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Publication Date

2006-02-01

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COHABITATION, MARRIAGE, AND TRAJECTORIES IN WELL-BEING AND RELATIONSHIPS

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February 2006

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COHABITATION, MARRIAGE, AND TRAJECTORIES IN WELL-BEING AND RELATIONSHIPS

ABSTRACT. Prior research on marriage has tended to focus on cross-sectional differences between the married and unmarried, with little attention to selectivity, change over time, or the substantive implications of statistically different means. This paper addresses these issues and provides a perspective for thinking about the relative benefits of marriage. It examines how transitions into marriage and cohabitation are associated with change over time in multiple measures of well-being and social relationships. Change score methods are used to control for differences in unmeasured variables that may affect the link between union status and various individual and couple-level outcomes. The analysis shifts emphasis to trajectories as opposed to snapshots, and it draws attention to the variability in outcomes within and across union statuses. Results show no difference between the effects of moving into marriage compared to cohabitation on happiness, depression, contact with parents, or time spent with friends; they show some difference in health, self esteem, intergenerational relationships, and couple relationships. Nonetheless, when mean differences are statistically significant, they tend to be small and appear to dissipate over time. The authors conclude that similarities between marriage and cohabitation are more striking than differences.

Marriage has long been recognized as a fundamental social institution (Burgess and Locke 1945; Davis 1939; Goode 1963; Parsons 1949), providing the context for procreation, socialization of the next generation, the organization of household labor, and the allocation of family resources, as well as the link between the individual and the broader community. Nonetheless, with the rise of modern economies and the associated individuation, many functions once confined to marriage now take place outside of it. Unmarried sex, cohabitation, and childbearing have increased dramatically over the past 40 years and are now common – if not normative – components of family life in the U.S. and other Western industrialized countries (Kiernan 2000; van de Kaa 1987). These changes have blurred the boundaries of marriage, leading one to ask what difference marriage makes in comparison to alternative modes of organizing its traditional functions. This is a critical sociological question, but one that cannot be addressed without recognizing the social and political context in which it is raised.

In many modern societies, the place of marriage in the family system is of little interest outside academic circles. The U.S., by contrast, has long shown a strong attachment to marriage as an ideal (Cherlin 2005). The religious and social symbolism of marriage is central to recent concerns over the role of traditional marriage in preserving the social order. A "marriage movement" has emerged over the past decade from a diverse array of conservative and centrist professionals, scholars, and religious leaders who seek to "recreate a marriage culture" (*What Next for the Marriage Movement?* 2004). This group views the weakening of marriage as a threat to the wellbeing of adults, children, and society as a whole, and it promotes policies that elevate marriage over those that support diversity in family forms (Whitehead 2004; Cherlin 2003). This movement has played an important part in a growing national debate over the meaning and significance of marriage in American society.

Efforts to strengthen marriage have been supported by research linking marriage to the well-being of adults. In their influential review of the literature, Waite and Gallagher (2000:77) conclude 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." While consistent with sociological theory and common cultural expectations, such conclusions may overstate the relative benefits of marriage.

A number of issues important for our understanding of the nature and meaning of marriage and the resulting implications for social policy have received insufficient attention. First, while associations between marriage and well-being are unequivocal, it is less clear to what extent they are causal as opposed to reflecting preexisting characteristics. Second, the benefits associated with marriage may not be unique to marriage. The reasons marriage should matter – including institutionalization, social support, and commitment – may apply to greater or lesser extent to other intimate relationships, particularly cohabitation. Cohabitation is unarguably a part of the American family system, as it is for families throughout most of Europe (Bumpass and Lu 2000; Kiernan 2000). Most young people today will spend time in a cohabiting relationship, and many will have or parent children in such unions (Bumpass and Lu 2000). Yet, relatively little work has examined the effects of cohabitation on adult wellbeing. Third, only recently has attention been paid to the changes that take place when people move into marriage or cohabitation or to trajectories through different stages of a relationship. Studies comparing snapshots of the married and unmarried provide less traction on questions of causality than those relying on panel data. Moreover, comparisons are often made in samples including married persons at older ages and longer relationship durations that are virtually absent among cohabiting

couples, confounding the effects of marriage, age, and duration (e.g, South and Spitze 1994; Nock 1995).

The tendency to focus on average, point-in-time differences between the married and unmarried fails to adequately address the extent to which the benefits associated with marriage are causal, shared by cohabitation, or stable over time. Further, and extremely important, a focus on mean differences ignores the extent to which there may be similarity in social processes affecting marriage and other intimate relationships. Statistically significant mean differences on important outcomes are too often emphasized without attention to the substantive importance of their magnitude, or to the similarity in distributions. This paper addresses these issues and provides a perspective for thinking about the relative advantages of marriage. Using panel data from the National Survey of Families and Households (NSFH), we examine how marriage and cohabitation are associated with changes in important dimensions of well-being: happiness, health, social ties, and the quality of couple relationships. We move away from cross-sectional descriptions of single, cohabiting, and married men and women and focus on transitions from being single into cohabitation and marriage, as well as trajectories within relationships over time. Our use of change score methods allows us to address the role of selection in linking union status to various individual and couple-level outcomes. It shifts emphasis to trajectories as opposed to snapshots, and draws attention to the variability in outcomes within and across union statuses.

MARRIAGE AND WELL-BEING

The association between marriage and well-being is well documented: Married men and women are better off than their unmarried counterparts in terms of happiness, health, financial well-being, and longevity (Gove 1973; Gove, Hughes, and Style 1983; Hao 1996; Kessler and Essex 1982; Pearlin and Johnson 1977; Umberson 1987; Waite 1995; Waite and Gallagher

2000); these findings appear to hold over time and place (Glenn and Weaver 1988; Hu and Goldman 1990; Lee, Seccombe, and Shehan 1991; Schoeni 1995; Stack and Eshleman 1998). Much of the early work on marriage relied on cross-sectional designs, making it difficult to parse out associations due to the causal effects of marriage and those due to self selection of the better off into marriage (or of the worse off out of marriage). More recent studies using longitudinal data also find greater health and well-being among the married (Horwitz, White, and Howell-White 1996; Hughes and Waite 2002; Korenman and Neumark 1991; Lillard and Waite 1995; Marks and Lambert 1998; Murray 2000; Simon 2002). Although longitudinal designs typically account for a broader array of selection factors, they are only as effective as the measured variables or selection models (for unmeasured variables) employed. We contribute to this literature by using a fixed-effects method requiring neither the measurement of all variables relevant to selection nor statistical models that are highly dependent on how they are specified. This approach holds constant all characteristics of individuals at initial observation, whether or not these characteristics are measured (Allison 1990, 1994).

There are a number of compelling reasons to expect a direct effect of marriage on well-being. We focus on four: institutionalization, social roles, social support, and commitment. These explanations are not mutually exclusive; indeed, they may be overlapping and reinforcing. Marriage is an *institution* defined by a legal contract specifying rights and responsibilities and, as such, brings with it normative standards with respect to appropriate behaviors and social support (Cherlin 1978, 2004; Nock 1995). Family, friends, and the broader society generally reinforce the maintenance of marriage relationships and sanction deviations with social disapproval.

As a social institution, marriage offers a set of relatively clearly defined *social roles*, which provide individuals with a source of meaning and purpose (Gove 1973; but see Ferree

[1990] for a critical analysis of the role perspective). Marital roles facilitate interaction between spouses by offering a set of 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. They also connect their partners to larger social networks including friends, kin, and the broader community. These relationships represent a network of social capital that can be drawn on in times of need.

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). The involvement of others in upholding the marriage contract strengthens *commitment* and facilitates joint long-term investments, including financial investments in a home or relationship-specific investments of time and energy in the care of young children (England and Farkas 1986). Over time, the accumulation of a shared history may become, in itself, a source of meaning, self-definition, and well-being. Joint investments strengthen bonds between partners and serve as barriers to exit.

Marriage is a social institution buttressed by law, social support and expectations, and the potential for spousal support and relationship-specific investments – and yet, half of all marriages dissolve. Despite the potential benefits of marriage, they are clearly not experienced equally or persistently for a great many marriages. With the exception of the legal aspects, factors supporting marriages vary across marriages and may be absent altogether in some. Of course, marriage may still be viewed as advantageous as a social status even by those for whom a

specific marriage was not. A majority of those who divorce also remarry, but as Cherlin noted years ago (1978), the variation in factors associated with marriage is reflected in remarriages being less institutionalized than first marriages. The recognition that institutionalization, social support, and commitment vary across marriages signals that these factors may also apply in varying degrees to cohabitations and the intimate relationships of partners living apart.

COMPARING MARRIAGE AND COHABITATION

To what extent do the benefits of marriage extend to cohabitation? Cohabitation and marriage are similar in key respects: Both involve sharing a household 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 monitor health, provide information, and "nag" (Waite and Gallagher 2000). But there are also important differences that may affect well-being. At the societal level, cohabitation lacks the legal constraints and sanctions of marriage, and norms about the social roles of cohabiting partners are less clearly defined. Without the legitimacy and presumed stability of marriage, cohabiting relationships likely receive less support from family, friends, and the broader community. In this context, "enforceable trust" is at best weak. The lesser institutionalization of cohabitation implies a broader range of relationships from casual to life-time commitments – variation which in turn shapes couple interactions.

At the individual level, there are value differences in many domains that likely affect couple interactions and individual well-being. Cohabitors tend to be less traditional and more individualistic than their married counterparts: On average, they have lower childbearing expectations, place a higher value on leisure time, are more accepting of divorce, and are less religious (Axinn and Thornton 1992; Clarkberg, Stolzenberg, and Waite 1995; Rindfuss and

Vandenheuvel 1990; Thornton, Axinn, and Hill 1992). Many have more egalitarian attitudes about sex roles and a more equal division of household labor (South and Spitze 1994). Though the prevalence is low, cohabitors are also more likely to have a secondary sex partner (Forste and Tanfer 1996), suggesting that either the rules or the mechanisms of enforcement are weaker in cohabitation than in marriage. The less structured roles and less traditional orientations of cohabitors may make it more difficult for partners to establish who does what in the relationship. The negotiation of new rules and meanings has the potential for greater conflict, but the greater flexibility of roles also leaves room for more rewarding, more egalitarian relationships (Brines and Joyner 1999; Cherlin 2004).

Reflecting the differences in social context and relevant values noted above, cohabiting partners may provide less support to each other than do spouses. On average, cohabitors report less commitment to their relationships, lower levels of happiness, less satisfaction with their sex lives, and more disagreements (Nock 1995; Brown and Booth 1996; Waite 1995). Evidence with respect to support from family and friends is somewhat mixed. Cohabitors tend not to be as close to their parents as their married counterparts (Nock 1995), are less likely to exchange certain kinds of support with their parents (Eggebeen 2005), and are less likely to participate in formal organizations, but they are more likely to interact informally with family, friends, neighbors, and co-workers (Stets 1991). The rewards of support may be traded off against the costs, including social regulation and obligation (Hughes and Gove 1981), and cohabitors may value greater autonomy.

Finally, without the protection of a legal contract or the enforceable trust engendered by a public commitment to a long-term relationship, cohabitors have less incentive to invest in their relationship (Cherlin 2000, 2004; Brines and Joyner 1999). Pooling resources and specializing

in caretaking are risky endeavors in the context of short-term unions. Indeed, cohabitation is less stable than marriage (Teachman, Thomas, and Paasch 1991), and nearly half of cohabitors are either uncertain about their relationships or uncommitted to staying together (Casper and Sayer 2000). On the one hand, the lack of joint investments may undermine relationship quality, happiness, and financial well-being within cohabitation; on the other, having few joint investments also makes it easier to exit a bad relationship. Again, the greater freedom and flexibility of cohabitation potentially has rewards as well as costs.

Differences in orientations toward the family, gender roles, relationship quality, and relationship stability suggest that cohabitation may not offer the same advantages as marriage. At the same time, it may be a way of obtaining the advantages of marriage without the costs associated with the more structured roles, obligations, and expectations of marriage. Differences between marriage and cohabitation may also be overstated because of different pre-existing attitudes and other characteristics of those who chose to cohabit; the consequences of the two may be more similar if a full(er) accounting could be made of selection factors.

A handful of longitudinal studies provide some evidence with respect to causality. Thornton and colleagues find evidence for both selection and causation in the relationship between attitudes, religiosity, and cohabitation – though effects of cohabitation tend to be small (Axinn and Thornton 1992; Thornton et al. 1992). Selection appears to account for differences between marriage and cohabitation in the gendered division of household and market work: Gupta (1999) finds that there is little difference in the division of household labor between marrieds and cohabitors after controlling for preexisting characteristics. A related finding is that men's earnings and a sex-specialized division of labor predict marriage among cohabitors (Smock and Manning 1997; and Sanchez, Manning, and Smock 1998), i.e., that marriage is

selective of those more conventional in their gender roles. By contrast, there is evidence that moving from cohabitation into marriage improves relationship quality (Brown 2004; Skinner et al. 2002), although cohabitors who marry are no different in relationship quality than those reporting plans to marry (Brown 2004; Brown and Booth 1996).

The major body of research relating to the causal effect of cohabitation has focused on whether cohabiting before marriage reduces the chances of marital success. It is unequivocal that marital disruption rates are higher among those who cohabit before marriage in the U.S. and other Western countries (Bakrishnan et al. 1987; Bennett, Blanc, and Bloom 1988; Berrington and Diamond 1999; Brüderl, Diekmann, and Engelhardt 1999; Bumpass and Sweet 1989; DeMaris and Rao 1992; Dush, Cohan, and Amato 2003; Hall and Zhao 1995; Teachman et al. 1991). The question is whether attitudes and patterns of interaction that develop during cohabitation account for this difference, as opposed to preexisting characteristics that distinguish those who marry directly from those who cohabit before marrying. One of the most statistically sophisticated analyses finds no direct effect of premarital cohabitation on divorce and suggests that it is the lower certainty about relationships in the first place that accounts for the observed associations (Lillard, Brien, and Waite 1995). Teachman (2003) reports that the higher rate of marital dissolution following cohabitation is only found among those who have more than one intimate premarital relationship, with strongest effects for women who have multiple premarital cohabitations. Consistent with this, Skinner et al. (2002) find no differences in relationship quality between couples who transition directly into marriage compared to those who cohabit first with their spouse. Teachman's findings do not address whether those with multiple relationships are selected on characteristics predicting disruption or whether the experience in these relationships raises the risk of subsequent marital failure. Results are consistent, however,

with the well-established higher disruption rates of second and higher-order marriages (Bramlett and Mosher 2001; Martin and Bumpass 1989).[1]

Only recently has there been research directly addressing the health and psychological well-being of cohabiting partners relative to husbands and wives. Evidence is mixed: Mastekassa (1994) reports no differences in happiness between the married and cohabiting in Norway; Wu and Hart (2002) find no health effects of entering either marriage or cohabitation over a two-year period in Canada. Using cross-sectional data from the U.S., Ross (1995) finds an association between union status and psychological distress, but one that is fully explained by relationship quality. Others report that marriage improves various measures of psychological well-being relative to cohabitation (Brown 2000; Horwitz and White 1998; Kim and McHenry 2002; Lamb, Lee, and DeMaris 2003). These latter studies use longitudinal designs to address the possibility of selection.

A PERSPECTIVE ON DIFFERENCES BETWEEN MARRIAGE AND COHABITATION

This brings us back to our earlier observation that the literature remains unclear on the extent to which the benefits of marriage are causal, shared with cohabitation, and stable over time. We emphasize three key points in addressing these issues: The nature of the definitions of marriage and cohabitation, the overlap of distributions in the context of mean differences, and trajectories within and between relationship types. First, the criteria used to define these

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[1] One final observation with respect to the cohabitation-divorce relationship argues for selection: The basic demography of "rates and states" predicts that when a characteristic causally associated with an outcome increases in prevalence in a population, the outcome should increase as well. On the contrary, the divorce rate remained constant in the U.S. during the period when cohabitation increased dramatically.

relationships must be kept clear. In particular, while the demographic categories of married and cohabiting imply distinct boundaries, these classifications have nothing inherently to do with the nature of relationships. Marriage is defined on the basis of a legal contract, and a couple is married as long as that contract remains intact. Similarly, cohabiting couples are defined on the basis of coresidence.[2] Living together may be little more than a matter of sexual convenience in a casual relationship, or it may be a committed partnership that will last for life (most often with subsequent marriage). Being "single" in this context is defined simply as being neither married nor cohabiting, yet many singles are in committed relationships. Relationships – whether married, cohabiting, or living apart – may range from empty or hostile to deeply committed and loving. Consequently, differences across relationship categories must necessarily be a matter of degree.

It follows, second, that while significant differences in mean values are important indicators of differences between union statuses, these differences should not be reified as if the statuses were monolithic and defined by relationships rather than legal and residential criteria. Similarity in distributions may be far more important than differences in central tendency. This is an obvious point, but one that is often overlooked in many social science analyses. For example, in his presidential address to the Population Association of America, Cherlin (1999) emphasized how deterministic thinking based on mean differences too often dominates considerations of family background and child outcomes. Average differences can direct attention away from both overlap and change.

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[2] While what constitutes living together is often more ambiguous at the boundary than the legal definition of marriage (Manning and Smock 2005), the construct is clear.

Finally, we must keep in mind that relationships follow trajectories within as well as across union statuses, i.e., change occurs within relationships over time and as relationships progress from one union status to another, for example, from cohabitation to marriage. Love and commitment may grow within marriage or cohabitation, but the high dissolution rates of both indisputably illustrate downward trajectories for many. Kurdek (1999:1284) argues that marriage must be seen "not as a single life event but as a set of stages." Developmental studies of marital quality find that decline is normative (Kurdek 1999; Umberson et al. 2005). Change in relationship quality over time is obviously also true of cohabitors and singles with a romantic partner.

Overlap and change in the relationships encompassed by marriage and cohabitation are key theoretical understandings for considering the effect of union status on well-being. These are important questions in and of themselves; they also bear on issues of selection. That is, the benefits attributed to marriage may be due to differences in the characteristics of individuals and relationships that move into marriage. For these reasons, this analysis focuses on changes in well-being associated with a transition from one status into another using a method that controls for pre-existing differences. Policy and theoretical discussions often make strong assumptions about the consequences to be realized if, for example, cohabiting couples would only marry. What difference marriage makes is hence, in part, a question about what changes for couples when they cross that boundary.

METHODS

Data and Samples

We use data from the first two waves of the National Survey of Families and Households (NSFH), a national sample survey focusing on family structure, process, and relationships

(Sweet and Bumpass 1996; Sweet, Bumpass, and 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 for NSFH1 and NSFH2 were 74 and 82 percent, respectively, comparing favorably to other household-level surveys

The NSFH contains complete marriage and cohabitation histories, allowing us to follow respondents' trajectories through coresidential unions. Questions were asked at both waves about "steady" relationships with intimate, noncoresidential partners. But because histories of these relationships were not collected, it is impossible to know when they started or ended. Thus, while it would be most desirable to include these relationships in our analysis, we cannot follow the trajectories of partners who were not living together at NSFH1. Consequently, we focus on transitions into cohabitation and marriage, running two separate analyses. The first examines changes in well-being and social ties among respondents not living with a partner at the first wave of data collection (we label these "singles");[3] the second examines changes in couple relationships among respondents cohabiting at the first wave. Among those single at NSFH1, we compare changes in outcomes across four trajectories: still single at NSFH2, married at NSFH2 without first cohabiting, married at NSFH2 following a spell of cohabitation, and cohabiting at NSFH2. Among those cohabiting at NSFH1, we compare changes in couple relationships across two trajectories: still cohabiting at NSFH2 and married at NSFH2.

Our samples are limited to respondents interviewed at both waves of the NSFH. Further, because we are interested in the effects of union formation, we exclude respondents who

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[3] This category includes all respondents not living with a partner, i.e., the separated, divorced, and widowed, as well as those in steady romantic relationships.

experienced the dissolution of a coresidential union between waves. This restriction eliminates men and women who were recently separated at NSFH2 or were in a new relationship after having ended one (or more) since NSFH1, reducing the variability in our samples and making it easier to interpret transitions into marriage and cohabitation. Finally, we limit our sample of singles to men and women under age 50 at NSFH1. We lose very few transitions by imposing this restriction, but avoid a comparison group (single at both waves of the NSFH) heavily weighted toward elderly widows. Our final samples include 2279 singles and 278 cohabitors.[4]

By focusing on unions still intact at NSFH2, we analyze a subset of all unions, namely those lasting a few years on average. Because cohabitations tend to be of shorter duration than marriages, we lose a greater share of them. Given relationships that survive tend to be of higher quality, our cohabiting subsample may be more selective than our married subsample. We come back to this point in discussing our results.

Change Score Models

We use change score models to estimate the effects of union status transitions on well-being, social ties, and couple relationships (Allison 1990, 1994). In both our samples of singles and cohabitors, some experience a union status transition over the interval, and others do not. If

[4] We start with 5452 single respondents at NSFH1; 1446 are not successfully reinterviewed, 485 experience a union dissolution between waves, and 1242 are out of our age range, leaving a sample of 2279. We start with 678 cohabitors at NSFH1; 168 are not reinterviewed, and 232 are not with the same partner at NSFH2, leaving a sample of 278. For both samples, *n*'s vary slightly by outcome due to differences in item response rates. Table 1 (introduced below) shows sample sizes for each outcome by union transition.

we assume that the effect of a union status transition adds a constant to the score of each individual who experiences it, we can express the two-period model by the following equations:

$$Y_{i1} = \mu_1 + \gamma W_{i1} + \beta Z_i + \alpha_i + \varepsilon_{i1} \quad (1)$$

$$Y_{i2} = \mu_2 + \delta X_i + \gamma W_{i2} + \beta Z_i + \alpha_i + \varepsilon_{i2}$$

where *i* indexes individuals in our samples, μ is the mean adjusted outcome across all sample members, *X* is a dummy variable or set of dummy variables equal to one for those who experience a transition and zero for those who do not, *W* is a vector of measured explanatory variables that vary over time, and *Z* is a vector of measured explanatory variables that are constant over time. The α's represent unobserved differences across individuals that are stable over time, and the ε's are time-specific random disturbances that are assumed to be independent of the measured explanatory variables and the α's.

We obtain the estimated effect of a union status transition by subtracting the first equation above from the second:

$$Y_{i2} - Y_{i1} = (\mu_2 - \mu_1) + \delta X_i + \gamma(W_{i2} - W_{i1}) + (\varepsilon_{i2} - \varepsilon_{i1}) \quad (2)$$

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 the contrast group, controlling for any factors that vary over the interval. For the analysis of singles at NSFH1, those still single at NSFH2 are the contrast group, and *X* is a vector of dummies representing transitions into marriage without first cohabiting, marriage following a spell of cohabitation, and cohabitation. For the analysis of cohabitors at NSFH1, those still cohabiting at NSFH2 are the contrast group, and *X* is a dummy representing the transition into marriage.

This is a fixed-effects approach, which has two principal advantages (Allison 1990, 1994; Liker, Augustyniak, and Duncan 1985; Winship and Morgan 1999). First, it deals effectively

with bias due to stable unobserved variables. Cohabitors tend to have less traditional orientations and lifestyles than married men and women, and these individual characteristics may influence well-being, social ties, and couple relationships; they may also influence the choice to cohabit versus marry. Change scores net out such individual selection factors (whether measured or unmeasured) and provide estimates of the consequences of entering into marriage and cohabitation. Second, by modeling changes as opposed to levels, this approach reduces bias due to persistent reporting errors. Individuals may overreport happiness and relationship quality (two positively skewed variables) relative to objective circumstances. Change scores are independent of this kind of persistent estimation bias.

Most prior work on transitions into marriage relies on the regressor variable method, i.e., regressing Y_{i2} on Y_{i1}, X_i and controls (but see Gupta 1999; Wu and Hart 2002). Liker et al. (1985:100) argue that this method is "seldom justified on statistical grounds," and Johnson (2005) uses a simulation exercise to show that the change score method yields better estimates. The regressor method is appropriate if all unobserved differences between individuals are transitory (Allison 1990; Winship and Morgan 1999), e.g., if changes in happiness move people into marriage, as opposed to relatively stable dispositions or orientations. It likely overstates so-called "treatment" effects by undercontrolling initial differences between groups. With only two waves of data, there is no way to test the appropriateness of assumptions about fixed versus transitory differences predominating in the move to marriage; thus, to establish the robustness of our results to changes in model specification, we compared all results based on the change score

method to those based on the regressor method. We found few differences in our estimated effects of union status transitions, and thus report results of the change score models only.[5]

Measures

Our outcomes fall into three domains: well-being, social ties, and couple relationships. We construct a number of measures in each domain, some based on a single item and others on multiple items yielding indexes of high reliability (Appendix Table A provides the precise question wording, coding, and response alternatives of all items). Our understanding of marriage benefits may depend on the outcome examined, thus evaluating a range of outcomes offers a more complete picture of how and when marriage matters. For example, Marks and Lambert (1998) find that marriage generally improves psychological well-being, but not across the board: they find that the single fare better in autonomy and personal growth. Our measures of well-being include global happiness, depressive symptoms, global health, and self esteem. These items have been examined in past research on marriage (e.g., Brown 2000; Kim and McHenry 2002; Lamb et al. 2003; Marks and Lambert 1998; Simon 2002).

We expect social support to affect well-being in marriage and cohabitation. Our measures of social ties include the quality of the respondent's relationship with parents, contact and communication with parents, and the frequency of social evenings with friends. We suggested that cohabitors may not be as well integrated into networks of social support as the married; Nock (1995) argues, more specifically, that cohabitation is a barrier to close relationships across generations. In addition to measures of the parent-child relationship, we have a measure of relationships within generations, i.e., social evenings with friends. Friends

[5] In their analysis of union transitions and health, Wu and Hart (2002) also compare results of the regressor and change score methods and find no differences.

may be an important source of social support, and their importance may vary by union status. Relatively little attention has been paid to these issues (but see Nock [1995] on parent-child closeness, Stets' [1991] on informal social support, and Eggebeen [2005] on intergenerational exchanges).

In the domain of couple relationships, we examine overall happiness in the relationship, how life would be different if the couple separated, time spent together, the frequency of arguments, and whether partners argue or hit in response to serious disagreements. These are commonly used measures of relationship quality (e.g, Brown 2004; Nock 1995; Skinner et al. 2002), with the exception of how life would be different if the couple separated. This latter measure is different theoretically since the perceived benefits of separating involve more than the current relationship; they also incorporate expectations about alternatives such as the likelihood of finding a more satisfactory partner (South and Lloyd 1995; Rank and Davis 1996), issues involving children, and the costs and difficulties of divorce.

We test whether the effect of union status depends on union duration at the time the outcome variables are observed. Distinguishing effects by union duration allows us to examine not only what changes as individuals cross from one union status to another, but whether these effects differ depending how long a relationship has lasted (others have examined adaptation to transitions into and out of marriage, e.g., Booth and Amato 1991; Johnson and Wu 2002; Lucas et al. 2003; Lucas 2005). For our sample of singles at NSFH1, we measure the duration of marriages and cohabitations formed since NSFH1 from the start of coresidence. We pool over cohabitations and marriages and divide all unions approximately in half based on how long couples have lived together by NSFH2, i.e., we divide them into "short" and "long" unions. We compare the well-being and social ties of men and women who experience short unions, long(er)

unions, and no union transitions between NSFH1 and NSFH2. We also examined cohabitations and marriages of varying lengths separately in results not shown; patterns were similar whether we looked within marriage and cohabitation or pooled over them.[6] For our sample of cohabitors at NSFH1, we likewise divide marriages formed since NSFH1 in approximately half, i.e., into "short" and "long" marriages based on the duration of marriage by NSFH2. We compare the relationship quality of men and women who experience short marriages, long(er) marriages, and no change in their cohabiting status between NSFH1 and NSFH2.

We also tested whether the effect of union status depends on gender. Going back to arguments by Gove (1972) and Bernard (1972), it has been assumed that marriage is more advantageous for men than women. Recent investigations show that both men and women benefit equally from marriage, although the particular emotional response may differ by sex (Simon 2002; Horwitz et al. 1996; Waite 2000; see review by Waite and Gallagher 2000). Our

[6] We also experimented with a different measure of union duration. Instead of measuring duration from the start of coresidence, as is the standard, we measured it from the start of a romantic relationship. The assumption underlying this strategy is that relationships begin their developmental trajectory as soon as the romance starts – perhaps well before coresidence. Although, as noted in the data section, it is not possible to precisely date the start of romantic relationships in the NSFH, we do know whether the respondent had a steady relationship at NSFH1. We differentiated between short and long relationships based on whether those married or cohabiting at NSFH2 were already in a steady romantic relationship at NSFH1 (assuming, perhaps heroically, that the subsequent marriage or cohabitation was with the same person). Results measuring duration on the basis of a steady relationship were very similar to those based on the start of coresidence.

interactions by sex revealed only a few significant differences in the effects of marriage and cohabitation on men and women, and these were in magnitude only; we thus excluded gender interactions from our models and report results for men and women combined. Similarity in marriage effects by sex – irrespective of type of response – is consistent with Kim and McHenry (2002) and Marks and Lambert (1998), who find no sex differences in the transition to marriage on multiple dimensions of psychological well-being.

Finally, we examined controls for key events that might have intervened in the lives of respondents between the two waves of the NSFH, namely: whether respondents obtained further education, experienced a change in income, or had a child. We expected that controlling for these events would alter our estimates of union status effects. Completed education, income, and having a child are all linked to marriage; they are also associated with health, psychological well-being, and, at least in the case of childbearing, couple interactions (Evenson & Simon 2005; McLanahan and Adams 1987; Oppenheimer, Kalmijn, and Lim 1997; Rindfuss and Parnell 1989; Thornton, Axinn, and Teachman 1995). Accounting for changes in income, education, and children, however, did not alter our main results. We thus present our final models without these controls.

RESULTS

Differences in Averages and Distributions

When viewed in cross-section, we find the usual pattern of well-being reported in the literature, with the largest mean differences favoring marriage appearing in the measures of happiness and depressive symptoms. Comparisons of measures of central tendency provide a useful index of differences between populations. However, as we noted earlier, differences that are statistically significant too often become the focus of interpretation to the exclusion of

underlying similarity between the populations being compared. This can be seen clearly in Figure 1 for distributions on depressive symptoms by union status at NSFH1.[7] We have intentionally chosen the cross-sectional differences for illustration because the mean differences are largest before selection is taken into account, representing the extreme case before even measured variables are controlled. The means (1.12 and 1.46) are indicated by the solid and broken vertical lines for marrieds and cohabitors, respectively. Whereas the literature focuses on mean differences in well-being between marriage and cohabitation, the vast majority of the space under either curve is shared with the other. Even if cohabitation *were* causal so that cohabitors were, on the average, this much more depressed as a consequence of not having married, very similar proportions of cohabiting and married persons would be observed at each level of depressive symptoms.

-- Figure 1 about here --

Changes in Well-being, Social Ties, and Couple Relationships

We turn now to what changes when individuals transition into marriage and cohabitation. Table 1 shows changes in well-being and social ties for our sample of singles at NSFH1 by their union status at NSFH2, as well as changes in couple relationships for our sample of cohabitors at NSFH1 by their marital status at NSFH2. The first column shows that, on average, people report increased levels of happiness and fewer depressive symptoms approximately six years after the first interview. Health and the quality of relationships with parents decline over time. Whether or not they married between interviews, the relationships of couples living together at first

[7] Here, the sample is restricted to individuals under age 50 and unions of less than 7 years duration (NSFH1, *N*=6245).

interview deteriorate over time, as indicated by lower overall happiness with the relationship, less time together, more disagreements, and more fights.

-- Table 1 about here --

Tables 2-4 present results based on change score models, which address selection by comparing changes in well-being, social ties, and couple relationships across union transitions. 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. Tables 2 and 3 rely on our sample of singles. Panel one presents results ignoring the effects of union duration, and panel two combines transitions to marriages and cohabitations in order to evaluate differences between short and long unions.

We look first at measures of well-being: global happiness, depressive symptoms, health, and self esteem. We find that, compared to being single, moving into any union by NSFH2 increases happiness and reduces depressive symptoms. Even though the coefficients involving cohabitation are almost twice those of entering marriage directly, the difference between them is not statistically significant. By contrast, the reduction in depressive symptoms is smaller for transitions into cohabitation than marriage, although this difference is also not significant. None of the union transitions has a significant effect on health relative to remaining single, but entering cohabitation reduces perceptions of health relative to entering marriage (both direct marriage and marriage preceded by cohabitation). Self esteem increases more for those who moved to cohabitation than among those who remained single, and more than among those who married (whether marrying directly or following a spell of cohabitation).

-- Table 2 about here --

The second panel of Table 2 collapses over union type and focus on differences between unions of short and long duration. Data show that the boost in happiness that comes from entering into a union is potentially short-lived. Individuals who entered cohabitation or marriage closer to the second interview (i.e., those in short-duration unions) report considerably larger increases in happiness than those who entered closer to the first interview (i.e., those in long-duration unions). The greater increase in well-being for those in short-duration unions at NSFH2 appears to hold true for depressive symptoms as well, although the difference between short- and long-duration unions just misses statistical significance. There seem to be no important differences by union duration in self esteem or health.

Table 3 shows change scores relating to social ties: the quality of relationships with parents, contact with parents, and social outings with friends, coworkers, and neighbors. The similarities in effects of union transitions on social ties are more striking than the differences (see panel one). Relative to remaining single, none of the union transitions has significant effects on the quality of parent-child relationships. The coefficient for direct marriage, however, is positive and that for cohabitation is negative – and the contrast between them is statistically significant, likely reflecting parental support of marriage on the one hand and disapproval of cohabitation on the other. Compared to remaining single, cohabitation, direct marriage, and marriage preceded by cohabitation all reduce contact with parents and outings with friends – and all to a similar extent. It is not surprising that moving into a new household with a spouse or partner reduces interactions with others. Whereas we found that happiness and depressive symptoms improved more for those in short-duration unions, there are no differences by union duration in social ties (row 3 of the second panel in Table 3).

-- Table 3 about here --

In Table 4, we present our analyses of changes in relationship quality for those who were cohabiting at NSFH1 depending on whether or not they had married by NSFH2. In three of the five outcomes examined, getting married is associated with an increase in the quality of couple relationships: Those who marry are less likely to say that life would be better if they separated, and they report more time with their partner and fewer fights. Although there is an increase in global relationship quality for those who marry, this increase is not statistically significant. There also appears to be no association between the frequency of disagreements and the transition to marriage.

In contrast to remaining in cohabitation, getting married by NSFH2 tends to have stronger effects on couple relationships if the outcomes are observed in the first few years of marriage rather than at longer durations (rows 1 and 2 of the second panel in Table 4). The contrast between short- and long-term marriages can be seen clearly in row 3. The greater effect of marriage when measured closer to the marriage date is true of global relationship quality, how life would be different if separated, and time with spouse. Although the difference between short and long marriages in fights with spouse is not statistically significant, the pattern is similar, with short-term marriages experiencing a sharper drop in fights than longer-term marriages. There is no difference by marriage duration in the frequency of disagreements (there are no effects overall).

-- Table 4 about here --

SUMMARY AND DISCUSSION

Change scores estimate the effects of marriage and cohabitation net of stable traits that select individuals into these union statuses. They take us a step further in addressing problems of

selection – and it is clear that selection plays a substantial role in observed differences in well-being. We should emphasize that change score models do not solve the problem of reverse causation. That is, our estimates of union effects may be overstated if changes in our outcomes lead to changes in union status; for example, if changes in happiness lead to marriage. We should also reiterate that we focus (by necessity) on the formation of unions still intact at NSFH2, thus excluding many short-term unions formed between waves. Because there are more short-duration cohabiting unions than short-duration marriages, our cohabiting sample may be more selective than our married sample. However, selecting on the more resilient relationships should lead to a sample that is more heavily weighted over time toward greater well-being and couple relationship quality. We find the opposite is true: married and cohabiting couples report better outcomes in shorter relationships.

In many domains, intimate partnerships confer benefits irrespective of their legal form. In four of the seven outcomes examined using our sample of singles at NSFH1, we find no differences in the effects of marriage and cohabitation on well-being and social relationships: Moving into any union by NSFH2 increases happiness and decreases depressive symptoms, contact with parents, and time spent with friends. Compared to direct marriage, cohabitation increases self esteem but reduces health and the quality of parent-child relationships. Direct marriage and marriage preceded by cohabitation are statistically indistinguishable in all outcomes examined; net of selection, we find no evidence that premarital cohabitation has negative consequences for well-being or social relationships.

We find somewhat stronger marriage effects on couple relationships. Among our sample of cohabitors at NSFH1, those who marry by NSFH2 see greater costs to separating, spend more time together, and have fewer fights than do their cohabiting counterparts. They nonetheless

report similar levels of global relationship quality and disagreements. Moreover, the benefits of marriage relative to cohabitation appear to diminish over time.

Unions of short duration tend to have stronger effects on well-being and social relationships than longer-term unions. While this is not true of all outcomes examined, in no case do longer-term unions have stronger effects than short-term unions. The benefits of entering into marriage and cohabitation on happiness and depressive symptoms dissipate over time, as do the benefits of marriage on global relationship quality, assessments of life if separated, and time spent together. Consistent with our results, Lucas et al. (2003) report that people adapt quickly to marriage, returning to baseline levels of subjective well-being; Kim and McHenry (2002) and Marks and Lambert (1998) find strong effects of new marriages, as opposed to on-going marriages, suggesting that marriage benefits fade over time.

The literature tends to focus on mean differences between marriage and cohabitation. However, more attention needs to be given to the distributions around such means and the extent to which such distributions overlap. Indeed, compared to similarities in the distributions of well-being and social relationships by union status, mean differences are small. Likewise, differential changes in well-being and social relationships associated with union status transitions are relatively small.

Are our results plausible, given the seemingly compelling reasons why marriage should make a major difference for individual well-being? Several considerations lead us to believe that they are. The first is that we must recognize that institutionalization is a continuum and not a dichotomous variable. The rigid division of labor emphasized by Parsons over 50 years ago (Parsons 1949), while argued to be advantageous by Becker (1973, 1974) and colleagues, has steadily given way to expectations that the economic support of the family is a part of a wife's as

well as a husband's obligation in marriage. Indeed, women's earning potential has become an important factor in her attractiveness for marriage (Oppenheimer 1994; Sweeney 2002). Given that half of all marriages end in divorce or separation, 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, unmarried coresidence, and childbearing. If institutionalization can be seen as a continuum, marriage is undergoing a process of deinstitutionalization (this argument is made convincingly by Cherlin [2004]).

At the same time, cohabitation – while an "incomplete institution" (Nock 1995; Waite 1995) – is moving in the other direction (Cherlin 2004). It has become the majority experience and approved by the vast majority of younger generations. Moreover, that about half of all marriages and three-quarters of all remarriages with children begin as cohabitation (Bumpass, Raley and Sweet 1995), it is little wonder that the line between the two states is blurring. As we noted at the outset, the key feature defining marriage as distinct from cohabitation is that marriage engages the legal system with respect to rights and responsibilities. The increasing pressure towards domestic partner benefits at both the corporate and state levels is further evidence of an increasing institutionalization of cohabitation.

Even before characteristics and attitudes selecting individuals into and out of these statuses are taken into account, we have noted that the two statuses are much more similar than they are different with respect to outcomes – despite significant differences in mean values. Once selection is taken into account by following the trajectories of individuals, we have found either no or small and temporary advantages associated with moving into marriage compared to cohabitation. Are we then saying that marriage is irrelevant for individual well-being? Of course not. 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 (and the well-being of children, by extension). 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 lifecourse. This takes us back to the issues of dispersion around measures of central tendency. Better understanding the circumstances and individual and couple characteristics under which this is likely to be the case is a critical interdisciplinary challenge. It is also surely the case that this more nuanced view of the relative benefits of marriage is essential to the formulation of social policy.

REFERENCES

Allison, P.D. 1990. "Change Scores as Dependent Variables in Regression Analysis." Pp. 93-114 in *Sociological Methodology 1990*, edited by C. Clogg. Oxford: Basil Blackwell.

------. 1994. "Using Panel Data to Estimate the Effects of Events." *Sociological Methods & Research* 23:174-199.

Axinn, W.G. and A. Thornton. 1992. "The Relationship Between Cohabitation and Divorce: Selectivity or Causal Influence?" *Demography* 29:357-374.

Balakrishnan, T.R., K.V. Rao, E. Lapierre-Adamcyk, and K.J. Krotki. 1987. "A Hazard Model Analysis of the Covariates of Marriage Dissolution in Canada." *Demography* 24:395-406.

Becker, G.S. 1973. "A Theory of Marriage: Part I." *Journal of Political Economy* 81:813-846.

------. 1974. "A Theory of Marriage: Part II." *Journal of Political Economy* 82:S11-S26.

Bennett, N.G., A.K. Blanc, and D.E. Bloom. 1988. "Commitment and The Modern Union: Assessing the Link Between Premarital Cohabitation and Subsequent Marital Stability." *American Sociological Review* 53:127-138.

Bernard, J. 1972. *The Future of Marriage.* New York: Bantam Books.

Berrington, A. and I. Diamond. 1999. "Marital Dissolution Among the 1958 British Birth Cohort: The Role of Cohabitation." *Population Studies* 53:19-38.

Booth, A. and P.R. Amato. 1991. "Divorce and Psychological Stress." *Journal of Health and Social Behavior* 32:396-407.

Bramlett, M.D. and W.D. Mosher. 2001. "First Marriage Dissolution, Divorce, and Remarriage: United States." *Advance Data No. 323*. Hyattsville, MD: National Center for Health Statistics. Retrieved October 27, 2005(http://www.cdc.gov/nchs/data/ad/ad323.pdf).

Brines, J. and K. Joyner. 1999. “The Ties That Bind: Principles of Cohesion in Cohabitation and Marriage.” *American Sociological Review* 64:333-355.

Brown, S.L. 2000. “The Effect of Union Type on Psychological Well-Being: Depression Among Cohabitors Versus Marrieds.” *Journal of Health and Social Behavior* 41:241-255.

------. 2004. “Moving from Cohabitation to Marriage: Effects on Relationship Quality.” *Social Science Research* 33:1-19.

Brown, S.L. and A. Booth. 1996. “Cohabitation Versus Marriage: A Comparison of Relationship Quality.” *Journal of Marriage and the Family* 58:668-678.

Brüderl, J., A. Diekmann, and H. Engelhardt. 1999. “Premarital Cohabitation and Marital Stability in West Germany.” University of Mannheim, Germany. Retrieved October 27, 2005 (http://www.sowi.uni-mannheim.de/lehrstuehle/lessm/papers/kohab.pdf).

Bumpass, L.L. and H.H. Lu. 2000. “Trends in Cohabitation and Implications for Children's Family Contexts in the United States.” *Population Studies* 54:29-41.

Bumpass, L.L. and J.A. Sweet. 1989. “National Estimates of Cohabitation.” *Demography* 26:615-625.

Bumpass, L.L., R.K. Raley, and J.A. Sweet. 1995. “The Changing Character of Stepfamilies: Implications of Cohabitation and Nonmarital Childbearing.” *Demography* 32:425-436.

Burgess, E.W. and H.J. Locke. 1945. *The Family: From Institution to Companionship.* New York: American Book.

Casper, L.M. and L.C. Sayer. 2000. “Cohabitation Transitions: Different Attitudes and Purposes, Different Paths.” Presented at the Annual Meeting of the Population Association of America. March, Los Angeles.

Cherlin, A.J. 1978. "Remarriage as an Incomplete Institution." *American Journal of Sociology* 84:634-650.

------. 1999. "Going to Extremes: Family Structure, Children's Well-Being, and Social Science." *Demography* 36:421-428.

------. 2000. "Toward a New Home Socioeconomics of Union Formation." Pp. 126-144 in *The Ties that Bind: Perspectives on Marriage and Cohabitation*, edited by L.J. Waite, C. Bachrach, M. Hindin, E. Thomson, and A. Thornton. New York: Aldine de Gruyter.

------. 2003. "Should the Government Promote Marriage?" *Contexts* 2: 22-29.

------. 2004. "The Deinstitutionalization of American Marriage." *Journal of Marriage and Family* 66:848-861.

------. 2005. "American Marriage in the Early Twenty-First Century." *The Future of Children* 15(2):33-55.

Clarkberg, M., R.M. Stolzenberg, and L.J. Waite. 1995. "Attitudes, Values, and Entrance into Cohabitational Versus Marital Unions." *Social Forces* 74:609-632.

Davis, K. 1939. "The Forms of Illegitimacy." *Social Forces*. 18(1): 77-89+114.

DeMaris, A. and K.V. Rao. 1992. "Premarital Cohabitation and Subsequent Marital Stability in the United States: A Reassessment." *Journal of Marriage and the Family* 54:178-190.

Dush, C.M.K., C.L. Cohan, and P.R. Amato. 2003. "The Relationship Between Cohabitation and Marital Quality and Stability: Change Across Cohorts?" *Journal of Marriage and Family* 65:539-549.

Eggebeen, D.J. 2005. "Cohabitation and Exchanges of Support." *Social Forces.* 83(3):1097-1110.

England, P. and G. Farkas. 1986. *Households, Employment, and Gender: A Social, Economic, and Demographic View*. New York: Aldine.

Evenson, R.J. and R.W. Simon. 2005. “Clarifying the Relationship between Parenthood and Depression. *Journal of Health and Social Behavior* 46:341–358.

Ferree, M.M. 1990. “Beyond Separate Spheres: Feminism and Family Research.” *Journal of Marriage and the Family* 52(4):866-884.

Forste, R. and K. Tanfer. 1996. “Sexual Exclusivity Among Dating, Cohabiting, and Married Women.” *Journal of Marriage and the Family* 58:33-47.

Glenn, N.D. and C.N. Weaver. 1988. “The Changing Relationship of Marital Status to Reported Happiness.” *Journal of Marriage and the Family* 50:317-324.

Goode, W.J. 1963. *World Revolution and Family Patterns*. New York: The Free Press.

Gove, W.R. 1972. “The Relationship Between Sex Roles, Marital Status, and Mental Illness.” *Social Forces* 51:34-44.

------. 1973. “Sex, Marital Status, and Mortality.” *American Journal of Sociology* 79:45-67.

Gove, W.R., M. Hughes, and C.B. Style. 1983. "Does Marriage Have Positive Effects on the Psychological Well-being of an Individual?" *Journal of Health and Social Behavior* 24:122-131.

Gupta, S. 1999. “The Effects of Transitions in Marital Status on Men’s Performance of Housework.” *Journal of Marriage and the Family* 61:700-711.

Hall, D.R. and J.Z. Zhao. 1995. “Cohabitation and Divorce in Canada: Testing the Selectivity Hypothesis.” *Journal of Marriage and the Family* 57:421-427.

Hao, L. 1996. “Family Structure, Private Transfers, and the Economic Well-Being of Families with Children.” *Social Forces* 75:269-292.

Horwitz, A.V. and H.R. White. 1998. "The Relationship of Cohabitation and Mental Health: A Study of a Young Adult Cohort." *Journal of Marriage and Family* 60:505-514.

Horwitz, A.V., H.R. White, and S. Howell-White. 1996. "Becoming Married and Mental Health: A Longitudinal Study of a Cohort of Young Adults." *Journal of Marriage and the Family* 58:895-907.

Hu, Y. and N. Goldman. 1990. "Mortality Differentials by Marital Status: An International Comparison." *Demography* 27:233-250.

Hughes, M.E. and L.J. Waite. 2002. "Health in Household Context: Living Arrangements and Health in Late Middle Age." *Journal of Health and Social Behavior* 43:1-21.

Hughes, M. and W.R. Gove. 1981. "Living Alone, Social Integration, and Mental Health." *American Journal of Sociology* 87:48-74.

Johnson, D.R. 2005. "Two-Wave Panel Analysis: Comparing Statistical Methods for Studying the Effects of Transitions." *Journal of Marriage and Family* 67:1061-1075.

Johnson, D.R. and J. Wu. 2002. "An Empirical Test of Crisis, Social Selection, and Role Explanations of the Relationship Between Marital Disruption and Psychological Distress: A Pooled Time-Series Analysis of Four-Wave Panel Data." *Journal of Marriage and Family* 64:211-224.

Kessler, R.C. and M.J. Essex. 1982. "Marital Status and Depression: The Importance of Coping Resources." *Social Forces* 61:484-507.

Kiernan, K. 2000. "European Perspectives on Union Formation." Pp. 40-58 in *The Ties that Bind: Perspectives on Marriage and Cohabitation*, edited by L.J. Waite, C. Bachrach, M. Hindin, E. Thomson, and A. Thornton. New York: Aldine de Gruyter.

Kim, H.K. and P.C. McKenry. 2002. "The Relationship Between Marriage and Psychological Well-being." *Journal of Family Issues* 23:885-911.

Korenman, S. and D. Neumark. 1991. "Does Marriage Really Make Men More Productive?" *Journal of Human Resources* 26:282-307.

Kurdek, L.A. 1999. "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* 35:1283-1296.

Lamb, K.A., G.R. Lee, and A. DeMaris. 2003. "Union Formation and Depression: Selection and Relationship Effects." *Journal of Marriage and Family* 65:953-962.

Lee, G.R., K. Seccombe, and C.L. Shehan. 1991. "Marital Status and Personal Happiness: An Analysis of Trend Data." *Journal of Marriage and Family* 53:839-844.

Liker, J.K., S. Augustyniak, and G.J. Duncan. 1985. "Panel Data and Models of Change: A Comparison of First Difference and Conventional Two-Wave Models." *Social Science Research* 14:80-101.

Lillard, L., M.J. Brien, and L.J. Waite. 1995. "Premarital Cohabitation and Subsequent Marital Dissolution: A Matter of Self-Selection?" *Demography* 32:437-457.

Lillard, L. and L.J. Waite. 1995. "Til Death Do Us Part: Marital Disruption and Mortality." *American Journal of Sociology* 100:1131-1156.

Lucas, R.E. 2005. "Time Does Not Heal All Wounds: A Longitudinal Study of Reaction and Adaptation to Divorce." *Psychological Science*. 16(12):945-950.

Lucas, R.E., Y. Georgellis, A.E. Clark, and E. Diener. 2003. "Reexamining Adaptation and the Set Point Model of Happiness: Reactions to Changes in Marital Status." *Personality and Social Psychology* 84:527-539.

Manning, W.D. and P.J. Smock. 2005. "Measuring and Modeling Cohabitation: New Perspectives from Qualitative Data." *Journal of Marriage and Family* 67:989-1002.

Marks, N. and J.D. Lambert. 1998. "Marital Status Continuity and Change Among Young and Midlife Adults." *Journal of Family Issues* 19:652-686.

Martin, T.C. and L.L. Bumpass. 1989. "Recent Trends in Marital Disruption." *Demography* 26:37-51.

Mastekaasa, A. 1994. "The Subjective Well-being of the Previously Married: The Importance of Unmarried Cohabitation and Time Since Widowhood or Divorce." *Social Forces* 73:665-692.

McLanahan, S.S. and J. Adams. 1987. "Parenthood and Psychological Well-being." *Annual Review of Sociology* 13:237-257.

Murray, J.E. 2000. "Marital Protection and Marital Selection: Evidence from a Historical-Prospective Sample of American Men." *Demography* 37:511-521.

Nock, S.L. 1995. "A Comparison of Marriages and Cohabiting Relationships." *Journal of Family Issues* 16:53-76.

Oppenheimer, V.K. 1994. "Women's Rising Employment and the Future of the Family in Industrial Societies." *Population and Development Review*. 20(2):293-342.

Oppenheimer, V.K., M. Kalmijn, and N. Lim. 1997. "Men's Career Development and Marriage Timing During a Period of Rising Inequality." *Demography* 34:311-330.

Parsons, T. 1949. "The Social Structure of the Family." Pp. 173-201 in *The Family: Its Function and Destiny*, edited by R. Anshen. New York: Harper and Brothers.

Pearlin, L.I. and J.S. Johnson. 1977. "Marital Status, Life-Strains and Depression." *American Sociological Review* 42:704-715.

Rank, M. and L.E. Davis. 1996. "Perceived Happiness outside of Marriage Among Black and White Spouses." *Family Relations* 45:435-441.

Rindfuss, R.R. and A.M. Parnell. 1989. "The Varying Connection Between Marital Status and Childbearing in the United States." *Population and Development Review* 15:447-470.

Rindfuss, R.R. and A. VandenHeuvel. 1990. "Cohabitation: A Precursor to Marriage or an Alternative to Being Single?" *Population and Development Review* 16:703-726.

Ross, C.E. 1995. "Reconceptualizing Marital Status as a Continuum of Social Attachment." *Journal of Marriage and the Family* 57:129-140.

Sanchez, L., W. Manning, and P.J. Smock. 1998. "Sex-Specialized or Collaborative Mate Selection? Union Transitions Among Cohabitors." *Social Science Research* 27:280-304.

Schoeni, R.F. 1995. "Marital Status and Earnings in Developed Countries." *Journal of Population Economics* 8:351-359.

Simon, R.W. 2002. "Revisiting the Relationships Among Gender, Marital Status, and Mental Health." *American Journal of Sociology* 107:1065-1096.

Skinner, K.B., S.J. Bahr, D. R. Crane, and V.R.A. Call. 2002. "Cohabitation, Marriage, and Remarriage: A Comparison of Relationship Quality Over Time." *Journal of Family Issues* 23:74-90.

Smock, P.J. and W.D. Manning. 1997. "Cohabiting Partners' Economic Circumstances and Marriage." *Demography* 34:331-341.

South, S.J. and K.M. Lloyd. 1995. "Spousal Alternatives and Marital Dissolution." *American Sociological Review* 60:21-35.

South, SJ. and G. Spitze. 1994. "Housework in Marital and Nonmarital Households." *American Sociological Review* 59:327-347.

Stack, S. and J.R. Eshleman. 1998. "Marital Status and Happiness: A 17-Nation Study." *Journal of Marriage and Family* 60:527-536.

Stets, J.E. 1991. "Cohabiting and Marital Aggression: The Role of Social Isolation." *Journal of Marriage and the Family*. 53(3)669-680.

Sweeney, M. 2002. "Two Decades of Family Change: The Shifting Economic Foundations of Marriage." *American Sociological Review* 67:132-147.

Sweet, J.A. and L.L. Bumpass. 1996. "The National Survey of Families and Households - Waves 1 and 2: Data Description and Documentation." Center for Demography and Ecology, University of Wisconsin-Madison (http://www.ssc.wisc.edu/nsfh/home.htm).

Sweet, J.A., L.L. Bumpass, and V.R.A. Call. 1988. "The Design and Content of the National Survey of Families and Households." NSFH Working Paper No. 1. Center for Demography and Ecology, University of Wisconsin-Madison, Madison, WI.

Teachman, J.D. 2003. "Premarital Sex, Premarital Cohabitation, and the Risk of Subsequent Marital Dissolution Among Women." *Journal of Marriage and Family* 65:444-455.

Teachman, J.D., J. Thomas, and K. Paasch. 1991. "Legal Status and the Stability of Coresidential Unions." *Demography* 28:571-585.

Thornton, A., W.G. Axinn, and D.H. Hill. 1992. "Reciprocal Effects of Religiosity, Cohabitation, and Marriage." *American Journal of Sociology* 98:628-651.

Thornton, A., W.G. Axinn, and J.D. Teachman. 1995. "The Influence of School Enrollment and Accumulation on Cohabitation and Marriage in Early Adulthood." *American Sociological Review* 60:762-774.

Umberson, D. 1987. "Family Status and Health Behaviors: Social Control as a Dimension of Social Integration." *Journal of Health and Social Behavior* 28:306-319.

Umberson, D., K. Williams, D.P. Powers and M.D. Chen. 2005. "As Good As It Gets? A Life Course Perspective on Marital Quality." *Social Forces* 84:493-511.

van de Kaa, D.J. 1987. "Europe's Second Demographic Transition." *Population Bulletin* 42(1).

Waite, L.J. 1995. "Does Marriage Matter?" *Demography* 32:483-507.

------. 2000. "Trends in Men's and Women's Well-Being in Marriage," Pp. 368-392 in *The Ties that Bind: Perspectives on Marriage and Cohabitation*, edited by L. Waite, C. Bachrach, M. Hindin, E. Thomson and A.Thornton. New York: Aldine de Gruyter.

Waite, L.J. and M. Gallagher. 2000. *The Case for Marriage: Why Married People Are Happier, Healthier, and Better Off Financially*. New York: Doubleday.

What Next for the Marriage Movement? 2004. New York: Institute for American Values. Retrieved March 1, 2006 (http://center.americanvalues.org/?p=11).

Whitehead, B.D. 2004. Testimony before the Committee on Health, Education, Labor and Pensions Subcommittee on Children and Families, U.S. Senate. Retrieved February 23, 2006 (http://marriage.rutgers.edu/Publications/Pub%20Whitehead%20Testimony%20Apr%2004.htm).

Winship, C. and S.L. Morgan. 1999. "The Estimation of Causal Effects from Observational Data." *Annual Review of Sociology* 25:659-707.

Wu, Z. and R. Hart. 2002. "The Effects of Marital and Nonmarital Union Transition on Health." *Journal of Marriage and Family* 64:420-432.

Appendix Table A. Question Wording, Response Alternatives, and Coding of Outcomes

Well-being

Global Happiness -- single item; 1=very unhappy, 7=very happy
Taking things all together, how would you say things are these days?

Global Health -- single item; 1=very poor, 5=excellent
Compared with other people your age, how would you describe your health?

Depressive Symptoms (CESD scale) -- average of 12 items; 0-7 days per week
On how many days during the past week did you:
Feel bothered by things that usually don't bother you?
Not feel like eating; your appetite was poor?
Feel that you could not shake off the blues even with help from your family or friends?
Have trouble keeping your mind on what you were doing?
Feel depressed?
Feel that everything you did was an effort?
Feel fearful?
Sleep restlessly?
Talk less than usual?
Feel lonely?
Feel sad?
Feel you could not get going?

Self Esteem -- average of 3 itesm; 1=strongly disagree, 5=strongly agree
Please indicate how much you agree or disagree with each of 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.
I am able to do things as well as other people.

Social ties

Relationship with Parents[a] -- higher of 2 items; 1=very poor, 7=excellent
How would you describe your relationship with your mother?
How would you describe your relationship with your father?

Contact/Communication with Parents[b] -- highest of 4 items; 1=not at all, 6=more than once a week
During the past 12 months, about how often did you:
See your mother?
Communicate with your mother by letter or phone?
See your father?
Communicate with your father by letter or phone?

Social Evenings -- average of 3 items; 0=never, 4=several times a week
About how often do you spend a social evening with:
A neighbor?
People you work with?
Friends who live outside your neighborhood?

Appendix Table A. Question Wording, Response Alternatives, and Coding of Outcomes (Continued)

Relationship Quality

Global Quality -- single item; 1=very unhappy, 7=very happy
Taking things all together, how would you describe your relationship?

Life if Separated -- average of 5 items; 1=much worse, 5=much better
Even though it may be very unlikely, think for a moment about how various areas of your life might be different if you separated. For each of the following areas, how do you think things would change?
Your standard of living
Your social life
Your career opportunities
Your overall happiness
Your sex life

Time Together -- single item; 1=never, 6=almost every day
During the past month, about how often did you and your partner spend time alone with each other, talking, or sharing an activity?

Disagreements -- average of 5 items; 1=never, 6=almost every day
How often, if at all, in the last year have you had open disagreements about each of the following:
Household tasks
Money
Spending time together
Sex
In-laws

Fights -- average of 2 items; 1=never, 5=always
When you have a serious disagreement with your partner, how often do you:
Argue heatedly or shout at each other?
End up hitting or throwing things at each other?

Notes:
Questionnaire items from the National Survey of Families and Households (NSFH1 & NSFH2).

[a] At NSFH2, response alternatives were 0 (really bad) to 10 (absolutely perfect); these were re-scaled 1-7. Coded 1 if no contact with either parent.
[b] Coded 6 if respondent was living with a parent.

Table 1. Changes in Outcome Variables between NSFH1 and NSFH2, Separately by Union Status Transition

		Single at NSFH1				
		All	Single-Single	Single-Married	Single-Cohabiting-Married	Single-Cohabiting
Well-Being						
Global Happiness	**M**	**0.24**	**0.10**	**0.33**	**0.48**	**0.53**
	SD	1.66	1.66	1.71	1.59	1.57
	n	1678	961	292	256	169
Depressive Symptoms	**M**	**-0.27**	**-0.14**	**-0.42**	**-0.57**	**-0.33**
	SD	1.63	1.64	1.61	1.54	1.64
	n	2199	1274	376	322	227
Global Health	**M**	**-0.10**	**-0.12**	**-0.05**	**-0.03**	**-0.20**
	SD	0.89	0.93	0.84	0.80	0.88
	n	2076	1202	359	304	211
Self Esteem	**M**	**0.01**	**-0.02**	**-0.01**	**0.02**	**0.16**
	SD	0.71	0.75	0.65	0.63	0.68
	n	2141	1240	371	314	216
Social Ties						
Relationship with Parents	**M**	**-0.23**	**-0.23**	**-0.10**	**-0.28**	**-0.35**
	SD	1.30	1.31	1.23	1.37	1.27
	n	1748	979	317	279	173
Contact with Parents	**M**	**-0.03**	**0.07**	**-0.16**	**-0.18**	**-0.16**
	SD	0.98	0.95	1.02	1.01	1.01
	n	1750	981	317	280	172
Social Evenings	**M**	**0.07**	**0.19**	**-0.07**	**-0.16**	**-0.10**
	SD	1.05	1.05	1.02	1.03	1.01
	n	2092	1211	360	309	212

		Cohabiting at NSFH1		
		All	Cohabiting-Cohabiting	Cohabiting-Married
Relationship Quality				
Global Quality	**M**	**-0.21**	**-0.34**	**-0.11**
	SD	1.72	1.69	1.73
	n	234	94	140
Life if Separated	**M**	**0.01**	**0.18**	**-0.10**
	SD	0.78	0.90	0.68
	n	241	97	144
Time Together	**M**	**-1.32**	**-2.09**	**-0.81**
	SD	1.87	1.95	1.64
	n	243	96	147
Disagreements	**M**	**0.20**	**0.14**	**0.24**
	SD	0.93	1.18	0.71
	n	243	97	146
Fights	**M**	**0.14**	**0.28**	**0.06**
	SD	0.75	0.89	0.63
	n	239	96	143

Notes:
Data from the National Survey of Families and Households (NSFH1 & NSFH2); means, *sd*'s, and *n*'s unweighted.
Samples restricted to respondents with no union disruptions between waves.
Transitions from single restricted to respondents under 50 at NSFH1.

Table 2. Change Score Models of Well-Being and Union Transitions Among Singles at NSFH1

	Global Happiness		Depressive Symptoms		Global Health		Self Esteem	
	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE
Contrasting NSFH2 Statuses								
Mar v. Single	0.23	0.11 **	-0.28	0.10 ***	0.07	0.05	0.01	0.04
Coh-Mar v. Single	0.39	0.12 ***	-0.43	0.10 ***	0.09	0.06	0.03	0.04
Coh v. Single	0.44	0.14 ***	-0.19	0.12	-0.08	0.07	0.17	0.05 ***
Coh-Mar v. Mar	0.16	0.14	-0.15	0.12	0.02	0.07	0.03	0.05
Coh v. Mar	0.21	0.16	0.09	0.14	-0.15	0.08 **	0.17	0.06 ***
Coh v. Coh-Mar	0.05	0.16	0.24	0.14 *	-0.17	0.08 **	0.14	0.06 **
Contrasting NSFH2 Union Duration[a]								
Short Union v. Single	0.51	0.12 ***	-0.42	0.10 ***	0.06	0.06	0.06	0.04
Long Union v. Single	0.24	0.10 **	-0.24	0.08 ***	0.03	0.05	0.05	0.04
Short Union v. Long Union	0.27	0.13 **	-0.18	0.11	0.03	0.06	0.02	0.05

Notes:
Data from the National Survey of Families and Households (NSFH1 & NSFH2).
Sample restricted to respondents under age 50 with no union disruptions between waves.
* P<.10; ** P<.05; *** P<.01 (two-tailed)

[a] Unions were divided into approximately half depending on length of coresidence by NSFH2.

Table 3. Change Score Models of Social Ties and Union Transitions Among Singles at NSFH1

	Relationship with Parents			Contact with Parents			Social Evenings		
	Coef.	SE		Coef.	SE		Coef.	SE	
Contrasting NSFH2 Statuses									
Mar v. Single	0.13	0.08		-0.23	0.06	***	-0.26	0.06	***
Coh-Mar v. Single	-0.05	0.09		-0.25	0.07	***	-0.36	0.07	***
Coh v. Single	-0.12	0.11		-0.23	0.08	***	-0.29	0.08	***
Coh-Mar v. Mar	-0.17	0.11		-0.02	0.08		-0.10	0.08	
Coh v. Mar	-0.25	0.12	**	0.00	0.09		-0.03	0.09	
Coh v. Coh-Mar	-0.08	0.13		0.03	0.09		0.07	0.09	
Contrasting NSFH2 Union Duration[a]									
Short Union v. Single	0.01	0.09		-0.23	0.07	***	-0.39	0.07	***
Long Union v. Single	0.02	0.07		-0.25	0.05	***	-0.28	0.05	***
Short Union v. Long Union	-0.01	0.10		0.02	0.07		-0.10	0.07	

Notes:
Data from the National Survey of Families and Households (NSFH1 & NSFH2).
Sample restricted to respondents under age 50 with no union disruptions between waves.
* P<.10; ** P<.05; *** P<.01 (two-tailed)

[a] Unions were divided into approximately half depending on length of coresidence by NSFH2.

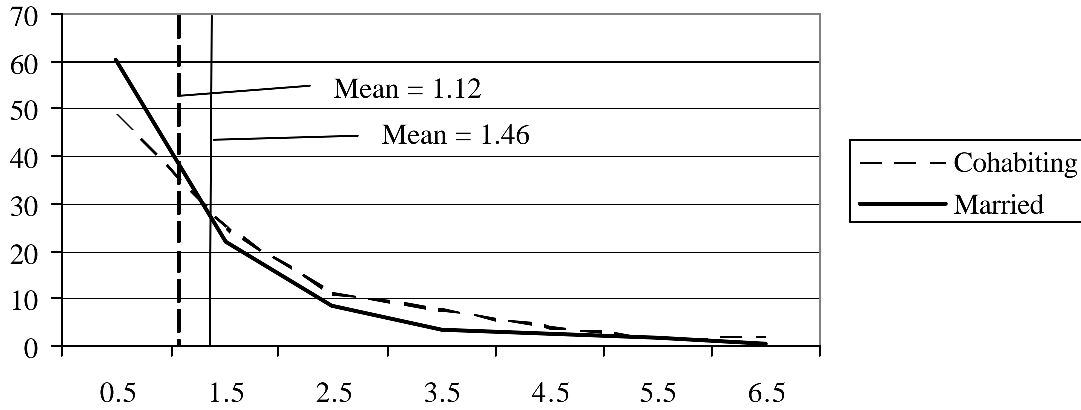
Table 4. Change Score Models of Relationship Quality and Marriage Among Cohabitors at NSFH1

	Global Quality			Life Better if Separated			Time Together			Disagreements			Fights		
	Coef.	SE		Coef.	SE		Coef.	SE		Coef.	SE		Coef.	SE	
Contrasting NSFH2 Statuses															
Mar v. Coh	0.23	0.23		-0.28	0.10	***	1.28	0.23	***	0.10	0.12		-0.22	0.10	**
Contrasting NSFH2 Marriage Duration[a]															
Short Mar v. Coh	0.60	0.34	*	-0.47	0.15	***	1.83	0.35	***	0.02	0.19		-0.28	0.15	*
Long Mar v. Coh	-0.05	0.23		-0.21	0.11	*	1.05	0.25	***	0.14	0.13		-0.17	0.11	
Short Mar v. Long Mar	0.65	0.33	*	-0.26	0.15	*	0.78	0.35	**	-0.12	0.18		-0.10	0.15	

Notes:
Data from the National Survey of Families and Households (NSFH1 & NSFH2).
Sample restricted to respondents with no union disruptions between waves.
* P<.10; ** P<.05; *** P<.01 (two-tailed)

[a] Marriages were divided into approximately half depending on duration by NSFH2.

Figure 1. Distribution of Days per Week Experiencing Depressive Symptoms by Union Status (NSFH1)



Notes: Data from the National Survey of Families and Households (NSFH1). Sample restricted to individuals under age 50 and unions of less than 7 years duration (*N*=6245).