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Re-Examining the Case for Marriage: Union Formation and Changes in Well-Being

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Abstract

This article addresses open questions about the nature and meaning of the positive association between marriage and well-being, namely, the extent to which it is causal, shared with cohabitation, and stable over time. We relied on data from the National Survey of Families and Households ($N=2,737$) and a modeling approach that controls for fixed differences between individuals by relating union transitions to changes in well-being. This study is unique in examining the persistence of changes in well-being as marriages and cohabitations progress (and potentially dissolve) over time. The effects of marriage and cohabitation are found to be similar across a range of measures tapping psychological well-being, health, and social ties. Where there are statistically significant differences, marriage is not always more advantageous. Overall, differences tend to be small and appear to dissipate over time, even when the greater instability of cohabitation is taken into account.

Keywords

cohabitation; family; marriage; stability; well-being

Marriage has long been recognized as a fundamental social institution (Burgess & Locke, 1945; Davis, 1939; Durkheim, [1897] 1997; Goode, 1963; Parsons, 1949), but with the rise of modern economies and the associated individualism, many functions once confined to marriage now take place outside of it. Unmarried sex, cohabitation, and childbearing have increased dramatically over the past forty years and are now common components of family life in the United States and other western industrialized countries (Heuveline & Timberlake, 2004; Kiernan, 2000). These changes have blurred the boundaries of marriage (Cherlin, 2004), leading one to ask what difference marriage makes in comparison to alternative modes of organizing its traditional functions. This is a critical question for the social sciences; it has also been one of great interest outside academic circles. Unlike many industrialized countries, the United States has shown a strong attachment to the ideal of marriage (Cherlin, 2005, 2009), and the weakening of traditional marriage has stimulated recent debate over the role of public policies in marriage promotion (Cherlin, 2003; Nock, 2005).

Efforts to encourage marriage have been supported by research linking it to adult well-being. In their influential review of the literature, Waite and Gallagher (2000, p. 77) concluded that “science tends to confirm Grandma’s wisdom: On the whole, man was not meant to live alone, and neither was woman. Marriage makes people happier.” These conclusions, although drawn from a vast body of work on psychological well-being, health, income, and longevity, may nonetheless overstate the relative benefits of marriage. Early studies on marriage relied on snapshots of married and unmarried individuals (Gove, 1973; Gove, Hughes, & Style, 1983; Hao, 1996; Kessler & Essex, 1982; Pearlin & Johnson, 1977; Umberson, 1987), making it difficult to parse out associations due to the causal effects of marriage and selection of the better off into marriage (or worse off out of marriage). Much of the more recent work has incorporated longitudinal designs but maintained a focus on the married and unmarried (Horwitz, White, & Howell-White, 1996; Hughes & Waite, 2002; Korenman & Neumark, 1991; Lillard & Waite, 1995; Marks & Lambert, 1998; Murray, 2000; Simon, 2002; Williams, 2003), telling us nothing of how marriage compares to other intimate relationships. Advances in the literature have pushed on these issues (especially Brown, 2000, 2004; Horwitz & White, 1998; Kim & McHenry, 2002; Lamb, Lee, & DeMaris, 2003; Skinner, Bahr, Crane, & Call, 2002), and scholars have begun to question the magnitude and scope of the marriage advantage (Marks & Lambert, 1998; Ross, 1995; Sarkisian & Gerstel, 2008; Williams, 2003).

This analysis addresses open questions regarding the extent to which the benefits of marriage are causal, shared with cohabitation, and stable over time. It relies on data from the 1987–1992 National Survey of Families and Households (NSFH) and is (to our knowledge) the first U.S. study of its kind to use fixed effects models, taking a step forward in isolating causal links between marriage, cohabitation, and well-being. Our study is also unique in examining the persistence of changes in well-being as relationships progress over time, comparing marriages and cohabitations of varying duration and accounting for the dissolution of these unions. We look at a range of outcomes tapping important dimensions of well-being, including psychological well-being, health, and social ties, drawing attention to variation in outcomes both within and across union statuses.

Background

Mechanisms Linking Marriage and Well-Being

Recent scholarship (e.g., Nock, 2005; Waite, 1995) has emphasized four causal mechanisms linking marriage and well-being: institutionalization, social roles, social support, and commitment. The *institutionalization* perspective highlights normative and legal structures that specify rights and responsibilities and bring with them standards of appropriate behavior reinforced by family, friends, and the broader society (Cherlin, 1978, 2004). The *social roles* perspective focuses on how marriage structures men’s and women’s understandings of what is expected of them (Gove, 1973; but see Ferree, 1990, for a critical analysis of social roles). Marital roles provide a source of meaning and purpose and facilitate interaction between spouses by offering guidelines about how to be a good wife or husband, including expectations about starting a family, the sharing of financial resources, and the gendered division of household and market work. The importance of *social support* from spouses is well established (Gove et al., 1983; Ross, 1995). Spouses provide intimacy, companionship, and day-to-day interaction, and they connect their partners to larger networks of friends, kin, and community that can be drawn on in times of need. Finally, the public nature of marriage—often entered into in the presence of family, friends, and religious congregants—creates what Cherlin has called “enforceable trust” (2000, p. 136). The involvement of others in upholding the marriage contract strengthens *commitment* and facilitates joint long-term investments, such as financial investments in homes and relationship-specific investments of time and energy in the care of young children (England & Farkas, 1986), which in turn

strengthen bonds between partners and serve as barriers to exit. Interpersonal commitment may lead partners to forego self-interest for the good of the couple (Stanley, Whitton, & Markman, 2004), and over time, the accumulation of a shared history may become, in itself, a source of meaning, self-definition, and well-being.

These are compelling arguments for the benefits of marriage, but do they apply uniquely to marriage? One view is that some of these mechanisms should operate in cohabitation (as well as other intimate relationships), and thus cohabitators should reap some of the benefits of marriage. Marriage and cohabitation both involve living with an intimate partner who is a potential confidant, caretaker, and provider, and both involve social roles that are seen as improving health and well-being, including someone to provide information, monitor health, and issue reminders or “nag” (Waite & Gallagher, 2000, p. 55). These attempts to encourage partners’ healthy behaviors (and deter unhealthy ones) may foster a sense of commitment and obligation to the relationship, further promoting health and well-being (Umberson, 1992). At the societal level, however, cohabitation lacks the legal constraints and sanctions of marriage, and norms about the social roles of cohabiting partners are less clearly defined (Cherlin, 2004; Eggebeen, 2005; Nock, 1995). In this context, there may be less certainty around relationships and greater risk in making joint investments, pooling resources, and specializing in caretaking (Brines & Joyner, 1999; Cherlin, 2000). If cohabitation provides some of the social support and commitment of marriage without as many of the institutional supports, then both marriage and cohabitation may increase well-being, although marriage to a greater extent.

The stronger social and community involvement in upholding marriage is generally taken to imply greater advantages to marriage, but another view emphasizes its costs relative to cohabitation. The more structured expectations of marriage may impose unwelcome social obligations (Hughes & Gove, 1981) and leave little space for cultivating outside relationships, autonomy, and personal growth (Marks & Lambert, 1998; Sarkisian & Gerstel, 2008). They may leave less flexibility for couples to define roles and construct relationships on their own terms (Brines & Joyner, 1999; Cherlin, 2004). Cohabitation may be a way of obtaining some of marriage’s benefits without the costs associated with the more prescribed roles and public character of formal marriage, and if so, cohabitators may be better off than married individuals.

Any account of the relative benefits of marriage must address factors that simultaneously select men and women into marriage and cohabitation and relate to differences in well-being across union status. Education, income, and health are all selection factors into marriage (Murray, 2000; Oppenheimer, Kalmijn, & Lim, 1997; Thornton, Axinn, & Teachman, 1995). Married individuals also differ in their expectations and orientations, reporting greater family orientation, more traditional family roles, less acceptance of divorce, and more religious involvement than their single and cohabiting counterparts (Axinn & Thornton, 1992; Clarkberg, Stolzenberg, & Waite, 1995; Rindfuss & VandenHeuvel, 1990; South & Spitze 1994; Thornton, Axinn, & Hill, 1992). They report greater commitment to their relationships and better overall relationship quality than cohabitators (Brown & Booth, 1996; Nock, 1995; Waite, 1995). Teasing out selection and causation is critical to understanding how marriage matters in relation to other family forms. Much of the debate about the causal effects of marriage in fact revolves around selection, yet it is often inadequately addressed. Thus what we know from prior research on the links between marriage and well-being may be biased by incomplete accounting of pre-existing individual characteristics.

Comparing Marriage and Cohabitation

Early research comparing marriage and cohabitation focused largely on the link between premarital cohabitation and marital success (e.g., DeMaris & Rao, 1992; Dush, Cohan, & Amato, 2003; Lillard, Brien, & Waite, 1995; Teachman, 2003; Teachman, Thomas, & Paasch, 1991), but a later generation of studies has examined links between marriage, cohabitation, and more direct indicators of well-being, and some of these have incorporated longitudinal study designs to address issues of selection and causation. In what follows, we review prior work on psychological well-being, health, and social ties. Although there are exceptions and inconsistencies, this work has generally found advantages to marriage over cohabitation. We ultimately build on this line of research, offering a more stringent test of the causal effects of marriage and cohabitation and of how long they last across a wide range of indicators of well-being.

Studies by Ross (1995) and Horwitz and White (1998) reported no difference in depression between the married and cohabiting. Ross's study was based on a cross-sectional survey of U.S. households, and Horwitz and White used a panel study of unmarried young adults from New Jersey. These null findings on depression stand in contrast to greater alcohol problems among cohabitators (Horwitz & White, 1998), as well as findings on psychological well-being from the National Survey of Families and Households (NSFH). Those married at Wave 1 of the NSFH fared better than cohabitators in global happiness and depression (Kurdek, 1991), differences due largely to cohabitators' higher perceived relationship instability (Brown, 2000). Kim and McHenry (2002) and Lamb and colleagues (2003) assessed union status transitions and change in depression using Waves 1 and 2 of the NSFH. Based on broad sets of groupings, Kim and McHenry found that singles who moved into marriage—but not cohabitation—had significantly lower levels of depression than those married at both waves; they did not, however, directly test whether transitions into marriage and cohabitation differed significantly from each other. Lamb and colleagues limited their investigation to young adults never in a marriage or cohabitation at the first wave, finding that those who married directly experienced the largest declines in depression, followed by those who cohabited and then married, and finally by those who cohabited only or remained single across waves. None of this work accounts for time since union formation or the potential effects of excluding couples who dissolve their unions in between waves of data collection, which may overstate the relative benefits of marriage.

Research on marriage, cohabitation, and social ties has shown that cohabitators tended not to be as close to their parents as their married counterparts (Nock, 1995) and were less likely to exchange certain kinds of support with their parents (Eggebeen, 2005). Cohabitators were also less likely to participate in formal organizations but more likely to interact informally with family, friends, neighbors, and coworkers (Stets, 1991). Highlighting the ways that marriage and community are potentially at odds, Sarkisian and Gerstel (2008) showed that married men and women were less involved with parents, siblings, neighbors, and friends than the never-married and previously married. Because Sarkisian and Gerstel did not explore differences between marriage and cohabitation, it is difficult to reconcile these disparate findings. Further, these studies all rely on a single wave of the NSFH and thus provide little basis for understanding how social ties change when single men and women enter into marriage and cohabitation.

Trajectories of Well-Being

Marital quality tends to decline with duration (Kurdek, 1999; Umberson, Williams, Powers, Chen, & Campbell, 2005; Van Laningham, Johnson, & Amato, 2001), as does the quality of cohabiting relationships (Brown, 2003). These declines suggest that estimates of what is gained from union formation must account not just for transitions from one union status to

another, but for trajectories within union statuses. But little work in the United States has looked at how subjective well-being, health, or other indicators of individual well-being change as marriages or cohabitations progress. An exception is Williams and Umberson (2004), who examined changes in self-assessed health with marriage duration, finding better health reports among men in the early years of marriage. Zimmermann and Easterlin (2006) measured adjustments in subjective well-being following marriage in Germany, finding an initial boost in well-being after marriage and then declines, with levels remaining somewhat above the never-married (countering findings based on the same data by Lucas, Georgellis, Clark, & Diener, 2003, showing that subjective well-being returned quickly to baseline after a brief “honeymoon”). Soons, Liefbroer, and Kalmijn (2009) also reported initial increases and then slow declines in subjective well-being following entry into formal and informal unions in the Netherlands.

Further indicative of a lack of attention to the dynamic nature of relationships are the few attempts to incorporate what we know about union dissolution into our understanding of the relative benefits of marriage. Research on transitions into marriage and cohabitation typically include only surviving unions (e.g., Kim & McHenry, 2002; Lamb et al., 2003; but see Williams, Sassler, & Nicholson’s 2008 study of single mothers). This may overstate the benefits of union formation, weighting the sample toward higher quality relationships and excluding a disproportionate share of cohabitations. Conditioning on surviving unions also fails to acknowledge separation as a common outcome of union formation.

Gender, Marital History, and Confounding Events

The effects of union formation may vary across groups. It has long been assumed that marriage is more advantageous for men than women (Bernard, 1972; Gove, 1972), although recent investigations have shown that both men and women experience gains in health and psychological well-being from marriage, with some variation in the particular emotional response (Horwitz et al., 1996; Simon, 2002; Waite, 2000; Williams, 2003; see review by Waite & Gallagher, 2000). The effects of union formation have been found to vary by marital history (Kurdek, 1991; Mastekassa, 1994). It may be that prior divorce signals patterns of interaction or cumulative stresses that carry over from past relationships and increase the chances of dissatisfaction and dissolution, or institutionalization may be weaker in remarriages (Cherlin, 1978), reducing gains to well-being. Marriage is also associated with other key life events, and these may confound the estimated effects of marriage. In particular, despite a weakening connection, children tend to be part of the marriage package (Rindfuss & Parnell, 1989). The transition to parenthood has been linked to lower levels of subjective well-being and relationship quality (McLanahan & Adams, 1987; although this link appears to depend on factors such as parity, union status, and gender, e.g., Evenson & Simon, 2005; Kohler, Behrman, & Skytthe, 2005; Nomaguchi & Milkie, 2003; Woo & Raley, 2005), which may dampen associations between marriage and well-being. Working in the opposite direction, forming a coresidential union (whether in or out of marriage) may increase living standards via wage gains or income pooling (Korenman & Neumark, 1991; Light, 2004).

The Current Study

This analysis addresses as-yet-unresolved questions about the benefits of marriage: the extent to which they are causal, shared with cohabitation, and stable over time. It uses a fixed effects approach that controls for pre-existing, stable individual differences, focusing on transitions into marriage and cohabitation and changes in multiple domains of well-being. This approach takes us a step closer to isolating causal relationships between marriage, cohabitation, and well-being and has not been used in the United States to investigate these questions (fixed effects models have been used to examine the effects of union status on

housework hours in the United States, Gupta, 1999, health in Canada, Wu & Hart, 2002, and subjective well-being in Germany, Zimmermann & Easterlin, 2006, and the Netherlands, Soons et al., 2009). Our emphasis on what changes when men and women move into marriage or cohabitation follows most closely Lamb and colleagues' (2003) study of depression reviewed above, but our more dynamic perspective expands on this work in important ways. In particular, we examine heterogeneity in the effects of union formation by union duration, and we take account of unions that disrupt in between waves of data collection. To account for union dissolution, we first follow convention and run a set of analyses excluding men and women who dissolve their unions in between waves of data collection. We then run a parallel set of analyses, including all individuals entering into a union, whether or not they remained with their partner and irrespective of whether they subsequently repartnered. This yields the average change stemming from a transition into marriage or cohabitation, acknowledging dissolution as a common outcome of union formation and recognizing its potential fallout (the consequences of union dissolution tend to be negative, although not uniformly so, Hawkins & Booth, 2005; Williams, 2003).

We examine a range of outcomes broadly encompassing well-being, providing a multidimensional look at the effects of marriage and cohabitation, including measures that have received little attention in the literature on marriage and cohabitation. Global happiness, depression, health, and self-esteem are direct indicators of one's subjective well-being. Ties to family and friends are indicators of social support, which is closely linked to health and well-being (House, Landis, & Umberson, 1988). Studies relating marriage and cohabitation to well-being typically focus on one indicator at a time, but effects may vary across outcomes, and the reader is left to consolidate findings across different samples and methodologies. Our work incorporates multiple dimensions of well-being, assesses variation in effects by gender and marital history, and tests the sensitivity of findings to controls for parenthood and other associated life events—offering a more complete picture of the relationship between union formation and well-being.

Our goal here is not to isolate the ways in which marriage and cohabitation matter; it is to estimate as best we can the total effects of union formation and the extent to which they persist over time. Indeed, the mechanisms outlined earlier—institutionalization, social roles, social support, and commitment—may well be overlapping and reinforcing. With the exception of legal rights and responsibilities, we argue that these mechanisms apply in varying degrees to cohabitation. Further, we posit that prior estimates of the effects of marriage may be overstated due to inadequate accounting of selection into and out of relationships. Our reading of the literature suggests the following hypotheses:

Hypothesis 1: Intimate unions—whether marital or cohabiting—provide benefits over remaining single.

Hypothesis 2: The benefits of marriage are not as consistent or large as previously estimated, and they follow a downward trajectory, particularly once the common occurrence of dissolution is taken into account.

With respect to the relative effects of marriage and cohabitation, we outlined two competing views:

Hypothesis 3: If cohabitation offers some of the social support and commitment of marriage with fewer institutional supports, then marriage confers advantages over cohabitation.

Hypothesis 4: If the institutional supports of marriage are offset by increased obligations and a loss of flexibility, then cohabitation confers advantages over marriage.

Method

Data, Measures, and Samples

We used data from the first two waves of the NSFH, a national sample survey focusing on family structure, process, and relationships (Sweet & Bumpass, 1996; Sweet, Bumpass, & Call, 1988). The first wave of the NSFH was conducted in 1987–1988 (NSFH1) and involved interviews with a main cross-section of randomly selected adults and oversamples of subgroups of interest, including cohabiting couples. Reinterviews were conducted in 1992–1994 (NSFH2). Response rates were 74% at NSFH1 and 82% (of those interviewed at Time 1) at NSFH2, comparing favorably to other household-level surveys. While it has now been over a decade since NSFH2, the NSFH is unique in providing nationally representative panel data on family transitions and varied indicators of adult well-being, and it remains a key source for studying families. A third wave of the NSFH was conducted in 2001–2002, but unfortunately for our purposes, it includes only a subset of the original NSFH main respondent sample. In particular, it targeted older respondents (who either had a focal child aged 5 years or older at NSFH1 or were 45 or older at NSFH3) and thus excludes the original respondents of greatest interest to us, that is, those in the early stages of relationship and family formation with the highest rates of marriage and cohabitation over the study period.

The NSFH contains complete marriage and cohabitation histories, allowing us to follow respondents' transitions into coresidential unions. Recent qualitative and quantitative reports have highlighted problems of misreporting in retrospective data on cohabitation and difficulties in precisely dating the start of cohabitation (Knab & McLanahan, 2006; Manning & Smock, 2005; Teitler, Reichman, & Koball, 2006), in contrast to marriages, which begin on a fixed date specified in a legal contract. But the implications of this relative imprecision for our study are likely limited, as we looked at whether a transition into marriage or cohabitation occurred at all and used broad groupings to categorize unions by duration. We defined *single* simply as not married or cohabiting, which includes never-married and previously married men and women (see below for more discussion on this point), as well as those in noncoresidential romantic relationships. Questions were asked at both waves about “steady” relationships with intimate, noncoresidential partners, but the NSFH (like most surveys) did not collect histories of these relationships, and thus we could not follow the transitions of partners living apart.

Coresidential union histories allowed us to divide marriages and cohabitations according to time since formation. We split our window of observation approximately in half, defining *recent unions* as those formed within the past three years, and *older unions* as those formed within the past four to six years. We experimented with different points at which to start the duration clock (e.g., the start of coresidence or marriage; see more on this below) and ways of coding duration. In particular, we examined a quantitative measure of duration in months and found that the quadratic form of this variable better described changes in various dimensions of well-being than the simple linear specification. Dichotomizing duration allows for nonlinearities in its effect on well-being (and thus, e.g., allows for the possibility of a distinct honeymoon effect upon entering into a union).

We constructed measures tapping multiple dimensions of well-being. Global happiness is based on a single item with response options ranging from 1 = *very unhappy* to 7 = *very happy* (“Taking things all together, how would you say things are these days?”). Depressive symptoms are an average of 12 items from the Center for Epidemiological Studies Depression Scale (CES–D). Respondents indicated how many days during the past week (0 to 7) they were bothered by things that usually don’t bother them, didn’t feel like eating, felt they couldn’t shake the blues even with help from family and friends, had trouble keeping

their mind on what they were doing, felt depressed, felt that everything they did was an effort, felt fearful, slept restlessly, talked less than usual, felt lonely, felt sad, and felt they could not get going ($\alpha = .93$ at both waves). Global health is assessed by a single item ranging from 1 = *very poor* to 5 = *excellent* (“Compared with other people your age, how would you describe your health?”). Self esteem is an average of 3 items assessing agreement on a scale from 1 = *strongly disagree* to 5 = *strongly agree* with the following statements: “I feel that I’m a person of worth, at least on an equal plane with others”; “On the whole, I am satisfied with myself”; and “I am able to do things as well as other people” ($\alpha = .66$ at wave 1 and $.64$ at wave 2). The highest correlation among these four indices was $r = -.47$ (between global happiness and depression at NSFH1); most intercorrelations varied around $.30$, suggesting distinct dimensions of well-being.

Social ties were measured by the quality of the respondent’s relationship with parents, contact with parents, and time with friends. Relationship with parents is the higher of 2 items asking how the respondent would describe their relationship with their mother and father, respectively, ranging from 1 = *very poor* to 7 = *excellent* (response options at NSFH2 ranged from 0 = *really bad* to 10 = *absolutely perfect*, and we rescaled these from 1–7; respondents not in contact with either parent were coded 1). Contact with parents is the highest of 4 items ranging from 1 = *not at all* to 6 = *more than once a week*, asking how often during the past 12 months the respondent: saw his or her mother; communicated with the mother by letter or phone; saw his or her father; communicated with the father by letter or phone (coded 6 if the respondent was living with a parent). Finally, time with friends is an average of 3 items ranging from 0 = *never* to 4 = *several times a week* indicating how often respondents spent a social evening with a neighbor, people they work with, and friends who live outside their neighborhood ($\alpha = .41$ at wave 1 and $.48$ at wave 2). The α for this measure was relatively low, but our results were very similar if we used a single item indicating the highest level of contact with a neighbor, coworker, or friend outside the neighborhood. The highest correlation among our three indices of social ties was $r = .33$ (between relationship with parents and contact with parents at NSFH2).

We limited our sample to men and women under age 50 who were single at NSFH1. We lost very few transitions by imposing this age restriction, but avoided a comparison group (single at both waves of the NSFH) heavily weighted toward elderly widows. Our main analysis further excluded all individuals who experienced a union dissolution in between waves of data collection, leaving us to focus on the first, still intact union formed between waves. Because union dissolution is reasonably common over the course of 6 years, particularly among cohabitators, this exclusion criterion has a significant impact on sample size and, potentially, on our understanding of the effects of marriage and cohabitation. Thus in a parallel set of analyses, we included all individuals, regardless of how their unions turned out. That is, we followed single men and women into cohabitation and marriage and we examined their well-being and social ties at Time 2, irrespective of whether they remained with their partner. We started with 5,452 single respondents at NSFH1; 1,446 (26.5%) were not successfully reinterviewed; 1,268 (31.7%) of those interviewed at both waves were out of our age range; and 1 was missing data on union transitions. Of the remaining 2,737 (our sample including union dissolutions), 450 (16.4%) experienced a union dissolution in between waves, leaving 2,287 (our sample excluding union dissolutions). Table 1 provides further details of our samples.

We compared outcomes across four groups: those who remained single across waves, married by Time 2 without first cohabiting, married by Time 2 following cohabitation with the same partner, and cohabited only by Time 2. In analyzing differences by union duration, we compared outcomes across three groups: those who remained single across waves, entered into any union within the past 3 years, and entered into any union within the past 4

to 6 years. As will be demonstrated, there were more similarities in the effects of marriage and cohabitation than differences, and thus results were similar whether we examined duration in marriage and cohabitation separately or pooled them.

Fixed Effects Model

We estimated a standard first difference model, which is equivalent to a fixed effects model in the two-period case. We started with a basic model of well-being (y):

$$y_{it} = \alpha + \beta x_{it} + \mu_{it}, \text{ where } \mu_{it} = \theta_i + \varepsilon_{it} \quad (1)$$

and i indexes individuals, t indexes time, α is the mean adjusted well-being across all sample members, x is a vector of dummies for union status, and μ represents unobserved factors that are both time-invariant (θ) and time-varying (ε). Running a regression of y on x yields an estimate of β biased by both time-invariant and time-varying unobserved components. Regressing Δy on Δx capitalizes on within-person variation to reduce this bias, specifically:

$$\Delta y_i = \alpha + \beta \Delta x_i + \Delta \mu_i, \text{ where } \Delta \mu_i = \Delta \varepsilon_i. \quad (2)$$

This regression yields the first difference estimator, which is free from bias due to time-invariant unobserved factors (the θ values), although potentially suffers from bias due to time-varying unobservables (the ε values). As we are concerned with the union formation process and limit our analysis to those unpartnered at $t-1$, Δx represents the transition from being single into a union. The estimated effect of x is thus the average change in a given outcome for those experiencing a union transition, less the average change for those experiencing no transition.

The fixed effects approach has two principal advantages (Allison, 1990, 1994; Liker, Augustyniak, & Duncan, 1985; Winship & Morgan, 1999). First, it deals effectively with bias due to stable unobserved variables, for example, religiosity or gender ideology that may influence both well-being and the choice to cohabit or marry. Second, by modeling changes as opposed to levels, it reduces bias due to persistent reporting errors, for example, the tendency to overreport happiness and relationship quality (two positively skewed variables) relative to objective circumstances. Johnson (2005) showed via simulation that change scores yield better estimates than the regressor variable method, that is, regressing $y_{i,t}$ on $y_{i,t-1}$, Δx_i , and controls, the strategy used by most panel studies on marriage and cohabitation. Fixed effects nonetheless do not control for unobserved factors that vary over time—and do not solve the problem of reverse causation, such that our estimates may be overstated if changes in our outcomes lead to changes in union status (e.g., if changes in happiness lead to marriage). Estimating causal effects from observational data remains a challenge (Moffitt, 2005), but we go further than past work in this endeavor.

To address potential bias due to time-varying factors, we examined the sensitivity of our results to controls for key events that might intervene in the lives of respondents between waves of data collection. Controlling for children born and changes in household income had no bearing on our main findings (results available upon request). That is, these changes did not account for the effects of union status transitions on changes in well-being, net of stable, individual differences such as family background, ability, personality traits, and values. Moreover, if childbearing or increases in income were the result of marriage and cohabitation, including them in our models would control away part of the effect we are interested in estimating. We thus present our final models without these controls.

We further tested differences in the effects of marriage and cohabitation by gender and whether previously married. Of the many interactions we tested, few were statistically significant (results available upon request). For the sake of simplicity, we excluded these distinctions and pooled over gender and marital history.

Results

Table 2 shows Time 1 means on outcome variables, separately according to union status transition by Time 2 (here, we excluded those who experienced a union dissolution in between waves and pooled unions of varying duration). Descriptive results were reasonably consistent with expectations from prior research: those who moved into marriage started out with higher levels of happiness, health, self-esteem, and time with friends than singles; they reported higher levels of happiness, contact with parents, and time with friends than cohabitators (all contrasts statistically significant at $p < .05$). Nonetheless, many of the differences reported in Table 2 were not statistically significant (e.g., depression). These estimates do not account for individual-level differences across union status groups.

Tables 3 and 4 address selection by presenting results of our fixed effects models. As described earlier, these coefficients represent differences in the changes associated with a particular union transition relative to a comparison group; for example, they indicate whether marriage and cohabitation affect well-being compared to remaining single, and whether their effects are significantly different from one another. These tables have two panels, the first restricted to individuals who did not experience a union dissolution in between waves and the second including all individuals, irrespective of union dissolution experience. Each panel presents one set of results ignoring the effects of union duration and another combining transitions to marriage and cohabitation in order to evaluate differences between unions formed in the past 3 years (recent unions) and those formed within 4 to 6 years (older unions).

Table 3 reports on psychological well-being and health outcomes. Results in the first set of rows (contrasting union transitions) of the first panel (excluding union dissolutions) show that moving into any union by NSFH2 increased global happiness and reduced depressive symptoms relative to remaining single (although the coefficient on cohabitation just missed statistical significance in the case of depression, at $p = .12$). Those that entered directly into marriage reported smaller gains in happiness than those who cohabited. None of the union transitions had a significant effect on health relative to remaining single, but entering into marriage (both direct marriage and marriage preceded by cohabitation) increased perceptions of health relative to cohabitation. Cohabitation increased self-esteem relative to remaining single and marriage (again, both direct marriage and marriage preceded by cohabitation).

The next few rows of Table 3 (contrasting time since start of union) collapse over union type and focus on differences between unions of shorter and longer duration. Data provide suggestive evidence that improvements in happiness and depressive symptoms following union formation were potentially short-lived. Individuals in unions of 3 years or less reported larger increases in happiness and declines in depressive symptoms than those in unions of 4 to 6 years, although these differences just missed statistical significance (e.g., $p = .10$ in the case of happiness). There seemed to be no important differences by union duration in self-esteem or health.

The second panel of Table 3 (including union dissolutions) addresses how our understanding of the benefits of marriage and cohabitation changes if we take into account union dissolution in between waves. Patterns of effects were similar to the first panel, although the

estimated effects of marriage and cohabitation relative to remaining single were generally weaker, as expected. For example, for happiness, coefficients on marriage and cohabitation were smaller, and only the coefficient on marriage preceded by cohabitation was statistically significant, whereas entering into any union had statistically significant effects in the first panel. Differences between marriage and cohabitation disappeared for happiness and emerged for depression, with marriage (preceded by cohabitation) lowering symptoms significantly more than cohabitation. As in the first panel, marriage improved health relative to cohabitation, and cohabitation improved self-esteem relative to marriage.

Differences by union duration were in the same direction as in the first panel, and coefficients were of a similar magnitude, but effects were statistically significant for three of the four outcomes. Unions formed within 3 years increased happiness, reduced depressive symptoms, and improved health to a greater extent than those formed further in the past. Factoring in the instability of unions, evidence was stronger that recently formed unions provide a greater boost to well-being than those formed further in the past. The group that formed unions within 4–6 years of NSFH2 included a higher share of dissolved unions (these men and women had more time to separate than those who formed unions within 3 years of NSFH2), which means at least short-term negative consequences for many. In sum, when we acknowledged union dissolution as a potential consequence of union formation, the overall gains to union formation were diluted, and this was increasingly true with time, as an increasing share of unions dissolve.

Table 4 shows change scores relating to social ties. The effects of union transitions on social ties were very similar, and this held in both the first and second panels, whether or not we included individuals who experienced a union dissolution between waves. The quality of parent–child relationships seemed robust to children’s experiences with marriage and cohabitation: Relative to remaining single, none of the union transitions had a significant effect on the quality of parent–child relationships, and differences between marriage and cohabitation were also not statistically significant. Compared to remaining single, cohabitation, direct marriage, and marriage preceded by cohabitation all reduced contact with parents and outings with friends—and all to a similar extent. The only exception was in the second panel (including union dissolutions) where outings with friends decreased more for those who married following cohabitation than for those who cohabited only. Social ties did not vary by time since union formation (final rows of each panel, contrasting recent and older unions). Entering into a coresidential union appears to be a significant turning point, with little rebound in the amount of interaction with friends and family over time.

The literature tends to focus on the statistical significance of mean differences between marriage and cohabitation, but this tells us nothing of substantive significance or variation around the mean. We can gain a sense of scale by standardizing change scores, for example, dividing coefficients in Tables 3 and 4 by Time 1 standard deviations in Table 2. By this method, the largest standardized effects in Tables 3 and 4 were on the order of one third of a standard deviation; most were smaller. Calculating proportions moving up versus down on a given outcome provides sense of variation. Taking global happiness as an example, we found that 41% of those marrying directly, 47% cohabiting, and 37% remaining single reported gains in happiness across waves (in the sample excluding union dissolutions). The modal response was greater happiness, regardless of union transition, but responses were not uniform, with many reporting the same or lower levels of happiness over time. Variation and overlap in distributions by union status may be more important than differences in central tendency.

Discussion

Examined across a range of outcomes, we found the similarities between marriage and cohabitation to be more striking than the differences: entering into any union improved psychological well-being and reduced contact with parents and friends. Direct marriage and marriage preceded by cohabitation were statistically indistinguishable in all outcomes examined, providing no evidence that premarital cohabitation has negative consequences for well-being or ties to family and friends. When union dissolutions were excluded from the analysis, there were no statistically significant differences between the married and cohabiting for depression, relationships with parents, contact with parents, or time with friends. Where there were statistically significant differences, marriage was not always more advantageous than cohabitation: The married fared better in health than cohabitators, but the opposite was true of happiness and self-esteem. Results were similar when union dissolutions were included in the analysis, although the benefits of union formation on happiness and depression appeared smaller, particularly among cohabitators.

We found no evidence that marriage and cohabitation provide benefits over being single in the realm of social ties; indeed, entering into a union reduced contact with parents and social evenings with friends. In some ways, of course, it is not surprising that forming a coresidential relationship reduces time with others, as partners spend time together that cannot be spent elsewhere. These findings do not, however, support arguments in the literature that marriage expands social circles and does so to a greater extent than cohabitation (e.g., Nock, 1995). Our results are more consistent with Sarkisian and Gerstel's (2008) assessment of marriage as a "greedy" institution—and suggest the same of cohabitation.

Where there were gains to union formation, they tended to dissipate over time. Excluding union dissolutions, we found suggestive evidence of greater happiness and fewer depressive symptoms among those in more recently formed unions. When we included the union dissolutions that occurred between waves of data collection, these differences became statistically significant and differences appeared for health. These results are consistent with declines in relationship quality with union duration (e.g., Brown, 2003; Umberson et al., 2005), as well as findings from Germany (Zimmermann & Easterlin, 2006) and the Netherlands (Soons et al., 2009) showing a honeymoon effect in subjective well-being following marriage, that is, relatively large gains in the first few years followed by smaller gains in the years thereafter. We found no change over time in the effects of marriage and cohabitation on ties with family and friends, suggesting that these ties do not rebound in the years following marriage or cohabitation. And although it is possible that stronger marriage effects on some of our outcomes would emerge over a longer period of time—our window of observation is only six years—we found no trace of this in our data. Differences between recent and older unions were not always statistically significant, but in no case did the older unions have stronger effects than the recent ones.

We hypothesized that union formation would provide benefits over being single, and that these would diminish over time; these expectations were largely supported in our analyses of psychological well-being and health, but not social ties. We offered two views on the relative benefits of marriage. One suggested that if the mechanisms linking marriage and well-being applied in part to cohabitation, the benefits of marriage would apply in part to cohabitation. The other posited that if the institutional supports of marriage were outweighed by its more structured expectations and obligations, cohabitation would confer advantages over marriage. We found evidence for each of these views, as summarized above. The formal nature of marriage and the package of entitlements that go with it—including health insurance for spouses—may explain the better health of the married. The greater happiness

and self-esteem of cohabitators fits with Marks and Lambert's (1998) findings on the diminished sense of autonomy and personal growth in marriage, and may relate to the relative flexibility of cohabitation.

We reiterate Ross's (1995) call for thinking about marriage and cohabitation as points on a continuum of social attachment. The demographic categories of married and cohabiting imply distinct boundaries, but they rely on legal and residential criteria that map only loosely to the nature of relationships. Relationships may range from empty or hostile to deeply committed and loving, and differences across relationship categories must necessarily be a matter of degree. The factors linking marriage to well-being—including institutionalization, social roles, social support, and commitment—operate on a continuum and not as dichotomous variables. Cherlin (2004) has made this case with respect to institutionalization, arguing that marriage is undergoing a process of deinstitutionalization, while the social norms defining partners' behavior in cohabitation—now a majority experience among young adults—are becoming stronger. The rigid division of labor in marriage emphasized by Parsons more than 50 years ago (1949) and argued to be advantageous by Becker (1973, 1974), has steadily given way to expectations that the economic support of the family is a part of both a wife's and husband's obligation (Oppenheimer, 1994; Sweeney, 2002). With as many as half of all marriages ending in divorce or separation (Goldstein, 1999; Raley & Bumpass, 2003), marriage is as likely to be temporary as it is to be a lifetime relationship. Furthermore, behaviors that were once normatively seen as unique to marriage are now much less so, including sexual relationships, coresidence, and childbearing. The key feature defining marriage as distinct from cohabitation is its engagement with the legal system. Even here, increasing pressure towards domestic partner rights and responsibilities at both the corporate and state levels blurs the boundaries between marriage and cohabitation.

As indicated at the outset, it has been well over a decade since the NSFH2 data were collected, and there is no more recent national survey to demonstrate how our findings may have changed in the intervening years. Given that increasing numbers of men and women experience cohabitation, understanding its evolving effects on well-being is a critical undertaking. What might new data show? On one hand, Cherlin's arguments about the deinstitutionalization of marriage suggest that the boundaries between marriage and cohabitation are blurring, and that the experiences of marriage and cohabitation may be converging. On the other hand, the exceptional nature of the attachment to the marriage ideal in the United States, as evidenced by recent efforts to promote marriage, may suggest potential divergence in the social status of marriage and cohabitation. In addition to new data to lay out the social facts, more theoretical development is needed to frame these facts, provide signposts for the course of changes to come, and shed light on the mechanisms linking romantic relationships (from dating to marriage) and well-being.

Our work addresses open questions about the nature of the link between marriage and well-being, offering a more stringent test of the causal effects of marriage and cohabitation across a range of indicators and paying closer attention to the dynamic nature of relationships than much past research. We reported new findings with respect to the relative benefits of marriage and cohabitation and the fading of gains in these benefits over time, suggesting that prevailing arguments about the clear advantages of marriage over cohabitation are incomplete at best. Yet, limitations of this study should be reiterated. First, as just noted, our data lag behind changes in family formation that have continued to march forward in the years since the NSFH2. Second, although fixed effects models hold selection on stable, unobserved factors constant by capitalizing on within-person change, they do not control for unobserved factors that vary over time, nor do they solve the problem of reverse causation. As such, our estimates may be overstated if changes in unobserved factors or our outcomes

lead to changes in union status across waves. Finally, we have only two observations on each end of a reasonably short window, and our sample sizes are relatively modest; thus our analyses paint a broad-brush picture of the relationship between union formation and well-being. Trajectories of change may be more complex than we are able to portray and there may be other aspects of heterogeneity (beyond gender, marital history, and parenthood) that this analysis does not capture.

In conclusion, we are certainly not saying that marriage is irrelevant for individual well-being. What we have found is simply that, once individual differences are taken into account, it is far from a blanket prescription for individual well-being. To those in highly conflicted marriages or who have gone through divorce, this sociological insight is only a firm grasp of the obvious. At the same time, for many others, marriage is a great source of happiness and well-being that it is expected to be for a lifetime, or at least for a portion of the life course. Recent campaigns to promote marriage are based on the assumption that marriage will improve the well-being of individuals, and in a context of scarce resources, they divert time and money away from other policy levers. Better understanding the circumstances and individual and couple characteristics under which marriage is likely to improve well-being is a critical interdisciplinary challenge with important policy implications.

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References

- Allison PD. Change scores as dependent variables in regression analysis. *Sociological Methodology*. 1990; 20:93–114.
- Allison PD. Using panel data to estimate the effects of events. *Sociological Methods and Research*. 1994; 23:174–199.
- Axinn WG, Thornton A. The relationship between cohabitation and divorce: Selectivity or causal influence? *Demography*. 1992; 29:357–374. [PubMed: 1426434]
- Becker GS. A theory of marriage: Part I. *Journal of Political Economy*. 1973; 81:813–846.
- Becker GS. A theory of marriage: Part II. *Journal of Political Economy*. 1974; 82:S11–S26.
- Bernard, J. *The future of marriage*. New York: Bantam Books; 1972.
- Brines J, Joyner K. The ties that bind: Principles of cohesion in cohabitation and marriage. *American Sociological Review*. 1999; 64:333–355.
- Brown SL. The effect of union type on psychological well-being: Depression among cohabitators versus marrieds. *Journal of Health and Social Behavior*. 2000; 41:241–255. [PubMed: 11011503]
- Brown SL. Relationship quality dynamics of cohabiting unions. *Journal of Family Issues*. 2003; 24:583–601.
- Brown SL. Moving from cohabitation to marriage: Effects on relationship quality. *Social Science Research*. 2004; 33:1–19.
- Brown SL, Booth A. Cohabitation versus marriage: A comparison of relationship quality. *Journal of Marriage and the Family*. 1996; 58:668–678.
- Burgess, EW.; Locke, HJ. *The family: From institution to companionship*. New York: American Book; 1945.
- Cherlin AJ. Remarriage as an incomplete institution. *American Journal of Sociology*. 1978; 84:634–650.

- Cherlin, AJ. Toward a new home socioeconomics of union formation. In: Waite, L.J.; Bachrach, C.; Hindin, M.; Thomson, E.; Thornton, A., editors. *The ties that bind: Perspectives on marriage and cohabitation*. New York: Aldine de Gruyter; 2000. p. 126-144.
- Cherlin AJ. Should the government promote marriage? *Contexts*. 2003; 2:22–29.
- Cherlin AJ. The deinstitutionalization of American marriage. *Journal of Marriage and Family*. 2004; 66:848–861.
- Cherlin AJ. American marriage in the early twenty-first century. *Future of Children*. 2005; 15:33–55. [PubMed: 16158729]
- Cherlin, AJ. *The marriage-go-round: The state of marriage and the family in America today*. New York: Alfred A. Knopf; 2009.
- Clarkberg M, Stolzenberg RM, Waite LJ. Attitudes, values, and entrance into cohabitational versus marital unions. *Social Forces*. 1995; 74:609–632.
- Davis K. The forms of illegitimacy. *Social Forces*. 1939; 18:77–89. 114.
- DeMaris A, Rao KV. Premarital cohabitation and subsequent marital stability in the United States: A reassessment. *Journal of Marriage and the Family*. 1992; 54:178–190.
- Dush CMK, Cohan CL, Amato PR. The relationship between cohabitation and marital quality and stability: Change across cohorts? *Journal of Marriage and Family*. 2003; 65:539–549.
- Durkheim, E. *Suicide: A study in sociology*. New York: Free Press; 1997. [1897]
- Edgerton DJ. Cohabitation and exchanges of support. *Social Forces*. 2005; 83:1097–1110.
- England, P.; Farkas, G. *Households, employment, and gender: A social, economic, and demographic view*. New York: Aldine; 1986.
- Evenson RJ, Simon RW. Clarifying the relationship between parenthood and depression. *Journal of Health and Social Behavior*. 2005; 46:341–358. [PubMed: 16433280]
- Ferree MM. Beyond separate spheres: Feminism and family research. *Journal of Marriage and the Family*. 1990; 52:866–884.
- Goldstein JR. The leveling of divorce in the United States. *Demography*. 1999; 36:409–414. [PubMed: 10472504]
- Goode, WJ. *World revolution and family patterns*. New York: Free Press; 1963.
- Gove WR. The relationship between sex roles, marital status, and mental illness. *Social Forces*. 1972; 51:34–44.
- Gove WR. Sex, marital status, and mortality. *American Journal of Sociology*. 1973; 79:45–67.
- Gove WR, Hughes M, Style CB. Does marriage have positive effects on the psychological well-being of an individual? *Journal of Health and Social Behavior*. 1983; 24:122–131. [PubMed: 6886367]
- Gupta S. The effects of transitions in marital status on men's performance of housework. *Journal of Marriage and the Family*. 1999; 61:700–711.
- Hao L. Family structure, private transfers, and the economic well-being of families with children. *Social Forces*. 1996; 75:269–292.
- Hawkins DN, Booth A. Unhappily ever after: Effects of long-term, low-quality marriages on well-being. *Social Forces*. 2005; 84:451–471.
- Horwitz AV, White HR. The relationship of cohabitation and mental health: A study of a young adult cohort. *Journal of Marriage and the Family*. 1998; 60:505–514.
- Horwitz AV, White HR, Howell-White S. Becoming married and mental health: A longitudinal study of a cohort of young adults. *Journal of Marriage and the Family*. 1996; 58:895–907.
- House JS, Landis KR, Umberson D. Social relationships and health. *Science*. 1988; 241:540–545. [PubMed: 3399889]
- Heuveline P, Timberlake JM. The role of cohabitation in family formation: The United States in comparative perspective. *Journal of Marriage and Family*. 2004; 66:1214–1230.
- Hughes M, Gove WR. Living alone, social integration, and mental health. *American Journal of Sociology*. 1981; 87:48–74.
- Hughes ME, Waite LJ. Health in household context: Living arrangements and health in late middle age. *Journal of Health and Social Behavior*. 2002; 43:1–21. [PubMed: 11949193]

- Johnson DR. Two-wave panel analysis: Comparing statistical methods for studying the effects of transitions. *Journal of Marriage and Family*. 2005; 67:1061–1075.
- Kessler RC, Essex MJ. Marital status and depression: The importance of coping resources. *Social Forces*. 1982; 61:484–507.
- Kiernan, K. European perspectives on union formation. In: Waite, LJ.; Bachrach, C.; Hindin, M.; Thomson, E.; Thornton, A., editors. *The ties that bind: Perspectives on marriage and cohabitation*. New York: Aldine de Gruyter; 2000. p. 40-58.
- Kim HK, McKenry PC. The relationship between marriage and psychological well-being. *Journal of Family Issues*. 2002; 23:885–911.
- Knab, JT.; McLanahan, S. Measuring cohabitation: Does when, who, and how you ask matter?. In: Hofferth, S.; Casper, L., editors. *The handbook of measurement issues*. New Jersey: Erlbaum; 2006. p. 19-33.
- Kohler H, Behrman JR, Skytthe A. Partner + children = happiness? The effects of partnerships and fertility on well-being. *Population and Development Review*. 2005; 31:407–445.
- Korenman S, Neumark D. Does marriage really make men more productive? *Journal of Human Resources*. 1991; 26:282–307.
- Kurdek LA. The relations between reported well-being and divorce history, availability of a proximate adult, and gender. *Journal of Marriage and the Family*. 1991; 53:71–78.
- Kurdek LA. The nature and predictors of the trajectory of change in marital quality for husbands and wives over the first 10 years of marriage. *Developmental Psychology*. 1999; 35:1283–1296. [PubMed: 10493654]
- Lamb KA, Lee GR, DeMaris A. Union formation and depression: Selection and relationship effects. *Journal of Marriage and Family*. 2003; 65:953–962.
- Light A. Gender differences in the marriage and cohabitation income premium. *Demography*. 2004; 41:263–284. [PubMed: 15209040]
- Liker JK, Augustyniak S, Duncan GJ. Panel data and models of change: A comparison of first difference and conventional two-wave models. *Social Science Research*. 1985; 14:80–101.
- Lillard L, Waite LJ. Till death do us part: Marital disruption and mortality. *American Journal of Sociology*. 1995; 100:1131–1156.
- Lillard LA, Brien MJ, Waite LJ. Premarital cohabitation and subsequent marital dissolution: A matter of self-selection? *Demography*. 1995; 32:437–457. [PubMed: 8829976]
- Lucas RE, Georgellis Y, Clark AE, Diener E. Reexamining adaptation and the set point model of happiness: Reactions to changes in marital status. *Personality and Social Psychology*. 2003; 84:527–539.
- Manning WD, Smock PJ. Measuring and modeling cohabitation: New perspectives from qualitative data. *Journal of Marriage and Family*. 2005; 67:989–1002.
- Marks N, Lambert JD. Marital status continuity and change among young and midlife adults. *Journal of Family Issues*. 1998; 19:652–686.
- Mastekassa A. The subjective well-being of the previously married: The importance of unmarried cohabitation and time since widowhood or divorce. *Social Forces*. 1994; 73:665–692.
- McLanahan SS, Adams J. Parenthood and psychological well-being. *Annual Review of Sociology*. 1987; 13:237–257.
- Moffitt R. Remarks on the analysis of causal relationships in population research. *Demography*. 2005; 42:91–108. [PubMed: 15782897]
- Murray JE. Marital protection and marital selection: Evidence from a historical-prospective sample of American men. *Demography*. 2000; 37:511–521. [PubMed: 11086576]
- Nock SL. A comparison of marriages and cohabiting relationships. *Journal of Family Issues*. 1995; 16:53–76.
- Nock SL. Marriage as a public issue. *Future of Children*. 2005; 15:13–32. [PubMed: 16158728]
- Nomaguchi KM, Milkie MA. Costs and rewards of children: The effects of becoming a parent on adults' lives. *Journal of Marriage and Family*. 2003; 65:356–374.
- Oppenheimer VK. Women's rising employment and the future of the family in industrial societies. *Population and Development Review*. 1994; 20:293–342.

- Oppenheimer VK, Kalmijn M, Lim N. Men's career development and marriage timing during a period of rising inequality. *Demography*. 1997; 34:311–330. [PubMed: 9275242]
- Parsons, T. The social structure of the family. In: Anshen, R., editor. *The family: Its function and destiny*. New York: Harper and Brothers; 1949. p. 173-201.
- Pearlin LI, Johnson JS. Marital status, life-strains, and depression. *American Sociological Review*. 1977; 42:704–715. [PubMed: 931191]
- Raley RK, Bumpass L. The topography of the divorce plateau: Levels and trends in union stability in the United States. *Demographic Research*. 2003; 8:245–260.
- Rindfuss RR, Parnell AM. The varying connection between marital status and childbearing in the United States. *Population and Development Review*. 1989; 15:447–470.
- Rindfuss RR, VandenHeuvel A. Cohabitation: A precursor to marriage or an alternative to being single? *Population and Development Review*. 1990; 16:703–726.
- Ross CE. Reconceptualizing marital status as a continuum of social attachment. *Journal of Marriage and the Family*. 1995; 57:129–140.
- Sarkisian N, Gerstel N. Till marriage do us part: Adult children's relationships with parents. *Journal of Marriage and Family*. 2008; 70:360–376.
- Simon RW. Revisiting the relationships among gender, marital status, and mental health. *American Journal of Sociology*. 2002; 107:1065–1096.
- Skinner KB, Bahr SJ, Crane DR, Call VRA. Cohabitation, marriage, and remarriage: A comparison of relationship quality over time. *Journal of Family Issues*. 2002; 23:74–90.
- Soons JP, Liefbroer AC, Kalmijn M. The long-term consequences of relationship formation for subjective well-being. *Journal of Marriage and Family*. 2009; 71:1254–1270.
- South SJ, Spitze G. Housework in marital and nonmarital households. *American Sociological Review*. 1994; 59:327–347.
- Stanley SM, Whitton SW, Markman HJ. Maybe I do: Interpersonal commitment and premarital or nonmarital cohabitation. *Journal of Family Issues*. 2004; 25:496–519.
- Stets JE. Cohabiting and marital aggression: The role of social isolation. *Journal of Marriage and the Family*. 1991; 53:669–680.
- Sweeney M. Two decades of family change: The shifting economic foundations of marriage. *American Sociological Review*. 2002; 67:132–147.
- Sweet, JA.; Bumpass, LL. Center for Demography and Ecology. Madison: University of Wisconsin; 1996. *The National Survey of Families and Households—Waves 1 and 2: Data description and documentation*. Retrieved from <http://www.ssc.wisc.edu/nsfh/home.htm>
- Sweet, JA.; Bumpass, LL.; Call, VR. Center for Demography and Ecology. Madison: University of Wisconsin; 1988. *The design and content of the National Survey of Families and Households (NSFH Working Paper No. 1)*. Retrieved from <http://www.ssc.wisc.edu/cde/nsfhw/home.htm>
- Teachman JD. Premarital sex, premarital cohabitation, and the risk of subsequent marital dissolution among women. *Journal of Marriage and Family*. 2003; 65:444–455.
- Teachman JD, Thomas J, Paasch K. Legal status and the stability of coresidential unions. *Demography*. 1991; 28:571–585. [PubMed: 1769403]
- Teitler J, Reichman N, Koball H. Contemporaneous versus retrospective reports of cohabitation in the Fragile Families survey. *Journal of Marriage and Family*. 2006; 68:469–477.
- Thornton A, Axinn WG, Hill DH. Reciprocal effects of religiosity, cohabitation, and marriage. *American Journal of Sociology*. 1992; 98:628–651.
- Thornton A, Axinn WG, Teachman JD. The influence of school enrollment and accumulation on cohabitation and marriage in early adulthood. *American Sociological Review*. 1995; 60:762–774.
- Umberson D. Family status and health behaviors: Social control as a dimension of social integration. *Journal of Health and Social Behavior*. 1987; 28:306–319. [PubMed: 3680922]
- Umberson D. Gender, marital status, and the social control of health behavior. *Social Science and Medicine*. 1992; 34:907–917. [PubMed: 1604380]
- Umberson D, Williams K, Powers DA, Chen MD, Campbell AM. As good as it gets? A life course perspective on marital quality. *Social Forces*. 2005; 84:493–511.

- Van Laningham J, Johnson DR, Amato P. Marital happiness, marital duration, and the U-shaped curve: Evidence from a five-wave panel study. *Social Forces*. 2001; 79:1313–1341.
- Waite LJ. Does marriage matter? *Demography*. 1995; 32:483–507. [PubMed: 8925942]
- Waite, LJ. Trends in men's and women's well-being in marriage. In: Waite, L.; Bachrach, C.; Hindin, M.; Thomson, E.; Thornton, A., editors. *The ties that bind: Perspectives on marriage and cohabitation*. New York: Aldine de Gruyter; 2000. p. 368-392.
- Waite, LJ.; Gallagher, M. *The case for marriage: Why married people are happier, healthier, and better off financially*. New York: Doubleday; 2000.
- Williams K. Has the future of marriage arrived? A contemporary examination of gender, marriage, and psychological well-being. *Journal of Health and Social Behavior*. 2003; 44:470–487. [PubMed: 15038144]
- Williams K, Umberson D. Marital status, marital transitions, and health: A gendered life course perspective. *Journal of Health and Social Behavior*. 2004; 45:81–98. [PubMed: 15179909]
- Williams K, Sassler S, Nicholson LM. For better or for worse? The consequences of marriage and cohabitation for the health and well-being of single mothers. *Social Forces*. 2008; 86:1481–1511.
- Winship C, Morgan SL. The estimation of causal effects from observational data. *Annual Review of Sociology*. 1999; 25:659–707.
- Woo H, Raley RK. A small extension to “Costs and rewards of children: The effects of becoming a parent on adults' lives.” *Journal of Marriage and Family*. 2005; 67:216–221.
- Wu Z, Hart R. The effects of marital and nonmarital union transition on health. *Journal of Marriage and Family*. 2002; 64:420–432.
- Zimmermann AC, Easterlin RA. Happily ever after? Cohabitation, marriage, divorce, and happiness in Germany. *Population and Development Review*. 2006; 32:511–528.

Table 1

N Values for Union Transitions between NSFH1–NSFH2, by Whether the Union Dissolved by NSFH2

Union transitions	No Union Dissolution	Union Dissolution	Total	% Union Dissolutions
Single → single	1,391	0	1,391	0
Single → married	349	81	430	19
Single → cohabiting → married	333	54	387	14
Single → cohabiting	214	315	529	60
Total	2,287	450	2,737	16
Single → single	1,391	0	1,391	0
Single → union formed within 3 years of NSFH2	338	116	454	26
Single → union formed within 4–6 years of NSFH2	558	334	892	37
Total	2,287	450	2,737	16

Note. Men and women under age 50 and single at NSFH1. *N* values are unweighted. Final *n* values vary due to differences in item response rates (shown in Tables 3 and 4).

Table 2

NSFH1 Values on Outcome Variables, by Union Transition between NSFH1–NSFH2

Outcome variables	All	Single → Single	Single → Married	Single → Cohabiting	Single → Married	Single → Cohabiting
Well-being						
Global happiness (1–7)	<i>M</i> 5.20	5.16 ^{2,4}	5.46 ^{1,3,4}	5.19 ^{2,4}	4.91 ^{1,2,3}	1.43
	<i>SD</i> 1.36	1.34	1.47	1.22	1.50	1.43
	<i>n</i> 1,682	1,011	265	256	150	1.43
Depressive symptoms (0–7)	<i>M</i> 1.45	1.42	1.47	1.55	1.23	1.43
	<i>SD</i> 1.44	1.45	1.52	1.45	1.23	1.23
	<i>n</i> 2,207	1,336	342	322	207	207
Global health (1–5)	<i>M</i> 4.16	4.11 ^{2,4}	4.25 ¹	4.19	4.28 ¹	4.28 ¹
	<i>SD</i> 0.76	0.80	0.73	0.66	0.70	0.70
	<i>n</i> 2,082	1,262	326	304	190	190
Self-esteem (1–5)	<i>M</i> 4.13	4.08 ^{2,3}	4.23 ¹	4.16 ¹	4.15	4.15
	<i>SD</i> 0.61	0.63	0.58	0.53	0.54	0.54
	<i>n</i> 2,149	1,301	337	314	197	197
Social ties						
Relationship with parents (1–7)	<i>M</i> 6.08	6.14 ³	6.06	5.97 ¹	6.02	6.02
	<i>SD</i> 1.15	1.11	1.17	1.19	1.25	1.25
	<i>n</i> 1,754	1,021	291	279	163	163
Contact with parents (1–6)	<i>M</i> 5.45	5.46	5.54 ⁴	5.39	5.33 ²	5.33 ²
	<i>SD</i> 0.94	0.94	0.89	0.92	1.04	1.04
	<i>n</i> 1,756	1,023	291	280	162	162
Time with friends (0–4)	<i>M</i> 1.82	1.73 ^{2,3,4}	1.86 ^{1,4}	1.97 ¹	2.05 ^{1,2}	2.05 ^{1,2}
	<i>SD</i> 0.95	0.95	0.92	0.93	0.90	0.90
	<i>n</i> 2,098	1,274	323	309	192	192

Note. Men and women under age 50 and single at NSFH1. Restricted to respondents with data on outcomes of interest at NSFH2 and no union dissolution in between waves. Means (*M*) and standard deviations (*SD*) are weighted; *n* values are unweighted. Range indicated in parentheses.

- ¹ Different from single \rightarrow single at $p < .05$.
- ² Different from single \rightarrow married at $p < .05$.
- ³ Different from single \rightarrow cohabiting \rightarrow married at $p < .05$.
- ⁴ Different from single \rightarrow cohabiting at $p < .05$.

Table 3

Change in Psychological Well-Being and Health Following Union Transition between NSFH1–NSFH2

	Happiness	Depression	Health	Self-Esteem
Panel 1: Excluding union dissolutions				
Contrasting union transitions				
Married v. single	0.19 [*]	-0.24 ^{**}	0.08	-0.01
Cohabiting → married v. single	0.38 ^{***}	-0.42 ^{***}	0.09	0.03
Cohabiting v. single	0.47 ^{***}	-0.19	-0.08	0.16 ^{***}
Married v. cohabiting → married	-0.19	0.17	-0.01	-0.04
Married v. cohabiting	-0.28 [*]	-0.06	0.15 [*]	-0.17 ^{***}
Cohabiting → married v. cohabiting	-0.09	-0.23	0.17 ^{**}	-0.14 ^{**}
Contrasting time since union formation ^a				
Recent union v. single	0.46 ^{***}	-0.39 ^{***}	0.06	0.08 [*]
Older union v. single	0.24 ^{**}	-0.23 ^{***}	0.04	0.03
Recent union v. older union	0.22	-0.16	0.02	0.05
<i>n</i>	1,682	2,207	2,082	2,149
Panel 2: Including union dissolutions				
Contrasting union transitions				
Married v. single	0.12	-0.18 ^{**}	0.08	-0.01
Cohabiting → married v. single	0.30 ^{***}	-0.36 ^{***}	0.07	0.04
Cohabiting v. single	0.12	-0.02	-0.02	0.11 ^{***}
Married v. cohabiting → married	-0.18	0.17	0.02	-0.05
Married v. cohabiting	0.00	-0.16	0.10 [*]	-0.12 ^{**}
Cohabiting → married v. cohabiting	0.18	-0.33 ^{***}	0.08	-0.07
Contrasting time since union formation ^a				
Recent union v. single	0.32 ^{***}	-0.30 ^{***}	0.12 ^{**}	0.08 [*]
Older union v. single	0.10	-0.10	0.00	0.04
Recent union v. older union	0.22 ^{**}	-0.20 ^{**}	0.12 ^{**}	0.04
<i>n</i>	2,009	2,646	2,498	2,579

Note. Men and women under age 50 and single at NSFH1. OLS regression coefficients on union transition dummies from fixed effects models, altering contrasts of interest.

^aRecent unions are those formed within 3 years of NSFH2; older unions are those formed within 4–6 years of NSFH2.

* $p < .10$.

** $p < .05$.

*** $p < .01$. (two-tailed)

Table 4

Change in Social Ties Following Union Transition between NSFH1–NSFH2

	Relationship with Parents	Contact with Parents	Time with Friends
Panel 1: Excluding union dissolutions			
Contrasting union transitions			
Married v. single	0.11	−0.23 ***	−0.26 ***
Cohabiting → married v. single	−0.04	−0.24 ***	−0.35 ***
Cohabiting v. single	−0.04	−0.19 **	−0.32 ***
Married v. cohabiting → married	0.14	0.01	0.09
Married v. cohabiting	0.15	−0.04	0.05
Cohabiting → married v. cohabiting	0.00	−0.06	−0.04
Contrasting time since union formation ^a			
Recent union v. single	0.01	−0.21 ***	−0.35 ***
Older union v. single	0.02	−0.23 ***	−0.28 ***
Recent union v. older union	−0.01	0.02	−0.07
<i>n</i>	1,754	1,756	2,098
Panel 2: Including union dissolutions			
Contrasting union transitions			
Married v. single	0.09	−0.23 ***	−0.24 ***
Cohabiting → married v. single	−0.01	−0.21 ***	−0.35 ***
Cohabiting v. single	0.06	−0.18 ***	−0.21 ***
Married v. cohabiting → married	0.11	−0.02	0.11
Married v. cohabiting	0.03	−0.05	−0.03
Cohabiting → married v. cohabiting	−0.07	−0.03	−0.14 *
Contrasting time since union formation ^a			
Recent union v. single	0.02	−0.19 ***	−0.30 ***
Older union v. single	0.07	−0.21 ***	−0.24 ***
Recent union v. older union	−0.05	0.02	−0.06
<i>n</i>	2,126	2,123	2,509

Note. Men and women under age 50 and single at NSFH1. OLS regression coefficients on union transition dummies from fixed effects models, altering contrasts of interest.

^aRecent unions are those formed within 3 years of NSFH2; older unions are those formed within 4–6 years of NSFH2.

* $p < .10$.

** $p < .05$.

*** $p < .01$. (two-tailed)