping the transition into marriage are identified in Table 6. Because results are largely consistent across models, we present results from the full model that include marital expectations.

Of those who 'tied the knot' men's economic factors played a large role. Women whose partners had attended some college were about twice as likely to marry as women whose partner did not finish high school (odds of 1.86 and 2.04, respectively, for the complete and repaired samples). Discrepancies between expectations and outcomes were even greater for the few women whose partners had completed college; they were over three times more likely to wed as women with a man who had not completed high school (Odds = 3.16 for the complete, and 3.64 for the repaired sample). These results are similar to those reported by Waller and McLanahan (2005), though not with those of Osborne (2005) or Carlson et al. (2004). Focusing only on the results for the repaired sample indicates that relative education levels also matter, as couples where the mother has either the same amount or more education than her male counterpart are somewhat more likely to marry than couples where the father has the educational advantage.

[Table 6 about Here]

No clear pattern between men's earnings and the couple's likelihood of marrying emerges. While lower earnings levels do not shape relationship progression, they do predict marriage. The repaired data indicates that couples where the male partner earned between $15,000 and $20,000 were almost twice as likely to marry as when men earned less than $5,000. Furthermore, men earning between $25,000 and $35,000 were about two and a quarter times more likely to wed than couples where the man did not earn very much in the preceding year. Yet couples where the male partner earned between $20,000

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and $25,000 were not significantly more likely to wed than their poorer counterparts. Nor were the highest earning men in this sample, those who brought home $35 thousand dollars or more in the prior year, significantly more likely to have 'tied the knot.' While the qualitative data suggest that many couples are seeking to establish a financial safety net prior to marrying, it is not clear, at least from these results, what that particular threshold of earnings might be.

The effects for race-ethnicity and relationship type on union transitions are largely consistent with reported results from other published studies (e.g., Harknett and McLanahan 2004; Waller and McLanahan 2005). Hispanic and non-Hispanic whites are substantially more likely to wed than their black counterparts (odds = 1.91 and 2.05, respectively). New parents that are coresiding have a significantly higher likelihood of marriage than those who are romantically involved but not cohabiting, as well as couples that share parenthood but are in less serious relationships. However, couples that have multiple children together are no more likely to wed. While the qualitative literature suggests that societal pressures for marriage are higher when parents share a child and are living together (Edin and Reed 2005; Edin and Kafalas 2005), this is less evident if couples have multiple children together.

Marital expectations also predict subsequent entrance into marriage. As in prior studies, mother's positive assessments of marriage increase the likelihood of getting married (Lichter et al. 1991; Sassler and Schoen 1999). Women who report an "almost certain" or "pretty good" chance of marrying their partner are over six times more likely wed than women who said their chances were "poor." Women with high hopes for

marriage whose partners have more attractive economic attributes are no more likely to marry than optimistic women with less economically attractive partners, however.

Conclusions

Most women express the desire to marry someday (Thornton and Young-DeMarco 2001). Relatively little is known, however, about how women's views are shaped by their partners' economic circumstances. In this paper, we examined whether women's marital expectations varied depending upon father's economic characteristics, and if father's attributes shaped subsequent relationship transitions. Regardless of their partner's economic characteristics, women's expectations for marriage to the father of their child are generally high. Nonetheless, men's school attainment and level of earnings do have important predictive effect on transitions into more involved relationships, including marriage.

Results from our multivariate analysis indicate that mothers with high expectations of marrying the father of their child are best able to realize their aspirations when their partner has better economic prospects – such as a college degree, earns well above the minimum wage, or is non-Hispanic white. That is because men with the best long-range prospects are more likely to move into increasingly serious relationships, as well as marry, compared to those men who have less than a high school degree. Clearly, the standard predictors of marriage for men in general still adhere among unmarried men who have fathered a child, even if they have not wed prior to the child's birth. Unfortunately, men with at least some college are not well represented among unmarried fathers with new babies, accounting for less than a quarter of the sample repaired for non-response. While current policy efforts to encourage marriage hope to create a pro-

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marriage culture, they might better focus on improving the economic situations of the men involved in the lives of these single mothers.

Marriage is more likely to occur when a partner has more education. The relationship between relationship progression and men's earning levels, however, is less clear. The odds of moving into a more serious type of relationship such as cohabitation or marrying do not rise monotonically as men's earnings increase. Still unknown, then, is how much a partner would have to earn to be considered 'good enough' for marriage (Smock, Manning, and Porter 2004), though it is clear that the bar has clearly been raised. Our findings suggest the existence of various thresholds that either encourage or discourage marriage (Steuerle and Carasso 2004). In 2005, low-income working families were eligible for the Earned Income Tax Credit (EITC) if they earned $30,338 or less and had one qualifying child, or $34,458 if they had more than one qualifying child. If a woman earned the modal amount that new mothers did in the year prior to their birth ($10,000 to $24,999) (Osborne 2005), then marriage to a man with earnings between $15,000 and $20,000 would still qualify them for the EITC. Couples where the man earned between $25,000 and $35,000 could also still qualify for EITC, if her work hours were more curtailed. While some qualitative literature has suggested that couples are not yet aware of how these tax credits function (Edin and Kafalas 2005), we infer from our results that such an awareness does exist. Further possible alternative reasons for the failure of couples where the man earned more than $35,000 (above the threshold for EITC, or more than twice the federal poverty level for a family of 4) to wed could include poor relationship quality or abuse, men's over-reporting their earnings, mother's concerns regarding the stability or consistency of earnings, or simply a disinclination for marriage.

For new parents, cohabitation seems to serve as a stepping-stone to marriage. Nonetheless, the share of cohabitors who marry remains small. Almost half of the repaired sample (47.49%) consisted of cohabiting couples, according to the mother's report, yet only about 8 percent of all couples in the sample had wed by the second interview. Such findings are consistent with the qualitative research on cohabitors, which reveals that even when couples have discussed wedding plans, actually getting married is often a long-range prospect (Sassler 2004). It is also possible that many unmarried couples, whether cohabiting or not, are focused more on retaining jobs, obtaining some training or completing a degree, and raising children than getting that 'piece of paper' from the state that sanctions their relationship (Edin and Kefalas 2005).

The findings from this paper also highlight the importance of accounting for father's non-response. By relying on a selective sample of fathers, we are underestimating the effect that education (even some college) has on men's union transitions, and even entrance into marriage. Extant studies have seemingly also overstated the impact of gender distrust on relationship progression. In part this is because the men lost to attrition or non-response are the least likely to marry. The need to incorporate non-respondent fathers is particularly important in a sample of disadvantaged men. Imputing missing data on non-respondent fathers could be particularly useful for future studies, such as those seeking to examine the impact of wage increases, spells of unemployment, or failure to experience job mobility over time on relationship stability or marriage.

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Appendix 1. Multiple Imputations for Race, Education, Age, and Household Relationship.

We provide an example of the steps used to conduct the multiple imputations for Race, Race-Ethnicity, Education, Age, and Household Relationship. The following is a cross-tabulation of household relationship as reported by the mother by that reported by the baby's father:

Father's Report of Household Relationship

Frequency Percent Row pct Col pct		1	2	3	4	Total
Mother's Report of Household Relationship	1	1037 27.08 98.76 96.38	8 0.21 0.76 0.48	2 0.05 0.19 0.33	3 0.08 0.29 0.61	1050 27.42
	2	21 0.55 1.34 1.95	1449 37.83 92.23 87.39	59 1.54 3.76 9.80	42 1.10 2.67 8.50	1571 41.02
	3	8 0.21 1.17 0.74	135 3.52 19.79 8.14	432 11.28 63.34 71.76	107 2.79 15.69 21.66	682 17.81
	4	10 0.26 1.90 0.93	66 1.72 12.52 3.98	109 2.85 20.68 18.11	342 8.93 64.90 69.23	527 13.76
	Total	1076 28.09	1658 43.29	602 15.72	494 12.90	3830 100.00

Where 1= married
2= cohabiting
3= romantically involved but not cohabiting
4= other.

For each of the 1,068 missing fathers:
1.   From the above table we find the conditional probabilities of baby's father reporting a certain category of present household relationship, given what the mother has reported. For example, the probability that baby's father will report that he is married to mother, given that mother has reported that she is married to the father, is 98.76%. The probability that baby's father will report he is cohabiting with the mother, given that mother reported that she was married to him, is 0.76% and so on.

2.   For the first of the 1,068 missing fathers on the list (for example):
   a. Let U= 0.567 be the U (0, 1) random number generated.
   b. Say in this case the mother reported that she was cohabiting with the baby's father. Use the cumulative probabilities when the mother reported that she was cohabiting with the baby's father and check in which interval 0.567 lies. We

see that $0.567 > 0.0134$ but < 0.9357. So we would impute the answer of the father to be "cohabiting."

c. Repeat (a.) and (b.) for all of the 1,068 missing fathers.

3. Iterate steps 2 a), b) and c) five times and record the imputed values each time, to get five completed datasets.

When imputing for education, we had to be careful that the age and level of education were compatible. Age was imputed first and then each time level of education was imputed, we checked if the imputed level of education was possible for the imputed age. For example, if the imputed age of the baby's father turned out to be 16, he could not possibly have a Bachelor's degree. In such cases, we re-imputed level of education. To be more specific, we set the following limits: a 16-year old could have less than high school level of education, a 17-year old could have less than high school, high school or post high school or some college, an 18 or 19-year old could have any of the previous or GED, a 20-year old could have any of the previous or refuse or skip or not know, and anyone 21 or older could have any of the previous or have a Bachelor's degree or more. In addition, the minimum acceptable age for the baby's fathers was set at 16 years, because that was age of the youngest fathers among those interviewed. Also, when imputing age for the missing fathers, we assumed that the mothers could not have been more than 10 years off the fathers' right ages, when reporting the fathers' ages.

Note that for the variable Age, there were forty cases where the mother's report on father's age was missing. For these forty cases, instead of imputing from mother-reported father's age, we imputed based on the mother's age, such that the acceptable difference between mother's and father's ages was set to lie between -11 and 20, i.e. the mother could be between eleven years older and twenty years younger than the baby's father. We arrived at this range for the difference by plotting a histogram for the age differences, using the 3,830 complete cases.

Appendix 2. Multiple Imputations for Income

Imputing income for missing fathers was difficult because the mothers did not report the baby's fathers' income levels. We therefore needed a different method for imputation from that we used for the other variables. To impute the income level of the baby's father, we relied on multi-category response logistic regression, with nine response categories: Under $5,000; $5,000-9,999; $10,000-$14,999; $15,000-$19,999; $20,000-$24,999; $25,000-$34,999; $35,000-$49,999; $50,000-$74,999; and $75,000 or more. Previous studies have shown that income level of baby's father could be dependent on (among other things) his age, race-ethnicity and level of education and household relationship as reported by the father. We are interested in the household relationship as reported by the father, because this may affect his sense of responsibility towards his partner and children as well as his income level. Whether or not the father did regular work in the last week or had a mental/physical condition that prevented him from regular work also turned out to be important explanatory variables when we ran a stepwise logistic regression procedure. The interaction effects that turned out to be important were the age and race interaction, education and race interaction, and age, race and education interaction. We should note here that age is the only continuous variable among the explanatory variables; all the others are categorical variables. The income levels of the 40 (missing) fathers whose age was not reported by the mothers could not be imputed.

Appendix 3. Distribution of Couples, by Characteristics of Fathers: Unrepaired and Imputed Data Sets

CHARACTERISTICS:	Complete Data (N = 2,777)	'Repaired' Data (N = 3,683)	Range of Missing Responses	
Race of Birth Father				
White or Asian	604	776 - 803	172	199
Black	1,587	2,125 - 2,154	538	567
American-Indian or Other	527	665 - 688	138	161
Refuse, Skip, etc.	59	71 - 84	12	25
Race-Ethnicity of Birth Father				
Hispanic	802	1,052 - 1,063	250	261
Non-Hispanic White or Asian	323	400 - 408	77	85
Non-Hispanic Black	1,525	2,035 - 2,048	510	523
Other	127	172 - 184	45	57
Household Relationship, as reported by Birth Father				
Cohabiting	1,650	1,905 - 1,939	255	289
Romantically involved (not cohabiting)	600	832 - 872	232	272
Other	489	838 - 880	349	391
Birth Father's Educational Attainment				
Less than high school	1,101	1,584 - 1,611	483	510
High school	758	920 - 948	162	190
General Equivalency Degree (GED)	239	293 - 298	54	59
Post high school or some college	580	736 - 764	156	184
Bachelor's degree or more	92	97 - 102	5	10
Baby's Father's Income				
Under $5,000	422	607 - 631	185	209
$5,000 - $9,999	396	565 - 586	169	190
$10,000 - $14,999	410	547 - 568	137	158
$15,000 - $19,999	325	434 - 446	109	121
$20,000 - $24,999	277	354 - 384	77	107
$25,000 - $34,999	291	367 - 384	76	93
$35,000 and above	244	315 - 334	71	90
N	2,777	3,683		

Table 1. Comparison of Interviewed Fathers and Missing Fathers

Mother Reported	Interviewed Fathers	Missing Fathers
Married to baby's father	28.09%	12.83%
Birth father gave money during pregnancy	64.36%	48.60%
Birth father suggested abortion	8.22%	16.10%
Race of Birth Father		
White	29.24%	18.54%
Black/African-American	48.90%	56.93%
Asian	2.35%	1.69%
American-Indian	4.13%	4.49%
Birth Father's Highest Grade of School[A]		
Less than high school	28.64%	25.84%
High School	27.47%	29.03%
GED	5.80%	5.15%
Post high school/ Some college	20.84%	15.54%
Bachelor's degree or more	11.07%	5.26%
Chance that mother will marry baby's father*		
Pretty good/almost certain	63.27%	29.36%
None/very little	18.04%	54.30%
N	3,830	1,068

* Asked only of those who were not married. N = 2,777 for Interviewed fathers; N = 906 for missing fathers.

[A] Numbers don't sum to 100% because of missing responses.

Table 2. Proportion of Mother's Reporting an 'Almost Certain' or 'Pretty Good' Chance of
Marrying Baby's Father, By Characteristics of Baby's Father

FATHER'S ATTRIBUTES	Complete Data	Imputed Cases	Repaired Data
Race			
White or Asian	76.16	24.28	64.15
	(1.73)	(4.03)	(2.04)
Black	57.72	30.75	50.74
	(1.24)	(2.07)	(1.11)
American-Indian or Other	65.84	30.18	57.88
	(2.07)	(5.31)	(2.21)
Refuse, Skip, etc.	57.63	33.8	51.64
	(6.43)	(15.5)	(6.41)
Race-Ethnicity			
Hispanic	69.2	29.4	59.62
	(1.63)	(3.01)	(1.54)
Non-Hispanic White (and Asian)	79.88	22.42	68.34
	(2.23)	(4.74)	(2.36)
Non-Hispanic Black	57.05	30.6	50.35
	(1.27)	(2.12)	(1.11)
Other	58.27	27.3	49.27
	(4.38)	(10.23)	(4.43)
Household Relationship			
Cohabiting	76.3	54.67	73.28
	(1.05)	(3.51)	(1.07)
Romantically Involved	61.00	32.68	52.66
	(1.99)	(3.33)	(1.79)
Other	22.09	9.22	16.52
	(1.88)	(2.09)	(1.37)
Educational Attainment			
LTHS	61.49	33.02	52.62
	(1.47)	(2.68)	(1.38)
HS	63.32	32.45	57.57
	(1.75)	(4.30)	(1.71)
GED	63.18	31.06	57.08
	(3.12)	(8.60)	(3.10)
Post-HS/Some College	67.76	15.07	55.97
	(1.94	(3.47)	(1.86)
BA or more	57.61	11.3	54.11
	(5.15)	(15.59)	(5.04)
N	2,777	906	3,683

Note: Standard errors in parentheses. The standard errors are computed assuming the data
are a random sample, and do not take into account the complex sample design (for
example, the clustering of births within hospital).

Table 4. Multinomial Logistic Regression Models of Relationship Progression

	Col. A Complete Data		Col. B Complete Data		Col. C Repaired Data		
	More Serious	Less Serious	More Serious	Less Serious	More Serious	Less Serious	M Se
Variables							
Constant	-2.297 **	0.158	-3.439 **	0.612 *	-2.250 **	0.270	-
Fathers' Attributes							
Educational Attainment							
Less than high school (REF)			--	--	--	--	
High school or GED	-0.008	-0.098	-0.054	-0.072	0.104	-0.183	
Some college	0.280	-0.094	0.234	-0.042	0.394 **	-0.222	
Bachelor's or more	0.337	-0.319	0.304	-0.251	0.601 +	-0.394	
Baby's mother has more education	0.112	-0.271	0.068	-0.207	0.190	-0.325 *	
Parents have same levels of schooling	0.134	-0.166	0.099	-0.129	0.237 +	-0.202	
Father has more education (REF)	--	--	--	--	--	--	
Earnings							
Refused	0.214	0.214	0.339	0.184 +	0.342 +	0.158	
$0 - $4,999 (REF)	--	--	--	--	--	--	
$5,000 - $9,999	-0.027	-0.198	0.028	-0.201	-0.058	-0.193	-
$10,000 - $14,999	0.208	-0.219	0.274	-0.264	0.143	-0.182	
$15,000 - $19,999	0.341	-0.052	0.376 +	-0.031	0.240	-0.072	
$20,000 - $24,999	0.162	-0.226	0.206	-0.205	0.159	-0.226	
$25,00 - $34,999	0.571 **	-0.139	0.663 **	-0.144	0.448 *	-0.150	
$35,000 or more	0.100	-0.339	0.176	-0.326	0.020	-0.293	
Race-Ethnicity							
Non-Hispanic White	0.314 +	-0.420 *	0.285 +	-0.365 *	0.210	-0.505 **	
Hispanic	0.358 **	-0.527 **	0.339 **	-0.508 **	0.256 *	-0.531 **	
Other	-0.113	-0.165	-0.023	-0.159	-0.014	-0.281	
Non-Hispanic Black (REF)	--	--	--	--	--	--	
Relationship Type							
Cohabiting (REF)	--	--	--	--	--	--	
Romantically involved	1.952 **	0.870 **	2.025 **	0.812 **	1.803 **	0.900 **	
Other	0.584 **	NA	1.352 **	NA	0.255 *	NA	
Mother's Attributes							
Multiple children with baby's father	0.261 *	-0.076	0.206 +	-0.084	0.379 **	-0.108	
Trust in opposite sex	0.353 *	-0.250 +	0.299 +	-0.220	0.181	-0.171	
Chances of Marriage							
Almost certain or pretty good chance			1.300 **	-0.624 **			
50-50			0.935 **	-0.401 +			
Poor chance (REF)			--	--			
Chi-Squared	1958.39						
Number of Cases	2,538		2,538				

Source: Fragile Families

** p ≤ .01; * p ≤ .05; + p ≤ .10 (two-tailed test). Underlining denotes significant difference between becoming more or less serious (p ≤ .05).