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FERTILITY AND THE STABILITY OF COHABITING UNIONS: VARIATION BY INTENDEDNESS

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Abstract

Although more cohabiting couples have children, it is not clear whether the theories explaining greater marital stability among parents can be applied to cohabitations. These theories often assume that births are intended, and this is far less likely to be the case during cohabitation. Using data from the 2002 cycle of the National Survey of Family Growth, we find that intended and disagreed-upon pregnancies (but not unintended pregnancies) reduce the risk of dissolution, and all pregnancies increase the risk of marriage over staying cohabiting relative to women who have no pregnancy or birth. Relative to non-fertile women, births are generally unrelated to stability and transitions but relative to women with an intended birth, having an unintended or disagreed-upon birth increases the risk of dissolution. These findings suggest that normative pressures influence cohabitation during pregnancy, while selection processes and rational choice considerations play a greater role after a birth.

Running Head: Fertility Intendedness and Cohabitation Stability

As cohabitation has increased in prevalence in the United States, childbearing and childrearing in cohabiting unions has become more common and acceptable (Kennedy and Bumpass 2008; Raley 2001). At the same time, though, marriage remains the preferred union type in which to raise and have children (Morin 2011; Thornton and Young-DeMarco 2001), and many cohabiting couples who become pregnant transition to marriage prior to the birth of their child (Manning 2004). Because marriage is viewed as a more appropriate relationship in which to raise a family, fertility within cohabiting unions is more likely to be unintended or disagreed-upon by the partners than fertility within marriages (Chandra et al. 2005). However, although cohabitation as a family form remains incompletely institutionalized in the United States, cohabiting women are increasingly resembling married women in their contraceptive and fertility behaviors (Sweeney 2010), and a sizeable proportion of pregnancies and births in cohabiting unions are intended, between 30-42% depending on the source of the estimate (Chandra et al. 2005; Finer and Henshaw 2006; Guzman, Wildsmith, Manlove, and Franzetta 2010). Despite the implicit assumption in work studying fertility and cohabitation that the unintended fertility frequently experienced in cohabiting unions may be detrimental to union stability (e.g., Manning 2004), prior research has ignored possible associations between fertility intentionality and the stability, and transitions out, of cohabiting unions. The current research explicitly tests this assumption using data from the 2002 National Survey of Family Growth (NSFG).

Children and union stability

The effect of children on union stability has been extensively studied, largely with a focus on marital unions. Past research finds that married couples with children are less likely to experience marital disruption than those without children (Cherlin 1977; Heaton 1990; Lillard and Waite 1993; Morgan and Rindfuss 1985; Waite, Haggstrom, and Kanouse 1985; Waite and

Lillard 1991). The association between fertility and cohabitation stability is less clear. Using data from Canada and Great Britain, respectively, Wu (1995) and Steele et al. (2005) find that children reduce instability in cohabiting unions, though neither of these studies examined the transition to marriage. Manning (2004) more explicitly examined transitions and stability in the United States, finding that pregnancy among cohabitors increased union stability by increasing the likelihood of marriage, but children born during cohabitation did not increase union stability as they do in marriage.

Past research has proposed three explanations for associations between childbearing and marital stability. The first approach to explaining the stabilizing effects of children on relationships is essentially a rational choice approach. This theory argues that, relative to childlessness, shared children create "union-specific capital" that increases the utility of a particular union (Becker 1981) and generate relationship solidarity by reducing uncertainty about the union's future, given the long-term commitment having children entails (Friedman, Hechter, and Kanazawa 1994). Therefore, the benefits of remaining in the original relationship increase; the financial costs of dissolution increase as well when children are involved. According to the second explanation, children increase the normative pressure against dissolution (Coleman 1988; Thornton 1977); that is, there is more social disapproval when parents split up than when nonparents do. Finally, the third theory suggests that the decision to have children is selective of the most stable couples (Lillard and Waite 1993; Myers 1997). Since couples who are unsure of their union's strength and longevity avoid childbearing, choosing to have children serves as a signal of union stability and commitment.

These explanations may be applicable to fertility in cohabiting unions as well as marriage. However, because of the ambiguous role of cohabitation in the U.S. family system, the

associations between childbearing and union outcomes predicted from these explanations are likely to be different for cohabitation than for marriage. Applying these theories is also made more complex by the fact that there are more possible transitions from cohabitation than from marriage: cohabiting couples can separate, remain cohabiting, or decide to marry. Further, there appears to be a greater distinction between pregnancy and a birth in cohabitation than in marriage (Manning 2004) because of different types of transitions and because of social norms toward nonmarital childbearing.

According to the rational choice framework, children would reduce rates of dissolution of cohabiting unions but would not necessarily increase rates of marriage. If children are union-specific capital, this capital can be enjoyed (and further investments can be made) regardless of whether the cohabiting union remains intact as a cohabitation or transitions to marriage. Theories based on the normative pressure against dissolution among parents also predict that children reduce separation rates for cohabitors. However, the normative pressure theory would suggest that there is a distinction between cohabitation and marriage. Given that marriage is preferable to cohabitation as an appropriate family form, social pressures to form a "legitimate" family would encourage cohabiting couples to marry, particularly prior to birth, rather than remain cohabiting.

Arguments about the role of selection in explaining links between fertility and relationship outcomes also suggest that childbearing reduces the risk of dissolution but are less clear about the association between cohabiting fertility and the transition to marriage. Cohabiting couples who have children are signaling their greater commitment to each other and the relationship but also possibly their greater acceptance of cohabitation as a context for fertility. Manning (2004) notes that couples who experience a pregnancy during cohabitation but do not marry before the birth have already decided to stay together in a nonmarital union – they have

essentially decided not to commit to marriage. According to these arguments, both pregnancy and birth during cohabitation should reduce the risk of relationship dissolution; the risk of transition to marriage should be higher during pregnancy but not after the birth.

The role of fertility intentionality

None of these theories – union-specific capital as seen in a rational choice framework, normative pressure against dissolution, and selection – have explicitly considered the role of fertility intentionality and how it may impact union stability, though intentionality is often an implicit argument (e.g. Manning 2004). Relative to married couples, cohabitors who experience fertility are more likely to report a birth was unintended (Chandra et al 2005), and prior work on couples with children suggests that unions are more likely to dissolve after an unintended birth than an intended birth (Guzzo and Hayford 2010; Manning, Smock, and Majumdar 2004; Wu and Musick 2008). As is widely known, children can introduce stress into relationships – they are labor-intensive, entail additional financial obligations, and take time away from leisure activities that may reinforce a couple's bond with each other. Particularly during early childhood, parental relationship quality often suffers due to the intensity of young children's demands and needs (Gable, Belsky, and Crnic 1995). The decline in relationship quality occurs across all unions but is most sizeable among those with unintended fertility (Belsky and Rovine 1990; Cox, Paley, Burchinal, and Payne 1999). The stressors of childbearing may be greater for those with unintended fertility, while at the same time less stable couples are more likely to characterize their childbearing as unintended. Further, couple disagreement on intentionality is common among unmarried couples (Williams 1994), and when one partner wants (or does not want) the child, a rift may emerge in the relationship, as partners may feel betrayed or trapped (Edin and Kefalas 2005). Still, since at least one partner intended the birth, disagreement over intentionality

may lower the stress in the union and may reduce the negative effect on stability relative to those who both agree the birth was unintended.

In this section, we propose hypotheses regarding the associations between fertility intentionality and outcomes of cohabiting unions generated from the three theoretical approaches described above. In some cases these hypotheses are competing, while other hypotheses are complementary. Rational choice and normative pressure approaches argue that children reduce rates of relationship dissolution because they increase the costs of dissolution, since both parents have higher utility when they coreside with the child and the social pressure against dissolution is higher when children are involved. As such, both theories would predict that all births, regardless of intentionality, reduce dissolution rates relative to cohabitors with no children (hypothesis 1A). However, given the stressors of childrearing, the rational choice perspective would suggest that unintended, and to a lesser extent, disagreed-upon fertility would result in lower utility (i.e., satisfaction) with the parent role than among those with intended fertility. Thus, we hypothesize that the reduction in dissolution risks would be lower for unintended and disagreed-upon fertility relative to intended fertility (hypothesis 1B). Further, although the rational choice perspective does not distinguish between cohabitation and marriage in terms of children as shared capital, the normative pressure theory implies that fertile cohabiting couples, regardless of intentionality, will have higher rates of marriage than couples who do not experience a pregnancy or birth, with stronger effects during pregnancy than after a birth given union preferences for childrearing and legitimation of nonmarital conceptions (hypothesis 1C).

Intentionality is most relevant to theories regarding fertility as selective of more stable couples. The signaling function of having a child is most certainly different for intended and unintended fertility, with distinctions between pregnancy and birth. Intentionally deciding to

have a child with one's cohabiting partner is indeed a strong signal of union confidence, and may suggest that couples are jointly planning marriage and childbearing (Brien, Lillard, and Waite 1999; Musick 2007; Wu and Musick 2008). As such, we hypothesize that marriage rates for cohabiting couples are higher among couples with an intended pregnancy than an unintended, a disagreed-upon pregnancy, or no pregnancy (hypothesis 2A).

Births may exhibit greater variation in union stability by intentionality than pregnancies. For individuals who *choose* to have a child while cohabiting and who do not marry prior to the birth, a birth may signal two possible viewpoints relative to couples who do not have a child at all. One, couples with intended births may view cohabitation as an acceptable union in which to raise their child. If this is the case, those with intended cohabiting births would be likely to continue cohabiting in the future, being less likely to break up *or* marry than those without births or those with unintended births (hypothesis 2B). Two, those who intend to have children while cohabiting may be, like married couples, most confident in the permanence of the relationship (Myers 1997) and thus would be less likely to break up but more likely to marry after the birth (hypothesis 2C). In fact, these couples may be having a child precisely because they expect to marry in the future and are jointly planning childbirth and marriage. Unintended, and to a lesser-extent, disagreed-upon births are expected to be increase the risk of dissolution relative to no births or an intended birth, given the potentially greater disruptive nature of unintended childbearing on couples who may not feel prepared to start a family together (hypothesis 2D).

The above arguments largely pertain to the first pregnancy and birth within a cohabiting union. Subsequent fertility within cohabiting unions, which has rarely been studied, may also be associated with stability. Couples who stay together long enough to have another child are more stable than couples who break up after the first birth, and they would also seem to be most

accepting of cohabitation as a family-building form, since they have not transitioned to marriage. The distinction between pregnancy and birth would likely be less relevant here, as couples who did not legitimate a prior nonmarital conception are unlikely to view legitimation of a subsequent nonmarital conception as necessary. Again, intentionality likely matters. Unlike the first birth within the union, we do not expect that an unintended or disagreed-upon birth increases the risk of dissolution, as becoming a parent again is far less disruptive than having a first child in union and these parents have already demonstrated a commitment to stay together and coparent. However, given the signaling role of fertility, we do expect that while any higher-parity fertility would further decrease the risk of dissolution, intended higher-parity births will more strongly decrease the chances of dissolution than unintended or disagreed-upon fertility (hypothesis 3).

In sum, if intended births reduce the risk of dissolution but unintended and disagreed-upon births do not, this supports the selection arguments about the link between fertility and union stability. If all fertility reduces the risk of dissolution, with intended births having the largest reduction of risk but fertility overall is unrelated to the transition to marriage (with no variation by intentionality in the risk of transition), than the rational choice framework is supported. If all fertility reduces the risk of dissolution, with intended births have the largest reduction of risk *and* all fertility increases the risk of marriage, particularly during pregnancy (with no variation by intentionality), the normative pressure theory is supported.

Other factors related to fertility and cohabitation stability

Socioeconomic and demographic characteristics such as education and race/ethnicity are strongly linked to both cohabiting fertility and to the stability and transitions of cohabiting unions (Manning and Smock 2005; Smock and Manning 1997; Wu and Pollard 2000), as are family background characteristics (e.g., childhood family structure, maternal education and fertility

timing). Generally, more advantaged individuals are more likely to transition to marriage, less likely to experience fertility in cohabiting unions, and less likely to experience unintended fertility. Teachman (2003) notes that the socialization process may differ for people who grew up in families that experienced marital dissolution and/or single parenthood, which may affect their attitudes toward, and stability of, cohabitation and marriage (Thornton 1991; Amato and Booth 1991; Amato 1996; Axinn and Thornton 1996; Wolfinger 1999). Race-ethnic differences in fertility and cohabitation are widely documented (Raley and Sweeney 2007). Cohabiting white women are more likely to transition to marriage from a cohabiting union (Manning and Smock 1995), especially when pregnant (Manning 2001, 2004). Hispanic women are more likely to have a child while cohabiting, to intend their cohabiting births, and to remain in a cohabiting union after a birth than non-Hispanic white or black women (Manning 2001, 2004; Musick 2007), with differences by nativity (Brown, VanHook, and Glick 2008; Choi and Seltzer 2009; Landale and Oropesa 2007). Birth rates in cohabiting unions are higher for blacks than whites, and their cohabiting unions tend to be more unstable (Manning and Smock 1995, 2002).

Prior family formation behaviors also influence cohabitation stability. Rates of postmarital cohabitation are increasing (Lichter and Qian 2008), and previously married cohabitors have lower rates of both marriage and relationship dissolution (Bumpass, Raley, and Sweet 1995). Similarly, many individuals have children prior to cohabitation, from either their current union (where they begin cohabiting after the child has been born) or from a prior union, and having children with a different partner tends to reduce union stability (Bumpass, Sweet, and Martin, 1990; Clarkberg, Stolzenberg, and Waite, 1995; Lampard and Peggs, 1999; Stewart, Manning, and Smock, 2003). Finally, characteristics of the current union are important, with

couples who were engaged when they began cohabiting more likely to transition to marriage (Guzzo 2009).

Data and methods

Data and measures

We use the 2002 cycle of the National Survey of Family Growth (NSFG), a nationally representative cross-sectional survey of U.S. women aged 15-44 designed to measure levels and trends in fertility. The NSFG includes detailed birth and relationship histories as well as measures of sociodemographic characteristics and family background. The 2002 cycle interviewed 7,639 women, of whom 3,574 had ever cohabited and had valid information on cohabitation start and end dates.

Our dependent variable is the stability of the first cohabiting union. We use discrete time event history analysis, and the data is converted into person-months in which women enter the month they begin cohabiting and exit when the relationship ends or are censored if the relationship is intact at the time of survey. Cohabiting unions "end" through a break-up or marriage, though clearly a relationship does not end when marriage occurs. We use multinomial logistic regression to simultaneously estimate the competing hazards of relationship end via dissolution or marriage.

Our primary independent variable is the occurrence of intended and unintended pregnancies and births. The NSFG collects full fertility histories and is the primary national source of information on birth intendedness. It should be noted that this measure only includes pregnancies resulting in a live birth; pregnancies ending in miscarriage or abortion are notoriously under-reported in national survey data (Jones and Kost 2006). We define a pregnancy as the seven months prior to a live birth. The NSFG does not directly inquire whether

a birth was intended or wanted. Instead, wantedness and intendedness are defined based on responses to a series of questions asked for every birth. Wantedness is derived from the question "Right before you became pregnant, did you yourself want to have a(nother) baby at any time in the future?" Negative answers are characterized as unwanted births. If a woman responds affirmatively, she is asked about the timing of the pregnancy: "So would you say you became pregnant too soon, at about the right time, or later than you wanted?" Births that are identified as too late or at about the right time are considered wanted and intended. Births that are identified as occurring too soon are asked a follow-up question regarding the extent to which the births were too soon: "How much sooner than you wanted did you become pregnant?" Following recent research on definitions of unintended fertility (Abma, Mosher, and Jones 2008; Lindberg, Finer, and Stokes-Prindle 2008; Pulley, Klerman, Tang, and Baker 2002) as well as exploratory analyses using a more detailed classification system (later than wanted, wanted or on-time, slightly mistimed, seriously mistimed, unwanted), we consider births occurring two or more years too soon as seriously mistimed and thus unintended, while those occurring less than two years too soon are considered slightly mistimed and thus intended. The NSFG also inquired about women's partner's view of whether the birth was intended, using similar questions. They were asked "Right before you became pregnant, did the father want you to have a(nother) baby at any time in the future?" and if they responded affirmatively, they were asked "So would you say you became pregnant sooner than he wanted, at about the right time, or later than he wanted?" Births that the respondent reported her partner considered too late or at the right time are considered intended. Births the respondent reported her partner considered too soon or didn't care about the timing and those for which she was unsure of what her partner thought are

considered unintended. There were 25 women who had a birth who were missing information on birth intendedness, reducing the sample size to 3,549 women.

Other socioeconomic and demographic characteristics include family structure at age 14, the respondent's mother's education, and whether the respondent's mother had a child prior to age 18. We include age at the start of the union and race/ethnicity/nativity (non-Hispanic white, non-Hispanic black, native-born black, and foreign-born black). Our analytical sample excludes women in the "other" race-ethnic category or who had missing information on nativity (n=142). Time-varying covariates include duration of union since start of cohabitation and whether the respondent had a high school degree. Family formation behaviors include whether the respondent had a recent birth (defined as having a birth within 6 months of the start of cohabiting, which is most likely with their cohabiting partner) and whether the respondent had an earlier birth (defined as a birth more than 6 months prior to cohabitation, most likely with a different partner). Past relationship variables include whether the respondent had previously been married; preliminary models showed that the effect of fertility and intentionality did not vary significantly between never-married and previously-married women. We also include whether the respondent's partner had a child from a previous relationship or had been married before (there is no information on partner's past cohabitations). Finally, we include whether the respondent was engaged at the start of cohabitation. 20 cases are missing information on one of these covariates, leaving a final sample size of 3,387 women.

Analytic approach

We estimate two nested models. The first model includes only simple time-varying indicators of the first birth within the union: whether the respondent was pregnant during the month; whether a birth occurred while cohabiting, where respondents are recorded as having had

a birth the month of the birth and all months thereafter (these are mutually exclusive variables). We also include whether the respondent experienced a subsequent pregnancy or birth after the first birth (defined as the seven months prior to the second birth within the union and all months thereafter). This first model essentially replicates prior work on fertility and cohabitation stability to establish the baseline association between fertility and cohabitation outcomes, though it improves upon prior work by including an indicator of subsequent fertility. It should be noted that the indicator of fertility focuses on the first birth while cohabiting, not necessarily a woman's or couple's first birth; women may have had births prior to cohabitation either with this partner or another partner.

The second model incorporates more nuanced indicators of fertility to take intendedness into consideration. Here, fertility is measured via two multi-category indicators. The first is a time-varying categorical measure of pregnancy and birth that takes the form of a set of mutually exclusive dummy variables: no pregnancy or birth during the month or in prior months (omitted), an unintended pregnancy during the month, an intended pregnancy during the month, a pregnancy during the month for which the woman reports she and her partner disagree about intendedness, an intended birth during the month or any previous month, an unintended birth during the month or any previous month, and a disagreed-upon birth during the month or any prior month. In exploratory analyses, we tested several alternative specifications. We ran models distinguishing between pre-union conceptions and pregnancies conceived during cohabitation but did not find significant differences by timing of conception. We also assessed whether associations between fertility and relationship outcomes varied by time since birth (i.e., whether the association was stronger immediately after a birth); results showed that they did not.

Preliminary analyses also indicated that it did not matter which partner reported the birth as intended and which partner reported the birth as unintended.

The second fertility indicator is time-varying as well and measures fertility after a first birth: no subsequent pregnancy or birth during the month or in a previous month (omitted), an intended pregnancy or birth during the month or in a previous month, an unintended pregnancy or birth during the month or in a previous month, a disagreed-upon pregnancy or birth during the month or in a previous month, and pregnancies or births of mixed intentionalities (that is, having more than one subsequent pregnancy or birth and these pregnancies/births are not of the same intendedness; this category is assigned a "1" the first month of a new pregnancy with a different intentionality than the last pregnancy). Preliminary models demonstrated that for higher-order births within the union, there were no significant differences between pregnancies and births.

Results

Descriptive results

Table 1 displays weighted descriptive information for women's first cohabiting unions. The sample is largely non-Hispanic white, and about two-thirds of the sample lived with both biological parents at age 14. About three-fourths of mothers of the women in the sample had completed high school, though only 15% of the respondent's mothers had completed college and 19% had a birth prior to age 18. 70% of the women themselves had completed high school prior to the start of cohabitation.

– Table 1 here –

Looking at prior family behaviors, about a fifth of women had a birth more than six months prior to the start of cohabiting (i.e. a birth likely to be with a partner other than their cohabiting partner), while 3% had a birth within six months of cohabiting (most likely with their

cohabiting partner). 15% of the sample is previously married, 23% are partnered with a man who had been married before, and 26% are partnered with a man who has children from a prior relationship. Turning now to characteristics of their first cohabiting union, women were about 23 years old on average when they started cohabiting. Slightly less than half were engaged at the start of cohabitation. These first cohabitations lasted just over two years (27.8 months) on average. By the end of the period of observation, only 12% of cohabitations were still intact as cohabitations, just over half (54%) had transitioned to marriage, and about a third had dissolved.

Keeping in mind that the data only provides information on pregnancies ending in live births, fertility is fairly common in first cohabitations. Just over 40% of women reported a pregnancy during cohabitation, though only 20% reported a birth, suggesting that many pregnant cohabitors transition to marriage prior to the birth. Disagreed-upon first pregnancies were most common, occurring for about 18% of women and 42% of all pregnancies (17.7%/42.4%=41.7%). 13% of women in first cohabitations had an intended first pregnancy in the union, and 12% had an unintended first pregnancy. About 8% of women had an intended first birth while cohabiting, about 5% had an unintended birth, and 8% had a disagreed-upon birth. Subsequent fertility was quite rare – only 6% of women had more than one birth while cohabiting. Among higher-parity births, intended births were most common and unintended births were least common.

Multivariate results

Table 2 displays the relative risk ratios from multinomial logistic regression for our two models of cohabitation stability and transitions. Model 1 includes straightforward measures of the first birth within the union and any subsequent fertility. Consistent with previous research, fertility is associated with cohabitation outcomes, but only during the months leading up to the first birth within the union. A pregnancy during the month sharply reduces the odds of

dissolution, by 50%, and increases the odds of marriage by about 115%, relative to women who are not pregnant and who have not had a birth while cohabiting. However, if a woman does not marry prior to the birth, having had a birth does not affect the stability of a cohabiting union relative to women who have not had a pregnancy or birth during cohabitation. Subsequent union fertility is also unrelated to cohabitation stability and transitions when births are not separated by intention status.

– Table 2 here –

Socioeconomic and demographic variables are associated with stability and transitions largely as expected. Foreign-born Hispanic women are about 40-45% less likely to break up or marry relative to staying cohabiting than non-Hispanic white women, while non-Hispanic black and native-born Hispanic women are less likely to marry than stay cohabiting. Women who lived in a stepfamily at age 14 are 1.25 times as likely to experience dissolution than women who lived with both biological parents, and women who lived in an "other" family type (primarily single-parent families) are 0.86 times as likely to marry than remain cohabiting. Women who had at least a high school degree or more at the start of their cohabitation are about 30% more likely to marry than remain cohabiting.

Prior family behaviors are important. Women who had a child prior to cohabitation, regardless of whether it was within six months of starting cohabitation or occurred earlier, are about 25% less likely to marry than remain cohabiting. Previously married women are less likely to experience dissolution and more likely to marry than never-married women; partner's marital status works similarly. However, having a partner who has children from a prior relationship increases the risk of dissolution (RRR=1.22) and decreases the risk of marriage (RRR=0.69) relative to staying in an intact cohabitation.

Characteristics of the cohabitation themselves also influence stability and transitions. Women's age at the start of cohabitation is negatively associated with dissolution risks and positively associated with marriage risk. Engagement at the start of the union is highly salient – women who report being engaged when they started living with their partner are 0.72 times as likely to experience dissolution and 2.36 times as likely to marry than remain cohabiting relative to women who were not engaged.

Our overarching hypothesis is that the association between fertility and cohabitation outcomes varies by intention status of pregnancies and births. The second model in Table 2 shows results incorporating indicators of fertility by intentionality. The coefficients for socioeconomic, demographic, and prior/current union variables remain virtually unchanged, so the discussion here will focus only on fertility and intentionality. As expected, Model 2 demonstrates that not all pregnancies and births are associated with stability in the same manner.

Consistent with hypotheses 1A, 1C, and 2A, intended pregnancies sharply reduce the relative risk of dissolution (by about 60%) and strongly increase the risk of marriage (by about 170%) relative to women who do not have a pregnancy or birth while cohabiting. Unintended pregnancies, conversely, do not protect against dissolution but do increase the risk of marriage by only 80%. Disagreed-upon pregnancies function similar to intended pregnancies but the magnitude of the associations are smaller, as hypothesized; they reduce the risk of dissolution by about 40% and increase the risk of marriage by about 75%.

Hypotheses 2B and 2C are not supported; contrary to expectations, intended births are not protective against relationship dissolution relative to couples who have no children, and they are unrelated to the risk of marriage. A first birth of disagreed-upon intentionality is associated with an increased risk of dissolution relative to no birth, which weakly supports hypothesis 2D. There

is virtually no support for hypothesis 3, in that higher-order births while cohabiting generally do not reduce dissolution risks, though subsequent disagreed-upon births are associated with reduced risks of dissolution relative to no subsequent births. Entering into parenthood when one partner does not want to have a child at all (or at least not at this point) might lead to increased relationship conflict, especially if one partner feels trapped or tricked into being in the union (Edin and Kefalas 2005). Disagreement on a higher-parity birth may present a different scenario, where one partner perhaps feels ambivalent about having another child but not necessarily about the union.

Table 3 shows the relative risk ratios for dissolution and marriage with different omitted categories of fertility for Model 2. All other coefficients are identical to those presented in Model 2, Table 2, where the comparison category is women who do not experience fertility in their unions. The results with different contrasts show that although intentionality matters, pregnancy seems to generally matter more, as suggested by the normative pressure theory. Looking first at the relative risk ratios when the omitted category is an intended pregnancy, there is very little statistically significant variation across categories of pregnancy intentionality, though women with a disagreed-upon pregnancy are also less likely to transition to marriage than women with an intended pregnancy by about a third. All categories of births are associated with a significantly higher risk of dissolution relative to women with an intended pregnancy. Women with an intended birth or a disagreed-upon birth are over twice as likely to experience dissolution (RRR=2.14 and RRR=2.79, respectively) than women with an intended pregnancy during the month, while those with an unintended birth are four times as likely to experience dissolution. The risk of marriage, relative to remaining cohabiting, is also significantly lower for women who

have not (yet) experienced fertility and those who have any type of births compared to women with an intended pregnancy.

– Table 3 here –

When the category is an intended birth, we see more variation across other birth intentionality categories and some support for our hypotheses. Relative to an intended birth, a disagreed-upon birth and especially an unintended birth increase the risk of dissolution, consistent with hypothesis 1B. Women with intended pregnancies are about a third less likely to experience dissolution and about 1.6 times more likely to marry than a woman who remained cohabiting through her intended pregnancy. Even women with unintended and disagreed-upon pregnancies are more likely to marry than those with an intended birth, by about 70-80%. Together, these findings suggest that the normative pressures to marry are strongest prior to a birth. Then, among the select group of women who do not marry prior to a birth, women with an intended birth are less likely to experience dissolution than women with other types of births but no more likely to transition to marriage, perhaps because they view cohabitation as an acceptable family form in which to raise children (the selection argument) or because the utility of unintended and disagreed-upon births is lower than intended births (the rational choice framework). We also explored whether cohabitation stability was differentially affected by the intentionality of subsequent births; results showed that women who had no subsequent pregnancies or births or who had unintended pregnancies or births were marginally more likely to experience dissolution than remain cohabiting at p=.06 for categories (RRR=1.46 and RRR=1.70, respectively).

Discussion

Consistent with previous research, our results show that pregnant cohabitors, regardless of whether the pregnancy was intended, are more likely to marry than either cohabitors who do not experience fertility or cohabitors who had a birth. Expanding on prior research, we show that the likelihood of marriage is highest among those with an intended pregnancy, suggesting that couples do in fact jointly plan cohabitation, fertility, and marriage (Musick 2007). Unlike intended pregnancies and disagreed-upon pregnancies, unintended pregnancies do not reduce the risk of dissolution relative to cohabitors who did not have a birth, and women with an intended pregnancy are more likely to marry than their counterparts with a disagreed-upon pregnancy. After a birth occurs, fertility is only weakly associated with cohabitation stability and transitions. Compared to women who do not become pregnant or have a birth, women who have an intended birth while cohabiting are neither more nor less likely to marry or experience dissolution, relative to remaining cohabiting. A disagreed-upon birth modestly increases the risk of dissolution relative to no birth, and, compared to an intended birth, women with unintended or disagreed upon birth have a higher risk of dissolution.

This research confirms prior work on the greater importance of pregnancy, rather than a birth, on transitions to marriage in cohabiting unions but expands upon prior work by demonstrating that intentionality also matters to some extent, such that cohabiting unions are strongest and most likely to transition to marriage when the pregnancy was intended. Conversely, while our overall results confirm that births during cohabitation are more weakly related to cohabitation stability, we demonstrate that intended births while cohabiting, relative to other types of births, reduce the risk of dissolution but are unrelated to the marriage transition. This latter finding suggests that there is a subset of cohabiting women who view their unions as

stable and appropriate for having and raising children, essentially viewing their relationship as equal to marriage. They intend to have a child with their cohabiting partner but do not seem to view marriage as necessary. Their unions are far more likely to remain intact as marriages than women with other types of pregnancies or births. Women who have unintended and disagreed-upon births, on the other hand, are at an elevated risk for dissolution relative to women who intended to have a child while cohabiting.

Finally, it is worth noting that despite the obvious selectivity of couples who have additional children while cohabiting, subsequent fertility in a cohabiting union is largely unrelated to the union's stability. Having more than one birth in a first cohabiting union is a fairly rare occurrence. The lack of significant differences between pregnancies and births, combined with the very weak association between subsequent fertility, regardless of intentionality, suggests that these couples who have multiple children while cohabiting are unique and merit further study.

Components of all three frameworks found some support. Normative pressure theories are supported, in that couples are most likely to transition to marriage during pregnancy; births are far less salient for the stability of cohabiting unions. At the same time, intentionality matters, too. Both the reductions in dissolution risks and the increases in marriage risk, relative to no birth, are larger for intended pregnancies than unintended and disagreed-upon pregnancies, which is consistent with selection/signaling viewpoint. Thus, while cohabiting couples expecting a child often transition to marriage, those who intended their pregnancy are particularly likely to do so, suggesting that these couples are more stable and committed to each other. However, there is also some support for the rational choice framework in that intentionality of births affects dissolution risk. Although dissolution risks do not differ between couples who do not experience

fertility and couples who have an intended birth, those who have an unintended or disagreed-upon birth are more likely to experience dissolution than those with an intended birth. These results reaffirm Manning's (2004) findings and explanation but presents a more nuanced picture: some women have already accepted cohabitation as a family-building union while other couples – those who did not both intend to have a child while cohabiting – are more negatively affected by having a child once they have already decided not to marry. Put differently, women with an intended birth while cohabiting may have decided not to marry because they did not view marriage as necessary, while women with an unintended or disagreed-upon birth may have decided not to marry for entirely different reasons likely related to the strength of their union and their confidence in the union's future. Our overall interpretation is that there are different mechanisms at play at different stages of cohabitation and fertility, with social pressures affecting cohabitation prior to a birth and then selection and rational choice factors affecting cohabitation after a birth.

Limitations

As is the case for most research on unintended fertility, we are limited to retrospective reports of pregnancy wantedness. There is a tendency in retrospective accounts to rationalize births and a reluctance to identify a child as unwanted (Trussell, Vaughan, and Stanford 1999; Williams, Abma, and Piccinino 1999; Musick 2002). Though we argue that couples with intended fertility are more likely to marry, an alternative explanation might be that couples whose relationship transitioned to marriage are more likely to label a birth intended. Conversely, women may be more likely to retrospectively classify births as unintended if their relationship dissolved, and thus the results shown here may overestimate the causal effect of unintended births on cohabitation outcomes. The retrospective nature of the data prevent us from examining

this possibility. Generally, though, the face validity of these measures of unintendedness has been shown to be high (Bachrach and Newcomer 1999; Joyce, Kaestner, and Korenman 2000). Thus, associations shown here are unlikely to be solely the result of reporting bias.

Furthermore, retrospective reports of pregnancies are biased by the underreporting of abortion that is endemic to survey data (Jones and Kost 2006). Women in the least stable unions may be most likely to abort unintended pregnancies; if this is the case, then unintended pregnancies carried to term may be selective of more stable relationships, and the results shown here would underestimate the causal effect of unintended pregnancy. It is impossible to address these limitations using survey data, and any causal inferences should be made with caution. We are also limited by using women's reports of their partner's feelings toward a birth. As with women's own retrospective viewpoints, women's reports of their partner's feelings about a birth may be colored by subsequent relationship trajectories. We were also unable to examine how pregnancies, births, and intentionality affect the stability of marriages originated by cohabitation due to well-known problems in the 2002 NSFG data collection process that impacted the accuracy of marital end dates in the data.

Finally, it is worth reiterating that our definition of unintended fertility differs from the more traditional definition in that we categorize slightly mistimed births (births less than two years too early) as intended, though more refined research in recent years supports this categorization. We explored models using the traditional definition, and results were substantively similar, though the magnitude of the associations between unintended fertility and stability were smaller.

Conclusions

In response to concerns about the impact of relationship instability for children, recent public policy initiatives have attempted to encourage marriage among unmarried parents. Cohabiting parents are often seen as the prime targets for these attempts, since they are more stable and have greater hopes for marriage than parents who do not live together. This research suggests that if cohabitors do not marry prior to a birth, a child born during cohabitation is unlikely to lead to marriage and may even increase the risk of breaking up if the child was not intended by both partners. As such, marriage promotion policies might be most effective during the prenatal time period, though it remains to be seen whether cohabiting couples who legitimate a pregnancy prior to birth have stable marriages over the long-term. Further, policies might need to adopt different strategies for parents based on the intentionality of their births – the obstacles facing those with an unintended birth are likely to differ (and be greater) than those with an intended birth. Alternatively, it is worth noting that efforts to reduce unintended fertility may have spillover effects in strengthening cohabiting relationships. Intended fertility in cohabiting unions is relatively rare; the majority of births to cohabiting couples are unintended by one or both partners. Should current policy initiatives aimed at reducing unintended fertility be effective, it is possible that cohabiting unions would become more stable and more likely to transition to marriage.

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Table 1. Weighted Descriptive Statistics of Women's First Cohabitation, 2002 National Survey of Family Growth (Standard deviation in parentheses where appropriate; sample size is unweighted)

Socioeconomic and Demographic Factors	
Race/ethnicity	
Non-Hispanic white	71.6%
Non-Hispanic black	14.7%
Foreign-born Hispanic	6.3%
Native-born Hispanic	7.5%
Family structure at 14	
Both bio parents	65.9%
Stepfamily	12.1%
Other	22.0%
Maternal education	
Less than HS/Missing	27.1%
HS/GED	37.3%
Some college	20.7%
College	14.9%
Mother had birth before 18	18.9%
HS at start of cohabitation	69.8%
Prior Family Behaviors	
Children born > 6 months prior to start of cohabitation	22.6%
Children born ≤ 6 months prior to start of cohabitation	3.2%
Prior marriage	14.9%
Partner married before	22.5%
Partner had children from prior relationship	25.7%
Cohabitation Characteristics	
Average age at start of cohabitation	22.8 years (5.24)
Average months of cohabitation duration	27.8 months (31.91)
Engaged at start of cohabitation	47.0%
First pregnancy during cohabitation	
No pregnancy	57.6%
Intended pregnancy	12.5%
Unintended pregnancy	12.2%
Disagreed-upon pregnancy	17.7%
First birth during cohabitation	
No birth	79.5%
Intended births	8.0%
Unintended births	4.7%
Disagreed-upon births	7.8%
Subsequent pregnancy or birth during cohabitation	
No pregnancy or birth	94.2%
Only intended pregnancies/births	2.5%
Only unintended pregnancies/births	0.7%
Only disagreed-upon pregnancies/births	1.6%
Pregnancies/births of mixed intentionalities	1.0%
Cohabitation outcome	
Intact	12.4%
Dissolved	33.5%
Marriage	54.2%
N	3387

Table 2. Relative Risk Ratios from Multinomial Logistic Regression of Pregnancy and Fertility on the Stability of Cohabiting Unions

	Model 1		Model 2	
	Dissolution vs. Intact	Marriage vs. Intact	Dissolution vs. Intact	Marriage vs. Intact
Socioeconomic and demographic factors				
Race-ethnicity				
Non-Hispanic White	--	--	--	--
Non-Hispanic Black	0.95	0.51 ***	0.97	0.51 ***
Foreign-born Hispanic	0.58 ***	0.53 ***	0.62 ***	0.52 ***
Native-born Hispanic	0.84	0.71 ***	0.85	0.70 ***
Family structure at 14				
Both bio parents	--	--	--	--
Stepfamily	1.25 *	1.06	1.26 **	1.06
Other	1.13	0.86 *	1.12	0.86 *
Maternal education				
Less than HS/Missing	0.94	1.01	0.95	1.01
HS/GED	--	--	--	--
Some college	1.13	1.12	1.13	1.12
College	1.17	1.01	1.16	1.01
Mother had birth before 18	0.99	1.01	0.99	1.00
HS during the month	1.02	1.30 ***	1.03	1.29 ***
Prior family behaviors				
Children born > 6 mos prior to start	0.97	0.72 ***	0.98	0.71 ***
Children born ≤ 6 mos prior to start	0.92	0.73 *	0.90	0.74 *
Prior marriage	0.78 *	1.22 *	0.80	1.22 *
Partner married before	0.69 ***	1.20 *	0.69 ***	1.21 *
Partner had children from prior union	1.22 **	0.69 ***	1.21 *	0.69 ***
Cohabitation characteristics				
Age at start of cohabitation	0.98 ***	1.03 ***	0.98 **	1.03 ***
Engaged at start of cohabitation	0.72 ***	2.36 ***	0.73 ***	2.36 ***
Duration of cohabitation (months)	1.00	1.00 ***	1.00	1.00 ***
First fertility within union				
No fertility	--	--		
Pregnant during the month	0.53 ***	2.16 ***		
Birth this month or prior month	1.12	1.02		
Had a subsequent pregnancy or birth	0.86	0.97		
First pregnancy/birth by intentionality				
No pregnancy or birth			--	--
Intended pregnancy			0.41 **	2.69 ***
Unintended pregnancy			0.59	1.84 **
Disagreed-upon pregnancy			0.58 *	1.73 ***
Intended birth			0.87	1.03
Unintended birth			1.63	1.07
Disagreed-upon birth			1.13 ***	0.98
Subsequent fertility by intentionality				
No pregnancy/birth			--	--
Intended pregnancies/births			0.69	0.99
Unintended pregnancies/births			1.16	0.50
Disagreed-upon pregnancies/births			0.64 *	1.27
Births of mixed intentionalities			0.91	0.55
N	3387		3387	
Person-months	103300		103300	
-2 log likelihood	29830.246		29787.478	

#p≤.06 *p≤.05 ** p≤.01 *** p≤0.001

Table 3. Relative Risk Ratios from Multinomial Logistic Regression of Fertility Intentionality on Cohabiting Unions, Using Alternative Omitted Categories of Intentionality of First Pregnancy/Birth within the Union

	Omitted=Intended Pregnancy		**Omitted=Intended Birth**	
	Dissolution vs. Intact	Marriage vs. Intact	Dissolution vs. Intact	Marriage vs. Intact
First pregnancy/birth by intentionality				
No pregnancy or birth	2.45 **	0.37 ***	1.15	0.97
Intended pregnancy	--	--	0.68 *	2.61 ***
Unintended pregnancy	1.45	0.69	0.66	1.79 *
Disagreed-upon pregnancy	1.43	0.64 *	0.66	1.67 **
Intended birth	2.14 *	0.38 ***	--	--
Unintended birth	4.02 ***	0.40 ***	1.87 ***	1.04
Disagreed-upon birth	2.79 **	0.37 ***	1.30 *	0.96

The coefficients for other covariates and model sample and fit statistics are the same as in Model 2 of Table 2.