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Breaking up is Hard to Count:  
The Rise of Divorce and Cohabitation Instability  
in the United States, 1980-2010

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April 2013

Working Paper No. 2013-01  
<https://doi.org/10.18128/MPC2013-01>

## **Abstract**

This paper critically evaluates the available data on trends in divorce and the dissolution of cohabiting unions in the United States. We find that both vital statistics and retrospective survey data on divorce after 1990 underestimate recent marital instability. These flawed data led some analysts to conclude that divorce risk has been stable or declining for the past three decades. Using new data from the American Community Survey and controlling for changes in the composition of the married population, we conclude that there was actually a substantial increase in divorce risk between 1990 and 2008. Divorce rates have doubled over the past two decades among persons over 35. Among younger adults, marital dissolution risks are stable or declining. The leveling of divorce among persons born since 1980 may reflect increasing selectivity of marriage. Even among the youngest cohorts, however, the stabilization of divorce rates is more than offset by the increasing number of dissolutions of cohabiting unions. In sum, divorce risk has risen sharply in recent years, but if current trends continue it could level off or even decline over the next few decades. Nevertheless, we expect that overall union instability will continue to increase because of the rise of cohabitation.

## Introduction

Since 1980, vital statistics data suggest that the number of divorces per 1,000 married women in the United States has declined by about 20%. Some observers have concluded that this reflects a fundamental shift in behavior. Stevenson and Wolfers (2011:107), for example, argue that “couples marrying after the 1970s were better calibrated about how their family life would play out and were likely better matched for a life together based upon modern gender roles. As such, they were likely in a better position to have their marriages survive than were those marrying in the 1970s.” Several analysts agree that that the risk of disruption has declined in recent years (Heaton 2002, Isen and Stevenson 2010, Stevenson and Wolfers 2007), although this decline may be limited to women with college degrees as marital instability continued to increase among women who did not complete high school (Martin 2006; Raley and Bumpass 2003).

Other studies, however, suggest greater continuity over the past three decades. Well before the divorce rate peaked, Samuel Preston used indirect methods to estimate that 44% of marriages would end in divorce based on the disruption rates observed in 1973 (Preston 1975). By the 1980s, most demographic analysts agreed that about half of marriages then being contracted would end in divorce (e.g., Cherlin 1981; Glick 1984; Norton 1983). Most studies based on more recent data have also estimated that about half of marriages would end in divorce (Goldstein 1999; Raley and Bumpass 2003; Schoen and Standish 2001; Teachman 2002). Pointing to changes in the timing of divorce, Schoen and Canudas-Romo (2006: 756) argue that “it is premature to believe that the probability of divorce has begun to decline.”

This paper has two main goals. First, we critically evaluate the strengths and weaknesses of the main data sources that have been used to measure changes in divorce: the vital statistics

system, the Current Population Survey, the Survey of Income and Program Participation, the American Community Survey, and the National Survey of Family Growth. We argue that a deterioration of the statistical system created uncertainty about trends in union instability over the past three decades, but new data from the American Community Survey and the National Survey of Family Growth represent a substantial improvement over existing sources. Second, we use these new data sources to estimate recent trends in the instability of marriages and cohabiting unions. We draw two substantive conclusions:

1. Controlling for basic changes in the composition of the married population, overall divorce incidence has risen substantially in recent years, especially among older adults.
2. Although divorce rates among younger cohorts are stable or declining, the rapid increase in cohabiting unions—which are much more unstable than marriages—means that overall union instability is rising among all age groups.

## **Vital Records**

For the past 145 years, official divorce records have been the primary source for statistics about trends in marital instability. The quality of early divorce statistics was good, especially in comparison to the available data from that period on births, deaths, and marriages. Carroll D. Wright, the U.S. Commissioner of Labor, wrote in the first Federal report on divorce that the statistics were “practically complete,” although he acknowledged that some omissions took place, partly because “as the divorce papers are usually filed indiscriminately with others, constituting in some counties a vast quantity of papers, here and there one might be missed” (Wright 1889: 133).

Wright compiled statistics for the period from 1867 to 1886 from the nation’s 2,700 counties. He sent “special agents” to the county seats, where they went through public court

records to record the details of each divorce case. The Census Bureau conducted a similar survey covering the period 1887 to 1906 using essentially the same methodology (U.S. Census Bureau 1908). After these ambitious early efforts, however, the collection of divorce records has never received adequate funding. The Census Bureau gathered data sporadically from 1907 until 1940. In 12 of those years, the Census Bureau contacted counties by mail to request detailed divorce statistics; in the remaining years, national divorce totals were estimated from state totals provided by a limited subset of states (U.S. Bureau of the Census 1922; National Office of Vital Statistics 1950).

In 1940, the Census Bureau attempted to collect divorce information the same way it collected information on births and deaths, by obtaining detailed information from state vital statistics offices. This effort was unsuccessful: only 12 states cooperated, and only 6 provided full details (National Center For Health Statistics 1973). The initiative was discontinued when the Second World War began. After the war, responsibility for divorce statistics shifted from the Census Bureau to the newly-created National Office of Vital Statistics located in the Public Health Service. The new agency focused mainly on health statistics, and divorce was a poor fit. For the next decade, few divorce statistics were published beyond national totals estimated from partial state data. In 1958 the agency introduced a Divorce Registration Area (DRA) with the goal of producing detailed and reliable divorce statistics. The DRA initially comprised 16 states, and the number of participating states gradually rose to 31 (National Center for Health Statistics 1997a). For the first time, federal authorities monitored the completeness and accuracy of divorce reporting. For states outside the DRA, the agency collected aggregate summary statistics.

In January 1996 the collection of detailed divorce and marriage statistics in DRA states was discontinued. The agency—by then known as the National Center for Health Statistics

(NCHS)—determined that the quality of marriage and divorce statistics had deteriorated, no resources were available to fix the quality problems, and alternative sources of information were readily available (Broome 1995). Accordingly, the funds used to collect marriage and divorce statistics were redirected to higher priority uses, and federal monitoring of the quality of divorce statistics ceased. As part of the new policy, NCHS stopped making payments to state vital statistics offices for collection of detailed data from marriage and divorce certificates. The agency continued to collect monthly counts of the raw number of divorces in each state, compensating the states with a payment of just \$1,000 annually (Lewin Group 2008). Without adequate support, compliance gradually declined. In 1990, NCHS obtained basic counts of the number of divorces from every state, although there were a few nonresponding counties in Indiana, Louisiana, and New Mexico (Clarke 1995). By 2005, California, Georgia, Hawaii, Indiana, Louisiana, and Minnesota had ceased reporting any divorce data whatsoever (National Center for Health Statistics 2011a). There are no estimates of the completeness of reporting in the 44 states that still provide basic counts, but it is likely that omissions have risen substantially (National Center for Health Statistics 2008).

The long-run trend in estimates of the refined divorce rate (divorces per 1,000 married women) appears in Figure 1. Because of incomplete reporting, divorce rates obtained from vital records should be regarded as lower-bound estimates in all periods. Some periods of data, however, have better reporting than others; in particular, data collection was probably best for 1867 to 1906, 1916, 1922 to 1932, and 1960 to 1990. In other periods—identified by shading in Figure 1—the data are more questionable. In particular, although the broad trends shown in Figure 1 are doubtless realistic, the decline of the post-1990 period is probably exaggerated.

Despite the shortcomings of the vital statistics on divorce, they provide an invaluable benchmark for evaluating alternative sources. Because the error in vital statistics stems from underreporting, we can be confident that “true” divorce rates must be at least as high as the rates based on official divorce records for the population represented by reporting states. In periods of poor reporting, the official records doubtless understate divorce rates. There is virtually no potential, however, for overcount of divorces in any period. Therefore, when evaluating other sources, the vital statistics define the lower bound for the number of divorces in the population.

We need alternative sources not only because we cannot be confident of the accuracy of the vital statistics, but also because the vital statistics do not include sufficient detail for us to evaluate those trends. In particular, there are reasons to be skeptical about significance of the decline in the divorce rate since 1980. The refined divorce rate does not take into account changes in distributions of age, marriage duration, or age at marriage. Over the past three decades, the population has grown substantially older, the average duration of marriages has grown, and age at marriage has increased. Since older people, those who have been married a long time, and those who marry later in life are at comparatively low risk of divorce, one would anticipate a significant decline in divorce rates simply because of changes in the characteristics of the married population. Because age and duration specific divorce rates from vital statistics are no longer published, it is difficult to estimate how much of the recent change is merely a reflection of change in the demographic composition of the married population.

Schoen and Canudas Romo (2006) argue that the volatile divorce rates shown in Figure 1 distort the long-run temporal pattern of divorce risk. They estimate a timing-adjusted measure of divorce based on age-specific marriage, divorce, and remarriage rates. Such data have not been consistently available for the United States, and for the years they are available they usually

cover only a subset of states. Accordingly, heroic imputation and adjustment was necessary to estimate the needed rates, especially for the period after 1995. Based on their estimates, the Schoen and Canudas Romo show that timing-adjusted period divorce probabilities rose in an essentially linear pattern from 1910 to 1990, and then leveled off; they found no evidence for a decline in the likelihood of divorce after 1980. These findings are important, but the only way we can directly evaluate trends in marital instability net of compositional change is to analyze richer sources, especially for the period after 1990.

### **Retrospective Surveys: CPS and SIPP**

When NCHS made the decision to discontinue collection of detailed divorce data in 1995, a major part of the rationale was that similar data could be obtained through survey data. In particular, they pointed to the June marital history supplement of the Current Population Survey (CPS), which beginning in 1970 provided retrospective data on divorce once every five years (Broome 1995). Ironically, the final marital history supplement was conducted in June 1995, six months before NCHS discontinued the collection of divorce statistics.

Early comparisons between the CPS and vital statistics found substantially lower divorce rates in the CPS (McCarthy, Pendleton, and Cherlin 1989; Castro Martin and Bumpass 1989). Goldstein (1999) compared the 1990 CPS estimates of the refined divorce rate with the national estimates from vital statistics, and found that the two series matched closely. We replicated Goldstein's finding, confirming that the 1990 CPS matches the vital statistics remarkably well. We then carried out the same analysis for other CPS samples. Figure 2A shows the refined divorce rate as reported in the national vital statistics and estimated from the CPS samples for 1980, 1985, 1990, and 1995 for the 45 years prior to each survey. To reduce random variability, the CPS estimates represent a three-year moving average. The analysis is restricted to women,



since reporting of marital disruption is less reliable for men (Raley and Bumpass 1992; Bumpass, Castro Martin, and Sweet 1991; Preston and MacDonald 1979; U.S. Census Bureau 1975).

The 1990 CPS matches the vital statistics closely; in the decade prior to the survey, the average refined divorce rate from the 1990 CPS is just 1.1% lower than the comparable estimates from vital statistics. The 1995 survey is almost as good, with just a 3.5% discrepancy, although it significantly understates divorces that took place during the five years immediately preceding the survey (Raley and Bumpass 2003). In the 1980 and 1985 surveys, however, the estimated CPS divorce rate was approximately 20% lower than the vital statistics divorce rate during the decade prior to each survey.<sup>1</sup> Thus, it appears that both the early critics of CPS divorce data and Goldstein's more favorable interpretation were substantially correct; apparently, there was a dramatic improvement in the quality of divorce reporting between the 1985 and the 1990 surveys.

After the CPS stopped inquiring about marital history, demographers were forced to turn to alternative sources. Between 1995 and 2008, the main alternative was the Survey of Income and Program Participation (SIPP), which showed a decline in divorce after 1990 (Isen and Stevenson 2010; Stevenson and Wolfers 2007, 2011). As in the case of the CPS, several early

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<sup>1</sup> Bumpass and Raley (1992) compared divorce rates in the 1980 and 1985 CPS data with estimates prepared by Weed (1980) based on duration-specific divorce rates from the DRA together with data from the 1975 CPS on the distribution of marriage durations. Weed's estimates of the proportion divorced by duration were close to those calculated by Bumpass and Raley from the CPS, leading Bumpass and Raley to conclude that the quality of the 1980 and 1985 CPS data had been unfairly maligned by previous analysts. As Weed (1980: 29) pointed out, however, the DRA—which covered a minority of the nation's population—had a crude divorce rate well below that of the rest of the country; accordingly, Weed suggested, his estimates of duration-specific divorce rates might be underestimated. The apparent match between estimates calculated from the CPS and from the vital statistics might therefore have occurred simply because both sources were biased downwards.

critics suggested that SIPP data substantially understated divorce (Hernandez 1989; Hill 1986; U.S. Census Bureau 1998a). Figure 2B compares SIPP estimates with the vital statistics, again using a three-year moving average to minimize random variability and focusing on women to minimize underreporting. The 1986 SIPP imply a refined divorce rate only slightly lower than that obtained through the vital statistics, but the discrepancy grew dramatically in subsequent waves, especially for divorces that took place in the decade preceding the survey. The mismatch is particularly evident in the 2008 SIPP which substantially understates divorce rates in all periods except for a few years around 2000. Considering the likelihood that the vital statistics understate actual divorce rates after 1990, the much lower divorce rates implied by the 2004 and 2008 SIPP data are troubling.<sup>2</sup>

The progressive deterioration of the SIPP is reflected in extraordinary levels of nonresponse and imputation. Marital histories for all household members in the SIPP are reported by a single respondent (Raley 2011), and this may contribute to the high rate of non-response in all years. Data quality problems in SIPP, however, have apparently worsened over the past several iterations, and underreporting of divorce became more severe. For example, date of divorce is imputed for about 30% of cases in the 2004 SIPP and *nearly half* of cases in the 2008 wave. It is therefore not advisable to use SIPP to assess divorce trends, and we should reconsider studies that rely on SIPP to establish a decline in divorce risk after 1995.

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<sup>2</sup> Raley (2011) compared dissolution rates produced using the 2008 SIPP to earlier SIPP and CPS estimates and also concluded that the 2008 SIPP may underestimate marital instability. The SIPP marital histories are currently under redesign.

## The American Community Survey

As a “response to the long-standing void in data on marriages and divorces,” in 2008 the Census Bureau added new marital history questions to the American Community Survey (Elliott, Simmons, and Lewis 2010). The new questions asked whether individuals were married, divorced, or widowed within the past 12 months, as well as number of times they had ever married and the year of the most recent marriage. By focusing on recent events, the Census Bureau hoped that the ACS could minimize the underreporting that characterized previous marital history surveys. The ACS provides data on 1.3 million women ages 15 and over each year, compared to 40,934 in the 2008 SIPP. The large sample sizes of the ACS allow for analysis of state-level divorce statistics (replacing the vital statistics system), while the annual data collection allow researchers to capture trends as they occur.

The ACS yields divorce rate estimates that are not only higher than the retrospective surveys, but also higher than the vital statistics. After making adjustments to maximize comparability of the ACS and the vital statistics, we find that female-based refined divorce rates calculated from the vital statistics were about 15% lower than the ACS estimates.<sup>3</sup> All things considered, the ACS estimates are more credible than the vital statistics. As NCHS acknowledges, there has been significant underreporting of divorces in the vital records after

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<sup>3</sup> The vital statistics divorce rates are 18.3% lower than the ACS estimates in 2008, 13.2% lower in 2009, and 14.9% lower in 2010. In recent years, NCHS has published divorce counts for 44 states and the District of Columbia. To make the NCHS and ACS comparable, we must limit the analysis to these places. In addition, the ACS for a given year must be compared with two years of NCHS data; this is because the ACS is collected continuously over the course of the year, so the reference period for vital events occurring within the previous 12 months could be any time during the current year or the previous year. Therefore, we compare the 2008 ACS to the average of NCHS divorce rates in 2007 and 2008.

1990. Although it is conceivable that the ACS could *over*-report divorce, we expect that any net over-reporting would be small.

A 2006 content test of the proposed ACS divorce question found that 7.8% of 176 women who reported getting a divorce in the previous 12 months did not actually receive a final divorce decree during that period (O'Connell, Gooding, and Ericson 2007). Conversely, however, we can be confident that some women who *did* get a final divorce decree in the previous 12 months failed to report it in the ACS, but the content test did not evaluate under-reporting. Although we currently have no means of measuring the net bias of ACS divorce statistics, over-reporting and underreporting would tend to cancel one another out. Accordingly, if over-reporting did result in a net upward bias in ACS divorce statistics, the magnitude is likely to be small relative to the size of the discrepancy between the ACS and the vital rates.

Closer analysis also suggests that the ACS may be more accurate than the vital statistics. The difference between the ACS and vital statistics estimates is smaller in states with good electronic systems for collecting vital records (Elliott, Simmons, and Lewis 2010). The vital statistics have more interstate variation than the ACS, which is consistent with a hypothesis that varying attention to the collection of divorce statistics from state to state has led to increasing variation in the completeness of reporting. The states with the sharpest decline in the vital statistics divorce rates between 1980 and 2010 also tend to be states with the biggest discrepancy between the vital statistics and the ACS in 2010 (adjusted r-squared= .12, p=.013). Again, this is consistent with the hypothesis that the decline in divorce rates from vital statistics partly resulted from the deterioration of data collection in particular states, notably Texas, Illinois, and Ohio.

If the ACS divorce rates are correct and the recent NCHS rates are biased, this significantly revises our understanding of the trajectory of change in divorce over the past 30

years. According to the vital statistics, the refined divorce rate declined 23.2% between 1980 and 2008; substituting the ACS estimates, the decline was only 2.2%.

These divorce rates do not control for changes in the composition of the married population. Ideally, we should control for changes in the distributions of age, age at marriage, and duration of marriage, all of which contributed to the decline in the refined divorce rate. Unfortunately, we lack sufficient data to control for all three factors simultaneously, but it is straightforward to control for the changing age structure of the married population. For 1970 and for 1980 to 1990, NCHS published age-specific divorce rates for the DRA, which included data for about 30 states representing half of the population.<sup>4</sup> These were probably the highest-quality divorce statistics ever gathered by NCHS, since the completeness of data reporting was being closely monitored by the agency. Figure 3 shows the age-standardized trend in divorces per 1,000 married women from 1970 to 2011 for the DRA. The national refined divorce rate from vital statistics, as shown in the previous graphs, is provided for reference. NCHS only published age-specific rates for 1970 and for the decade from 1980 to 1990; the other years are interpolated.

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<sup>4</sup> The composition of the DRA shifted slightly from 1970 to 1990. In 1990, the age-specific divorce rates were based on Alabama, Alaska, Connecticut, Delaware, District of Columbia, Georgia, Hawaii, Idaho, Illinois, Iowa, Kansas, Kentucky, Maryland, Massachusetts, Michigan, Missouri, Montana, Nebraska, New Hampshire, New York, Oregon, Pennsylvania, Rhode Island, South Carolina, Tennessee, Utah, Vermont, Virginia, Wisconsin, and Wyoming. This is the same geographic footprint we used for the ACS statistics in Figures 3 and 4. Ohio and South Dakota were also part of the DRA in 1990, but they were not included in the tabulations of age-specific rates; the same exclusion applies to Michigan prior to 1989 (Clarke 1995). There was little change in the DRA from 1980 to 1989, but the 1980 DRA did not include Delaware or the District of Columbia. The 1970 DRA included California but excluded Massachusetts, New Hampshire, and South Carolina (National Center for Health Statistics 1985).

The results are striking. With 2010 as the standard population, the age-standardized divorce rate rose 40% between 1980 and 2008. After a slight dip in 2009—possibly a result of the recession (Chowdury 2012; Cohen 2012; Schaller 2012)—the rise has continued, and 2011 has the highest divorce rate of any year to date. If we use 1980 as the standard population, the change was smaller, but remains substantial: if the age distribution of married women in 2008 had been the same as it was in 1980, the divorce rate in 2008 would have been 25% higher than in 1980. This increase is so substantial that it cannot be an artifact of misreporting. It does not reflect peculiarities of the DRA; in fact, in 2011 the refined divorce rate was 2.4% higher in the nation as a whole than it was in the DRA.

There are two reasons most observers missed the rapid increase in aggregate divorce risk after 1990. First, the demographic community was not aware of the extent of deterioration in the vital statistics and the SIPP. Second, the analyses did not account for the changes in the composition of the married population, especially the shift of the married population into older ages, especially those ages where the increase in divorce rates is concentrated.

The rise of divorce has not occurred evenly across age groups. As pointed out by Brown and Lin (2012), there has been a striking increase in divorce among the middle-aged. Figure 4 shows the age-specific rates for 1970, 1980, 1990, and the 2008-2010 period in the DRA. To minimize random error in smaller age groups, we pooled three years of data from the ACS. From 1970 to 1980, divorce rates increased at every age, but the age pattern remained essentially similar. The level of divorce in 1990 was almost the same as in 1980, but a shift in the age pattern can be discerned: among women in their 20s and early 30s, 1980 had slightly higher divorce rates than 1990, but among those over 40 the reverse was true. Over the next two decades, this shift in the age pattern accelerated. Among persons under age 25, divorce was

lower in the ACS than in the 1990 vital statistics, but among women in their 50s, the recent ACS data show divorce rates over twice as high as the comparable rates in 1990.

Figure 5 shows the age pattern of the *prevalence* of marital instability. We define prevalence as the percentage of ever-married persons who have ever been divorced or separated. These statistics reveal the cumulative impact of divorce and separation over the life course. Because they derive from different sources than the statistics in Figure 4, these data provide independent confirmation of the broad patterns of change.<sup>5</sup> Like the statistics on the incidence of divorce shown in Figure 4, the prevalence statistics in Figure 5 show a decline in marital instability from 1980 to 2010 among younger ever-married people. This decline is more than cancelled out, however, by the massive increase among persons in their 50s. By 2010, almost half of ever-married persons had been divorced or separated by the time they reached their late 50s.

The shifting age pattern of divorce suggests a cohort effect. The same people who had unprecedented divorce incidence in 1980 and 1990 when they were in their 20s and 30s are now in their 40s, 50s, and 60s. The baby-boom generation was responsible for the extraordinary rise in marital instability after 1970. They are now middle aged, but their pattern of high marital

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<sup>5</sup> See also Manning and Brown (2011). The data for 2010 are from the ACS; those from 1995 and 1980 are from the June Current Population Surveys; and 1970 is from the decennial census. The prevalence is the percentage of persons currently divorced or separated plus the percentage of persons who have remarried and whose previous marriages did not result from widowhood. In 1970, we only have information about widowhood after the first marriage, so the statistics omit widows who subsequently remarried, then divorced, and then remarried for a second time. 2010 does not provide information about the reason for termination of previous marriages, so we assumed that age-specific widowhood among the remarried was unchanged from 1995 to 2010. Since mortality was declining, this assumption overstates widowhood in 2010, so the prevalence of marital instability shown for 2010 in Figure 5 is probably slightly underestimated.

instability continues. As Brown and Lin (2012) point out, part of this may simply be a consequence of the high divorce rates they experienced earlier in life, since remarriages tend to be less stable than are first marriages.

## **Union Dissolution**

The decline in divorce rates among women under age 25 may be attributable to increasing selectivity of marriage. Fewer young people are getting married. Compared with earlier generations, few of the young people who do marry are teenagers or high-school dropouts, characteristics associated with high divorce rates. This does not mean, however, that young people are at lower risk of union dissolution than were previous generations.

Instead, as young adults are delaying or possibly forgoing marriage entirely, they are forming unions outside of marriage at unprecedented levels (Smock and Manning 2004). As cohabitation has become more socially acceptable, Americans have become decreasingly less likely to marry their cohabiting partners and more likely to enter into multiple cohabiting unions (Lichter, Turner, and Sassler 2010, Kennedy & Bumpass 2008). Many cohabitators still marry their partners and premarital cohabitation no longer increases the likelihood that a married couple will divorce (Manning and Cohen 2012). Nevertheless, it is likely that the couples at highest risk of union dissolution are forgoing marriage entirely. By the early 1990s, overall union instability rates had risen slightly as result of the rise in cohabitation (Raley and Bumpass 2003).

Consequently, the evaluation of trends in union instability should take into account unions that form and dissolve outside of legal marriage. To assess trends in overall union instability among younger adults, we use the National Survey of Family Growth (NSFG). The survey focuses on persons in reproductive ages, so it is not useful for understanding longer-run trends in the overall incidence of divorce; as shown above, the most dramatic changes in divorce



rates have occurred among women over age 45. For this reason, we cannot benchmark NSFG against the vital statistics, as we did for CPS and SIPP. We suspect that NSFG may suffer from some of the same underreporting problems as the other retrospective surveys, but we expect it is more trustworthy than SIPP. Unlike SIPP, NSFG does not rely on proxy respondents for marital histories. Moreover, because marital history is a central focus of NSFG, the data may have been gathered with greater care than in the case of the SIPP, where marital history was a secondary concern.

The 1988 wave of the periodic National Survey of Family Growth was among the first nationally representative surveys to collect detailed cohabitation histories.<sup>6</sup> The NSFG was repeated in 1995, 2002, and 2006-2010. Unfortunately, the 2002 data are compromised: routing errors in the 2002 female questionnaire produced substantial missing data and limited the usefulness of this wave for studying trends in union dissolution.<sup>7</sup>

Because NSFG has longest run of cohabitation histories currently available, it is the best source for investigating trends in union dissolution among younger women. We examine trends in union formation for first marriage and first union cohorts over three decades: 1980-1987, 1987-1994, and 1998-2009. These cohorts are selected to include unions formed during the 8 years before each survey allowing us to maximize sample size, while limiting recall error

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<sup>6</sup> The National Survey of Families and Households (NSFH) provides detailed marriage and cohabitation histories from the 1980s, but it is not suitable for assessing recent trends. The 1982 NSFG questionnaire collected limited cohabitation data: the survey collected marriage histories, and respondents were asked whether each marriage was formal or informal marriage.

<sup>7</sup> Specifically, marital dissolution data are missing entirely for currently separated respondents, resulting in very high rates of missing data for marriages that dissolved in periods close to the survey administration. In addition, marriages in which the male partner had children from a prior union were also skipped out of the marriage dissolution questions.

(Hayford and Morgan 2008, Raley and Bumpass 2003).<sup>8</sup> Our analysis is limited to women who first marry or enter a first union by age 35 because this is the oldest age at which women could form unions in the first year of each of these cohorts.

Using the NSFG, we estimate life table and multivariate hazard models examining cohort differences in marriage or union dissolution within five years. Dissolution is defined as the time when a couple stops coresiding, whether they are cohabiting or married. Table 1 presents cohort life table estimates for women who formed unions by age 35 of the proportion for first marriages and first unions dissolving within 5 years, for each cohort.<sup>9</sup> We found little change in marital disruption over the past three decades. For the most recent marriage cohort, 18% separated within 5 years of marrying, compared to 21-22% of first marriages formed in the previous two cohorts. This small decline does not contradict the increase of divorce rates presented in Figures 3 and 4. The NSFG analysis focuses on disruption in the first five years of marriage among women married by age 35, whereas the overall increase in divorce rates was driven by the sharp rise of divorce among the middle aged.

Among first unions that began with cohabitation, however, about half ended in disruption in all three cohorts, even as their share of first unions increased from half to three-quarters. When we combine marriages and cohabitations to look at disruption of all first unions, during these periods, we find evidence that union instability is on the rise even among the young. Currently,

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<sup>8</sup> Because the most recent NSFG includes interviews conducted during the years 2006-2010, this restriction results in a 12-year marriage cohort. In addition, although there is a one-year overlap between the two earliest surveys, the impact is minimal as women entering unions in 1987 in the earliest cohort contribute at most one person-year of exposure to our analysis.

<sup>9</sup> Note that the proportion of first unions that began with cohabitation rather than direct marriage increased from 53% in the earliest cohort, to 75% in the most recent cohort, while percentage of first marriages preceded by cohabitation increased from 43% to 64%.

for the 1998-2009 first union cohort, we estimate that almost 45% disrupted within 5 years. This represents a substantial increase, about 10 percentage points, over women forming unions in the 1980s, with most of the growth in instability occurring since the 1990s.

To control for age at union formation as well as marriage duration, we turned to Cox proportional hazards models. Table 1 presents descriptive statistics on age at marriage and union formation for our first marriage and first union cohorts. This shows that as marriage formation has been delayed, cohabitation and union formation in the U.S. still occurs at very young ages: 35% of women enter first unions (marriage or cohabitation) in their teens, and this percentage has not shifted greatly in three decades.

Table 3 presents results from Cox proportional hazard models predicting the dissolution of first marriages and first unions. Our models include an indicator of marriage cohorts: 1980-87, 1987-94, and 1998-2007 (the reference category). We also include controls for age at marriage or union start—these variables are designed to control for compositional change due to shifts in age at union formation.<sup>10</sup>

As shown on the left of Table 3, we find no significant change in the disruption of first marriages across cohorts, even controlling for increased marriage age. Again, this result is consistent with results from the ACS showing some decline in divorce risks for the very young, but stable divorce risks for women in their mid-20s and early 30s. The next model focuses on first unions that began with cohabitation. Just as with marriage, the likelihood that a cohabiting couple would dissolve their union did not change significantly across the three cohorts in the first

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<sup>10</sup> In fact, the controls for age at union formation did not significantly change the cohort coefficients. We also ran models with controls for additional demographic variables that could explain differences between cohorts: educational attainment, race and ethnicity, and nativity. These also did not affect our results and are not shown.

five years. Finally, on the right of Table 3 we present results for all first unions, including both marriages and cohabitations. The pattern is clear: when we consider cohabitation as well as marriage, union instability has risen significantly over time.

## **Discussion**

Cherlin (2009) argues that the turbulence in family life caused by frequent entrance into and dissolution of formal marriages and informal cohabiting unions is the defining characteristic of American family life. Our results document striking growth in this turbulence since the 1980s and 1990s at both younger and older ages, during a period when many analysts have argued that marriages have become more stable.

For the past three decades, trends in divorce have been obscured by a deteriorating statistical system. Data from both the vital statistics system and the SIPP were increasingly flawed, leading many observers to believe that the risk of divorce was declining. Thanks to the new questions in the American Community Survey, we now can see that this interpretation was mistaken. As Goldstein (1999) and other suggested, there was a leveling of divorce between 1980 and 1990. Between 1990 and 2008, however, the age-standardized divorce rate increased substantially, and is now at an all-time high.

There have been striking changes in the age pattern of divorce over the past three decades. Divorce at age 40 or higher is much more common than it was, and divorce of persons in their teens and early twenties has dropped dramatically. The cohort born right after World War II, between 1945 and 1954, divorced more frequently than those who came before or followed, and they are continuing to do so at unprecedented rates as they age. It makes sense that the baby boomers divorced more than their predecessors. The loosening of legal constraints and declining social stigma reduced barriers to divorce, and the opening of new economic opportunities for

women allowed many to escape bad marriages (Ruggles 1997). But why has divorce leveled off or started to decline among the young?

The dramatic rise in marriage age and decline in proportions married over the past four decades reduced the number of marriages at high risk of dissolution. There are many fewer high-risk teen marriages. Several decades ago, couples were often forced into marriage because of pregnancy. Today, this is rare and it is no longer necessary to marry in order to have sexual relations or to start a family and little stigma is attached to unmarried parenthood (Cherlin 2004). As pressures to marry recede, people can be more selective about their partners; it makes sense that these unions will be more stable. As yet, however, we find clear evidence of declining divorce rates only among women under age 25.

The wave of divorce experienced by the Baby Boom generation may be receding among the youngest cohorts, but it is unlikely we will ever return to the marital patterns of the earlier twentieth century. Divorce may decline in coming decades as younger cohorts replace the baby boomers. The driving force of this change, however, is the turn away from marriage, and it does not imply an increase in union stability. Indeed, cohabitation has been seen as one of the chief reasons for the leveling of divorce among the young (Bumpass and Sweet 1989; Raley and Bumpass 2003; Sweeney and Phillips 2004). If cohabitation continues to rise, the decline of divorce is likely to be offset by the increase in the number of dissolutions of cohabiting unions.

Our analysis of the newly released NSFG is generally consistent with the findings from ACS. To a growing extent, cohabitation is now substituting for formal marriage. Dissolution of cohabiting unions has always been far more common than marital dissolution. We see no systematic change in the stability of cohabiting unions. Because cohabitation makes up a rapidly growing percentage of all unions, however, they have an increasing impact on overall union

instability. When we merge cohabiting unions and marital unions together, it is apparent that overall union instability is growing rapidly even among the young.<sup>11</sup>

At the same time that unions are becoming more unstable, the percentage of the population in unions is declining. Marriage is becoming increasingly selective. Over 40% of the population in 2008 had not married by their 30th birthday, a four-fold increase since 1980. A growing percentage of those who divorce choose not to remarry. Today, many of the people who would have been at the highest risk of divorce in the past are either already divorced or never married in the first place. The two extraordinary changes in union formation—the decline of marriage and the rise of cohabitation—are rendering conventional measures of marital dissolution increasingly irrelevant.

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<sup>11</sup> Cohabitation is growing rapidly among older Americans, although cohabiting unions formed among adults age 50 and older appear to be more stable than those formed to the young. (Brown, Bulanda, and Lee 2012; Vespa 2012). Unfortunately, there is limited data available to measure the trends in the stability of cohabiting union of older adults.

## References

- Broome, C.V. (1995). Change in marriage and divorce data available from the National Center for Health Statistics. *Federal Register* 60(241): 64437-64438.
- Brown, S. L. & Lin I. (2012). The gray divorce revolution: rising divorce among middle-aged and older adults, 1990–2010. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 67(6), 731–741
- Brown, S. L., Bulanda J. R., & Lee G. R. (2012). Transitions Into and Out of Cohabitation in Later Life, *Journal of Marriage and Family*, 74: 774–793
- Bumpass, L.L. & Raley, R.K. (1992). Estimating levels of marital disruption: differential data quality by source and trends by race, age at marriage, and education. Center for Demography and Ecology Working Paper No 92-27, University of Wisconsin-Madison.
- Bumpass, L. L., Castro-Martin, T., & Sweet, J. A. (1991). The impact of family background and early marital factors on marital disruption. *Journal of Family Issues*, 12: 22–42.
- Bumpass, L. L., & Sweet, J. A. (1989). National estimates of cohabitation. *Demography*, 26, 615–625.
- Castro Martin, T. & Bumpass, L.L. (1989). Recent trends in marital disruption. *Demography* 26(1):37-51.
- Cherlin, A.J. (1981). *Marriage, Divorce, Remarriage*. Cambridge MA: Harvard University Press.
- Cherlin, A.J. (2004). The deinstitutionalization of American marriage. *Journal of Marriage and Family*, 66: 848-861.
- Cherlin, A.J. 2009. *The Marriage-Go-Round*. New York: Alfred A. Knopf.

- Chowdury, A. (2012). 'Til recession do us part: booms, busts and divorce in the United States. *Applied Economics Letters* 20:255-261.
- Cohen, P.N. (2012). Recession and divorce in the United States: Economic conditions and the odds of divorce, 2008-2010. Working Paper, Maryland Population Center.
- Clarke, S.V. (1995). Advance report of final divorce statistics, 1989 and 1990. *Monthly Vital Statistics Report* 43(9): 1-31.
- Elliott, D.B., Simmons, T., & Lewis, J.M. (2010). *Evaluation of the Marital Events Items on the ACS*. U.S. Census Technical and Analytic Reports on the American Community Survey. Washington, D.C.: U.S. Census Bureau.
- Glick, P. (1984). Marriage, divorce, and living arrangements: Prospective issues. *Journal of Family Issues* 5: 7-26.
- Goldstein, J. R. (1999). The leveling of divorce in the United States. *Demography*, 36(3): 409-414.
- Haines, M.R. (2006), Marriage and divorce rates: 1920–1995. Table Ae507-513 in *Historical Statistics of the United States, Earliest Times to the Present: Millennial Edition*, ed.Susan B. Carter, Scott Sigmund Gartner, Michael R. Haines, Alan L. Olmstead, Richard Sutch, and Gavin Wright. New York: Cambridge University Press, 2006.  
<http://dx.doi.org/10.1017/ISBN-9780511132971.Ae1-513>
- Hayford, S.R. & Morgan, S.P. (2008). The quality of retrospective data on cohabitation. *Demography* 45(1): 129–141.
- Heaton, T.B. (2002). Factors contributing to increasing marital stability in the United States. *Journal of Family Issues* 23: 392-409.



- Hernandez, D. (1989). Components of longitudinal household change for 1984-85: An evaluation of national estimates from the SIPP. SIPP Working Paper Series, No. 8922, U.S. Bureau of the Census
- Hill, D. (1986). An additive model of recall error: Analysis of SIPP data. Proceedings of the Section on Survey Research Methods, American Statistical Association, 226-230.
- Isen, A. & Stevenson, B. (2010). Women's education and family behavior: trends in marriage, divorce and fertility. National Bureau of Economic Research working Paper No. 15725.
- Kennedy, S. & Bumpass, L.L. (2008). Cohabitation and children's living arrangements: New estimates from the United States, *Demographic Research*, 19: 1663-1692.
- Lewin Group. (2008). *Collection of Marriage and Divorce Statistics by States. Final Report*. Prepared for U.S. Department of Health and Human Services Administration for Children and Families and the Office of the Assistant Secretary for Evaluation and Planning. [http://archive.acf.hhs.gov/programs/opre/strengthen/expl\\_opt/reports/coll\\_stats/coll\\_stats.pdf](http://archive.acf.hhs.gov/programs/opre/strengthen/expl_opt/reports/coll_stats/coll_stats.pdf)
- Lichter, D. T., Turner, R. N., & Sassler, S. (2010). National estimates of the rise in serial cohabitation. *Social Science Research*, 39: 754-765.
- Manning, W.D. & Brown, S.L. (2011). The demography of unions among older Americans, 1980-Present: A family change approach. Pp. 193-210 in R.J. Settersten & J.L. Angel, eds, *Handbook of Sociology of Aging*. New York: Springer.
- Manning, W.D. & Cohen, J. (2012) Premarital cohabitation and marital dissolution: An examination of recent marriages.” *Journal of Marriage and Family* 74(2):377-387.
- Martin, S.P. (2006). Trends in marital dissolution by women's education in the United States. *Demographic Research* 15: 537-560.

McCarthy, J., Pendleton, A., & Cherlin, A. (1989). The quality of marriage and divorce data from surveys. *Challenges*. DHHS publication No. (PHS) 90-1214.

National Center for Health Statistics. (1973). 100 Years of Marriage and Divorce Statistics, 1867-1967. *National Vital Statistics System Series 21 Number 24*.

National Center for Health Statistics. (1985). Supplement: Advance report of final divorce statistics, 1983. *Monthly Vital Statistics Report* Vol 34, no. 9, December 26, 1985.

National Center for Health Statistics. (1990). National Survey of Family Growth, Cycle IV, 1988. Public Use data file and documentation. Hyattsville, MD: National Center for Health Statistics. [http://www.cdc.gov/nchs/nsfg/nsfg\\_cycle4.htm](http://www.cdc.gov/nchs/nsfg/nsfg_cycle4.htm).

National Center for Health Statistics. (1997a). *U.S. Vital Statistics System. Major Activities and Developments, 1950-95*. DHHS Publication No. (PHS) 97-1—3. Hyattsville, MD: National Center for Health Statistics.

National Center for Health Statistics. (1997b). National Survey of Family Growth. Cycle 5: 1995. Public Use data file and documentation. Hyattsville, MD: National Center for Health Statistics. [http://www.cdc.gov/nchs/nsfg/nsfg\\_cycle5.htm](http://www.cdc.gov/nchs/nsfg/nsfg_cycle5.htm).

National Center for Health Statistics. (2008). *National Vital Statistics Reports* 56(14) (March 28, 2008).

National Center for Health Statistics. (2011a). *Divorce Rates by State: 1990, 1995, and 1999-2010*. [http://www.cdc.gov/nchs/data/nvss/divorce\\_rates\\_90\\_95\\_99-10.pdf](http://www.cdc.gov/nchs/data/nvss/divorce_rates_90_95_99-10.pdf),

National Center for Health Statistics. (2011b). National Survey of Family Growth, 2006-2010. Public Use data file and documentation. Hyattsville, MD: National Center for Health Statistics. [http://www.cdc.gov/nchs/nsfg/nsfg\\_2006\\_2010\\_puf.htm](http://www.cdc.gov/nchs/nsfg/nsfg_2006_2010_puf.htm).

- National Center for Health Statistics. (2012). National Vital Statistics System: Marriages and divorces. <http://www.cdc.gov/nchs/mardiv.htm>, retrieved 10/13/12.
- National Office of Vital Statistics. (1949). *Vital Statistics of the United States*. Prepared under the direction of Halbert L. Dunn, M.D. Washington: GPO.
- National Office of Vital Statistics. (1950). History and organization of the vital statistics system. Pp. 1-19 in *Vital Statistics of the United States*. Prepared under the direction of Halbert L. Dunn, M.D. Washington: GPO.
- Norton, A. (1983). Family life cycle: 1980. *Journal of Marriage and the Family* 45:267-275.
- O'Connell, Martin, Gooding, G. & Ericson, L. (2007). Evaluation report covering marital history. *2006 American Community Survey Content Test Report* Washington, D.C.: U.S. Census Bureau.
- Preston, S.H. (1975). Estimating the proportion of american marriages that end in divorce. *Sociological Methods and Research* 3: 435-460.
- Preston, S. H., & McDonald, J. (1979). The incidence of divorce within cohorts of American marriages contracted since the Civil War. *Demography*, 16, 1–25.
- Raley, R. K. (2011). A brief on the quality of data of marital and relationship instability in the United States. Paper presented at the 2011 *Counting Couples, Counting Families* conference.
- Raley, R. K. & Bumpass, L.L. (2003). The topography of the divorce plateau: Levels and trends in union stability in the United States after 1980. *Demographic Research* 8(8): 245-260.
- Ruggles, S. (1997). The rise of divorce and separation in the United States, 1880-1990. *Demography* 34: 455-466

- Ruggles, S. et al. (2012). *Integrated Public Use Microdata Series: Version 5.0* [Machine-readable database]. Minneapolis: University of Minnesota.
- Schaller, J. (2012). For richer, if not for poorer? Marriage and divorce over the business cycle. *Journal of Population Economics*. Doi: 10.1007/s00148-012-0413-0
- Schoen, R. & Canudas-Romo, V. (2006), Timing effects on divorce: 20th century experience in the United States. *Journal of Marriage and Family* 68: 749–758.
- Schoen, R. & Standish, N. (2001). The retrenchment of marriage in the US.” *Population and Development Review* 27(3): 553-563.
- Smock, P.J. & Manning W.D. (2004). Living Together Unmarried in the United States: Demographic Perspectives and Implications for Family Policy. *Law & Policy* 26: 87-117.
- Stevenson, B. & Wolfers, J. (2007). Marriage and divorce: Changes and their driving forces. *The Journal of Economic Perspectives* 21: 27-52.
- Stevenson, B. & Wolfers, J. (2011). Trends in Marital Stability. In L. Cohen and J. D. Wright (eds), *Research Handbook in the Law and Economics of the Family* (pp.96-108). Northampton: Edward Elgar Press.
- Sweeney, M.M. & Phillips, J.A. (2004). Understanding racial differences in marital disruption: recent trends and explanations. *Journal of Marriage and the Family* 66(3): 639-650.
- Teachman, J.D. (2002). Stability across cohorts in divorce risk factors. *Demography* 39(2): 331-352.
- U.S. Bureau of the Census. (1908). *Marriage and divorce, 1887-1906*. Bulletin 96. Washington, D.C: U.S. Government Printing Office.
- U.S. Bureau of the Census. (1925). *Marriage and Divorce, 1922*. Washington, D.C: U.S. Government Printing Office.

- U.S. Bureau of the Census. (1975). *Accuracy of data for selected population characteristics as measured by the 1970 CPS-Census match* (Evaluation and Research Program, Series PHC(E)-11). Washington, DC: U.S. Government Printing Office.
- U.S. Census Bureau. (1982). Current Population Survey, June 1980. Washington, DC: U.S. Dept. of Commerce, Bureau of the Census.
- U.S. Census Bureau. (1988). Current Population Survey, June 1985: Marital History and fertility. Washington, DC: U.S. Dept. of Commerce, Bureau of the Census.
- U.S. Census Bureau. (1989). Survey Of Income And Program Participation (SIPP) 1986 panel. Washington, DC: U.S. Dept. of Commerce, Bureau of the Census.
- U.S. Census Bureau. (1991). Current Population Survey, June 1990: Fertility, birth expectations, and marital history. Washington, DC: U.S. Dept. of Commerce, Bureau of the Census.
- U.S. Census Bureau. (1997). Current Population Survey, June 1995: Fertility, birth expectations, and marital history. Washington, DC: U.S. Dept. of Commerce, Bureau of the Census.
- U.S. Census Bureau. (1998a). SIPP Quality Profile 1998. SIPP Working Paper Number 230. 3rd Edition. U.S. Department of Commerce, Bureau of the Census.
- U.S. Census Bureau. (1998b). Survey Of Income And Program Participation (SIPP) 1996 panel. Washington, DC: U.S. Dept. of Commerce, Bureau of the Census.
- U.S. Census Bureau. (2008). Survey Of Income And Program Participation (SIPP) 2004 Panel, Wave 2 Topical Module. Washington, DC: U.S. Census Bureau.
- U.S. Census Bureau. (2011). Survey Of Income And Program Participation (SIPP) 2008 Panel, Wave 2 Topical Module. Washington, DC: U.S. Census Bureau.
- Vespa, J. (2012). Union formation in later life: economic determinants of cohabitation and remarriage among older adults. *Demography* 49:1103–1125

Weed, J.A. (1980). *National Estimates of Marriage Dissolution and Survivorship*. Department of Health and Human Services Publication (PHS) 81-1403. Hyattsville, MD: National Center for Health Statistics.

Wright, C.D. (1889). *A Report on Marriage and Divorce in the United States, 1867 to 1886*. Washington, D. C.: U.S. Government Printing Office.

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**Table 1.** Life table estimates of first marriage and union dissolution within 5 years

	First marriages	First cohabiting unions	All first unions
Marriage/union cohort			
1980-1987	0.21	0.49	0.34
1987-1994	0.22	0.49	0.36
1998-2009	0.19	0.50	0.43

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Source: National Survey of Family Growth 1988, 1995, and 2006-10. National Center for Health Statistics 1990, 1997b, 2011b.

Notes: includes only marriages and unions formed by age 35. Marital disruption is measured at the time of separation, not divorce.

**Table 2.** Distribution of age at marriage or formation of cohabiting unions, 1980-2009

	First marriages			First cohabitating unions			All first unions		
	1980-1987	1987-1994	1998-2009	1980-1987	1987-1994	1998-2009	1980-1987	1987-1994	1998-2009
< 20	0.24	0.19	0.11	0.39	0.38	0.40	0.35	0.32	0.35
20-22	0.32	0.28	0.23	0.28	0.31	0.26	0.31	0.30	0.27
23-25	0.23	0.22	0.27	0.17	0.16	0.18	0.19	0.18	0.20
26-29	0.14	0.20	0.24	0.11	0.11	0.10	0.10	0.13	0.12
30+	0.07	0.11	0.15	0.04	0.05	0.06	0.04	0.06	0.06
N	1682	2106	2152	1129	1514	2551	1987	2463	3270

Source: National Survey of Family Growth 1988, 1995, and 2006-10. National Center for Health Statistics 1990, 1997b, 2011b.

Note: Includes only marriages and unions formed by age 35.

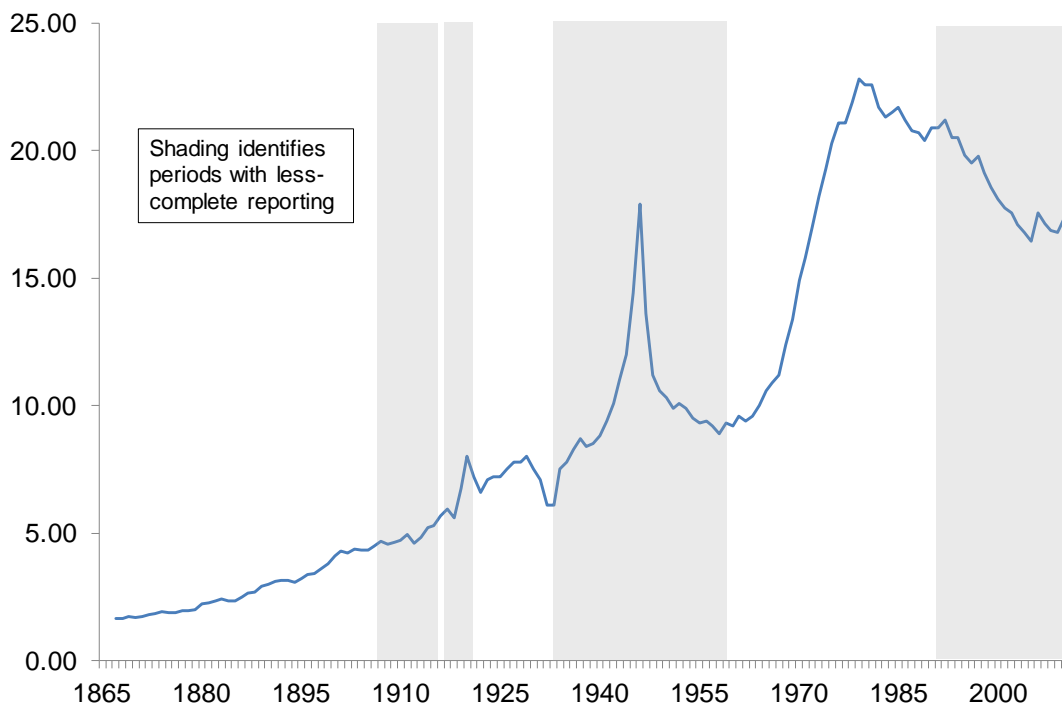


**Proportional hazards models predicting rate of first marriage and union dissolution within five years**

	First Marriages			First cohabiting unions			All first unions		
	B	SE B	eB	B	SE B	eB	B	SE B	eB
Marriage/union cohort									
1980-1987	-0.06	0.11	0.94	0.07	0.07	1.08	-0.20**	0.07	0.82
1987-1997	0.01	0.10	1.01	0.03	0.06	1.03	-0.17**	0.06	0.84
1998-2009									
Age at marriage /union start									
< 20									
20-22	-0.53**	0.16	0.59	-0.14	0.13	0.87	-0.45***	0.12	0.64
23-26	-1.05***	0.20	0.35	-0.47**	0.16	0.63	-0.83***	0.15	0.44
26-29	-1.03***	0.23	0.36	-0.45*	0.19	0.64	-0.69***	0.18	0.50
30+	-0.78*	0.31	0.46	-0.50	0.28	0.61	-0.55	0.24	0.58

Source: National Survey of Family Growth 1988, 1995, and 2006-10. National Center for Health Statistics 1990, 1997b, 2011b.

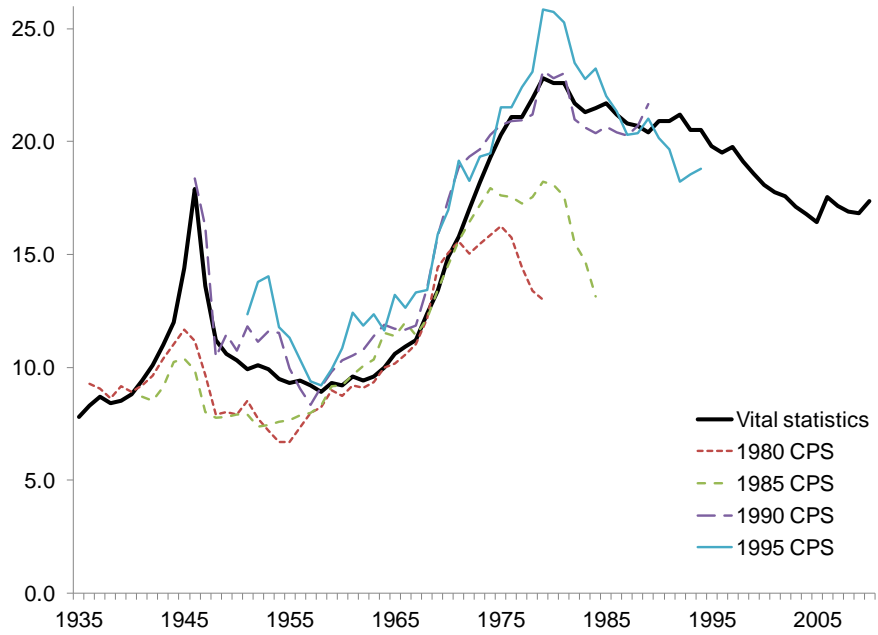
Notes: includes only marriages and unions formed by age 35. Marital disruption is measured at the time of separation, not divorce.



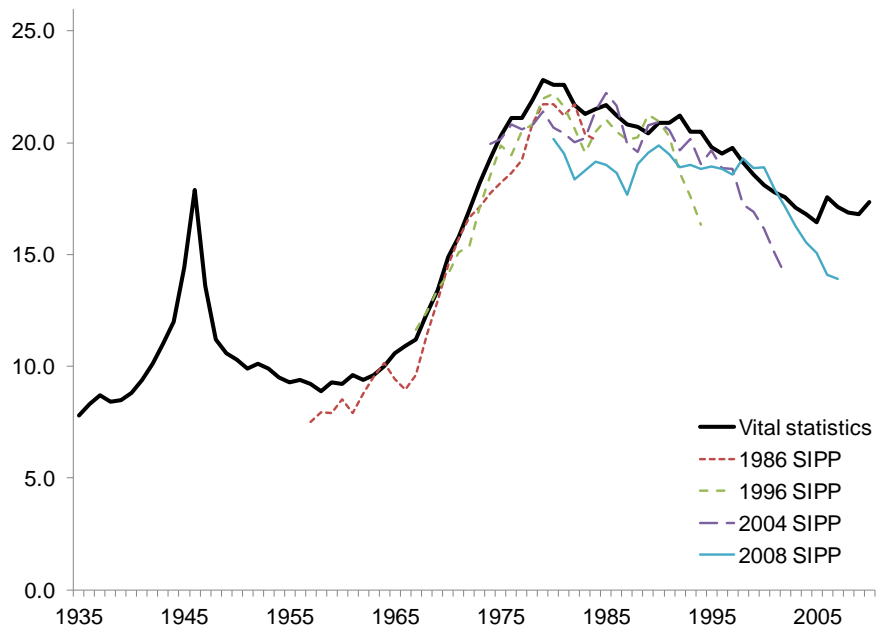
**Figure 1.** Divorces per 1,000 married women, 1867-2010

Sources: 1867-1919 number of divorces, National Office of Vital Statistics 1949, Part 1, Table CT; 1920-1995, Haines 2006; 1996-2010 number of divorces, National Center for Health Statistics 2012; 1867-1919, 1996-2010 proportion married females estimated from Ruggles et al. 2012.

A. Current Population Surveys (CPS) compared with vital statistics

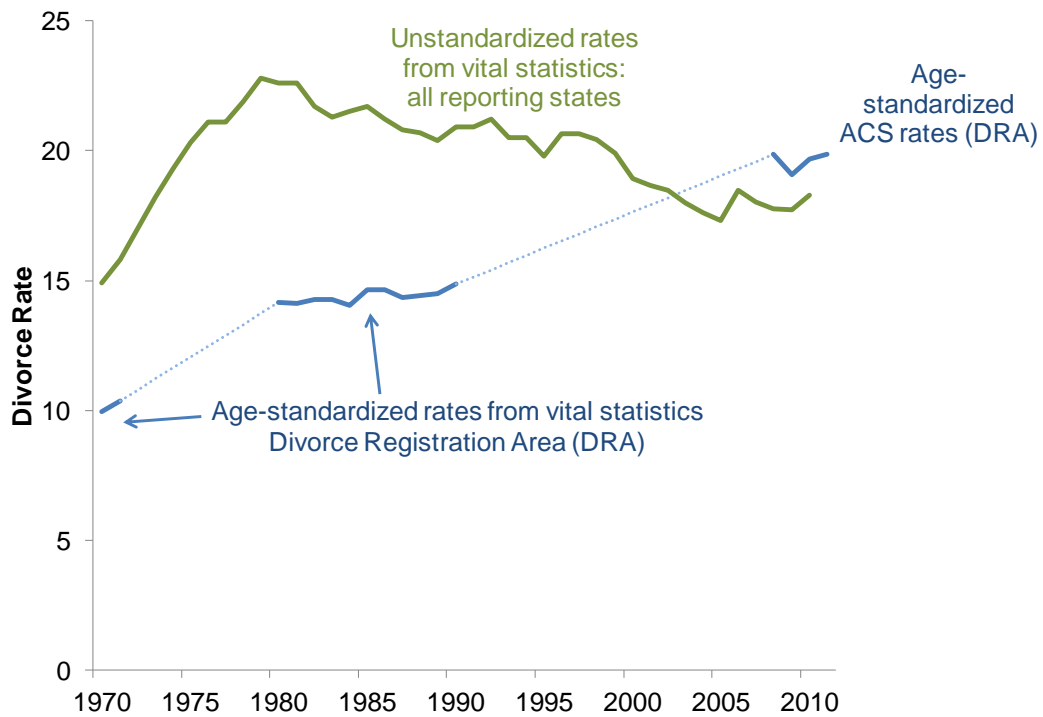


B. Survey of Income and Program Participation (SIPP) compared with vital statistics



**Figure 2.** Divorces per 1,000 married women calculated from retrospective surveys, compared with estimates from vital statistics

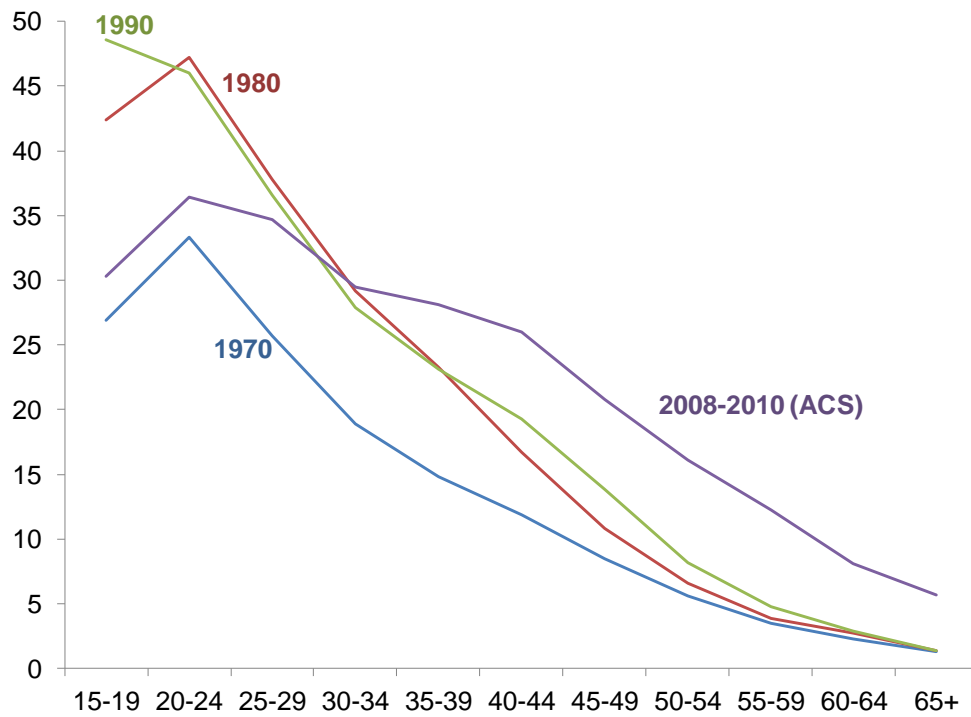
Sources: See Figure 1; U.S. Census Bureau 1982, 1988, 1989, 1991, 1997, 1998b, 2008, 2011.



**Figure 3.** Comparison of age-standardized and unstandardized divorces per 1,000 married women

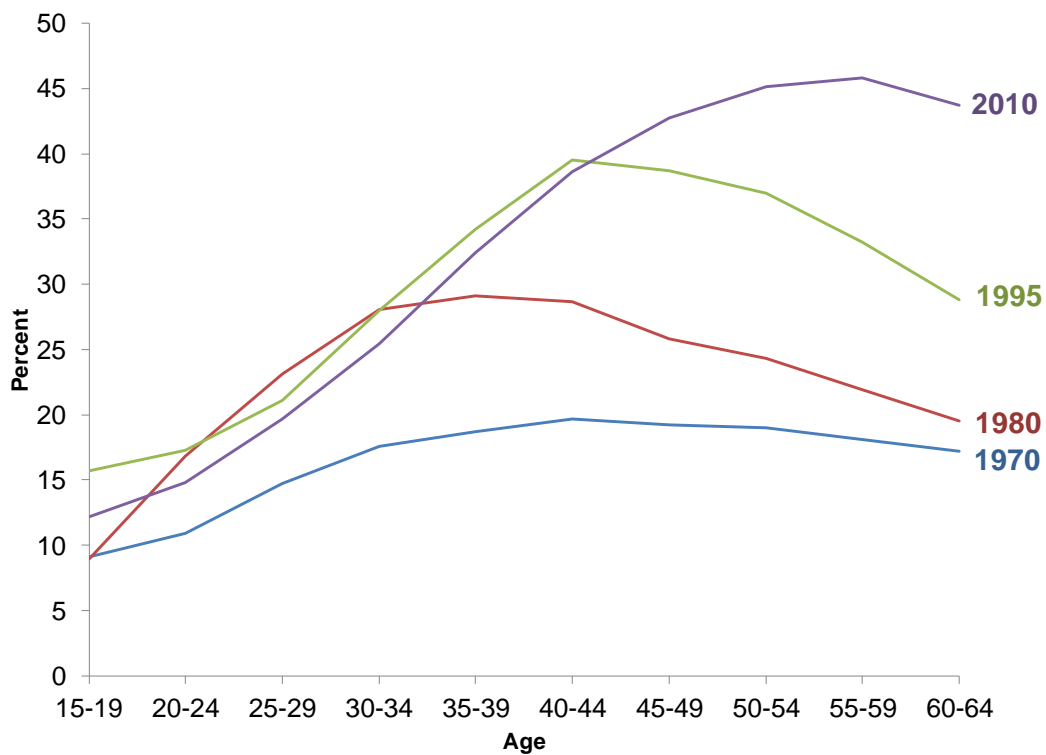
Note: Standard population=married women in 2010.

Sources: Unstandardized rates, see Figure 1; 1970, 1980, 1984-1990: Clarke 1995; 1982-1983: National Center for Health Statistics 1985, Table 6; 2008-2018 Ruggles et al. 2012.



**Figure 4.** Age-specific divorce rates per 1,000 married women, Divorce Registration Area, 1970-2010

Sources: 1970, 1980, 1990: Clarke 1995. 2008-10: Ruggles et. al. 2012.



**Figure 5.** Percent of ever-married persons ever divorced or separated, by age: 1970-2010

Note: Assumes constant age-specific effect of widowhood among remarried population from 1995 to 2010.

Sources: 1970, 2010: Ruggles et. al. 2012; 1980, 1995: U.S. Census Bureau 1982, 1997.