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# The Role of Pre- and Postconception Relationships for First-Time Parents

*Using data from the National Longitudinal Survey of Youth 1997, a nationally representative cohort of young adults, the authors analyzed relationship type at the time of a first birth (N = 4,044). More than 10% of births were to a postconception cohabiting household (cohabitations that were initiated between conception and birth), a higher proportion of births than those born to postconception married households. Individuals in postconception and preconception cohabiting relationships (cohabitations that existed prior to conception) were demographically similar; both groups were associated with lower levels of socioeconomic advantage relative to those in preconception and postconception marriage. Postconception and preconception cohabiting relationships were associated with similar levels of dissolution, as 40% dissolved within 3 years of a child's birth. Having a marital union, rather than whether relationship was established pre- or postconception, was more strongly associated with who selected into the relationship and how long the relationship lasted.*

In years past, so-called ''shotgun marriages,'' in which a couple married after a nonmarital conception but before the birth, were a common response to an out-of-wedlock pregnancy. In the early 1960s, roughly two thirds of couples who experienced a nonmarital pregnancy had a shotgun marriage; by the early 1990s, this rate had declined to one quarter (Bachu, 1999). With the emergence of cohabitation as a socially sanctioned context in which to raise children, many couples who once would have married instead have chosen to cohabit (Reed, 2006).

Because postconception cohabitations (cohabitations established after a conception) have only recently emerged, relatively little is known about them. Who selects into postconception cohabitations, and how those individuals compare with those who choose a shotgun marriage (what we term a *postconception marriage*), is not known. It is also unclear how durable postconception cohabitations are and how their length compares with preconception cohabitations (cohabitations established prior to conception).

To address these issues, we examined postconception cohabitations, postconception marriages, and other relationship types at the time of a first birth for a cohort of young adults. Data came from the 1997 through 2009 waves of the National Longitudinal Survey of Youth 97 (NLSY97; see http://www.bls.gov/nls/nlsy97.htm), a nationally representative sample of youths who were ages 12 through 18 when first observed in 1997. We analyzed the prevalence of six relationship types at the time of a first birth: (a) preconception marriages, (b) traditional postconception marriages (marriages established when two adults with separate residences marry between

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conception and birth), (c) cohabiting postconception marriages (marriages established when cohabiting couples marry between conception and birth), (d) preconception cohabitations; (e) postconception cohabitations, and (f) nonunion households. We analyzed selection into these relationships by predicting union formation as a function of sociodemographic characteristics. Finally, we considered the stability of these relationships by using life table and Cox regression to estimate dissolution rates.

Our article makes several contributions to the literature. First, we not only documented, on a nationally representative sample, the diversity of family forms that surrounded the birth of a first child, but we also provided estimates of the prevalence of postconception marriages and cohabitations among a recent cohort of young adults. Second, ours is the first study to associate different demographic characteristics with postconception relationships, providing insight into who forms these unions. Finally, by analyzing relationship length, we are the first to provide a comparison of the relative stability of postconception cohabitations with other relationship types.

## Background

### *Relevance of Postconception Cohabitation*

Little doubt exists that couples are increasingly less likely to marry in response to a nonmarital conception. Research has found that traditional postconception marriages declined by 55% from the early 1980s to the 2000s and accounted for only 3% of family arrangements in the 2000s (Gibson-Davis & Rackin, 2011). This underscores the decreasing rates of postconception marriage compared with earlier cohorts (Akerlof, Yellen, & Katz, 1996; Bachu, 1999); together, the scholarship on postconception marriage suggests that their rates have declined steadily since the 1960s.

The decrease in postconception marriages most likely reflects changing norms and behaviors regarding out-of-wedlock pregnancy. Indeed, the term *shotgun marriage* no longer seems applicable, given that it referred to a hypothetical situation in which the father of a pregnant woman pointed a shotgun at the man who had impregnated his daughter, threatening to shoot the man unless he did the "right thing" and married the daughter. Although this situation most likely never occurred as described, the shotgun marriage scenario reflected societal norms insofar as an unmarried woman who got pregnant was expected to marry the father. Those norms have dissipated for several reasons: increased acceptance of out-of-wedlock births, the ability of women to survive economically without the contributions of a husband, and the recognition that family formation behaviors are a matter of individual choice and cannot be coerced by family or society (Cherlin, 2009; Coontz, 2005). In addition, given legalized abortion, a woman no longer has to realize a conception as a live birth.

The shotgun marriage scenario also made no mention of cohabitation. Although cohabitation rates may have been higher in the past than is commonly believed (as Coontz, 2005, pointed out, poor individuals in rural areas often cohabitated because they had difficulty obtaining legal marriages), there is little doubt that cohabitation has become an increasingly prevalent family form. More than half of recent nonmarital births were to cohabiting households (Mincieli, Manlove, McGarrett, Moore, & Ryan, 2007), and roughly one third of all births to non-Hispanic Black women and women without a high school diploma were to women in cohabiting relationships (Kennedy & Bumpass, 2008).

The emergence of cohabitation and the decrease in number of postconception marriages suggest that couples faced with an unplanned or unintended pregnancy may choose to cohabit rather than marry. Qualitative evidence supports this hypothesis: Reed (2006), in her study of 44 couples participating in the Time, Love and Cash in Couples With Children study, found that two thirds of couples began to cohabit after conceiving. For these couples, moving in together was a reasoned response to a conception; cohabiting allowed them to coparent and share household responsibilities and expenses. It is important to note, however, that, like postconception marriages of decades past, these cohabiting relationships would not have existed save for the fact of an impending birth.

With the exception of Reed's (2006) study, relatively little evidence has examined postconception cohabitations and compared them with other relationship types. Yet a comparison of postconception cohabitations is potentially informative as to whether marital status or the timing of union formation is more important in determining relationship outcomes (as measured here by relationship stability). If marital status is more important, then postconception marriages should resemble preconception marriages in outcomes, with larger differences when marriages (of any type) are compared with either pre- or postconception cohabitation. If the timing of union formation is important, then postconception marriages and postconception cohabitation should be similar, but preconception relationships should differ substantially from postconception relationships.

Theoretical reasons exist to believe that marital status, rather than the timing of union of formation, is more important in determining relationship stability. First, cohabitation has been repeatedly associated with lower quality, more conflictual, and less stable relationships (Osborne, Manning, & Smock, 2007; Wu & Musick, 2008). Although this negative association may arise in part because cohabiters had a poorer sociodemographic profile than married individuals, insofar as they were younger, had less education, and were more likely to be members of racial/ethnic minority groups (Manning & Brown, 2006), the lack of social and legal norms regarding cohabitation made it more vulnerable to relationship pressures as well as easier to dissolve (Cherlin, 2004; Nock, 1995; Smock & Gupta, 2002). Second, the more proscribed role that married fathers were expected to play reinforced their contributions (Hofferth, 2006) and made it harder for them to leave the relationship. These legal and normative expectations, which may be weaker for cohabiting fathers, are equally applicable to fathers in pre- and postconception marriages. Therefore, because of the nature and norms of cohabitation, such unions may dissolve more quickly than marriages.

It is also possible that the timing of union formation, rather than marital status, may be more important in determining relationship stability. Although little evidence exists to support or refute this claim, it is possible that coresidential unions started because of a pregnancy may force individuals into a more serious relationship than was originally intended. Mothers may also be willing to settle for a less-than-ideal partner in order to have another person sharing their living space and helping with childrearing. Therefore, relationships that were formed because of a birth may be more susceptible to the stresses and strains that accompany caring for a newborn. When compared on stability, then, postconception relationships may end more quickly than preconception relationships.

It is also likely that differences in duration between pre- and postconception marriages and cohabitations partially reflect who selects into those relationships. U.S. family formation patterns have become strongly demarcated by class (usually measured by maternal education or racial/ethnic minority status). Research has indicated that the vast majority of nonmarital births and births to cohabiting couples occurred to women without a 4-year college degree (Cherlin, 2010; Kirsch, Braun, Yamamoto, & Sum, 2007). Non-Hispanic Blacks and Hispanics also had more nonmarital and cohabiting births than non-Hispanic Whites (Kennedy & Bumpass, 2008). In addition, the intentionality of births varied by social class: Less well-educated women had higher rates of unintended births than those with more education (Finer & Henshaw, 2006). Because of these class differences in household formation behaviors and birth intentionality status, we expected that women who select into cohabiting relationships, and postconception cohabiting relationships in particular, would have disproportionately lower levels of education and would be disproportionately members of racial/ethnic minority groups than women who select into married relationships.

These socioeconomic differences suggest that it will be important to control for both education and race and ethnicity when predicting relationship stability. Other necessary control variables include age and gender. Younger individuals and men have been associated with higher rates of cohabitation and lower rates of marriage as well as higher rates of instability and less commitment to intimate relationships (Kennedy & Bumpass, 2008; Wolfinger & Wilcox, 2008).

### *Postconception Marriages*

Given the option of cohabitation, it is worth considering who might select into a postconception marriage. Postconception married individuals may have moderate levels of education and be those whose family formation patterns do not neatly align with the preponderance of marital births among the most educated or the preponderance of nonmarital and cohabiting births among the least educated (Cherlin, 2011). A study of postconception and preconception married individuals found that those in a postconception marriage had lower levels of education (the study did not consider cohabiters; Ginther

& Zavodny, 2001). Those in a postconception marriage may also have higher levels of religiosity, at least compared to those in cohabiting relationships. Religious individuals, versus the nonreligious, tended to have more conservative and traditional views about marriage and childbearing (Wilcox, 2004). Religious adults who find themselves with an unplanned conception may therefore not consider cohabitation to be an option and may instead choose to marry.

This study distinguished between a traditional postconception marriage, in which a couple who had been maintaining separate residences married between the conception and the birth, from a cohabiting postconception marriage, in which a cohabiting couple married between conception and birth. We distinguished between these two types because they may reflect different relationship trajectories, though how these two types will differ is theoretically ambiguous. Couples in a cohabiting postconception marriage were already living together prior to conception, with potentially more established relationships than those in a traditional postconception marriage. In contrast, those who respond to a conception by marrying, rather than cohabiting, may be more committed to marriage as an institution and may be less inclined to dissolve the relationship.

### *Study Hypotheses*

We hypothesized that variation in relationship outcomes would be greater by marital status than by when the union was formed. Previous evidence indicated that rates of dissolution were similar for pre- and postconception marriages (Ginther & Zavodny, 2001), suggesting that the social and legal ramifications of marriage reinforce its stability in a way not found for cohabitation. Moreover, assuming demographic similarity between pre- and postcohabiters, then cohabiters as a group might be more likely to have characteristics that are associated with lower quality relationships.

Although we hypothesized that union type would be more important in determining relationship outcomes than the relative time point at which the relationship was formed, we also believed that postconception cohabitations would be associated with shorter relationships than would preconception cohabitations. As mentioned above, relationships started because of a conception may be particularly fragile, especially if such relationships are not subject to widely known and expected norms that reinforce their stability. Moreover, postconception relationships may have difficulty establishing the necessary strengths needed to withstand the strain of caring for a newborn, because the couple has to adjust to both sharing a residence and taking care of a child. Assuming postconception cohabiters are choosing to form a relationship on the basis of the conception, and not on the basis of the prospective partner, they may be undermining the assortative mating process and making matches with people they otherwise would not have considered.

In short, postconception cohabiters, of all union types considered, may be the most at risk of union dissolution. We also expected postconception cohabiters to negatively compare in terms of sociodemographic characteristics with individuals in any type of marriage, based on previous evidence suggesting that cohabiters have lower levels of human capital than those who married (Cherlin, 2010). No evidence to date has compared preconception cohabiters with postconception cohabiters, but little a priori reason exists to expect the two groups to be demographically dissimilar.

## Method

### *Data*

Data come from the NLSY97, a nationally representative sample of individuals who were 12 to 16 years old by December 31, 1996. Beginning with interviews in 1997, NLSY97 researchers have been collecting annual information from its nearly 9,000 participants on their employment, relationship status, and health behaviors. To date, respondents have been interviewed 13 times, with 84.2% of the original sample participating in the 2009 interviews, when they were 24 to 30 years old (Bureau of Labor Statistics, 2011). The NLSY97 offers several advantages over other studies that have been used to examine union formation at the time of a birth. First, it is a nationally representative sample of a contemporary cohort of young adults; second, it follows individuals at more frequent intervals and for longer periods of time than other surveys; and third, it collects data prospectively on first relationships and first births.

The sample we used for our study consists of 4,060 individuals who either gave birth to or fathered a child between 1997 and 2009.

We concentrated on conceptions that resulted in a birth rather than all conceptions because abortion behavior is generally underreported in surveys, and underreporting varies nontrivially by race and ethnicity (Jagannathan, 2001). All individuals with a birth were included, regardless of their age at birth. The average age at birth was 20.5 for women and 21.6 for men, with 39% of women giving birth when they were 19 or younger and 26% of men fathering a child at age 19 or younger. Because we were interested in initial family transitions, we included only first births. Missing data among our covariates were quite low (only one case had missing data on education; four cases had missing data on the measure of religiosity; and one case had missing data on education, educational enrollment, and religiosity). We omitted the 10 individuals who lived with two partners during the pregnancy because we could not identify which partner was the biological parent. The final sample size with valid data was 4,044.

The main variable of interest was relationship type. To construct this variable, we relied on monthly partnership coresidence histories that were collected at each wave. The respondent could indicate whether he or she was living with a spouse, a romantic partner, or with neither. The spouse or romantic partner was given a unique identification number by the NLSY97, so the analyst could ascertain whether a respondent switched romantic partners between months or continued in a relationship with the same person.

We then analyzed relationship status at two time periods: (a) the point at which women would likely know they were pregnant (following Raley, 2001, this was calculated by subtracting 7 months from the birth date; for linguistic ease, this is referred to as the *conception date*) and (b) at birth. By comparing relationship status during these two periods, we derived the following relationship types. A *preconception marriage* consisted of individuals who married prior to conception. A *traditional postconception marriage* included those who were not living together at conception but married by the birth. A *cohabiting postconception marriage* referenced cohabiters who married by the birth. A *preconception cohabitation* included those cohabiting prior to the conception, and a *postconception cohabitation* referred to those who cohabited after the conception. The *nonunion* category consisted of those who lived without a spouse or partner; it referred to both women and men and did not imply that the parent lived with the child. About 3% ($n = 119$) of the sample lived with a partner at some point during or before the conception but was not living with that person at the birth. Those cases were included in the nonunion category. Including them in other categories did not significantly change the results presented here.

Relationship quality was measured through relationship dissolution. *Dissolution* was defined as the first month after child's birth when the respondent reported that he or she had not been living with a spouse or romantic partner for the past 6 months. Defining relationship dissolution as the first month in a 6-month period in which the couple did not live together could overstate relationship dissolution if the separation we observed occurred because of a reason unrelated to romantic status (e.g., military service). As such, our estimates may indicate an upper bound of marriage and cohabitation dissolution. Counting dissolution as the first 3-month period when couples did not live together did not substantially change the results.

Because the goal of our models was to compare individuals who choose different relationships rather than a causal account of relationship transitions, we chose a parsimonious list of covariates that were likely to differentiate between union types. We included measures of race and ethnicity: non-Hispanic White (omitted category), non-Hispanic Black, and Hispanic (Hispanics included the 38 respondents who were of a different race or ethnicity). Other covariates included age at the first birth, educational status (1 = *currently enrolled in school*), educational attainment (no high school diploma, high school diploma [omitted category], some college, college graduate), and three dichotomous measures of religious attendance (no attendance in the past year [omitted category], some religious attendance in the past year, and attends religious services once a week or more). In initial models, we considered two other characteristics: (a) the respondent's parents' highest grade attended and (b) the respondent's mother's age at the time of the respondent's birth. We subsequently dropped those characteristics because they were not significantly predictive of relationship type and were missing in several cases. We also did not measure earnings, because it was highly correlated with educational attainment and had a high degree of missing data. In models that predicted selection into relationship

Table 1. *Percentage of Respondents in Each Union Type (*N = 4,044*)*

| Union Type | Full Sample | White ($n$ = 1,645) | Black ($n$ = 1,369) | Hispanic ($n$ = 1,030) |
|---|---|---|---|---|
| Preconception marriage | 22.8 | 30.4 | 5.0 | 18.7 |
| Traditional postconception marriage | 4.0 | 4.4 | 2.1 | 4.9 |
| Cohabiting postconception marriage | 4.4 | 5.8 | 1.7 | 2.9 |
| Preconception cohabitation | 17.4 | 20.2 | 11.0 | 15.6 |
| Postconception cohabitation | 10.5 | 10.5 | 7.7 | 14.3 |
| Nonunion | 40.9 | 28.8 | 72.5 | 43.7 |

*Note:* All values are weighted.

type, educational status, educational attainment, and religiosity were measured in the wave before the birth occurred; age at first birth was measured when the birth occurred. In the Cox regression models examining dissolution, educational attainment was allowed to vary across waves. Lagging educational status and educational attainment to the survey wave before the pregnancy occurred did not significantly change the results.

Our analysis strategy was as follows. We used multinomial logistic regression to predict the association between these covariates and the other relationship types (using as the base category preconception marriages). Next, we used life table analysis to examine the proportion of relationships that remained intact after 3 years. Finally, we relied on Cox regression models to analyze how the odds of dissolution varied across relationship types. All results were weighted to be nationally representative and to correct for nonresponse bias, with weights designed by the NLSY97.

## Results

The distribution of relationship type at the time of the first birth is presented in Table 1. In this table, we present the results for the full sample and then by race and ethnicity. We also estimated distributions separately by gender, but the findings were quite similar for men and for women and are not shown.

In keeping with other studies on family formation patterns among young adults (Amato et al., 2008; Schoen, Landale, & Daniels, 2007), results for the full sample indicated that relatively few births were to married households (31.2% for all three married types combined), and the proportion of births to nonunion households (40.9%) constituted the largest category. Roughly 20% of births were in the context of postconception relationships. Postconception cohabiting relationships accounted for 10.5% of all births, more than double the proportion of traditional postconception marriage (4%). The proportion of preconception marriages (22.8%) was only slightly higher than the proportion of preconception cohabitations (17.4%).

Results by racial and ethnic group were consistent with past work (Kennedy & Bumpass, 2008) insofar as non-Hispanic Blacks and Hispanics had a higher proportion of out-of-wedlock births and were more likely to cohabit. Within each racial and ethnic group, though, the proportion of births to postconception cohabiting households outweighed the proportion of births to traditional postconception married households. For Hispanics, for example, 4.9% of births were born to traditional postconception married families, as opposed to 14.3% of births to postconception cohabiting households. Each racial and ethnic group also showed nontrivial amounts of births to preconception cohabiting households. Among both Blacks and Hispanics, the proportion of births to both types of cohabiting arrangements was larger than the proportion of births to the three married types combined. Births to Black respondents were also more likely to be in the context of a preconception cohabiting arrangement (11%) than in a preconception marriage (5%).

Descriptive statistics are presented in Table 2. Results are presented for all respondents combined and then separately by relationship type. Consistent with past studies (Lerman, 2002), the results suggest that individuals in the preconception marriage category had the relatively highest levels of socioeconomic advantage and those in the nonunion had the lowest. Cohabiters were more advantaged than respondents in the nonunion group. In addition, as we had hypothesized, preconception and postconception cohabiters were demographically similar, at least

Table 2. *Descriptive Characteristics for the National Longitudinal Survey of Youth 97* (N = 4,044)

| Variable | All | Preconception Marriage | Traditional Postconception Marriage | Cohabiting Postconception Marriage | Preconception Cohabitation | Postconception Cohabitation | Nonunion |
|---|---|---|---|---|---|---|---|
| Female | 56.5 | 57.1 | 51.7 | 54.5 | 55.6 | 51.3 | 58.4 |
| Mean age at first birth | 21.3 | 24.0 | 21.1 | 22.4 | 21.7 | 20.8 | 19.7 |
| *SD* | 3.35 | 2.35 | 2.48 | 2.35 | 2.81 | 3.01 | 3.34 |
| Race and ethnicity | | | | | | | |
| White | 61.2 | 81.4 | 67.4 | 80.7 | 71.0 | 61.0 | 43.2 |
| Black | 21.7 | 4.7 | 11.6 | 8.4 | 13.7 | 15.8 | 38.6 |
| Hispanic | 17.0 | 13.9 | 20.9 | 11.0 | 15.3 | 23.2 | 18.2 |
| Religious attendance | | | | | | | |
| None | 83.6 | 96.4 | 84.8 | 91.5 | 87.1 | 85.0 | 73.6 |
| Some | 8.4 | 1.7 | 7.6 | 4.1 | 8.1 | 8.3 | 12.7 |
| Weekly | 8.1 | 1.9 | 7.6 | 4.5 | 4.8 | 6.7 | 13.7 |
| Education | | | | | | | |
| Enrolled at first birth | 30.1 | 17.6 | 31.5 | 19.4 | 15.8 | 29.7 | 44.3 |
| Education at first birth | | | | | | | |
| Less than high school | 43.9 | 13.6 | 33.4 | 30.2 | 48.5 | 49.2 | 60.1 |
| High school | 29.4 | 30.8 | 38.3 | 41.9 | 33.1 | 30.0 | 24.7 |
| Some college | 17.5 | 26.8 | 25.1 | 17.4 | 14.7 | 17.0 | 13.0 |
| College | 9.1 | 28.7 | 3.2 | 10.6 | 3.7 | 3.8 | 2.2 |
| Sample size | 4,044 | 924 | 160 | 179 | 705 | 424 | 1,652 |

*Note:* All numbers represent percentages unless otherwise indicated. All values are weighted.

in terms of educational attainment, religiosity, and age at first birth. Individuals in a preconception cohabitation, however, relative to those in a postconception cohabitation, were more likely to be non-Hispanic White and were less likely to be enrolled in school.

The two postconception married groups had levels of socioeconomic advantage that fell somewhere between the preconception married and the cohabiting groups. Rates of high school incompletion for the two postconception married groups (about 30%) were much lower than those seen for cohabiters of either type (about 50%), but rates of postsecondary training (28%) were far lower than that found for the preconception married group (56%). In regard to age at first birth, the two postconception married groups were closer to the cohabiters than to the preconception married individuals, and those in traditional postconception marriage had similar rates of school enrollment to those found for the postconception cohabiting group. Some differences emerged between the two postconception married groups: Those in a traditional postconception marriage, compared with those in a cohabiting postconception marriage, had higher levels of religiosity and were less likely to be non-Hispanic White.

The next set of results present the associations between the relationship types and the covariates using multinomial logistic regression (see Table 3). Preconception marriage served as the reference category. Consistent with the descriptive statistics, respondents in a cohabiting relationship (of both types) were statistically different from preconception married individuals in several respects: They were younger at first birth, more likely to be Black, more likely to have dropped out of high school, and more likely to have not completed college. Relative to those in a preconception marriage, those in the preconception cohabiting group were less likely to be enrolled at first birth and less likely to have some college attendance. Individuals in the postconception cohabiting birth group were less likely to be female and more likely to be Hispanic. Fewer statistically significant differences emerged when we compared the two postconception married categories with the preconception married category. Respondents in both postconception married categories were significantly younger at first birth and were less likely to have any postsecondary training; those in a traditional postconception marriage were also significantly less likely to be female and more likely to be non-Hispanic Black.

In additional models not shown, we used categories other than preconception marriage as the omitted relationship type. Overall, we found relatively few significant differences when we compared individuals in a traditional postconception marriage with those in a cohabiting postconception marriage. When we compared cohabiters, we found some modest differences, but these differences did not indicate a consistent pattern of one group having a more advantaged profile than the other. Preconception cohabiters were more likely to be White rather than Hispanic, but they were also less likely to be enrolled in school.

The final set of results examined relationship dissolution. As an initial step, we examined the relative proportion of either type of cohabiting household that transitioned into marriage (results are not presented but are available on request). Rates of transition into marriage did not vary significantly between the two types of cohabiting households, with roughly one third of cohabiting households marrying. Rates of dissolution were also similar between those two groups; those who married from a cohabiting state were equally likely to dissolve their relationship (through separation or divorce) as were cohabiters who did not marry (note that we did not count cohabiting couples who married as dissolving their relationship; their relationships were considered intact). Because rates of dissolution were similar, we present results for all cohabiters combined rather than separating out those cohabiters who married.

We then estimated life tables on the percentage of relationships that lasted at least 3 years after the birth (see Table 4). For the full sample (see left-hand column of Table 4), rates of survival were highest for preconception marriages; 93.3% survived to 3 years after the first birth. Both types of postconception married relationships had reasonably similar dissolution rates, with 81.3% of traditional postconception and 84.9% of cohabiting postconception intact 3 years after the birth. Cohabiting relationships, regardless of type, dissolved the most quickly, with 62.1% of preconception cohabiting couples and 57% of postconception cohabiting couples reporting still being in a relationship after 3 years. Moreover, although rates of dissolution within 3 years for the two cohabiting groups were similar, postconception cohabiting

Table 3. *Multinomial Logit Predicting Relationship Type at the Birth of a First Child (N = 4,044)*

| Variable | Traditional Postconception Marriage ($n$ = 160) | | | Cohabiting Postconception Marriage ($n$ = 179) | | | Preconception Cohabitation ($n$ = 705) | | | Postconception Cohabitation ($n$ = 424) | | | Nonunion ($n$ = 1, 652) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *b* | *SE* | RRR | *b* | *SE* | RRR | *b* | *SE* | RRR | *b* | *SE* | RRR | *b* | *SE* | RRR |
| Female | −0.48* | 0.20 | 0.62 | −0.12 | 0.20 | 0.89 | −0.01 | 0.13 | 0.99 | −0.41** | 0.15 | 0.66 | −0.21 | 0.12 | 0.81 |
| Age at first birth | −0.29*** | 0.04 | 0.75 | −0.12** | 0.04 | 0.89 | −0.14*** | 0.03 | 0.87 | −0.27*** | 0.03 | 0.76 | −0.35*** | 0.03 | 0.71 |
| Race (vs. White) | | | | | | | | | | | | | | | |
| Black | 1.06*** | 0.29 | 2.89 | 0.59 | 0.30 | 1.81 | 1.26*** | 0.19 | 3.51 | 1.51*** | 0.22 | 4.54 | 2.75*** | 0.18 | 15.7 |
| Hispanic | 0.28 | 0.22 | 1.32 | −0.44 | 0.26 | 0.65 | −0.03 | 0.15 | 0.97 | 0.48** | 0.16 | 1.62 | 0.51*** | 0.14 | 1.67 |
| Religious attendance (vs. none) | | | | | | | | | | | | | | | |
| Some | 0.33 | 0.48 | 1.39 | 0.07 | 0.55 | 1.07 | 0.64 | 0.36 | 1.89 | 0.17 | 0.37 | 1.18 | 0.42 | 0.33 | 1.52 |
| Weekly | 0.30 | 0.47 | 1.35 | 0.17 | 0.52 | 1.19 | 0.10 | 0.35 | 1.10 | −0.08 | 0.37 | 0.92 | 0.28 | 0.31 | 1.32 |
| Education | | | | | | | | | | | | | | | |
| Enrolled at first birth | 0.26 | 0.26 | 1.30 | 0.00 | 0.27 | 1.00 | −0.65*** | 0.20 | 0.52 | 0.04 | 0.19 | 1.04 | 0.30 | 0.16 | 1.35 |
| Education at first birth (vs. no high school) | | | | | | | | | | | | | | | |
| Less than high school | −0.09 | 0.27 | 0.92 | 0.26 | 0.26 | 1.30 | 1.01*** | 0.17 | 2.74 | 0.72*** | 0.19 | 2.05 | 0.75*** | 0.16 | 2.11 |
| Some college | −0.03 | 0.27 | 0.97 | −0.64* | 0.28 | 0.53 | −0.44* | 0.18 | 0.65 | −0.16 | 0.21 | 0.85 | −0.31 | 0.17 | 0.73 |
| College | −1.46** | 0.53 | 0.23 | −0.97** | 0.36 | 0.38 | −1.64*** | 0.28 | 0.19 | 1.06** | 0.34 | 0.35 | −1.23*** | 0.27 | 0.29 |

*Note:* All values are weighted. All categories are compared with preconception marriage. RRR = relative risk ratio.

* $p < .05$. ** $p < .01$. *** $p < .001$.

relationships dissolved the most quickly. Nearly 17% of postconception cohabiting relationships did not survive until the child's first birthday.

When the sample was divided by race and ethnicity, results for non-Hispanic Whites largely mirrored those for the full sample, with the highest rates of dissolution found for cohabiting couples. Hispanics had high rates of dissolution among the postconception cohabiting households (only 53.6% were intact after 3 years), but relatively low rates of dissolution for preconception cohabitation households (70.2% remained intact). Non-Hispanic Blacks had the highest rates of dissolution among postconception cohabiting households, with 25.9% dissolving within the first year and 55.4% dissolving within 3. For both Blacks and Hispanics, rates of dissolution for cohabiting postconception marriage were actually lower than rates of dissolution for preconception married households (Black traditional postconception marriages also had lower rates of dissolution). These results should be interpreted cautiously, though, because the cell sizes for the Black and Hispanic postconception marriage categories were quite small. Small sample sizes may also explain lower dissolution rates among postconception marriages for Blacks relative to Whites, because Black individuals had less variability in these categories.

Results of Cox regressions, with which we compared preconception marriage versus the other union types, are presented in Table 5. Respondents in a nonunion household were omitted from this table (because they had no relationship to dissolve). Within marriage and cohabitation type, relatively few differences were found in odds of dissolution; we found the largest differences when we compared marriages with cohabitations. The odds of dissolution for traditional postconception marriage, once other covariates were included, were statistically indistinguishable from those of preconception marriages. Cohabiting postconception marriages, relative to preconception marriages, had one and half times the odds of dissolving (odds ratio = 1.49, $p < .05$). The odds of dissolution were substantially larger when cohabitation was compared with marriage. Both types of cohabiting relationships were associated with at least two and half times the odds of dissolution (odds ratios = 2.47 for preconception cohabitation and 2.9 for postconception cohabitation, $p < .01$ for both).

Table 4. *Survival by Union Type* (N = 2,111)

| | Full Sample | | | White ($n$ = 1,171) | | | Black ($n$ = 351) | | | Hispanic ($n$ = 589) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Union Type | 1 Year | 2 Years | 3 Years | 1 Year | 2 Years | 3 Years | 1 Year | 2 Years | 3 Years | 1 Year | 2 Years | 3 Years |
| Preconception marriage | 99.4 | 97.6 | 93.3 | 99.4 | 97.8 | 93.4 | 100.0 | 97.5 | 90.2 | 99.2 | 96.7 | 93.8 |
| Traditional postconception marriage | 94.7 | 87.3 | 81.3 | 93.3 | 83.9 | 79.0 | 100.0 | 91.2 | 91.2 | 96.4 | 96.4 | 83.0 |
| Cohabiting postconception marriage | 98.1 | 91.2 | 84.9 | 97.9 | 89.6 | 82.3 | 100.0 | 100.0 | 95.3 | 97.8 | 97.8 | 97.8 |
| Preconception cohabitation | 92.0 | 77.1 | 62.1 | 92.9 | 77.3 | 61.1 | 86.3 | 69.5 | 58.0 | 93.1 | 82.9 | 70.2 |
| Postconception cohabitation | 83.4 | 66.7 | 57.0 | 83.7 | 68.1 | 61.7 | 74.1 | 55.6 | 44.6 | 88.9 | 70.6 | 53.6 |

*Note:* All values are weighted.

Table 5. *Cox Regression: Time to Relationship Dissolution (N = 2,111)*

| Variable | *B* | *SE* | *β* |
|---|---|---|---|
| Union type (vs. preconception marriage) | | | |
| Traditional postconception marriage | 0.21 | 0.19 | 1.23 |
| Cohabiting postconception marriage | 0.40* | 0.19 | 1.49 |
| Preconception cohabitation | 0.91*** | 0.12 | 2.47 |
| Postconception cohabitation | 1.07*** | 0.13 | 2.90 |
| Female | 0.00 | 0.09 | 1.00 |
| Age at fist birth | −0.10 | 0.02 | 0.90 |
| Race (vs. White) | | | |
| Black | 0.40*** | 0.10 | 1.49 |
| Hispanic | −0.17 | 0.09 | 0.85 |
| Religious attendance (vs. none) | | | |
| Some | 0.30* | 0.15 | 1.35 |
| Weekly | −0.16 | 0.18 | 0.85 |
| Education | | | |
| Enrolled at first birth | −0.01 | 0.11 | 0.99 |
| Education at first birth (vs. high school) | | | |
| Less than high school | 0.04 | 0.10 | 1.05 |
| Some college | −0.09 | 0.12 | .91 |
| College | −0.82 | 0.27 | 0.44 |

*Note:* All values are weighted.
$^{*}p < .05$. $^{***}p < .001$.

In other models not shown but available on request, we reran the Cox models but omitted a different relationship category. We found no significant differences in the odds of dissolution between traditional and cohabiting postconception relationships; both types of marriage were associated with lower odds of dissolution compared with pre- and postconception cohabitations. No significant differences in the odds of dissolution were found between the two kinds of cohabiting relationships.

## Discussion

We examined the role of postconception relationships in the lives of young adults with a first birth. Estimates indicated that nearly 19% of first births occur in households in which the parents began to live together after conception occurred. Among these births, the proportion occurring in a postconception cohabiting household (10.5%) was higher than those occurring in a traditional postconception marriage (4%) or a cohabiting postconception marriage (4.4%). Our results therefore indicated that contemporary adults who formed a relationship after a conception were more likely to choose cohabitation over marriage.

This shift from postconception marriages to postconception cohabitations is significant, because postconception cohabitations were very fragile and had higher rates of dissolution as compared with postconception marriages. Nearly 17% ended within 1 year of the child's birth, and 43% ended by the time the child was age 3. By comparison, only 19% of traditional postconception marriages and 15% of cohabiting postconception marriages had ended within 3 years. In Cox regression models, postconception cohabiting relationships had nearly three times the odds of dissolving relative to preconception marriages, traditional postconception marriages were no more or less likely to dissolve, and cohabiting postconception marriages had one and half times the odds.

Our results add to a growing body of literature documenting the fragility of the cohabiting relationship (Cherlin, 2010; Kennedy & Bumpass, 2008). The seeming instability of cohabitation undermines its advantages as a family context. Although it might seem advantageous for a child to be born into a union where both parents were present and had made the commitment to share a household, research has demonstrated that the relationship instability can be detrimental to child development (Cavanagh & Huston, 2008; Osborne & McLanahan, 2007). Moreover, given that cohabiting households may be economically unstable, children born to cohabiting unions may be doubly disadvantaged, insofar as they will be adversely affected both by relationship instability and fewer financial resources.

Our results suggest that *when* the coresident union was formed was much less important than the *type* of that union. Marriages of any type were associated with higher levels of stability, whereas cohabitations of any type were associated with more instability. The similarity in outcomes between cohabitation types and the dissimilarity between preconception cohabitation and preconception marriages suggest that the distinction between marriage and cohabitation was much more important than the distinction between pre- and postconception relationships. This result is consistent with those of other studies that have highlighted the unique nature of marriage and with the fact that its stability is reinforced by social and legal norms that do not apply to cohabitation (Cherlin, 2004; Gibson-Davis, Edin, & McLanahan, 2005; Smock & Gupta, 2002).

The similarity in relationship stability between preconception and postconception cohabiting couples was contrary to our expectations. We had thought that clearer differences would emerge between the two types, given that qualitative evidence has suggested that postconception cohabitations were formed as a response to a birth and did not necessarily reflect a deepening of a romantic relationship (Reed, 2006), yet hazards of dissolution were quite similar between the two groups. It is possible that preconception and postconception cohabitations did not reflect different types of relationships, because postconception cohabiting couples may have had plans to move in together anyway, and a child simply accelerated the time frame. Alternatively, these two groups could appear more similar because the cohabiting couples with the highest quality relationships may not be observed in this comparison, because it is possible that those with highest quality relationships may have married by the birth (and therefore be part of the cohabiting postconception married group).

Another potential explanation for the homogeneity in cohabiting relationship outcomes is that pre- and postconception cohabiters had a similar sociodemographic profile. As reported here and in other studies (Carlson, McLanahan, & England, 2004; Manning & Brown, 2006), cohabiting individuals, as compared with married individuals, were more likely to be members of racial/ethnic minority groups, younger at first birth, and to have lower levels of educational attainment. These characteristics, in turn, have been correlated with lower quality relationships and higher rates of relationship dissolution (Smock & Greenland, 2010). If this poorer sociodemographic profile explains why cohabiting individuals were associated with worse outcomes, then the similarity we found between preconception and postconception individuals would also explain the similarity in relationship stability. Unfortunately, our data did not allow us to identify the mechanisms by which cohabitation was associated with worse outcomes, but it seems clear that, regardless of the causal path, it holds for both preconception and postconception cohabiters.

Although we had speculated that odds of dissolution might differ between traditional and cohabiting postconception married individuals, we did not find this to be the case. The two groups were also relatively demographically similar. We did find, however, that only cohabiting postconception marriage was associated with increased odds of dissolution relative to preconception marriage. Although we cannot say for certain why only cohabiting postconception marriage had increased odds of dissolution, the result was consistent with other studies that have found that cohabitation prior to marriage, in particular for parents, is associated with an increased risk of dissolution (Tach & Halpern-Meekin, 2009). Scholars remain divided, though, as to whether the effect of cohabitation on marital disruption is causal or spurious (Brown, Sanchez, Nock, & Wright, 2006; Lillard, Brien, & Waite, 1995).

We had hypothesized that individuals with traditional postconception marriages may have had higher levels of religiosity than individuals with cohabiting postconception marriages, and average levels of religious attendance were indeed higher for traditional postconception marriages. We did not find, however, that religiosity significantly predicted the type of relationship individuals were in; neither did it significantly predict relationship length. Our measure of religiosity (measured only through religious attendance) may have been too crude to pick up meaningful differences.

Although race and ethnicity were not the focus of our study, we found that, consistent with previous work (Cherlin, 2010), both Blacks and Hispanics had higher proportions of births to cohabiting households than to married households. Moreover, among Blacks, the proportion of births to preconception married households (5%) was smaller than the proportion of births to either preconception cohabiting households (11%) or to postconception households (7.7%). This suggests that the retreat from marriage found elsewhere among Black parents (Kennedy & Bumpass, 2008) is, if anything, accelerating among young adults. We also found that Black cohabiting relationships had faster rates of dissolution relative to Whites or Hispanics, with only 58% of preconception and 45% of postconception cohabiting relationships surviving 3 years. This study cannot indicate why Black cohabiting households dissolved so quickly, but it seems a fruitful area for further work.

Limitations to our study should be noted. Because respondents of color had relatively few postconception marriages, we could not estimate statistically reliable models by race and ethnicity. Cohabitations, unlike marriages, may not have a distinct start date, because individuals may "drift" into cohabitation (Manning & Smock, 2005). By relying on information regarding who was residing in the household instead of relying on recall data of when a cohabitation began, we may have minimized bias arising from self-reports of cohabitation start dates (Teitler, Reichman, & Koball, 2006). Nevertheless, we cannot be sure that we have accurately classified when a cohabiting relationship began. The generalizability of the findings is limited because of the narrow age range observed (individuals between the ages of 12 and 30). Our study also represents a select sample of births and may not generalize to individuals who have births at older ages. Furthermore, we examined only first births, and the focus on first births could explain why rates of nonmarital births were so high. We found much higher dissolution rates for cohabitation than have been reported elsewhere (Kennedy & Bumpass, 2008). Our higher rates most likely occurred because of the youth of our sample, although they could reflect our definition of dissolution. We were also able to follow respondents only until 2009, when the NLSY97 was last collected; more differences between pre- and postconception marriages may have emerged if respondents were followed for a longer time frame. Finally, our regression results depicted associations, but they did not indicate causal relationships.

This study underscores how the emergence of cohabitation as an acceptable context for childbearing has changed the family formation landscape. Fewer respondents chose marriage as a response to a conception but instead opted to cohabit. These results suggest that the norm to form a union in response to a birth remains in place but has changed from one of marriage to one of cohabitation. It is probable that individuals still value the idea of a two-parent family but no longer consider it necessary for the parents to be married. Given the fragility of cohabiting unions, however, it seems clear that as pre- and postcohabitation continue to grow in prevalence, an increasing numbers of births will be to parents with unstable relationships.

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## References

Akerlof, G. A., Yellen, J. T., & Katz, M. L. (1996). An analysis of out-of-wedlock childbearing in the United States. *Quarterly Journal of Economics, 111*, 278 – 317.

Amato, P. R., Landale, N. S., Havasevich-Brooks, T., Booth, A., Eggebeen, D. J., Schoen, R., & McHale, S. (2008). Precursors of young women's family formation pathways. *Journal of Marriage and Family, 70*, 1271 – 1286.

Bachu, A. (1999). *Current population reports: Trends in premarital childbearing.* Washington, DC: U.S. Census Bureau.

Brown, S. L., Sanchez, L. A., Nock, S., & Wright, J. D. (2006). Links between premarital cohabitation and subsequent marital quality, stability, and divorce: A comparison of covenant versus standard marriages. *Social Science Research, 35*, 454 – 470.

Bureau of Labor Statistics. (2011). *NLSY97 user's guide.* Washington, DC: Author. Retrieved from http://www.nlsinfo.org/nlsy97/nlsdocs/nlsy97/97sample/introsample.html

Carlson, M. J., McLanahan, S., & England, P. (2004). Union formation in fragile families. *Demography, 41*, 237 – 261.

Cavanagh, S. E., & Huston, A. C. (2008). The timing of family instability and children's social development. *Journal of Marriage and Family, 70*, 1258 – 1270.

Cherlin, A. J. (2004). The deinstitutionalization of American marriage. *Journal of Marriage and Family, 66*, 848 – 861.

Cherlin, A. J. (2009). *The marriage-go-round: The state of marriage and the family in America today.* New York: Knopf.

Cherlin, A. J. (2010). Demographic trends in the United States: A review of research in the 2000s. *Journal of Marriage and Family, 72*, 403 – 419.

Cherlin, A. J. (2011). Between poor and prosperous: Do the family patterns of moderately educated Americans deserve a closer look? In M. J. Carlson & P. England (Eds.), *Social class and changing families in an unequal America* (pp. 68 – 84). Stanford, CA: Stanford University Press.

Coontz, S. (2005). *Marriage, a history: From obedience to intimacy, or how love conquered marriage.* New York: Viking.

Finer, L. B., & Henshaw, S. K. (2006). Disparities in rates of unintended pregnancy in the United States, 1994 and 2001. *Perspectives on Sexual and Reproductive Health, 38*, 90 – 96.

Gibson-Davis, C. M., Edin, K., & McLanahan, S. (2005). High hopes but even higher expectations: The retreat from marriage among low-income

couples. *Journal of Marriage and Family, 67*, 1301 – 1312.
Gibson-Davis, C. M., & Rackin, H. (2011). *Trends in pre- and postconception marriages and cohabitations*. Sanford School of Public Policy Working Paper, Duke University.
Ginther, D. K., & Zavodny, M. (2001). Is the male marriage premium due to selection? The effect of shotgun weddings on the return to marriage. *Journal of Population Economics, 14*, 313 – 328.
Hofferth, S. L. (2006). Residential father family type and child well-being: Investment versus selection. *Demography, 43*, 53 – 77.
Jagannathan, R. (2001). Relying on surveys to understand abortion behavior: Some cautionary evidence. *American Journal of Public Health, 91*, 1825 – 1831.
Kennedy, S., & Bumpass, L. (2008). Cohabitation and children's living arrangements: New estimates from the United States. *Demographic Research, 19*, 1663 – 1692.
Kirsch, I., Braun, H., Yamamoto, K., & Sum, A. (2007). *America's perfect storm: Three forces changing our nation's future*. Princeton, NJ: Educational Testing Service.
Lerman, R. (2002). *Marriage and the economic well-being of families with children: A review of the literature*. Washington, DC: The Urban Institute.
Lillard, L. A., Brien, M. J., & Waite, L. (1995). Premarital cohabitation and subsequent marital dissolution: Is it self-selection? *Demography, 32*, 437 – 458.
Manning, W. D., & Brown, S. L. (2006). Children's economic well-being in married and cohabiting parent families. *Journal of Marriage and Family, 68*, 345 – 362.
Manning, W. D., & Smock, P. J. (2005). Measuring and modeling cohabitation: New perspectives from qualitative data. *Journal of Marriage and Family, 67*, 989 – 1002.
Mincieli, L., Manlove, J., McGarrett, M., Moore, K., & Ryan, S. (2007). *The relationship context of births outside of marriage: The rise of cohabitation* (Child Trends Research Brief No. 2007-13). Washington, DC: Child Trends.
Nock, S. L. (1995). A comparison of marriages and cohabiting relationships. *Journal of Family Issues, 16*, 53 – 76.
Osborne, C., Manning, W. D., & Smock, P. (2007). Married and cohabiting parents' relationship stability: A focus on race and ethnicity. *Journal of Marriage and Family, 69*, 1345 – 1366.
Osborne, C., & McLanahan, S. (2007). Partnership instability and child well-being. *Journal of Marriage and Family, 69*, 1065 – 1083.
Raley, R. K. (2001). Increasing fertility in cohabiting unions: Evidence for the Second Demographic Transition in the United States? *Demography, 38*, 59 – 67.
Reed, J. M. (2006). Not crossing the "extra line": How cohabitors with children view their unions. *Journal of Marriage and Family, 68*, 1117 – 1131.
Schoen, R., Landale, N. S., & Daniels, K. (2007). Family transitions in young adulthood. *Demography, 44*, 807 – 820.
Smock, P. J., & Greenland, F. R. (2010). Diversity in pathways to parenthood: Patterns, implications, and emerging research directions. *Journal of Marriage and Family, 72*, 576 – 593.
Smock, P. J., & Gupta, S. (2002). Cohabitation in contemporary North America. In A. Booth & A. C. Crouter (Eds.), *Just living together: Implications of cohabitation on families, children, and social policy* (pp. 53 – 84), Mahwah, NJ: Erlbaum.
Tach, L., & Halpern-Meekin, S. (2009). How does premarital cohabitation affect trajectories of marital quality? *Journal of Marriage and Family, 71*, 298 – 317.
Teitler, J. O., Reichman, N., & Koball, H. (2006). Contemporaneous versus retrospective reports of cohabitation in the Fragile Families survey. *Journal of Marriage and Family, 68*, 469 – 477.
Wilcox, W. B. (2004). *Soft patriarchs, new men: How Christianity shapes fathers and husbands*. Chicago: University of Chicago Press.
Wolfinger, N. H., & Wilcox, W. B. (2008). Happily ever after? Religion, marital status, gender and relationship quality in urban families. *Social Forces, 86*, 1311 – 1337.
Wu, L. L., & Musick, K. (2008). Stability of marital and cohabiting unions following a first birth. *Population Research and Policy Review, 27*, 713 – 727.