

Draft: Relationship Stability Following an Unintended Birth

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Extensive research has shown that children increase union stability, particularly for marital unions. However, the impact of intendedness of births on relationship stability has not been empirically examined. Since intention status reflects both perceived relationship stability and perceived readiness to parent, the impact of intended and unintended births is likely to differ. Given the high proportion of unintended births in the United States, assessing possible differences is important in understanding the stability of cohabiting and marital unions. This analysis compares relationship outcomes after first and higher-order intended and unintended births. Results using data from the 2002 National Survey of Family Growth show that both marriages and cohabitations are more likely to dissolve after an unintended first birth than after an intended first birth. The instability associated with an unintended first birth is persistent, and an unintended higher-parity birth following an intended first birth also increases instability.

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An extensive body of research has shown that children increase marital stability (Cherlin 1977; Heaton 1990; Lillard and Waite 1993; Morgan and Rindfuss 1985; Waite, Haggstrom, and Kanouse 1995; Waite and Lillard 1991). There is also evidence that children reduce the likelihood of dissolution of cohabiting relationships, although this effect appears to be less consistent than the effects for marital stability (Manning 2004; Steele et al. 2005; Wu 1995). Generally, children are believed to both solidify and reflect relationship commitment. The impact of children on relationship stability, however, may differ based on whether children were intended or not, since intention status of births reflects both perceived relationship stability and perceived readiness to parent. Given the high proportion of unintended births in the United States as well as growing concern over family stability, it is important to understand how birth intentionality affects the stability of cohabiting and marital unions. This analysis fills a gap in the empirical literature by comparing relationship outcomes after first and higher-order intended and unintended births.

More than one third of births between 1997 and 2002 in the United States were unintended, including 23% of births to married women and 51% of births to cohabiting women (Chandra et al. 2005). Unintended fertility in the U.S. is higher than in other developed countries and has been stable and perhaps even increasing in the 1990s after showing declines in earlier decades (Finer and Henshaw 2006; Hayford, Guzzo, and Wildsmith 2008; Morgan 2003). Unintended fertility, especially unwanted fertility, is associated with negative health

consequences for both mothers and children (Bustan and Coker 1994; Hellerstedt et al. 1998; Hummer et al. 1995; Joyce, Kaestner, and Korenman 2000; Marsiglio and Mott 1988; Weller, Eberstein, and Bailey 1987). And unintended births are a negative outcome in their own right: they represent a woman's lack of control over her reproductive life and can limit women's activities and achievements in other domains.

Having a child at a time much earlier than desired or when one does not want to have children at all can influence family and relationship outcomes in addition to health and wellbeing. Unintended births are associated with less positive mother-child relationships (Barber, Axinn, and Thornton 1999), and women with early unintended births are more likely to have subsequent unintended births (Guzzo and Hayford 2009). And although research has not yet examined this aspect, it seems likely that unintended births affect the relationship between parents. While in general, shared children reduce union instability by serving as union-specific capital (Becker 1981) and reducing uncertainty about the relationship by signaling long-term commitment (Friedman, Hechter, & Kanazawa 1994), births resulting from an unintended pregnancy may not have the same impact on union stability, as an unintended birth is far more likely to act as a relationship stressor than an intended birth. The well-documented negative association between divorce and "shotgun" marriages likely reflects this mechanism – couples who move into more serious relationships in response to a pregnancy rather than a desire to make deeper commitments differ from other couples, and they may be less equipped to deal with the challenges associated with parenting.

This analysis uses data from the 2002 National Survey of Family Growth to assess outcomes of marriages and cohabiting relationships following intended and unintended births.

Results show that, consistent with expectations, both marriages and cohabitations are more likely to dissolve after an unintended birth than after an intended birth. The instability associated with an unintended birth is persistent and is exacerbated by subsequent childbearing. This extended abstract outlines the motivation for the analysis, presents preliminary results and conclusions, and notes where analyses will be refined or expanded in the full paper.

Children and relationship outcomes

The decision to have children with a partner can reflect confidence in the union's stability and a strong commitment to the partner. Children provide a bond between parents and are an immeasurable source of joy. Conversely, though, children can also change the dynamics of a relationship in negative ways. Children are labor-intensive, introduce 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). While the decline in relationship quality occurs across union types, the magnitude of the decline varies across union types (Belsky & Rovine 1990) and is most sizeable among those with unintended fertility (Cox, Paley, Burchinal, and Payne 1999).

Despite the negative effects of children on relationship *quality*, more than three decades of research confirms that having a child improves relationship *stability* for married couples (e.g., Cherlin 1977; Heaton 1990; Lillard and Waite 1993; Morgan and Rindfuss 1985; Waite and Lillard 1991). Dissolution rates are lowest during pregnancy and immediately after the birth (Heaton 1990; Heaton and Call 1995). Children are hypothesized to increase marital stability by increasing commitment to the relationship, by increasing relationship-specific investment, and by

increasing the normative pressures against divorce (Becker 1981; Coleman 1988; Friedman, Hechter, & Kanazawa 1994; Thornton 1977). Some of the positive relationship between fertility and marital stability can also be attributed to selection, since less stable couples are likely to avoid childbearing. However, the stabilizing effect of childbearing has been found to persist even when selection is accounted for (Lillard and Waite 1993).

Some of the mechanisms connecting childbearing and marital stability apply to cohabiting relationships as well – for example, children can increase the level of investment in any relationship. However, the different roles of cohabitation and marriage in U.S. family systems may lead to different outcomes associated with childbearing in cohabiting unions. Evidence from the U.S., Britain, and Canada suggests that fertility can reduce dissolution rates for cohabitators (Manning 2004; Steele et al. 2005; Wu 1995). In the United States, this effect operates largely through increasing the likelihood that cohabitators will marry between conception and birth – having a birth within a cohabiting union does not affect dissolution rates among couples who remain cohabiting, and *increases* dissolution rates among couples who marry after the birth (Manning 2004). However, as Wu and Musick (2008) point out, many cohabiting couples jointly plan marriage and cohabitation, so the consideration of the timing and sequencing of conception and births as well as cohabitation and marriage is necessary to understand how fertility impacts union stability.

The weaker positive impact of childbearing on the stability of cohabiting unions may in part be explained by the lack of normative support for childbearing in cohabitation (Manning 2004). Children may also increase relationship stress by increasing the financial and emotional demands on the relationship; because cohabitators tend to be less socially integrated than married

couples, these negative effects may be stronger for cohabitators (Wu 1995). Manning (2004) further notes that processes of selection may function differently for marital and cohabiting births: births to cohabiting couples may be selective of low-stability relationships, since more committed couples are likely to marry before a birth. Thus, the negative impact of an unintended birth may be larger for a cohabiting couple than a married couple because they have a lower level of commitment to the union and to each other (Nock 1995), such that they have a lower threshold for dissolution which is accompanied by lower costs of dissolution.

Nearly all of the hypotheses in earlier research on the impact of births for relationship stability in cohabiting and marital unions implicitly distinguish between intended and unintended births. Negative effects of childbearing are more likely in cases where a birth is an “unanticipated or unplanned event” (Manning 2004: 675-676). Positive effects of childbearing are more likely when a birth indicates commitment and plans for the future – that is, when a birth is intended. Because births to married couples are more likely to be intended than births to cohabiting couples, married couples are more likely to experience the positive effects of childbearing on relationship stability, so it seems likely that much of earlier work confounds relationship type and the intendedness of births within different types of unions. Further, the very limited work that considers birth intentionality has not explicitly distinguished between intended and unintended first and higher-order births in examining the effects of childbearing on relationship outcomes.

Though an unintended birth introduces unexpected demands and stresses at any parity, the impact is likely to be greater for a first birth than for subsequent births. Becoming a first-time parent is one of life’s major transitions. New parenthood is a major adjustment, as dealing

with the time- and labor-intensive demands of early childhood require placing individual and couple needs secondary to that of the child. If that transition occurs earlier than desired or to individuals who did not want to become parents at all, the stress on the relationship can become overwhelming. The limited existing research shows that having a first unintended birth does increase the risk of dissolution (Manning, Smock, and Majumdar 2004; Wu and Musick 2008). This impact may be long-lasting; even if couples go on to have additional children (intended or not), entering into parenthood when the couple was not intending to may have a long-term negative impact. Couples who initially stay together because they have a child may find that as time passes, there is less that connects them and bonds them together. Here, we would expect that duration of relationship prior to birth as well as relationship type at birth is important, too – couples in shorter-duration relationships may be particularly stressed by an unintended birth because they had less time to build a strong relationship prior to parenthood.

Having an unintended higher-parity birth may not have as negative an effect on union stability, especially if earlier births were intended. In general, the transition to second and higher births seems to be less stressful than the transition to the first birth. Most parents are surprised at the intensity of both the demands from, and of their feelings, for their first child (McMahon 1995), but the knowledge derived from parenting a first child can ease the stresses (or at least limit the surprises) of parenting later children. First-time parents must learn how to cope with new problems as they arise, but second-time (and third-time, and so on) have learned through prior experience how to anticipate and respond to many issues. While additional children present additional costs and logistical issues, these factors are not necessarily as great as those placed by first children. Economies of scale and re-using clothing, toys, and infant equipment mean that two children are not twice as expensive as one child. There are several possibilities

where early and subsequent birth intendedness may interact together to impact union stability. Couples with more than one intended birth likely have the greatest commitment to their union and have the most stable unions. Conversely, couples that have multiple unintended births may be experiencing the greatest level of stress, as they are faced with the unexpected strains of parenting at multiple points during the relationship. An unintended birth followed by an intended birth, on the other hand, suggests that the couple experienced their unexpected parenthood in a positive manner and thus decided to go on to have another child. Put differently, the decision to have another child together after entering parenthood unintentionally suggests that they have a commitment to their relationship and its future. Finally, having an unintended birth following an intended birth will have a negative impact on relationship stability but the expected impact is likely to be small. Once individuals decide to become parents, having an additional but unexpected child can alter some future plans and introduce new tensions but is often viewed as an unexpected blessing. In all these scenarios, controlling for duration since first birth is important because birth spacing can affect the impact of subsequent births and intentionality. Having closely-spaced unintended births may be particularly stressful but having an unintended higher-parity birth only a few years after having intended births may mean that parents are still in “baby-mode” and relatively easily accommodate a new baby. Conversely, having an unintended birth several years after a couple believes it has ended its family-formation years forces a couple to return to the labor-intensive demands of early parenthood after enjoying some of the relative freedom that comes with older children, and this may become a source of tension.

In addition to its explicit consideration of intendedness at multiple parities, this work also addresses the birth intentions of both members of a couple. Couples who actively decide

together to have a child may feel prepared to handle the increased demands parenthood brings. Couples who agree that the birth was unintended might be least equipped to handle the demands of parenting, as neither partner wanted the birth. In terms of union stability, couples who disagree on intentionality likely fall somewhere between couples who agree the birth was intended and couples who agree the birth was unintended. When at least one partner intended the birth, that person may feel prepared to take on the roles and duties of parenthood and can ease the burden for the other partner by helping them adjust and cope. Still, the other partner is likely to be displeased, and there is sometimes distrust between partners, where one partner feels “trapped” by the birth (Edin and Kefalas 2005). Thus, an elevated risk of instability likely persists when even only one partner feels a birth was unintended.

Hypotheses

Hypothesis 1: An unintended first birth increases the risk of dissolution compared to an intended first birth and likely has long-term negative effect on relationship stability, regardless of subsequent fertility and intentionality.

- *Hypothesis 1A:* A birth labeled unintended by both parents increases the risk of dissolution relative to an intended birth more than a birth labeled unintended by only one parent.

Hypothesis 2: First and subsequent birth intendedness interact with each other, such that

- *Hypothesis 2A:* Multiple unintended births will further increase risk of instability while multiple intended births further decrease the risk of instability.

- *Hypothesis 2B:* Unintended fertility following intended fertility will only modestly increase the risk of instability while intended fertility following unintended fertility will modestly lower the risk of instability.

Data and methods

We use the 2002 cycle of the National Survey of Family Growth (NSFG), a nationally representative survey of U.S. women of age 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 these women, 2,649 had a child and were either cohabiting or married at their first birth. We further restrict the sample to women with valid information on the intendedness of their first birth (n=2,595). Because we wanted to examine parity-specific variations in unintended fertility, we further restrict the analyses to cases where the woman reported this was her partner's first birth as well (n=2,186). Finally, due to an error in the data collection process while in the field, a small number of cases were missing information on the enddate of marriage, and we excluded these cases for a final sample size of 2,114.¹

The NSFG is the primary national source of information on birth intendedness, having included questions regarding the intendedness of births since its inception in 1973 (London, Peterson, and Piccinino 1995; Ventura et al. 2008). The NSFG does not directly inquire whether a birth was intended or wanted. Instead, wantedness and intendedness are constructs 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

¹ The NSFG imputed enddates for these; including these cases yielded substantively similar results, but the consensus among users of the NSFG is that these cases should be excluded.

the future?” A negative answer would be characterized as an unwanted birth. 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?” Recent research has shown that the births mistimed by two or more years (“seriously mistimed”) tend to have negative outcomes similar to those associated with unwanted births, whereas those that are mistimed by less than two years more closely resemble intended births (Abma, Mosher, and Jones 2008; Lindberg, Finer, and Stokes-Prindle 2008; Pulley, Klerman, Tang, and Baker 2002). Building off this work, we consider births occurring two or more years too soon as seriously mistimed and thus unintended (according to the operational definition used here), while those occurring less than two years too soon are considered slightly mistimed and thus intended. Our categorization is based on the results of exploratory analyses using a more detailed classification system (later than wanted, wanted or on-time, slightly mistimed, seriously mistimed, unwanted).

Women were also asked about their partner’s view of the birth intendedness, 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 considered are considered unintended.

Analytic plan

We use discrete-time event history models to examine how the intendedness of a cohabiting or marital first women and any subsequent fertility is related to union stability. All analyses use person-months as the unit of analysis. To predict stability following a first birth, women enter the sample the month of the first birth and leave when they experience relationship dissolution or at the time of the survey if their relationship is still intact. As the dependent variable is a dichotomous measure indicating whether the union is intact or not, the analyses use logistic regression. Changes in relationship status (i.e. the marriage of cohabiting couples) are modeled in the analysis (see below) but not treated as outcomes: we focus on the duration of relationships, regardless of the legal status of the couple.

We include a range of socioeconomic and demographic control variables: race/ethnicity, nativity, family structure at age 14 (intact, stepfamily, or other), respondent's mother's education, and whether the mother had a birth prior to age 18 as measures of family background. Because the 2002 cycle of the NSFG did not include a detailed education or employment history as in other cycles, we have limited time-varying measures of socioeconomic status. We use data on the month a high school degree was received to construct a time-varying measure of education (high school degree or GED/no degree).

Past union information includes whether the respondent had ever been married before or had ever cohabited before as well as whether her partner had ever been married before (partner cohabitation history was not asked). Current relationship type is measured through a time-

varying variable: cohabiting at birth and cohabiting now, cohabiting at birth and married now, cohabited prior to marriage but married at birth and married now, and married at birth and married now (omitted). We also include a variable measuring the duration of the coresidential relationship prior to birth and a time-varying measure of duration since birth. Other fertility-related variables include the woman's age at birth, whether the birth was conceived prior to the coresidential union (defined as whether the birth occurred within 8 months of when the couple began living together), and parity.

Birth intendedness is measured through two sets of variables and a set of interaction terms. (In future analyses we will explore alternative means of classifying fertility trajectories.) For first births, it is defined as both partners agree the birth was intended (omitted), both partners agree it was unintended, and partner disagreement on intendedness. We account for births after the first by creating a set of time-varying dichotomous variables, where the omitted category is always no birth: both partners agree subsequent birth was intended, both partners agree the birth was unintended, and partner disagreement on subsequent birth intendedness. These variables are not mutually exclusive, since couples can have more than one birth after the first and may have different feelings about each birth. Thus, for example, a couple with three children, only the third of which is unintended, would be coded 1 on both "subsequent intended birth" and "subsequent unintended birth." In addition, we interact first birth intendedness with subsequent birth intendedness. To make the interactions more parsimonious and easier to interpret, we combined births labeled as unintended by both partners and those labeled unintended by only one partner. There are four time-varying and non-exclusive interaction terms: an unintended first birth and an intended subsequent birth, an intended first birth and an unintended subsequent birth, an

unintended first birth and an unintended subsequent birth, and an intended first birth and an intended subsequent birth. All models also control for parity.

Preliminary results

Table 1 details the results from the logistic regression of socioeconomic, demographic, relationship, and fertility variables on the stability of women's cohabiting and marital unions. Results are presented in the form of odds ratios. As the dependent variable measures whether the relationship dissolved or not, a number less than one indicates a decreased risk of dissolution and a number greater than one indicates an increased risk of dissolution.

– Table 1 here –

The intention status of first births is strongly associated with subsequent relationship stability. Compared to women who report that both she and her partner intended their first birth, women who report that both she and her partner did not intend the birth or who report disagreement on the intendedness of a birth are more likely to experience union dissolution. When both partners report the first birth was unintended, the odds of dissolution are 1.8 times that of when both partners intended the first birth. When disagreement is present, the odds of dissolution are 1.4 times that of an intended first birth. By itself, subsequent fertility does not appear to impact union stability. However, when interacted with first birth intendedness, subsequent fertility does play a role in stability. An unintended subsequent birth (recall that this grouping includes births that both partners agree was unintended as well as those for which partners disagreed) following an intended first birth (this behavior is relatively rare and only occurred for about 11% of the sample) increases the odds of dissolution (OR=2.6) while intended first and subsequent birth reduces the odds of dissolution.

We interpret these findings to mean that the intendedness of a first birth has a lasting effect on relationship stability, as the magnitude and significance of the first birth intendedness variables persists (and even increases – results not shown) when including subsequent fertility and interaction terms. Given that parenting is highly stressful and often drastically changes relationship dynamics, entering into parenthood when one or both partners feels as if they were not quite prepared to do so can negatively affect the strength of the union and have a lasting impact. However, the elevated risk of dissolution for those who have a higher-order unintended or disagreed-upon birth following an intended first birth suggests that having an unintended birth even after intending to become parents initially can present a challenge for couples.

Past and present relationship characteristics are also strongly correlated with union stability. Women who had cohabited with other partners before the current union had a higher risk of union dissolution than those who had no prior cohabitation experience. Women who had been previously married were not significantly more likely to experience union dissolution than other women, though the magnitude of the difference between first and higher-order marriages was large (OR=1.4). Given that this analysis is limited to women experiencing a first birth in the current union, the sample of previously married women is small (N=75) and selected; these results are likely not generalizable to all births. As expected, the form of the current relationship was highly significant. Compared to women who had not cohabited prior to marriage and had their first birth while married, all other women had a higher risk of dissolution. Women who were cohabiting at birth and currently cohabiting were 3.6 times as likely to dissolve their relationships than women who were married when they had their birth and had not cohabited with their partner; the odds of dissolution were even higher for women who were cohabiting when they had their first birth but who were now married, who were roughly five times as likely

to experience union dissolution. Women who had a marital birth but cohabited with their husband prior to marriage were about 50% more likely to dissolve their unions compared to those who had not cohabited prior to the marriage. Clearly, a cohabiting birth in particular is negatively related to union stability, even when the couple subsequently marries. Though the length of the couple's relationship prior to the birth does not impact the union stability, the odds of dissolution decline by women's age at birth and with the duration of the relationship since birth.

Socioeconomic and demographic characteristics have little impact on the likelihood of dissolution, though foreign born women are less likely to experience union dissolution than native born women. This finding is striking given the large body of research that finds that relationship stability is strongly correlated with social position, including race-ethnicity, educational attainment, and family background (Martin 2006; Raley and Bumpass 2003). These results are not directly comparable to previous studies, though, as the analysis is limited to parents and includes only those couples who remained intact long enough to have a birth together. Still, even other analyses of relationship stability among parents find race-ethnic and SES differences in rates of dissolution (Osborne et al. 2007). Our findings suggest that some of these differences may be attributable to higher proportions of unintended births among women of color and low-SES women; or, alternatively, that the factors driving unintended fertility are related to those driving union dissolution, such that accounting for unintended births also accounts for unobserved factors related to union dissolution.

Preliminary conclusions and planned future analyses

The preliminary analyses suggest that the intendedness of both first and subsequent births impacts relationship stability. Having an unintended first birth has long-term negative consequences for relationship stability relative to having an intended first birth, even after controlling for subsequent fertility and intendedness. There is also evidence that having an unintended birth after an intended birth increases relationship instability; the magnitude of this effect is fairly large, although this effect is tempered by negative effect on dissolution of the intended first birth. Relationship status at birth is important, as expected. Couples who had a birth while cohabiting are much more likely to separate than couples who had a birth while married, even if they marry after the birth.

Future analyses will continue to refine model specification, especially measurement of birth and relationship trajectories. For instance, we plan to construct variables identifying particular relationship sequences (such as premaritally conceived births that are legitimated prior to the birth). In addition, the interactions between first and subsequent fertility as currently defined treat couples with only one child as the omitted category. This group may not be the most appropriate reference; other ways of modeling interactions will be explored. Future analyses will also improve the modeling of duration-specific variation in the odds of relationship dissolution and the effects of an unintended birth.

Future work will also continue to develop the substantive implications of the results. Discussion and conclusion will focus on variation in the effects of intended and unintended births across different types of relationships. In addition, the somewhat surprising lack of race-ethnic differences in the odds of relationship dissolution merits further attention.

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Table 1. Odds Ratios from Logistic Regression of Birth Intendedness of Union Stability Among Women in the NSFG

Socioeconomic & demographic characteristics

Race/ethnicity			
	White	--	
	Black	1.179	
	Hispanic	0.922	
	Other	0.667	
Foreign born		0.748	**
Family structure at age 14			
	Both biological parents	--	
	Stepfamily	1.094	
	Other family type	1.159	
Mother's education			
	Less than HS/missing	1.025	
	HS	--	
	Some college	1.148	
	College or more	1.042	
High school degree (time-varying)		1.04	
<i>Union characteristics</i>			
Past cohabitation		1.405	*
Past marriage		1.42	
Partner married before		1.08	
Relationship type (time-varying)			
	Cohabiting at birth, cohabiting now	3.646	***
	Cohabiting at birth, married now	4.95	***
	Cohabited prior to marriage, marital birth, married now	1.444	***
	No cohabitation, marital birth, married now	--	
<i>Fertility characteristics</i>			
Relationship duration prior to birth		0.999	
Months since birth (time-varying)		0.996	**
Age at birth		0.905	***
Pre-union conception		0.986	
Parity			
	1	--	
	2	0.919	
	3	0.942	
	4	1.126	
	5+	2.015	
1st birth intendedness			
	Both intended	--	
	Both unintended	1.833	***

Disagreement on intendedness	1.381	***
Subsequent fertility		
No birth	--	
Both intended	0.979	
Both unintended	0.985	
Disagreement on intendedness	0.646	
Interactions		
Unintended 1st birth, subsequent intended birth	0.808	
Intended 1st birth, subsequent unintended birth	2.55	*
Unintended 1st birth, subsequent unintended birth	1.4	
Intended 1st birth, subsequent intended birth	0.689	*
Person months	179694	
Women	2114	
-2log likelihood	9718.791	