

## **The Coming Divorce Decline**

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Data and code for this paper is available as an OSF project here: <https://osf.io/yb4hr/>.

## **The Coming Divorce Decline**

### **Abstract**

This paper analyzes U.S. divorce trends over the last decade, and considers their implications for future divorce rates. Modeling women's odds of divorce from 2008 to 2017 using marital events data from the American Community Survey, I find falling divorce rates, with or without adjustment for demographic covariates. Age specific divorce rates show that the trend is driven by younger women, which is consistent with longer term trends showing uniquely high divorce rates among people born in the Baby Boom period. Finally, I analyze the characteristics of newly-married women and estimate the trend in their likelihood of divorcing based on the divorce models. The results show falling divorce risks for more recent marriages. The accumulated evidence thus points toward continued decline in divorce rates. The U.S. is progressing toward a system in which marriage is rarer, and more stable, than it was in the past.

The odds of divorce in the first decade or two of marriage fell for U.S. cohorts married from 1980 to 2010 (Rotz 2016), and the refined divorce rate – divorces per 1,000 married women – fell as well (Hemez 2017), although problems of data comparability make that assessment less definitive. However, Kennedy and Ruggles (2014), using age-adjusted divorce rates, make a convincing case that the decline in divorce in the three decades up to 2010 reflected the aging of the most divorce-prone cohort, those born in the Baby Boom, out of their peak-divorce years. As the Baby Boomers aged through adulthood, they sparked the gray divorce phenomenon (Brown and Lin 2012; Lin et al. 2018), but even though their divorce rates were higher than those of previous generations, older couples still are less likely to divorce than younger ones. Thus, overall divorce rates fell or were stable, but age-standardized rates rose through the first decade of the 2000s.

However one interprets the trends before 2010, all signs point toward decreasing divorce rates in the years since, on a cohort and population basis, in the last decade and for the coming years ahead. This is remarkable, occurring as it does along with an increase in less-stable cohabiting relationships (Guzzo 2014), and the growing cultural acceptability of divorce. The General Social Survey finds that percentage of people who favor making divorce “easier to obtain” reached record high levels for all ages in 2018 – up about 20 percentage points since 2004 – to 53% for the ages 18-34, 47% for those 35-54, and 39% for those 55 or older (Smith et al. 2019).

The 2008 introduction of the marital events questions on the American Community Survey (ACS) allows us to analyze the most recent decade of divorce rates in a multivariate context. In this paper I analyze that decade and present evidence for future declines in divorce. I first build a model for the odds of divorce using the ACS from 2008 to 2017 to assess the trend. I then apply coefficients from a 2017 divorce model to newly-married women over the same period, to illustrate the changing risk profile of new marriages. Falling divorce rates for younger women, the shrinking demographic influence of the Baby Boom cohorts, and the characteristics of newly-married women, together all but guarantee falling divorce rates in the coming years.

## **Methods**

For description of the overall trend, and age-specific trends, I use simple tabulations from the ACS of all married women and all women divorced in the 12 months before the survey. Then, in logistic regression models, I use membership in the recently-divorced category as the dependent variable. I analyze the time trend by estimating separate coefficients for each year, with interactions to test for changes in the demographic determinants of divorce over the period. I restrict the analysis to women following the advice of Kennedy and Ruggles (2014), who argue that the ACS, and surveys generally, more accurately capture the timing of divorce events for women than for men.

The exact dates of marriage and divorce are not included in the ACS – a person may be recorded as having experienced multiple marital events in the previous year, and these cannot be sequenced. Therefore, I exclude women whose most recent marriage was in the survey year. Variables in the divorce analysis are survey year, age (and its square), years married (duration since the most recent marriage), marriage order, nativity, education, and race/ethnicity (see Table 1). The regression sample for 2008-2017 is 6,878,909. All analyses are weighted.

For the analysis of newly-married couples, I make a model of divorce probability for the most recent year and apply its coefficients to all women who report having married in the 12 months before the survey over the years 2008-2017 ( $N = 210,829$ ). The estimate of the annual odds of divorce for newly-

married women over the course of the decade is not intended to predict future divorce rates, but it establishes the basis for predicting the direction in those rates at least. For the risk profile analysis, I alter the divorce model somewhat. First, I restrict it to women married less than 10 years in 2017 ( $N = 168,090$ ), to make it more applicable to those newly marrying; these are also the years with the highest divorce risk. Second, instead of marital duration and current age, I calculate the age at marriage, because that can be applied to newly-married women.

## Results

The overall trend is depicted in the left panel of Figure 1, which shows both the unadjusted divorce rate and predicted probabilities from the regression model (using Stata's average marginal effects). The unadjusted trend corresponds to that reported through 2016 by Hemez (2017), who did not include multivariate analysis. There was a 21 percent drop in the refined divorce rate from 2008 to 2017. The adjusted line, controlling for the variables shown in Table 1, displays a less steep decline – 10 percent – but the pattern is very similar. The main logistic regression model is shown in Table 2. The predictors of divorce detailed in Table 2 are as expected, with increased age, marital duration, fewer marriages, foreign-born status, more education, and White or Hispanic identity all being associated with lower annual odds of divorce. With dummy variables for each year, the model shows the drop in 2009, followed by a rebound and flat trend until 2012 (as reported by Cohen 2014) before the decline resumes through 2017. Analysis by age shows that divorce odds have only fallen for younger women. The right panel of Figure 1 shows the results of a version of the full model with an interaction between individual years and four categories of age. Additional interaction analysis, not shown, did not reveal other substantial changes in the trends by race/ethnicity, education, or marital parity.

**Table 1. Variables used in the divorce analysis**

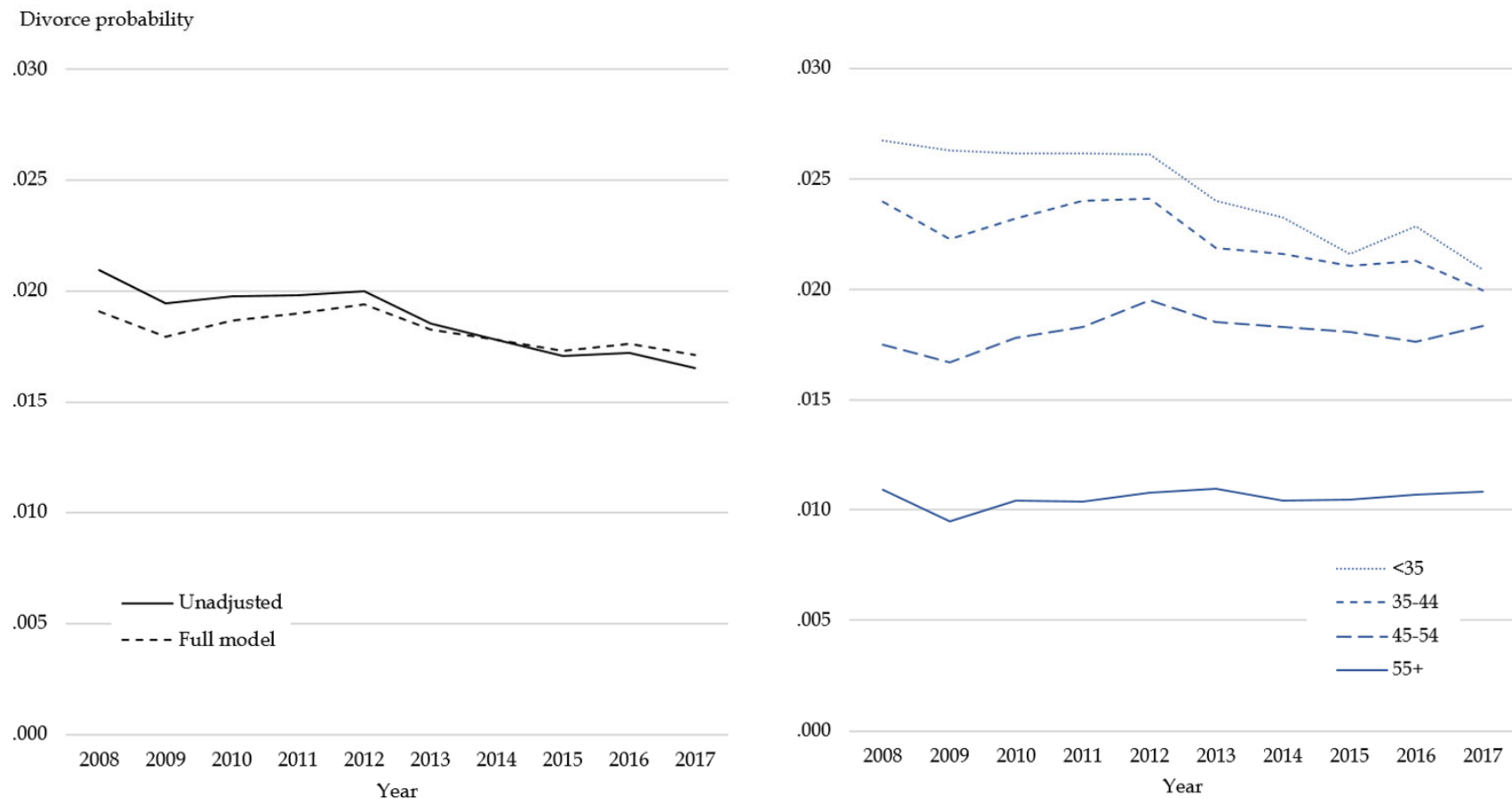
	<i>Percent</i>
Divorced in the previous 12 months	1.8
Year	
2008	9.8
2009	9.9
2010	9.9
2011	9.9
2012	10.0
2013	10.0
2014	10.0
2015	10.1
2016	10.1
2017	10.3
Age	
<35	18.1
35-44	21.6
45-54	23.2
55+	37.2
Years married	
1-9	27.1
10-19	23.9
20-29	18.7
30+	30.3
Marriage order	
1st	76.8
2nd	18.6
3rd+	4.7
Foreign-born	19.6
Education	
Less than high school	11.0
High school complete	33.0
Some college	23.9
BA or higher	32.2
Race/ethnicity	
White, non-Hispanic	70.1
Black	8.0
Hispanic	13.9
Other	7.9

*N* = 6,878,909. Weighted percentages. Includes married women and those divorced in the previous 12 months, excluding those just married in the previous 12 months; includes separated and married, spouse-absent. Data source: 2008-2017 American Community Survey via IPUMS.org.

**Table 2. Logistic regression coefficients for divorce**

	<u>Coefficient</u>	<u>S. E.</u>	
Year			
2008	ref		
2009	-.062	.017	*
2010	-.022	.016	
2011	-.005	.017	
2012	.018	.017	
2013	-.046	.017	*
2014	-.071	.017	*
2015	-.099	.018	*
2016	-.082	.018	*
2017	-.111	.018	*
Age	-.001	.002	
Age squared	-.00029	.00002	*
Years married	-.017	.001	*
Marriage order			
1 <sup>st</sup>	ref		
2 <sup>nd</sup>	.405	.011	*
3rd+	.825	.017	*
Foreign-born	-.362	.014	*
Education			
Less than high school	ref		
High school complete	.020	.015	
Some college	.057	.015	*
BA or higher	-.328	.016	*
Race/ethnicity			
White, non-Hispanic	ref		
Black	.494	.012	*
Hispanic	.039	.014	*
Other	-.032	.018	
Constant	-2.996	.047	*

$N = 6,878,909$ ; weighted. \*  $p < .01$

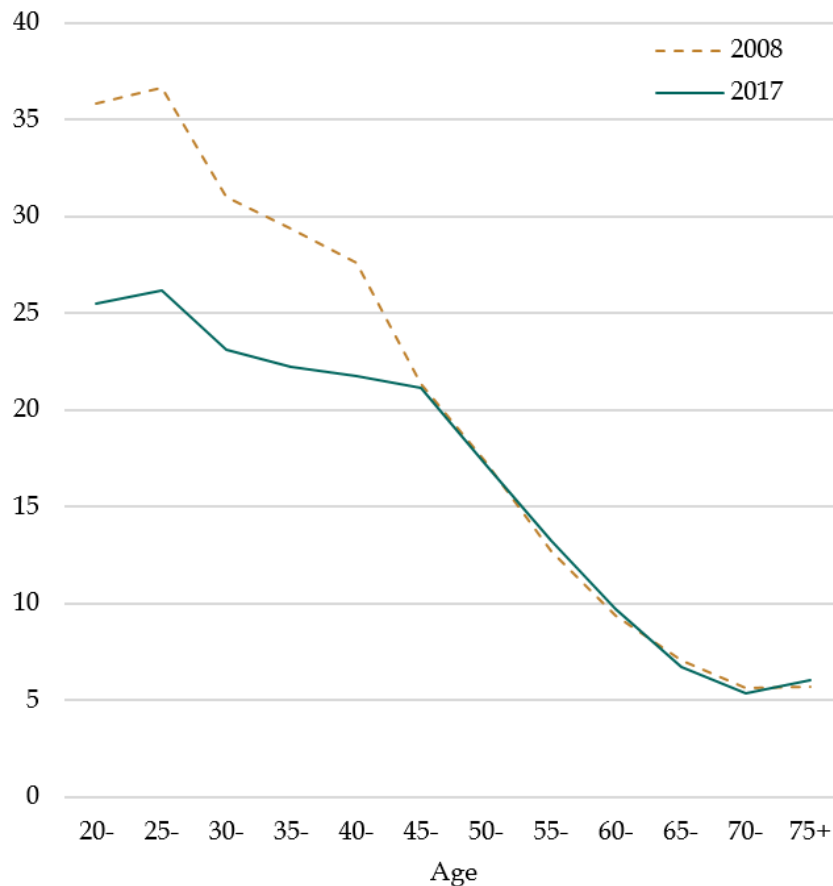


**Figure 1.** Women's annual divorce probabilities, 2008-2017. (A) Divorces per married woman, unadjusted and margins predicted from the model in Table 2. (B) Predicted probability of divorce, by age and year; from a model with the predictors in Table 2 plus interactions between age category and year. Margins calculated with Stata using average marginal effects.

Kennedy and Ruggles (2014) showed that from the 1980s through 2010 divorce rates rose for older women while falling for younger women. The trend since 2008 shows the increase in divorce rates at older ages has stopped. If the increase for older women before 2010 mostly reflected the unique experience of the Baby Boom generation, then we would not expect today's younger women to reach their levels of divorce at later ages. And if people marrying now are showing less proclivity for divorce, then we would expect them to reach longer marital durations, at which divorce rates are (to this point in history) generally lower, leading to lower divorce rates at older ages in the future. Further, lower divorce rates for younger adults now may portend lower divorce rates for their children (Amato and Patterson 2017; Li and Wu 2008).

Figure 1 showed the decline in adjusted divorce rates was limited to younger women. Figure 2 shows unadjusted age-specific divorce rates for the years 2008 and 2017, to update Kennedy and Ruggles (2014: Fig. 4). Over this decade the only drop in divorce rates was for women younger than age 45-49. Barring unforeseen historical events, it seems certain that these women, who will reach longer marital durations, and who are less likely to be divorced and therefore remarried later in life, will have lower divorce rates at older ages than do today's older women.





**Figure 2.** Age-specific divorce rates, 2008 and 2017. Divorces per 1000 married women. From the American Community Survey analysis sample described in Table 1 (under age 20 not shown, comprising 0.2% of the sample).

The last part of the analysis concerns divorce risks for newly-married women. Table 3 shows a model of divorce similar to that shown in Table 2, but with two changes. First, to better reflect risks for recent couples, it is restricted only to women married less than 10 years and run only for the year 2017. Second, it uses as a predictor the age at marriage (calculated from year of marriage and current age), because that can be applied to newly-married women. Next, the coefficients from this model are applied to newly-married women from 2008 to 2017, to generate a predicted divorce probability based on 2017 effects. The analysis asks what proportion of the newly-married women would divorce in each of their first ten years of marriage if 2017 divorce propensities prevailed and their characteristics did not change.

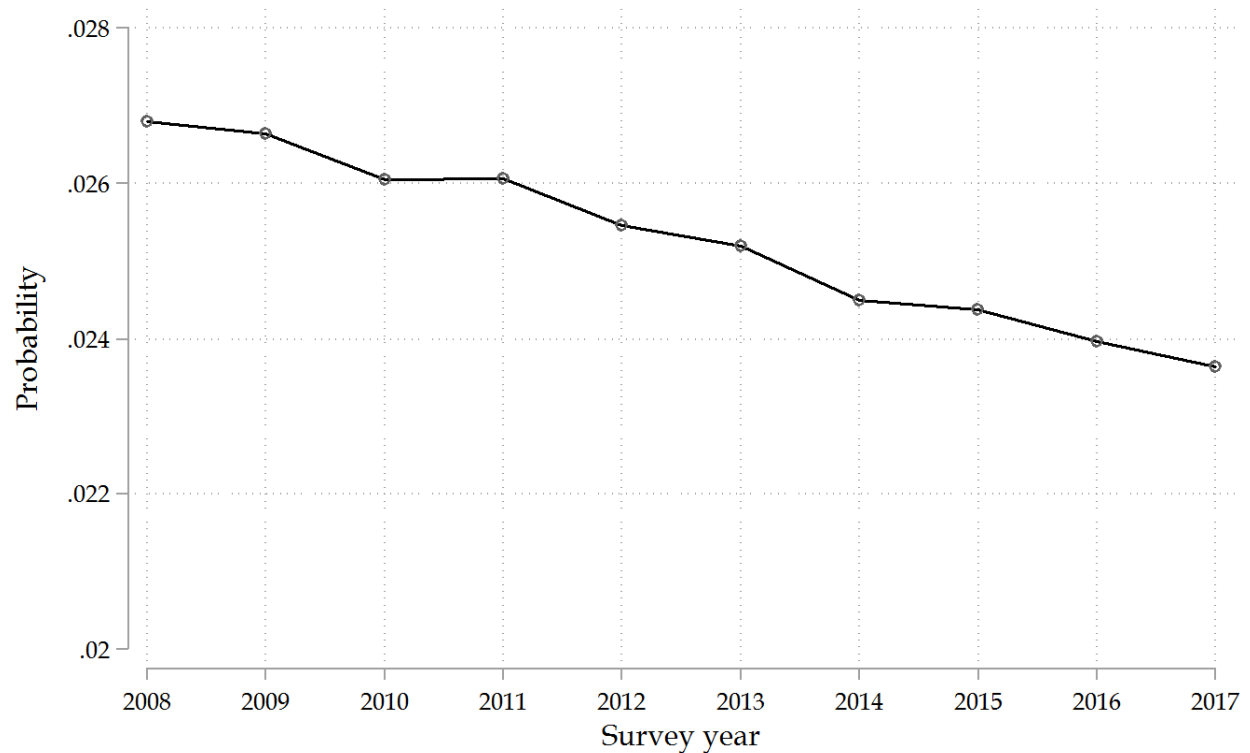
The results are in Figure 3, which shows a steadily declining divorce risk profile for newly-married women over the period. This is the result of changes in the characteristics of newly-married women. Most notably, age at marriage in the sample increased from 32.1 to 33.4, the percentage with BA degrees increased from 30 to 39, and the percentage entering a first marriage increased from 69 to 74. The probabilities in Figure 3 are not predictions of future divorce experience; this exercise simply demonstrates that the pool of newly-married women (and marriages) has shifted over the last decade toward a constellation of characteristics that is less likely to lead to divorce in the coming years.

**Table 3. Logistic regression coefficients for divorce: Married <10 years, 2017**

	<i>Coefficient</i>	<i>S. E.</i>
Age at marriage	-.029	.002 *
Marriage order		
1 <sup>st</sup>	Ref	
2 <sup>nd</sup>	.718	.056 *
3rd+	1.200	.083 *
Foreign-born	-.303	.073 *
Education		
Less than high school	Ref	
High school complete	.134	.088
Some college	.131	.090
BA or higher	-.296	.091 *
Race/ethnicity		
White, non-Hispanic	Ref	
Black	.376	.068 *
Hispanic	-.098	.071
Other	-.099	.094
Constant	-2.979	.112 *

*N* = 168,090; weighted. \* *p* < .01

Note: Subsample of the data shown in Table 1.



**Figure 3.** Estimated annual divorce probability: Newly-married women, 2008-2017. Generated by the coefficients from the model in Table 3. The linear trend is significant at  $p < .001$ .

## Limitations

There are several limitations to this analysis that follow from the nature of the ACS data. The most important of these concern the influence of people and relationships about which there is no available information. Because the ACS is a household survey, there is no information about the demographic characteristics of the former spouses in the case of divorces. Therefore, factors that have been shown to influence divorce, such as age (Englad, Allison, and Sayer 2016), race/ethnicity (Fu and Wolfinger 2011), and income disparities (Schwartz and Gonalons-Pons 2016), cannot be taken into account here. We do not even know the gender of the former spouse. The ACS also lacks a fertility history, and only records the existence of children who currently live with the respondent, so I am unable to include information on children in the marriages of respondents here. Because the only measure of income available is current income, which is likely to fluctuate in the year after a divorce, I have left out any measure of income, relying instead of education level to capture social class. Finally, although the

ACS has the great benefit of measures of marital duration and marital parity, which are included here, it does not include a complete marital history, so only the outcome of the most recent marriage is available (e.g., for a woman married twice and now divorced, we don't know the duration of her first marriage or how it ended). Thus, a complete analysis of marriage cohorts is not possible.

## **Conclusion**

The analysis shows that refined divorce rates have fallen since 2008, and this is also apparent in a multivariate regression model controlling for demographic and marriage characteristics. Divorce rates have fallen for younger women, in both adjusted and unadjusted analyses, accounting for all of the decline in divorce rates. Although today's older women have higher probabilities of divorce than women did at their age in the past, divorce rates over age 45 stopped rising in the last decade. Finally, because the risk profile for newly-married couples has shifted toward more protective characteristics, it appears certain that – barring unforeseen changes – divorce rates will further decline in the coming years.<sup>1</sup> The reasons that higher education, older age at marriage, lower-order marriage all reduce the odds of divorce are beyond the scope of this analysis, but they are consistent with long-standing observations about marital stability (Isen and Stevenson 2010; Lundberg, Pollak, and Stearns 2016).

The recent decline in divorce, and the coming further decline, present a stark contrast with the trend toward more cohabitation (Sassler and Miller 2017) and less stability within cohabiting couples (Guzzo 2014), which implies less stability among U.S. couples outside of marriage. Further, as noted above, attitudes toward divorce continue to grow more permissive. On the other hand, marriage rates remain at historic lows (Schweizer 2018) and marriage is becoming increasingly selective (Lundberg and Pollak 2015), while economic security increasingly predicts marital stability (Killewald 2016). In that

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<sup>1</sup> The first test of this prediction came with the release of the 2017 data, which was after the first draft of this paper was posted. That data, now included here, show continuation of the trends predicted in the first draft. The complete version history is available here: <https://osf.io/preprints/socarxiv/h2sk6/>.

context, the trends presented here describe progress toward a system in which U.S. marriage is rarer, and more stable – a more elite status – than it was in the past.

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