



Published in final edited form as:

J Marriage Fam. 2012 August ; 74(4): 774–793. doi:10.1111/j.1741-3737.2012.00994.x.

Transitions Into and Out of Cohabitation in Later Life

Susan L. Brown, Jennifer Roebuck Bulanda, and Gary R. Lee

Susan L. Brown: brownsl@bgsu.edu

Department of Sociology, Bowling Green State University, Bowling Green, OH 43403

*Department of Sociology and Gerontology, Miami University, Oxford, OH 45056

**Department of Sociology, Bowling Green State University, Bowling Green, OH 43403

Abstract

Cohabitation among adults over age 50 is rising rapidly, more than doubling from 1.2 million in 2000 to 2.75 million in 2010. A small literature provides a descriptive portrait of older cohabitators, but no study has investigated transitions into and out of cohabitation during later life. Drawing on demographic and life course perspectives, the authors developed a framework for conceptualizing later life union behaviors. Using data from the 1998 – 2006 Health and Retirement Study, they estimated discrete -time event-history models predicting union formation (i.e., cohabitation or marriage) among older unmarried individuals ($N = 3,736$) as well as transitions to either marriage or separation among older cohabitators ($N = 377$). Those who formed a union were as likely to be in a cohabiting relationship as a marriage. Older adult cohabiting unions were quite stable and unlikely to culminate in either marriage or separation. During later life, cohabitation appears to operate as a long-term alternative to marriage.

Keywords

aging; cohabitation; families in middle and later life; marriage

The dramatic growth in cohabitation over the past few decades has altered contemporary union formation and dissolution patterns. Cohabitation is now the modal path to marriage and fully accounts for the delay in marriage entry. A majority of marriages are preceded by cohabitation, yet a minority of cohabiting unions are formalized through marriage (Bumpass & Lu, 2000).

Despite the rapid ascent of cohabitation and its central role in broader shifts in union behavior, nearly all of the research on cohabitation involves young and middle-age adults, essentially ignoring the experiences of older adults (Cooney & Dunne, 2001, although see Chevan, 1996, and King & Scott, 2005). Moreover, the research on marital status and transitions in later life focuses overwhelmingly on marriage and widowhood (Allen, Blieszner, & Roberto, 2000; Calasanti & Kiecolt, 2007; although see Brown, Lee, & Bulanda, 2006).

The omission of older adult cohabitators from the family and gerontological literatures is notable for two reasons. First, it belies the demographic composition of the U.S. population, which is aging rapidly. This process is now accelerating with the movement of the baby

Note

An earlier version of this article was presented at the Center for Demography and Ecology, University of Wisconsin—Madison in 2009.

boomers—the first generation to cohabit in large numbers—into the older adult population, suggesting that cohabitation will be increasingly common among older Americans (Brown et al., 2006). Second, cohabitation among older adults is important from a theoretical standpoint because it likely plays a unique role in the lives of older Americans. For instance, older adults may be less interested in marriage because they are past the age of reproduction. They also may be more interested in protecting the wealth they have accrued over their lifetime than they are in pooling economic resources. Older adults, especially women, may be less sanguine about marriage because of the care giving burden it often entails (Talbot, 1998).

To begin to fill this critical gap, we use longitudinal data from the 1998 – 2006 Health and Retirement Study (HRS; see <http://hrsonline.isr.umich.edu/>) to examine transitions into and out of cohabiting unions among adults over age 50. The current investigation was guided by a theoretical framework that incorporates life course and demographic perspectives on aging (Uhlenberg, 1996). Combining insights from the extensive research base on union formation among young adults with findings from the literature on dating and marital transitions among older adults, we developed a framework to predict the formation of cohabiting unions among older adults.

We also evaluated the stability of cohabiting unions and the propensity of older cohabitators to marry versus separate. Some researchers (e.g., Davidson, 2001; Talbot, 1998) have argued that older persons are less interested in marriage and thus union duration and outcomes among older cohabitators are likely to exhibit a pattern distinct from that documented for young adults. In other words, older adult cohabiting unions may endure over many years and be unlikely to result in marriage. To our knowledge, this study is the first to integrate the cohabitation and gerontological literatures to develop and test expectations about patterns of union formation and dissolution among older adults.

Background

The Growth in Cohabitation

Cohabitation has increased rapidly in recent decades. U.S. Census (2010a) estimates indicate that in 2010 there were more than 7.5 million opposite-sex cohabiting couples versus just 500,000 in 1970. The increasingly prominent role of cohabitation in the family life course has contributed to the emergence of an extensive literature on cohabitation that has focused on younger people, typically in their 20s, 30s, and 40s, presumably because this is the life stage at which family formation and fertility decisions are most salient. Indeed, the emphasis of much of this work has been on the determinants of union transitions, including the formation of cohabiting versus marital unions (e.g., Oppenheimer, 2003; Raley, 1996; Xie, Raymo, Goyette, & Thornton, 2003) and cohabitators' union outcomes (e.g., Brown, 2000; Manning & Smock, 1995; Smock & Manning, 1997). Unfortunately, virtually none of this research on union formation and outcomes has incorporated older adults, even though 15% of cohabiting couples include at least one partner age 50 or over (U.S. Census Bureau, 2010a). Thus, very little is known about transitions into and out of cohabitation among older adults and whether the same mechanisms operate among this age group.

The Growth in the Older Population

The United States is an aging society, and the older adult population is projected to double by 2050 (Jacobsen, Mather, Lee, & Kent, 2011). At the same time, a declining share of older adults will be married in the coming decades (Cooney & Dunne, 2001; Manning & Brown, 2011), meaning a larger proportion will be eligible to cohabit. Indeed, cohabitation among older adults is likely to increase in the future as cohabitation has been common among baby

boomers and cohabitation levels are actually higher among previously (vs. never-) married individuals (Bumpass & Lu, 2000).

Cohabitation Among the Older Population

Although researchers anticipate a more pronounced movement away from marriage among older adults in the coming years, prior work on union formation and dissolution among this group has ignored cohabitation. Instead, the primary focus of research on marital status among older adults has been spousal loss (e.g., Carr, 2004; Carr et al., 2000; Lee & DeMaris, 2007). Older women are more likely than men to experience widowhood and less likely to remarry following spousal loss (Kinsella & He, 2009). Prior studies of remarriage among older persons (e.g., K. A. Bulcroft, Bulcroft, Hatch, & Borgatta, 1989; Burch, 1990) are rather dated and have ignored cohabitation entirely. Although this may have been justifiable a few decades ago when rates of cohabitation were lower, cohabitation is now a more common feature of the lives of older adults, and therefore it is essential that we begin to understand it.

The rise in cohabitation coupled with the growth in the older population ultimately means significant increases in older adult cohabitation. Allen et al. (2000) asserted that “young adults are not the sole innovators in pioneering the changes taking place in family life today” (p. 913). Early estimates by Chevan (1996) using U.S. Census data suggested that cohabitation among individuals age 60 and older increased from slightly less than 10,000 in 1960 to more than 400,000 people in 1990, although these figures are based on indirect measures of cohabitation. Direct measures indicate a rapid recent acceleration in the older adult cohabiting population, which grew from 1.2 million people in 2000 (Brown et al., 2006) to 2.75 million people in 2010 (U.S. Census Bureau, 2010a). Among those at risk of cohabiting—that is, the unmarried—nearly 8% of persons over age 50 were cohabiting in 2010 (authors’ calculations using the 2010 Current Population Survey; see <http://www.census.gov/newsroom/releases/archives/population/cb11-tps16.html>) versus 4% in 2000 (Brown et al., 2006).

Prior Research

Despite the mounting evidence that cohabitation is rising rapidly among older adults, a review of intimate relationships in older adulthood revealed that “we have no research base on cohabiting unions in later life” (Cooney & Dunne, 2001, p. 853). Our own review of published studies on cohabitation among older people uncovered very few. Moreover, this research is limited to cross-sectional, descriptive studies. Early work by Chevan (1996) and Hatch (1995) relied on indirect measures of cohabitation and used data from the 1990 and 1980 censuses, respectively. Cohabitation during older adulthood was rare during this time period, yielding small samples for analysis. Not only do these studies suffer from possible underreporting biases, they are also limited by the narrow range of measures that were available to predict cohabitation experience. More recent research conducted by Brown et al. (2006; Brown, Bulanda, & Lee, 2005) provides a descriptive portrait of older cohabitators compared to remarried and unpartnered individuals using cross-sectional data. Older cohabitators differ from remarried individuals in ways that are similar to younger adults. For instance, Blacks are less likely than Whites to be remarried, and cohabitators report lower incomes, are less likely to own their own homes, and have weaker social ties (Brown et al., 2006). Other cross-sectional work has investigated the relationship dynamics of older cohabiting unions. King and Scott (2005) found that, compared to younger adults, older adults tended, on average, to remain in their unions longer, were less likely to report marriage plans, and had higher levels of relationship quality. Older cohabitators characterized their unions as more stable and harmonious than their younger counterparts, leading the authors to conclude that cohabitation operates as a long-term alternative to marriage among

older adults. This conclusion is consistent with research showing that older cohabitators and married individuals report similar relationship quality (Brown & Kawamura, 2010).

Research on cohabitation transitions among older adults is quite limited and is restricted to non-U.S. populations, including a study of union formation in The Netherlands (de Jong Gierveld, 2004) and union outcomes in Finland (Moustgaard & Martikainen, 2009). Treating cohabitation, remarriage, and living apart together as competing risks, de Jong Gierveld found that men were more likely than women to form any type of union and that age was negatively associated with cohabitation. Education, church membership, and type of dissolution (i.e., widowhood or divorce) were not significantly associated with cohabitation. Among Finnish elderly individuals, socioeconomic status was negatively associated with cohabitation, and cohabiting unions were less stable than marital unions. They were also more likely to end through either death or institutionalization (Moustgaard & Martikainen, 2009).

The Current Study

Theorizing older adult cohabitation—Both life course and demographic perspectives are useful in the formulation of expectations about transitions into and out of cohabitation among older adults (Elder, 1994; Uhlenberg, 1996). An understanding of demographic patterns requires consideration of both the sociohistorical context and individual maturation. Analogously, central to a life course perspective are “transitions, aging, and context” (Uhlenberg, 1996, p. 226). This perspective is premised on the notion that contemporary events are connected to earlier experiences and contexts (Elder, 1994). Individual experience in later life thus cannot be fully understood without considering the role of historical time, an individual’s place in the social structure, and his or her own unique biography (Settersten, 2003). For example, baby boomers’ early life course experiences of cohabitation portend considerable growth in cohabitation among older adults over the next few decades.

More generally, there are several reasons why the distinct role of cohabitation in the life course of older adults may translate into unique patterns of union formation and dissolution. For instance, although older adults express an interest in companionship, they tend to be less interested in marriage (R. A. Bulcroft & Bulcroft, 1991; Hatch, 1995). Women are especially reluctant to marry in later life, citing the caregiving strains that marriage may entail, as well as perceived loss of freedom (Davidson, 2001; Talbott, 1998). Actually, older unmarried individuals are as likely to express an interest in cohabiting as they are in marriage (R. A. Bulcroft & Bulcroft, 1991). Indeed, gender plays an especially prominent role in union behavior among older adults, with the skewed sex ratio portending more cohabitation (and marriage) among older men than women (Chevan, 1996). At later stages of the life course, cohabitation may be desirable because it permits partners to retain control over their assets or eligibility for certain types of benefits or income security programs. Chevan (1996) argued that the disincentives for marriage are magnified for older adults, who are likely to have economic resources whose value may be reduced through marriage.

Consequently, existing theories of cohabitation transitions require reconsideration for the older adult population. This is consistent with the conclusion reached by scholars of aging about dating and remarriage: Theories developed to explain these behaviors among younger adults are not directly applicable to older adults because they ignore the significance of life course stage in structuring opportunities and outcomes (e.g., K. A. Bulcroft et al., 1989; R. A. Bulcroft & Bulcroft, 1991). Therefore, our framework for predicting transitions into and out of cohabitation encompassed several life course and demographic mechanisms: *demographic characteristics, economic resources, health, and social support*. We discuss each of these mechanisms below, explicating our hypotheses for how various factors are related to both union formation and dissolution among older adults.

Demographic characteristics—Among those age 55 and older there are more than twice as many unmarried women as unmarried men (U. S. Census Bureau, 2010b). Men are also much more likely than women to select partners from younger age categories, expanding their pool of eligibles. This suggests that older men have substantially greater opportunities to find both spouses and cohabiting partners than do older women, so we expected the proportion of cohabitators to be higher among men.

Although older Blacks are less likely to be married than older Whites (Manning & Brown, 2011), previous research (Brown et al., 2006) has found no race differences in the proportions cohabiting. We therefore expected no race differential in the formation of cohabiting unions, but we did expect that Whites are more likely than non-Whites to transition from singlehood into marriage and out of cohabitation into marriage.

Among older unmarried persons, age is negatively associated with cohabitation (Brown et al., 2006). This may be partly due to cohort differences in the acceptability of cohabitation and partly due to declines with age in the frequency of all types of partnering, including marriage (Wilmoth, 1998). We hypothesized that the prevalence of cohabitation declines linearly with age and that older cohabitators are less likely than their younger counterparts to transition into marriage.

Most older cohabitators are divorced (71%), followed by widowed (18%) and never-married (11%), whereas older remarried individuals are disproportionately widowed (Brown et al., 2006). We expected that divorced people are more likely to form cohabiting than marital unions, whereas the widowed gravitate toward marriage. Never-married individuals are more likely to cohabit than marry. Compared to widowed cohabitators, divorced and never-married cohabitators are less likely to either marry or separate. Union duration is negatively related to both marriage and separation (Moustgaard & Martikainen, 2009).

Economic resources—Among younger persons, socioeconomic status is positively related to marriage and negatively associated with cohabitation. Prior research suggests that this is also the case in the older population (Brown et al., 2006; Moustgaard & Martikainen, 2009). We anticipated our indicators of socioeconomic status (education, income, employment, and private health insurance) to predict cohabitation negatively, but transitions from cohabitation to marriage positively. Receipt of Social Security income or a pension should discourage entry into marriage.

Health—Poor health may make one less attractive as a potential spouse, in particular in light of older women's concerns about caregiving in remarriages (Davidson, 2001). We expected poor health (operationalized as limitations in activities of daily living [ADLs] and self-assessed health) to deter union formation, but among those who do repartner it should increase the propensity to cohabit rather than marry. Poor health can increase stress in relationships (Booth & Johnson, 1994), so we expected that it discourages marriage and encourages separation among cohabiting couples. Alcohol consumption may be more prevalent among cohabitators but may also discourage transitions to marriage (Brown et al., 2006).

Social support—There are competing hypotheses regarding the association between social support and repartnering among older adults (Hatch, 1995; Talbot, 1998). The *compensatory hypothesis* suggests that individuals with limited support networks are more motivated to find a supportive partner. The *complementarity hypothesis* says that those most integrated into social networks are most effective at forming intimate partnerships. One small qualitative study of older widows found support for the latter hypothesis (Talbot, 1998), but other studies have posited that close family ties, especially with adult children,

probably deter older adults from forming new unions, in particular marriages that might create legal complexities in the inheritance process (R. A. Bulcroft & Bulcroft, 1991; Chevan, 1996; Wu, 1995). Thus, older adults who either exchange assistance with their adult children or have relatives living nearby should be more likely to cohabit than marry and less likely to transition from cohabitation to marriage. Alternatively, the direction of the intergenerational exchange could matter. The provision of assistance may serve as a proxy for economic advantage because it is typical for older adults to provide their adult children with economic assistance as opposed to assistance with transportation or chores (McGarry & Schoeni, 1995; Sloan, Zhang, & Wang, 2002; Swartz, 2009). The receipt of assistance, which is more often in the form of in-kind services (e.g., help with housework or transportation) provided by adult children, rather than financial assistance (McGarry & Schoeni, 1995; Sloan et al., 2002; Swartz, 2009), could be indicative of disadvantage. Giving assistance could be positively associated with union formation, whereas receiving assistance could be negatively related to entering marriage (and possibly cohabitation) or transitioning from cohabitation to marriage.

Religiosity promotes conservative attitudes toward family relations and discourages cohabitation among younger (Clarkberg, Stolzenberg, & Waite, 1995; Eggebeen & Dew, 2009) as well as older (Brown et al., 2006) adults. We hypothesized that religiosity is positively associated with transitions into marriage and negatively associated with transitions into cohabitation among unpartnered older adults, and positively associated with marriage among cohabiting older persons.

Method

We used data from five waves of the HRS, which were collected every 2 years from 1998 to 2006 by the University of Michigan. Designed to examine health and retirement decision making as well as how older adults and their families respond to declining health in later life, the 1998 HRS is a nationally representative sample of the noninstitutionalized population composed of 21,384 persons born in 1947 and earlier. Thus, at the time of the 1998 interview, main respondents were as young as 51. The 1998 HRS brings together a sizable continuous cohort of older Americans by combining four samples: the Asset and Health Dynamics Among the Oldest Old (born in 1923 and earlier), the original 1992 HRS (born 1931 – 1941), and two new samples: (a) War Babies (born 1942 – 1947) and (b) Children of the Depression Age (born 1924 – 1930). Through the combination of adjacent cohort-based samples, the 1998 – 2006 waves of the HRS encompass multiple domains of the lives of persons over age 50, including information on the cognitive, economic, health, work, and family status of respondents.

In the present research, we mainly relied on the RAND HRS files and the RAND HRS Version H data file, which contain all of the variables available in the public use HRS data files merged properly to be at the respondent level. Some information, including family and financial variables, was originally collected at the household level. The RAND file also notes discrepancies and provides cleaned data when possible. It also includes extensive income and asset imputations using bracketed techniques. Files are easy to merge across waves and use consistent variable naming conventions. A few additional variables not available in the RAND file are merged on from the HRS public use files, such as union duration for some of the 1998 cohabitators, which is obtained from earlier waves of the HRS.

There were two distinct analytic samples: (a) the *union formation sample*, composed of respondents who were unmarried at the 1998 interview and therefore at risk of forming either a cohabiting or a marital union, and (b) the *union dissolution sample*, composed of respondents who were cohabiting in 1998 and therefore at risk of dissolving their

cohabitation through either marriage or separation. For the union formation sample, we excluded those not single in 1998 ($n = 14,874$), those not ages 51 to 75 ($n = 2,682$), those not followed up in any subsequent wave ($n = 87$), and those who formed same-sex cohabiting partnerships ($n = 5$; though substantively of interest, the small number of cases prohibits meaningful statistical analysis of this group). The final union formation sample size for the analysis of transitions into cohabitation was 3,736 respondents.

For the union dissolution sample, we excluded those not cohabiting in 1998 ($n = 20,833$), those not between the ages of 51 and 75 ($n = 137$), those not followed up in any subsequent wave ($n = 16$), those in same-sex partnerships ($n = 20$), and one case in which it was not clear whether the respondent was cohabiting in 1998. The final union dissolution sample size for the analysis of transitions out of cohabitation was 377 respondents.

Dependent Variables

Union formation among singles can occur through either cohabitation or marriage after the 1998 interview. *Cohabitation status* was measured at each subsequent wave (i.e., 2000i.e., 2002i.e., 2004, and 2006). We used the RAND constructed measure of marital status that included partnership status. Respondents who reported their marital status as partnered were coded as *cohabiting*. Persons who reported their marital status as *married* were coded as such. Respondents also reported the month and year in which the cohabitation or marriage began.

Union dissolution among cohabitators can occur through either marriage or separation after the 1998 interview. As noted above, *marriage* was measured by obtaining the respondent's marital status at each subsequent wave (2000–2006). *Separation* was captured when the respondent reported his or her marital status as neither partnered nor married or in response to the direct questions “Is [name] still your spouse/partner?” and “Is [name] still alive?” These two questions permitted us to distinguish between separations due to breakup versus partner death. Respondents also reported the month and year in which the marriage began or the cohabitation ended by separation.

The HRS allowed us to capture nearly all transitions that occurred between interviews. For respondents who married between interviews, we could ascertain whether they cohabited prior to entering marriage. If they did cohabit prior to marriage, the respondent was censored following entry into cohabitation (for the union formation portion of the analyses); that is, the union formation analysis was designed to predict the *first* union formed following the 1998 interview. Similarly, for respondents who died by the subsequent wave, we could determine whether and when they cohabited or married prior to death (from the exit interview with the proxy respondent), and these transitions were captured in our models as appropriate. When respondents were single at two consecutive waves, we could determine whether and when they married and separated (and code the transition accordingly) as well as whether and when they cohabited prior to the marriage, but we could not establish whether they cohabited and separated between waves, so we may be underestimating entry into cohabitation a bit. We expect that this is minimal because of the long average durations of cohabitations among older adults (Brown & Kawamura, 2010), the frequency of the interviews, and the fact that we were able to capture cohabitations between interviews that led to marriage. There were fewer than a dozen cases in which marital status at each wave was not always clear. For these cases, we evaluated respondents' reports of marital status and the dates of transitions at each wave to draw informed conclusions about how to code unclear marital statuses.

Independent Variables

Demographic characteristics—*Gender* was a dichotomous variable coded 1 = *women* and 0 = *men*. *Non-White* was a dichotomous variable coded 0 = *non -Hispanic White* and 1 = *all others*. *Age* was coded in years. *Prior marital status* comprised a series of dummy variables that distinguished among the *widowed* (reference), *divorced*, and *never-married*. *Union duration*, which is included only in the union dissolution portion of the analysis, was a continuous measure of the number of years the respondent had been in the cohabiting union as of the 1998 interview.

Economic resources—*Education* was measured in 1998 by three mutually exclusive dichotomous variables: (a) *less than high school*, (b) *high school*, or (c) *more than high school*. *Household income* was a constructed measure in the HRS data set that incorporated bracketed income responses using sophisticated imputation techniques for missing data. *Assets* was a constructed variable that captured the value of nonhousing assets held by the household, including the values of checking and savings accounts; certificates of deposit, bonds, and Treasury bills; individual retirement accounts; stock and mutual funds; business equity; equity in real estate other than respondent's primary assets; and other reported nonhousing assets. Both income and assets were time-varying variables and were logged to minimize the effects of skewness. A time-varying dichotomous measure indicated whether the respondent *owns his/her home* (1 = *yes*, 0 = *no*). Employment status was a time-varying dummy coded measure that captured whether the respondent was currently *employed*. We also included time-varying measures to tap receipt of *Social Security* (1 = *yes*, 0 = *no*) in the household (may be the respondent or partner, if applicable) and a *pension* (1 = *yes*, 0 = *no*) in the household (may be the respondent or partner, if applicable). *Private health insurance* coverage was a time-varying measure that distinguished respondents with private health insurance (1 = *yes*) from others (0 = *no*).

Health—The *ADL limitations* measure was a time-varying dummy variable indicating that the respondent reported having difficulty with at least one of the following six ADLs because of health problems: getting across a room, dressing, bathing, eating, getting into or out of bed, or using the toilet. *Excellent or very good health* was a dichotomous variable coded 1 = *the respondent rates his/her own health as excellent or very good* and 0 = *all others*. A time-varying dummy measure tapped the respondent's drinking habits: *nondrinker* (1 = *yes*, 0 = *no*).

Social support—*Give assistance* was a time-varying dummy variable (1 = *yes*, 0 = *no*) that measured whether the respondent (or partner, if applicable) had given a child or grandchild at least \$500 in the past 2 years to help with expenses (e.g., for education, a down payment, rent, medical expenses, utility bills, etc.). This could be a gift or a loan. *Receive assistance* was a time-varying dummy variable (1 = *yes*, 0 = *no*) that captured whether the respondent (or partner, if applicable) had received any assistance in the past year from children with household chores, errands, transportation, or other activities, or any financial assistance of \$500 or more in the past 2 years. *Religiosity* was a time-varying measure of the reported significance of religion in the respondent's life, rated as 1 = *not too important*, 2 = *somewhat important*, and 3 = *very important*. *Relatives in the neighborhood* was a time-varying measure coded 1 = *at least one relative residing in their neighborhood* and 0 = *otherwise* (this measure captured only non-coresident relatives). Note that "neighborhood" was not explicitly defined by the HRS.

Analytic Strategy

We modeled transitions into and out of cohabitation using discrete-time event-history techniques. Event-history modeling is perhaps the most effective approach to handle the

problems posed by censoring (e.g., persons continue to be at risk for an event after the observation period ends) and time-varying explanatory variables that are integral to process-driven events such as union formation and dissolution (Allison, 1982). Event-history techniques are desirable because they permit explicit modeling of the time dependency of experiencing an event. For instance, prior research on younger adults indicates that the longer a couple cohabits, the less likely they are to marry or separate (Brown, 2000; Smock & Manning, 1997). Discrete-time models are appropriate here because union start and end dates were measured using time intervals, namely, month and year. Discrete-time models have many advantages, including the ease of incorporating time-varying covariates and the use of log linear methods for model estimation (Allison, 1982).

The hazard rate in a discrete-time framework is typically defined as $P_{it} = \Pr[T_{it} = t | (T_{it}, X_{it})]$, where T is the discrete random variable giving the uncensored time of event, given that the i th person survived to the t th discrete time point (Allison, 1982). In other words, this is the conditional probability that an event occurs at time interval t , given that it has not already occurred. We considered how this hazard rate is a function of time and explanatory variables. Most often, this function is expressed as $P_{it} = 1/[1 + \exp(-a_t - \mathbf{B}\mathbf{x}_{it})]$, or as log odds: $\log[P_{it}/(1 - P_{it})] = a_t + \mathbf{B}\mathbf{x}_{it}$, where $a = (a_1, a_2, \dots)$ is a set of constants and \mathbf{B} represents the vector of effects of our set of explanatory variables, denoted by the vector \mathbf{x} (Allison, 1982). Discrete-time models ultimately are estimable with programs for dichotomous data because each discrete time unit is an observation.

For our purposes, observations were coded into person-years (there were insufficient events to support person-month-level data), our unit of analysis to model transitions into and out of cohabitation. We coded the dependent variable 1 if the individual experienced the event during that person-year, and 0 otherwise. When estimating models in which more than one outcome is possible (e.g., cohabitators can transition into either marriage or separation), we used multinomial logistic regression to estimate competing risks models. The hazard for a competing risks model, in which there are m possible ways to exit the initial state and where $j = 0, \dots, m$, can be expressed as $P_{it} = \Pr(T = t, J = j | T)$, $j > 0$. As suggested by the HRS principal investigators, we used the survey weights in the estimation of all of our prospective event-history models to account for the complex, clustered sampling design (Willis, 1999).

To predict older adults' transitions into cohabitation, we used the union formation sample ($N = 3,736$). Cohabitation and marriage were treated as competing risks relative to remaining single, meaning we had a trichotomous outcome that permitted us to evaluate the odds of forming a cohabiting versus marital union. All persons at risk were unpartnered in 1998. They were censored once they formed either a cohabiting or marital union, or if they died (death signaled the end of the exposure to risk period). Otherwise, respondents at risk were censored at the last available interview.

Transitions out of cohabitation, whether through marriage or separation, were also estimated using competing risks models. Using the union dissolution sample ($N = 377$), we examined the odds of "ending" the cohabiting union by marrying or separating relative to remaining in the cohabiting union. This strategy permitted us to calculate the odds of marrying versus separating. Cohabitators were censored once they married or separated, or when one of the partners died (death was not coded as a separation because it is involuntary; instead, death signaled the end of the exposure to risk period). Otherwise, respondents at risk were censored at the last available interview.

In our estimation of these various event-history models, we examined the roles of demographic characteristics, economic resources, health, and social support. Initially, models in which each of these four factors was introduced individually were estimated.

Because the substantive conclusions from these initial models remained the same as those for the full models, we present only the full models in the Results section. We also investigated the importance of gender by running separate models for women and men. Union formation and dissolution patterns can vary by gender, and given the skewed sex ratio in older adulthood, variation may be even more pronounced for this age group. Given the modest number of events, or transitions, we used a two-tailed $p < .10$ significance level test for model coefficients to minimize the chances of making a Type II error (i.e., failing to reject the null hypothesis when it is actually false; Labovitz, 1968). Models were estimated in Stata using svy commands to correct for the complex sampling design of the HRS. There are no goodness-of-fit test statistics provided in Stata when using the svy: mlogit command and thus the tables do not show model fit statistics (Archer & Lemeshow, 2006; Zhang & Hayward, 2006).

Results

Union Formation

Survival curves were estimated for forming either a cohabiting or marital union (results not shown). Union formation after age 50 was relatively rare, with 4% of singles forming a cohabiting union and 4% marrying over the 8-year time period. By comparison, roughly 20% of singles died without forming either a cohabiting or marital union. The vast majority—72%—of singles remained unpartnered and alive.

Bivariate results—The weighted descriptive statistics show how respondents in the union formation sample compare in terms of demographic characteristics, economic resources, health, and social support according to whether they formed a cohabiting union, married, or remained single, as shown in Table 1. The results revealed that singles who formed cohabiting unions were especially likely to be divorced or male, whereas those who remained single were disproportionately widowed and female. Never-married respondents were more likely to form a cohabiting than a marital union, whereas among widows, marriage was more common than cohabitation. Respondents who formed a union (either cohabitation or marriage) tended to be younger, on average. Those with less than a high school education were less likely than others to form either type of union. Singles who formed a union tended to have higher household incomes than respondents who remained single, although the assets of those who formed a union did not significantly differ from those who remained single. Union formation was positively associated with employment and negatively related to Social Security receipt. Respondents with private health insurance were more likely to form a marital than a cohabiting union. Health was related to union formation such that three times as many singles who remained unpartnered reported ADL limitations compared to those who either cohabited or married. Similarly, those who formed either a cohabiting or marital union were more likely to report their own health as excellent or very good than those who remained single. Consistent with prior work, drinkers were more likely to enter cohabiting versus marital unions. Cohabitation and marriage were more common among older adults who gave assistance, whereas those who remained single were especially likely to receive assistance from others. Those who formed a cohabiting union reported lower levels of religiosity, on average, than those who either married or remained unpartnered. Having relatives in the neighborhood was negatively associated with marriage but unrelated to cohabitation.

Multivariate results—The multinomial logistic regression predicting union formation among singles is presented in Table 2. The model shows the coefficients and odds ratios for all variables on the competing risks of forming a cohabitation versus remaining single (column 1), marrying versus remaining single (column 2), and forming a marriage versus a

cohabitation (column 3). Demographic characteristics were related to union formation in later life. Women were less likely than men to form a union. The odds that a woman transitioned from singlehood to cohabitation was 56% lower than the odds for men. Similarly, the odds of marriage were 63% lower for women than men. Age was negatively associated with union formation. Advancing age was linked to lower likelihoods of either cohabiting or marrying. Divorced and widowed persons were similarly likely to form either a cohabiting or marital union. Never-married respondents were significantly less likely than widowed respondents to form either a cohabiting or marital union.

There did not appear to be much of an effect of socioeconomic characteristics on the union formation of older adults. One exception was that receipt of Social Security benefits was marginally negatively associated with marriage, which is consistent with prior work suggesting that Social Security deters marriage (e.g., Chevan, 1996). Neither household income nor assets, nor employment, nor pensions, nor health insurance were related to union formation.

Health also was modestly related to union formation. Although ADL limitations were not associated with union formation, excellent or very good health was positively related to forming a cohabiting union. Not consuming alcohol was associated with lower odds of forming a cohabiting union.

Social support played a role in union formation among older adults: Respondents who provided assistance to others were more likely to cohabit or marry, supporting the social complementarity hypothesis. The odds of cohabitation for those who gave assistance were 57% greater than for those who did not. For marriage, the figure was 35% greater. Receiving assistance was associated with a reduced likelihood of marriage; the odds of marriage were .65 times those of persons who did not receive assistance, which is in line with the compensatory hypothesis. Religiosity was linked to union formation, but the effects differed by union type. Higher levels of religiosity were associated with decreased odds of cohabitation and increased odds of marriage. This was the only predictor in the model that had opposite effects for the two types of unions. Indeed, religiosity was associated with greater odds of marrying than cohabiting. The presence of relatives in the neighborhood was associated with reduced odds of marriage. When we compared cohabitation and marriage, we noted that respondents with relatives nearby were less likely to marry.

Gender-specific models of union formation provided additional insights (see Table 3). For instance, non-White women were less likely to form a union than their White counterparts, but there was no race differential among men. Never-married men were unlikely to either cohabit or marry compared to widowed men. Indeed, the large negative coefficient ($b = -37.71$) for marriage among never-married men reflected the fact that never-married older men were highly unlikely to wed (including never-married men in the reference category with widowers resulted in similar findings; results not shown). The odds of marriage were much lower than the odds of cohabitation among never-married men. Among never-married women, the odds of cohabitation were similar to those for widows, but the likelihood of marriage was lower for never-married women. The odds of marriage among never-married women were 87% lower than the odds for widowed women. Again, economic resources were essentially unrelated to union formation among both women and men. Women with private health insurance were less likely to form a cohabiting union than women without such insurance. Social Security receipt was negatively associated with marriage among both women and men but did not achieve statistical significance in the models. Excellent or very good health was positively associated with forming a cohabiting union, but only among women. Giving assistance was related to an increased likelihood of cohabiting among women, whereas receipt of assistance was associated with a decrease in the odds of marriage

among men. The opposing effects of religiosity on cohabitation and marriage persisted for both women and men. Very religious women and men alike were much more likely to marry than cohabit. Having relatives nearby was positively related to cohabitation but negatively related to marriage among women; indeed, women with relatives close by were significantly less likely to marry than cohabit. There were no significant effects of relatives on men's union formation.

Union Dissolution

Survival curves were estimated for transitions out of cohabitation (results not shown). Older cohabitators' unions were relatively stable. Marriage was less common than separation, and this differential widened over time. About 12% of cohabiting unions were formalized by marriage and 18% ended through breakup during the 8-year period. Separation through death was much more common, however, with 32% of unions ending by death of a partner. The remaining 38% continued to cohabit. Note that at baseline (i.e., 1998), cohabitators were already in unions of rather long duration, averaging more than 8 years.

Bivariate results—The descriptive statistics shown in Table 4 illustrate how cohabitators who married, separated, or stayed together differed across the life course mechanisms, including demographic characteristics, economic resources, health, and social support. Non-Whites were relatively unlikely to marry and more likely to continue cohabiting. Cohabitators who marry tended to be younger. Widowed cohabitators were more likely to remain cohabiting than to separate. The variation in average union duration by union outcome suggested that cohabitators who broke up did so relatively soon in their unions, with an average duration of less than 6 years. Those who married had been together a similar amount of time (about 6 years), and those who continued to cohabit had the longest average union duration, nearly 10 years. Cohabitators who married were better educated, on average, than their counterparts who broke up or remained together unmarried. More than half of cohabitators who married reported more than a high school degree, compared to about one third of those who experienced other union outcomes. Similarly, average household income and the proportion owning a home were substantially higher among cohabitators who married than those who continued to cohabit. Cohabitators who married were more likely to be employed and to have private health insurance than those who remained cohabiting. Receipt of Social Security appeared to deter marriage in that those who married were least likely to report Social Security income. Cohabitators who separated were less likely to report having ADL limitations, and those who married were more likely to be teetotalers than cohabitators who remained together unmarried. Giving assistance was most common among cohabitators who married, but receiving assistance was not related to cohabitators' union outcomes. Cohabitators who married reported lower average levels of religiosity than cohabitators who separated.

Multivariate results—Table 5 shows the coefficients and odds ratios for the multinomial logistic regression model of the competing risks of marrying versus continuing to cohabit (column 1), separating versus continuing to cohabit (column 2), and marrying versus separating (column 3). Some demographic characteristics were related to older cohabitators' union outcomes. Age was negatively associated with separation but unrelated to marriage. Divorced and never-married cohabitators were more likely to separate than widowed individuals, although the groups did not differ in their odds of marriage. Union duration was negatively related to separation but was not associated with marriage.

Economic resources were essentially unrelated to cohabitators' union outcomes. Only the receipt of private health insurance was negatively associated with separation. Private health insurance was associated with a 44% lower odds of separation. Education, income, assets,

home ownership, Social Security, and pension receipt were unrelated to cohabitators' outcomes.

There was modest evidence that health indicators were related to cohabitators' decisions to marry or separate. ADL limitations were associated with a reduced likelihood of separation, suggesting some level of perceived obligation to assist partners. At the same time, they were unrelated to the likelihood of marriage.

Social support was not closely related to cohabitators' union outcomes. Only receiving assistance was associated with increased odds of marriage, which was not consistent with the expectation that receiving assistance is indicative of disadvantage. It is in line with the complementarity hypothesis. Religiosity and having relatives nearby did not alter the likelihoods of either marriage or separation relative to continuing to cohabit.

Separate models were estimated for men and women, as shown in Table 6. These results should be interpreted with caution because the sample sizes are modest (204 men and 173 women) and thus it is more possible to make Type II errors. Age was negatively associated with transitions among both women and men but achieved statistical significance for separation only among men. Divorced men were more likely to separate than their widowed counterparts. Never-married cohabiting women had a 24% higher odds of marrying compared to widowed women. Both cohabiting men and women were less likely to separate the longer they had been cohabiting. The odds of marriage were not related to union duration. Economic resources were not related to cohabiting women's union outcomes. Social Security receipt was associated with reduced odds of marriage among cohabiting men, but not women. The negative association between private health insurance and separation held only for cohabiting men. Among cohabiting women, health was unrelated to union outcomes. Among cohabiting men, having an ADL limitation was associated with a 79% reduction in the odds of separation but was not related to marriage. Social support was unrelated to either cohabiting women's or men's union outcomes.

Discussion

This study makes several contributions. First, it extends prior research on union formation and dissolution by focusing on union transitions that occur in later life. Our findings demonstrate that union behaviors are situated within a life course context; models used to explain decisions to cohabit or marry among younger adults do not readily translate to older adults, who face a unique set of constraints and opportunities. Second, this study builds on the limited body of work on older adult cohabitators, which is primarily descriptive because it is confined to cross-sectional studies. We were able to investigate union transitions using prospective, longitudinal data from a large, recent sample of older adults. This approach helps to identify not only the factors associated with forming a cohabiting union in later life but also the correlates of maintaining, dissolving, or formalizing (through marriage) the union. Third, the data permit gender-specific analyses, which are advantageous not only because mate selection strategies often differ for men and women but also because the composition of the older adult population is highly skewed because women outlive men by 6 years, on average (Kinsella & He, 2009).

Cohabitation among older adults is still relatively rare. Only 4% of our sample of unpartnered older persons transitioned into cohabitation during the 8-year period of our study; however, this matches the 4% who entered a marriage directly. Perhaps the most remarkable feature of cohabitation among older persons, which clearly differentiates older from younger populations, is the durability of the unions. Of those who were cohabiting in 1998 when the study began, the mean duration of their unions at that point was more than 8

years. Over the ensuing 8 years covered by the study, only 18% of these unions ended in separation. Only 12% eventuated in marriage, but the modal cohabitation extended either until the death of one partner or the termination of the study. Cohabitations among older persons are clearly much less fragile than they are among younger persons, even though they rarely lead to marriage. Cohabitation certainly appears to be an alternative to marriage, rather than a prelude to marriage, among older people. This conclusion is consistent with cross-sectional research that has compared older and younger cohabitators (King & Scott, 2005) as well as older cohabitators and married individuals (Brown & Kawamura, 2010).

The picture these findings paint is one of very low rates of transition either into or out of unions among the older population. Never-married persons (especially men) are particularly unlikely to form unions in later life, and divorced men are less likely than the widowed to remarry. When older persons do form unions, even cohabiting unions, they tend to be quite stable. Changes in union status beyond age 50 are rare, and the frequency of change diminishes with age. This is a clear contrast to the frequent changes in union status and partners observed among younger adults (Cherlin, 2009).

The rarity of union formation and dissolution during later life makes it challenging to examine the predictors of union transitions among older adults. Most of the variables in the models did not achieve statistical significance. Although the HRS provides a very large panel of adults over age 50, and we relied on a less stringent significance level ($p < .10$) for covariates in the models to avoid making Type II errors, it is difficult to know for sure whether the lack of statistical association between many of the covariates and union transitions is real or an artifact of low statistical power. We return to this point later in this section when we describe the study's limitations, but we acknowledge its potential role in shaping the key conclusions from the study, to which we now turn.

Union transitions among older adults are largely unresponsive to economic resources, contrary to the pattern among younger adults, for whom cohabitation appears to be a response to economic disadvantage. Social Security receipt was associated with a reduced likelihood of marriage but was unrelated to cohabitation among older singles. No other economic factor was related to union formation in later life. This result is similar to that of de Jong Gierveld (2004), who found no association between education and cohabitation in The Netherlands but contrary to the negative relationship between socioeconomic status and cohabitation found in Finland (Moustgaard & Martikainen, 2009). Regardless, cohabitation does not appear to play the role of "poor person's marriage" among the older population.

Some researchers (e.g., Davidson, 2001) have suggested that older women, in particular, widows, do not want to remarry because they are hesitant to resume the caretaker role for an ill or disabled spouse, so they cohabit because it does not entail the caregiving obligation that marriage does. Indeed, Noël-Miller (2011) found that cohabiting partners provided less care than spouses. However, our data showed that men's health problems did not deter them from either cohabiting or marrying and that cohabiting men with ADL limitations were no less likely to marry, and actually less likely to separate, than other men. Of course, it may be that only widowed women, who have lived through the death of one spouse, are hesitant to marry men in poor health; we did not have sufficient cases to test this.

We also found some evidence that social support was related to union formation, although its relationship with cohabitators' union outcomes appeared to be negligible. Older persons who provided assistance to adult children were somewhat more likely than others to enter both cohabitation and marriage, but those who received assistance from children were less likely to marry. Taken together, these findings suggest that the direction of exchange is indicative of advantage or stability. Older adults (in particular, women) who had relatives

nearby were less likely to marry, which is in line with the compensatory hypothesis. Religiosity discouraged cohabitation and encouraged marriage among older unpartnered adults, as expected. Among respondents who were cohabiting, however, there was no effect of religiosity on marriage. Apparently, if religious scruples do not prevent cohabitation initially, they do not propel cohabitators into marriage.

Despite repeated prognostications in the literature that social policies create economic and legal (dis)incentives to cohabit or marry in later life that drive union decisions (Brown et al., 2006; Chevan, 1996), our study does not support this assertion. For example, the receipt of Social Security benefits, a pension, having private health insurance, and home ownership were not closely tied to transitions into or out of cohabitation during later life. Moreover, adult children did not appear to have an especially strong influence on their parents' union transitions, even though scholars have theorized that adult children prefer that their parents cohabit rather than remarry (Hatch, 1995). There was no clear indication here that older parents who were close to their adult children avoided partnering, or cohabited rather than married, to protect their children's interests in their estates.

This study has some important limitations. First, cell sizes limited the specificity with which certain variables could be measured. For instance, although the HRS differentiates among non-Whites, we were not able to distinguish between Blacks and Hispanics because too few experienced the events of interest. More generally, the relative rarity of union formation—whether marriage or cohabitation—among single older adults suggests that caution in interpreting the results is warranted. Analogously, the sample size of older cohabitators was small (fewer than 400), and the stability of these unions meant that few experienced a transition to either marriage or separation, again reducing the power of our analyses, particularly when separated by gender. In our presentation of the results, we relaxed the traditional benchmark for statistical significance and used $p < .10$ to avoid Type II errors, but we realize this decision also may have inadvertently yielded Type I errors. The modest number of transitions also precluded race-specific analyses and the inclusion of cohabiting partner characteristics (although some measures were obtained at the household level) in models estimating cohabitators' union outcomes. Also, we were not able to fully explore the role of marital history in older adult union transitions. Widowed respondents were disproportionately likely to remarry, whereas divorced respondents more often formed cohabiting unions, and thus it is possible that the mechanisms underlying decisions about which type of union to form depend in part on marital history. Also, we considered only residential unions: cohabitation and marriage. Unfortunately, the HRS does not include information on other relationship types, including living apart together and dating relationships, and thus our study provides a more narrow depiction of union transitions during later life. Non-coresidential relationships are an important topic for future research, particularly as rising shares of middle-age and older adults are unmarried and therefore eligible to form such relationships (Cooney & Dunne, 2001; Manning & Brown, 2011).

Cohabitation is gaining ground as a family form across the life course. Older unmarried adults are as likely to form a cohabiting union as a marriage. Once formed, later life cohabitations tend to endure, indicating that cohabitation serves a unique function for older adults: It is a long-term alternative to marriage. For these reasons, future research should consider how cohabitation is related to the health and well-being of older adults as well as the extent to which it offers protective benefits akin to marriage.

Acknowledgments

This research was supported by a grant from the National Institute on Aging (R03-AG024512). Additional support was provided by the Center for Family and Demographic Research, Bowling Green State University, which has core funding from the Eunice Kennedy Shriver National Institute of Child Health and Human Development

(R24HD050959-07). We thank Kara Joyner, I-Fen Lin, Wendy Manning, Zhenmei Zhang, and the Center for Demography and Ecology seminar participants for their helpful comments.

References

- Allen KR, Blieszner R, Roberto KA. Families in the middle and later years: A review and critique of research in the 1990s. *Journal of Marriage and the Family*. 2000; 62:911–926.10.1111/j.1741-3737.2000.00911.x
- Allison, PD. Discrete-time methods for the analysis of event histories. In: Keinhardt, K., editor. *Sociological methodology*. San Francisco: Jossey-Bass; 1982. p. 61-98.
- Archer KJ, Lemeshow S. Goodness-of-fit test for a logistic regression model fitted using survey sample data. *The Stata Journal*. 2006; 6:97–105.10.1016/j.csda.2006.07.006
- Booth A, Johnson DR. Declining health and marital quality. *Journal of Marriage and the Family*. 1994; 56:218–223.10.2307/352716
- Brown SL. Union transitions among cohabitators: The role of relationship assessments and expectations. *Journal of Marriage and the Family*. 2000; 62:833–846.10.1111/j.1741-3737.2000.00833.x
- Brown SL, Bulanda JR, Lee GR. The significance of nonmarital cohabitation: Marital status and mental health benefits among middle-aged and older adults. *Journal of Gerontology: Series B: Psychological Sciences and Social Sciences*. 2005; 60B:S21–S29.10.1093/geronb/60.1.S21
- Brown SL, Kawamura S. Relationship quality among cohabitators and marrieds in older adulthood. *Social Science Research*. 2010; 39:777–786.10.1016/j.ssresearch.2010.04.010
- Brown SL, Lee GR, Bulanda JR. Cohabitation among older adults: A national portrait. *Journal of Gerontology: Series B: Psychological Sciences and Social Sciences*. 2006; 61:S71–S79.10.1093/geronb/61.2.S71
- Bulcroft KA, Bulcroft RA, Hatch L, Borgatta EF. Antecedents and consequences of remarriage in later life. *Research on Aging*. 1989; 11:82–106.10.1177/0164027589111004 [PubMed: 2711023]
- Bulcroft RA, Bulcroft KA. The nature and functions of dating in later life. *Research on Aging*. 1991; 13:244–260.10.1177/0164027591132007
- Bumpass LL, Lu H-H. Trends in cohabitation and implications for children's family contexts in the United States. *Population Studies*. 2000; 54:29–41.10.1080/713779060
- Burch TK. Remarriage of older Canadians. *Research on Aging*. 1990; 12:546–559.10.1177/0164027590124009 [PubMed: 2277862]
- Calasanti T, Kiecolt JK. Diversity among late -life couples. *Generations*. 2007; 31:10–17.
- Carr D. The desire to date and remarry among older widows and widowers. *Journal of Marriage and Family*. 2004; 66:1051–1068.10.1111/j.0022-2445.2004.00078.x
- Carr D, House JS, Kessler RC, Nesse RM, Sonnega J, Wortman C. Marital quality and psychological adjustment to widowhood among older adults: A longitudinal analysis. *Journal of Gerontology: Series B: Psychological Sciences and Social Sciences*. 2000; 55B:S197–S207.10.1093/geronb/55.4.S197
- Chevan A. As cheaply as one: Cohabitation in the older population. *Journal of Marriage and the Family*. 1996; 58:656–667.
- Cherlin, A. *The marriage-go-round: The state of marriage and the family in America today*. New York: Vintage Books; 2009.
- Clarkberg ME, Stolzenberg R, Waite LJ. Values and the entrance into cohabitation. *Social Forces*. 1995; 74:609–634.10.2307/2580494
- Cooney TM, Dunne K. Intimate relationships in later life: Current realities, future prospects. *Journal of Family Issues*. 2001; 22:838–858.10.1177/019251301022007003
- Davidson K. Late life widowhood, selfishness, and new partnership choices: A gendered perspective. *Ageing and Society*. 2001; 21:297–317.10.1017/S0144686X01008169
- de Jong Gierveld J. Remarriage, unmarried cohabitation, living apart together: Partner relationships following bereavement or divorce. *Journal of Marriage and Family*. 2004; 66:236–243.10.1111/j.0022-2445.2004.00015.x
- Eggebeen D, Dew J. The role of religion in adolescence for family formation in young adulthood. *Journal of Marriage and Family*. 2009; 71:108–121.10.1111/j.1741-3737.2008.00583.x

- Elder GH Jr. Time, human agency, and social change: Perspectives on the life course. *Social Psychology Quarterly*. 1994; 57:4–15.
- Hatch, RG. *Aging and cohabitation*. New York: Garland Press; 1995.
- Jacobsen LA, Mather M, Lee M, Kent M. America's aging population. *Population Bulletin*. 2011; 66:1–16.
- King V, Scott ME. A comparison of cohabiting relationships among older and younger adults. *Journal of Marriage and Family*. 2005; 67:271–285.10.1111/j.0022-2445.2005.00115.x
- Kinsella, K.; He, W. *International Population Reports No P95/09-1*. Washington, DC: U.S. Government Printing Office; 2009. An aging world: 2008. Retrieved from <http://www.census.gov/prod/2009pubs/p95-09-1.pdf>
- Labovitz S. Criteria for selecting a significance level: A note on the sacredness of .05. *American Sociologist*. 1968; 3:220–222.
- Lee GR, DeMaris A. Widowhood, gender, and depression: A longitudinal analysis. *Research on Aging*. 2007; 29:56–72.10.1177/0164027506294098
- Manning, WD.; Brown, SL. The demography of unions among older Americans, 1980–present: A family change approach. In: Settersten, RA.; Angle, JL., editors. *Handbook of sociology of aging*. New York: Springer; 2011. p. 193-212.
- Manning WD, Smock PJ. Race and the transition to marriage among cohabitators. *Demography*. 1995; 32:509–520.10.2307/2061671 [PubMed: 8925943]
- McGarry K, Schoeni R. Transfer behavior in the Health and Retirement Study: Measurement and redistribution of resources within the family. *Journal of Human Resources*. 1995; 30:S184–S226.10.2307/146283
- Moustgaard H, Martikainen P. Nonmarital cohabitation among older Finnish men and women: Socioeconomic characteristics and forms of union dissolution. *Journals of Gerontology: Series B: Psychological Sciences and Social Sciences*. 2009; 64B:S507–S516.10.1093/geronb/gbp024
- Noël-Miller CM. Partner caregiving in older cohabiting couples. *Journals of Gerontology: Series B: Psychological Sciences and Social Sciences*. 2011; 66:341–353.10.1093/geronb/gbr027
- Oppenheimer VK. Cohabiting and marriage during young men's career-development process. *Demography*. 2003; 40:127–149.10.1353/dem.2003.0006 [PubMed: 12647517]
- Raley RK. A shortage of marriageable men? A note on the role of cohabitation in Black–White differences in marriage rates. *American Sociological Review*. 1996; 61:973–983.
- Settersten, RA. Propositions and controversy in life course scholarship. In: Settersten, RA., editor. *Invitation to the life course: Toward new understandings of later life*. Amityville, NY: Baywood; 2003. p. 15-48.
- Sloan FA, Zhang HH, Wang J. Upstream intergenerational transfers. *Southern Economic Journal*. 2002; 69:363–380.10.2307/1061677
- Smock PJ, Manning WD. Cohabiting partners' economic circumstances and marriage. *Demography*. 1997; 34:331–341.10.2307/3038287 [PubMed: 9275243]
- Swartz TT. Intergenerational family relations in adulthood: Patterns, variations, and implications in the contemporary United States. *Annual Review of Sociology*. 2009; 35:191–212.10.1146/annurev.soc.34.040507.134615
- Talbott MM. Older widows' attitudes towards men and remarriage. *Journal of Aging Studies*. 1998; 12:429–449.10.1016/S0890-4065(98)90028-7
- Uhlenberg P. Mutual attraction: Demography and life-course analysis. *The Gerontologist*. 1996; 36:226–229.10.1093/geront/36.2.226 [PubMed: 8920093]
- U.S. Census Bureau. Table 10: Marital status of the population 55 years and over by sex and age: 2009. Current Population Survey, Annual Social and Economic Supplement. 2010b. Retrieved from http://www.census.gov/population/socdemo/age/2009_older_table10.xls
- U.S. Census Bureau. Table UC3: Opposite sex unmarried couples by presence of biological children/1 under 18, and age, earnings, education, and race and Hispanic origin/2 of both partners: 2010. Current Population Survey, 2010 Annual Social and Economic Supplement. 2010a. Retrieved from <http://www.census.gov/population/socdemo/hh-fam/cps2010/tabUC3-all.xls>

- Willis RJ. Theory confronts data: How the HRS is shaped by the economics of aging and how the economics of aging will be shaped by the HRS. *Labour Economics*. 1999; 6:119–145.10.1016/S0927-5371(99)00011-1
- Wilmoth JM. Living arrangement transitions among America's older adults. *The Gerontologist*. 1998; 38:434–444.10.1093/geront/38.4.434 [PubMed: 9726130]
- Wu Z. Remarriage after widowhood: A marital history study of older Canadians. *Canadian Journal of Aging*. 1995; 14:719–736.
- Xie Y, Raymo JM, Goyette K, Thornton A. Economic potential and entry into marriage and cohabitation. *Demography*. 2003; 40:351–367.10.1353/dem.2003.0019 [PubMed: 12846136]
- Zhang Z, Hayward MD. Gender, the marital life course, and cardiovascular health in late midlife. *Journal of Marriage and Family*. 2006; 68:639–657.10.1111/j.1741-3737.2006.00280.x

Table 1

Means at Baseline for all Variables by Union Outcome (Single in 1998)

Variable	Cohabit		Marry		Remain Single	
	M	SE	M	SE	M	SE
Demographic characteristics						
Female	0.42 ^a		0.53 ^b		0.72	
Non-white	0.16 ^a		0.18		0.26	
Age	58.06 ^a	0.55	59.76 ^b	0.67	63.32	0.18
Divorced	0.67 ^a		0.59 ^b		0.39	
Never married	0.09 ^c		0.01 ^b		0.14	
Widowed (Ref.)	0.24 ^{a,c}		0.40		0.47	
Economic resources						
Less than high school	0.17 ^a		0.19 ^b		0.30	
High school (Ref.)	0.40		0.36		0.34	
More than high school	0.43		0.45		0.36	
Household income (USD)	39,875 ^a	3,671	38,728 ^b	3,707	29,748	1,323
Household assets (USD)	12,5782	24,832	134,253	30,389	111,854	7,768
Own home	0.52		0.61		0.57	
Employed	0.65 ^a		0.61 ^b		0.41	
Not employed (Ref.)	0.35 ^a		0.39 ^b		0.59	
Social security receipt	0.26 ^a		0.32 ^b		0.56	
Pension	0.20		0.28		0.29	
Private health insurance	0.71 ^c		0.81 ^b		0.61	
Health						
ADL limitation (1 or more)	0.06 ^a		0.05 ^b		0.18	
Excellent or very good health	0.55 ^a		0.48 ^b		0.36	
No alcohol consumption	0.46 ^{a,c}		0.68		0.73	
Social support						
Give assistance	0.51 ^a		0.52 ^b		0.27	

Variable	Cohabit		Marry		Remain Single	
	M	SE	M	SE	M	SE
Receive assistance	0.22 ^a		0.26 ^b		0.40	
Religiosity	2.18 ^{a,c}	0.06	2.63	0.06	2.52	0.02
Relatives in neighborhood	0.23		0.16 ^b		0.30	
N		137		147		3,452

Note: The analyses used survey weights to correct for sampling design.

Ref. = reference category; ADL = activities of daily living.

^aSignificant difference between those who entered cohabitation and those who remained single ($p < .05$).

^bSignificant difference between those who married and those who remained single ($p < .05$).

^cSignificant difference between those who entered cohabitation and those who married ($p < .05$).

Table 2

Multinomial Logistic Regression Predicting Union Formation ($N=28,539$ Person-Years)

Variable	Cohabit vs. Stay Single		Marry vs. Stay Single		Marry vs. Cohabit	
	<i>b</i>	<i>OR</i>	<i>b</i>	<i>OR</i>	<i>b</i>	<i>OR</i>
Demographic characteristics						
Female	-0.82***	0.44	-0.99***	0.37	-0.17	0.85
Non-White	-0.39*	0.68	-0.45*	0.64	-0.07	0.94
Age	-0.07***	0.93	-0.04*	0.96	0.03	1.04
Divorced	-0.04	0.96	-0.19	0.83	-0.15	0.86
Never married	-0.85*	0.43	-3.44**	0.03	-2.59*	0.07
Economic resources						
Less than high school	-0.23	0.80	0.10	1.10	0.32	1.38
More than high school	-0.31	0.73	0.06	1.07	0.37	1.45
Household income (logged)	0.05	1.05	0.10	1.11	0.05	1.05
Household assets (logged)	0.00	1.00	0.02	1.02	0.02	1.02
Own home	-0.09	0.92	0.01	1.01	0.10	1.10
Employed	0.16	1.17	0.14	1.15	-0.02	0.98
Social Security receipt	-0.08	0.93	-0.39 [†]	0.68	-0.31	0.73
Pension	0.17	1.18	0.19	1.21	0.02	1.03
Private health insurance	-0.30	0.74	0.25	1.29	0.55 [†]	1.74
Health						
ADL limitation (1 or more)	-0.16	0.85	-0.35	0.70	-0.19	0.83
Excellent or very good health	0.33 [†]	1.39	0.04	1.04	-0.29	0.75
No alcohol consumption	-0.31 [†]	0.73	0.10	1.10	0.40	1.50
Social support						
Give assistance	0.45**	1.57	0.30 [†]	1.35	-0.15	0.86
Receive assistance	-0.17	0.84	-0.43*	0.65	-0.26	0.77
Religiosity	-0.40***	0.67	0.45**	1.57	0.84***	2.33
Relatives in neighborhood	-0.02	0.98	-0.59*	0.56	-0.57*	0.57

Note: The analyses used survey weights to correct for sampling design.

OR = odds ratio; ADL = activities of daily living.

[†] $p < .10$.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Table 3

Multinomial Logistic Regression Predicting Union Formation, by Gender (Women: N= 21,281 Person - Years; Men: N= 7,258 Person-Years)

Variable	Women						Men					
	Cohabit vs. Stay Single		Marry vs. Stay Single		Marry vs. Cohabit		Cohabit vs. Stay Single		Marry vs. Stay Single		Marry vs. Cohabit	
	b	OR	b	OR	b	OR	b	OR	b	OR	b	OR
Demographic characteristics												
Non-White	-0.89**	0.41	-0.65*	0.52	0.24	1.27	0.04	1.04	-0.16	0.85	-0.20	0.82
Age	-0.07*	0.93	-0.02	0.98	0.05	1.05	-0.10**	0.91	-0.09**	0.92	0.01	1.01
Divorced	0.16	1.18	0.36	1.44	0.20	1.22	-0.39	0.68	-1.06**	0.35	-0.67	0.51
Never married	-0.28	0.75	-2.04 [†]	0.13	-1.75	0.17	-1.39*	0.25	-37.71***	0.00	-36.32***	0.00
Economic resources												
Less than high school	-0.71	0.49	0.20	1.22	0.91 [†]	2.48	0.20	1.22	0.05	1.05	-0.15	0.86
More than high school	-0.35	0.71	-0.05	0.95	0.30	1.35	-0.22	0.81	0.20	1.22	0.42	1.52
Household income (logged)	0.13	1.14	0.18	1.20	0.05	1.05	0.02	1.02	0.03	1.03	0.01	1.01
Household assets (logged)	-0.03	0.97	0.00	1.00	0.03	1.03	0.04	1.04	0.06	1.06	0.02	1.02
Own home	0.12	1.13	0.05	1.05	-0.07	0.94	-0.32	0.73	-0.12	0.89	0.20	1.22
Employed	0.28	1.32	0.07	1.07	-0.21	0.81	0.01	1.01	0.28	1.32	0.27	1.31
Social Security receipt	0.01	1.01	-0.44	0.64	-0.45	0.64	-0.07	0.93	-0.20	0.82	-0.13	0.88
Pension	0.07	1.07	0.25	1.29	0.18	1.20	0.26	1.30	0.27	1.32	0.01	1.01
Private health insurance	-0.52 [†]	0.59	-0.01	0.99	0.52	1.67	-0.17	0.84	0.56	1.75	0.73 [†]	2.08
Health												
ADL limitation (1 or more)	0.20	1.23	-0.63	0.53	-0.84	0.43	-0.54	0.58	0.03	1.03	0.57	1.76
Excellent or very good health	0.62*	1.87	0.01	1.01	-0.61	0.54	0.04	1.04	0.04	1.04	0.00	1.00
No alcohol consumption	-0.24	0.79	0.03	1.03	0.26	1.30	-0.28	0.76	0.24	1.27	0.52	1.68
Social support												
Give assistance	0.40 [†]	1.50	0.21	1.24	-0.19	0.83	0.48	1.61	0.41	1.51	-0.07	0.93
Receive assistance	-0.29	0.75	-0.36	0.70	-0.07	0.93	0.01	1.01	-0.68 [†]	0.51	-0.68	0.51
Religiosity	-0.36**	0.70	0.42 [†]	1.53	0.78**	2.19	-0.42*	0.66	0.46*	1.58	0.88***	2.41
Relatives in neighborhood	0.33 [†]	1.39	-0.78**	0.46	-1.11**	0.33	-0.32	0.72	-0.41	0.67	-0.08	0.92

Note: The analyses used survey weights to correct for sampling design.

OR = odds ratio; ADL = activities of daily living.

[†] $p < .10$.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Table 4

Means for All Variables at Baseline by Union Outcome (Cohabiting in 1998, $N = 377$)

	Marry		Separate		Still Cohabiting	
	M	SE	M	SE	M	SE
Demographic characteristics						
Female	0.40		0.46		0.47	
Non-White	0.12 ^a		0.25		0.30	
Age	56.81 ^a	0.826	58.00	0.734	59.90	0.756
Divorced	0.77		0.76		0.62	
Never married	0.10		0.12		0.13	
Widowed (Ref.)	0.13		0.12 ^b		0.25	
Union duration	6.74 ^a	0.888	5.62 ^b	0.870	9.42	1.138
Economic resources						
Less than high school	0.20		0.29		0.34	
High school (Ref.)	0.24		0.35		0.35	
More than high school	0.56 ^{a,c}		0.36		0.31	
Household income (USD)	87,968 ^a	13,168	60,504	7,993	45,934	6,036
Household assets (USD)	413,907	190,232	159,857	43,845	132,131	31,424
Own home	0.74 ^a		0.61 ^b		0.54	
Employed	0.75 ^a		0.59 ^b		0.43	
Not employed (Ref.)	0.25 ^a		0.41 ^b		0.57	
Social security receipt	0.22 ^a		0.37		0.57	
Pension	0.16		0.17		0.25	
Private health insurance	0.80 ^a		0.59		0.55	
Health						
ADL limitation (1 or more)	0.16		0.11 ^b		0.24	
Excellent or very good health	0.43		0.44		0.37	
No alcohol consumption	0.35 ^a		0.52		0.59	
Social support						

	Marry		Separate		Still Cohabiting	
	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>
Give assistance	0.50 ^a		0.32		0.26	
Receive assistance	0.22		0.16		0.16	
Religiosity	1.98 ^c	0.126	2.27	0.071	2.24	0.055
Relatives in neighborhood	0.29		0.13		0.20	
<i>n</i>	63		88		226	

Note: The analyses used survey weights to correct for the sampling design.

Ref. = reference category; ADL = activities of daily living.

^aSignificant difference between those who marry and those who remain cohabiting ($p < .05$).

^cSignificant difference between those who marry and those who separate ($p < .05$).

^bSignificant difference between those who separate and those who remain cohabiting ($p < .05$).

Table 5
 Multinomial Logistic Regression Predicting Cohabitators' Union Outcomes ($N = 2,138$ Person-Years)

Variable	Marry vs. Stay Cohabiting		Separate vs. Stay Cohabiting		Marry vs. Separate	
	<i>b</i>	OR	<i>b</i>	OR	<i>b</i>	OR
Demographic characteristics						
Female	-0.15	0.86	-0.10	0.91	-0.06	0.95
Non-White	-0.61	0.54	-0.30	0.74	-0.31	0.73
Age	-0.02	0.98	-0.05 [†]	0.95	0.03	1.04
Divorced	0.37	1.45	1.11 ^{**}	3.04	-0.74	0.48
Never married	0.46	1.58	1.12 [†]	3.08	-0.67	0.51
Union duration	-0.05	0.95	-0.11 ^{**}	0.90	0.06	1.06
Economic resources						
Less than high school	0.09	1.10	-0.34	0.71	0.44	1.55
More than high school	0.29	1.34	-0.23	0.79	0.52	1.68
Household income (logged)	0.10	1.10	-0.04	0.96	0.13	1.14
Household assets (logged)	0.01	1.01	0.02	1.02	-0.01	0.99
Own home	-0.05	0.95	0.11	1.12	-0.16	0.85
Employed	0.19	1.21	0.01	1.01	0.18	1.20
Social Security receipt	-0.47	0.62	0.01	1.01	-0.48	0.62
Pension	0.08	1.09	-0.09	0.91	0.18	1.19
Private health insurance	-0.07	0.93	-0.57 [*]	0.56	0.50	1.65
Health						
ADL limitation (1 or more)	-0.49	0.61	-0.78 [*]	0.46	0.29	1.33
Excellent or very good health	-0.41	0.67	-0.23	0.79	-0.17	0.84
No alcohol consumption	-0.39	0.68	0.04	1.04	-0.43	0.65
Social support						
Give assistance	0.50	1.64	-0.14	0.87	0.64	1.90
Receive assistance	0.54 [†]	1.72	-0.19	0.83	0.73	2.08
Religiosity	-0.11	0.90	0.14	1.15	-0.25	0.78
Relatives in neighborhood	-0.02	0.98	-0.13	0.88	0.11	1.12

Note: The analyses used survey weights to correct for the sampling design.

OR = odds ratio; ADL = activities of daily living.

[†] $p < .10$.

* $p < .05$.

** $p < .01$.

Table 6

Multinomial Logistic Regression Predicting Cohabiters' Union Outcomes, by Gender (*n*s = 944 Person-Years for Women and 1,144 Person-Years for Men)

Variable	Women						Men					
	Marry vs. Stay Cohabiting		Separate vs. Stay Cohabiting		Marry vs. Separate		Marry vs. Stay Cohabiting		Separate vs. Stay Cohabiting		Marry vs. Separate	
	<i>b</i>	<i>OR</i>	<i>b</i>	<i>OR</i>	<i>b</i>	<i>OR</i>	<i>b</i>	<i>OR</i>	<i>b</i>	<i>OR</i>	<i>b</i>	<i>OR</i>
Demographic characteristics												
Non-White	-0.11	0.89	-0.34	0.71	0.23	1.26	-0.86	0.42	-0.30	0.74	-0.57	0.57
Age	-0.03	0.97	-0.03	0.97	0.00	1.00	-0.01	0.99	-0.07 [†]	0.93	0.06	1.06
Divorced	0.74	2.10	0.82	2.27	-0.08	0.92	0.21	1.24	1.29 [†]	3.63	-1.07	0.34
Never married	1.24 [*]	3.47	1.21	3.34	0.04	1.04	-0.37	0.69	1.02	2.77	-1.39	0.25
Union duration	-0.02	0.98	-0.08 [†]	0.92	0.05	1.06	-0.11	0.90	-0.14 ^{**}	0.87	0.04	1.04
Economic resources												
Less than high school	-0.46	0.63	-0.43	0.65	-0.03	0.97	0.48	1.61	-0.10	0.90	0.58	1.79
More than high school	0.39	1.47	-0.03	0.97	0.41	1.51	0.19	1.21	-0.39	0.68	0.58	1.78
Household income (logged)	-0.03	0.97	0.19	1.20	-0.22	0.80	0.18	1.20	-0.11	0.90	0.29	1.33
Household assets (logged)	0.01	1.01	0.01	1.01	0.00	1.00	0.00	1.00	0.03	1.03	-0.03	0.97
Own home	0.22	1.25	0.33	1.40	-0.11	0.89	-0.31	0.73	-0.11	0.90	-0.21	0.81
Employed	0.41	1.51	0.37	1.44	0.04	1.04	0.22	1.25	-0.10	0.90	0.32	1.38
Social Security receipt	0.23	1.26	-0.06	0.94	0.29	1.34	-0.86 [†]	0.42	0.07	1.08	-0.94	0.39
Pension	-0.43	0.65	-0.41	0.66	-0.02	0.98	0.40	1.50	0.11	1.12	0.29	1.34
Private health insurance	0.44	1.55	-0.72	0.49	1.16	3.19	-0.41	0.66	-0.57 [*]	0.57	0.16	1.17
Health												
ADL limitation (1 or more)	-0.02	0.98	0.02	1.02	-0.04	0.96	-0.84	0.43	-1.58 [*]	0.21	0.74	2.10
Excellent or very good health	-0.27	0.76	-0.15	0.86	-0.12	0.89	-0.50	0.60	-0.31	0.74	-0.20	0.82
No alcohol consumption	-0.41	0.66	0.17	1.19	-0.59	0.56	-0.45	0.64	-0.16	0.86	-0.29	0.75
Social support												
Give assistance	0.45	1.56	-0.13	0.88	0.57	1.78	0.47	1.60	-0.09	0.91	0.56	1.76
Receive assistance	0.55	1.73	-0.44	0.64	0.99	2.68	0.64	1.89	0.30	1.34	0.34	1.41

