

Stability and Change in Predictors of Marital Dissolution in the US 1950-2017

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Running head: Stability and Change in Predictors of Divorce

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Objective: Our goal is to measure change over time in the predictors of marital dissolution in the US.

Background: The last comprehensive comparative analysis of predictors of marital dissolution is more than 20 years out of date. Rising inequality in the US requires a fresh look at the predictors of marital dissolution. The Diverging Destinies hypothesis predicts greater inequality over time in the divorce rate between groups, whereas the Converging Destinies hypothesis predicts convergence in divorce rates.

Method: We use a variety of event history models to examine the change over time in race, ethnicity, intermarriage, premarital cohabitation, education, teen marriages, and family of origin intactness as predictors of marital dissolution using data on first marriages from the NSFG covering 7 decades of marital histories. We examine racial differences in the non-racial predictors of divorce.

Results: In the post-Civil Rights era, Black women's and White women's marital dissolution rates converged. In the most recent marriage cohorts, marital dissolution rates for Black women have increased relative to White women and teen marriage is increasingly associated with divorce. Women without the BA degree appear to be increasingly at risk for divorce. We find that wives from racial minority groups have divorce rates that are less impacted by premarital cohabitation, low education, and teen marriage.

Conclusion: The demographic profile of women at marriage has changed dramatically, while the predictors of divorce have changed modestly. Where there are changes in the predictors of divorce, we find more support for Diverging Destinies.

Keywords: Divorce, Event History Methods, Inequality, Marriage

Stability and Change in Predictors of Marital Dissolution in the US 1950-2017

Introduction:

There is a rich literature on change over time in the predictors of marital dissolution in the U.S. Most of this literature examines change (or stability) in one key predictor of marital dissolution at a time, such as education (Härkönen and Dronkers 2006, Martin 2006), premarital cohabitation (Dush et al. 2003, Reinhold 2012) or parental divorce (Li and Wu 2008).

Teachman (2002), the last comprehensive analysis of change over time in the predictors of marital dissolution in the U.S., found a broad pattern of stability in the predictors of divorce in the U.S. through 1995. The only significant interaction with time that Teachman found was a convergence in Black women's and White women's marital dissolution rates from the 1950s to 1995. The data Teachman (2002) used is now more than 2 decades out of date. Subsequent data cover a period of increasing economic and social inequality in the U.S. We offer an updated assessment of how the predictors of marital dissolution have changed during the era of rising inequality in the U.S. Our analysis is broad in predictors of divorce: we consider race, Hispanicity, interraciality, interethnic marriages, education, premarital cohabitation, non-intact family of origin and teen marriage as potential predictors of marital dissolution. We consider the potential change across marriage cohorts from the 1950s to the 2010s of each predictor's association with marital dissolution. We test racial interactions with the non-racial predictors of divorce. We deploy a more diverse set of modeling assumptions than past literature in order to illustrate which modeling choices may have an effect on the results.

Since the 1950s, the US family system has undergone a historically unprecedented transformation. The age at first marriage has risen, educational attainment has grown, interracial

and interethnic unions are more common, the ethnic diversity of the US has increased, and premarital cohabitation has become dramatically more common. In other words, the mate selection system has diversified and changed in several important regards (see Figure 1).

We explore whether marital stability between advantaged and disadvantaged groups is converging or diverging over time. We contrast one theory, the Diverging Destinies Hypothesis, which predicts divergence in divorce rates over time, with a Converging Destinies hypothesis, which predicts a convergence in divorce rates over time. We seek to understand whether the new diversity in American family life and the rise in inequality in the U.S. have been accompanied by more equality, or more inequality in the risk of divorce.

The Diverging Destinies Hypothesis:

The United States is among the most unequal high-income countries in the world by income, wealth, and assets (Brandolini and Smeedling 2006). Importantly for our study, economic inequalities in the U.S. have risen dramatically since 1980 (Piketty 2014) and racial differences in affluence (though not poverty) appear to have increased since 1980 (Iceland 2019).

The Diverging Destinies Hypothesis was influentially described by McLanahan (2004) who noted that divorce rates had been diverging between women without BA degrees and women with BA degrees in the US (citing Martin n.d.; see also Martin 2006). In McLanahan's view, diverging divorce rates were one important manifestation of diverging destinies between disadvantaged and advantaged populations in the U.S. It is a fundamental rule of stratification research that increasing societal inequality forges deeper divisions in family life and in family outcomes (Esping-Anderson 2016). The discovery of the association between class disadvantage and higher divorce rates in the U.S. goes back at least as far as Goode (1962).

The BA degree has long been associated with greater marital stability (Bramlett and Mosher 2002) because of the BA's association with higher pay, better working conditions, and jobs with higher status and privileges. Additionally, obtaining a BA selects for people who come from more privileged backgrounds, and the privileged background itself could be advantageous to a married couple. As the BA degree has become more important to success in US society, the Diverging Destinies Hypothesis predicts that there would be divergence in divorce rates between women without BA degrees and women with BA degrees.

Härkönen and Dronkers (2006) found that divorce risk was diverging between less educated women and others in the U.S., from marriage cohorts of the 1980s and 1990s. Martin (2006) found divergence in divorce rates between women without college degrees and other women in the US, from the 1970s to the 1990s, using the Survey of Income and Program Participation. Raley and Bumpass (2003) found a similar result. Esping-Anderson (2016) found that the divorce rate gap between lower educated people and higher educated people was widening after 1990 not only in the U.S., but also in Denmark, Germany, and Sweden. All of these results are consistent with the Diverging Destinies Hypothesis. Whether the association between education and marital stability has varied significantly across racial and ethnic groups is unclear (Bramlett and Mosher 2002; Sweeney and Phillips 2004)

We expand McLanahan's (2004) Diverging Destinies Hypothesis to encompass other correlates of marital stability and divorce besides education. Adults whose parents divorced have been shown to be more likely to divorce themselves (Amato and Cheadle 2005). Children raised by single mothers are more likely to experience poverty and disadvantageous social and legal outcomes (McLanahan and Percheski 2008; McLanahan 2004; McLanahan and Sandefur 1994), and single parenthood is therefore a family system that may amplify inequalities across

generations. Intactness (versus non-intactness) of family of origin is a social division whose impact on divorce rates would be expected to grow under the Diverging Destinies Hypothesis.

The Diverging Destinies Hypothesis predicts a divergence in marital dissolution rates between Black wives and White wives, and between Hispanic wives and non-Hispanic wives, as members of racial minority groups would face additional stresses during a period of rising inequality. Frazier (1966) was one early proponent of the idea that inequality would impose higher divorce rates on racial minorities. Raley and Bumpass (2003: 255), using the 1995 wave of NSFG, found Black women's first union dissolution rate to be increasing compared to White women's divorce rate. Sweeney and Phillips (2004) used Current Population Survey data and found a similar divergence of divorce rates by race, consistent with the Diverging Destinies Hypothesis.

Historically, interracial couples have had higher divorce rates (compared to same-race couples), Hispanic women have had slightly lower divorce rates than non-Hispanic women, and the divorce risk of interethnic couples compared to couples with shared Hispanicity is unclear (Bramlett and Mosher 2002, Bratter and King 2008). We are not aware of scholarship on whether the hazard ratio of these groups' risk of divorce has changed over time (relative to same-race, non-Hispanic, or non-interethnic couples, respectively).

Teen marriage was normative during the Baby Boom in the US but has now become rare. In 1960 52% of first marriages recorded in NSFG were to women younger than 20; by 2015 only 4% of first marriages were to teenage women (see Figure 1 below). Teen marriage has long been associated with family of origin poverty, teen childbirth (Waite and Spitze 1981) and higher rates of marital dissolution (Bramlett and Mosher 2002), though the association between teen marriage and marital dissolution has appeared to be weaker for Black wives (Bramlett and Mosher 2002,

P. 61; Martin and Bumpas 1989, P. 42; Sweeney and Phillips 2004, P. 644; but see also Lehrer and Son 2017, P. 240) and for Hispanic wives (Bramlett and Mosher 2002, P. 58) than for White wives. Teen marriage makes it more difficult for women to finish their educations, to develop their own careers and to judge (unless they marry a much older person) how their spouse's career will turn out (Oppenheimer 1988). As women have increasingly entered the formal labor market, teen marriage has become associated with disadvantage in the US compared to women who marry at later life stages. As teen marriage has become an indicator of and a predictor of worse economic prospects, the Diverging Destinies Hypothesis predicts a divergence in the divorce rate between women who married in their teen years and women who married at a later life stage. Teachman (2002) found no significant change across marriage cohorts in age at marriage's association with marital dissolution.

We do not assume that an ideal society (one without any inequality or deprivation) would have a divorce rate of zero. Rather, the Diverging Destinies Hypothesis assumes that economic and social disadvantage can raise the risk of marital dissolution for couples who (but for their economic or social disadvantage) would otherwise remain married. In the framework of Diverging Destinies, divergent marital dissolution rates between disadvantaged and advantaged groups are a measure of the increasing lived importance of inequality.

Racial Minority Moderation Hypothesis

Racial and ethnic differences in the US family system are profound (Cherlin 1992). Black individuals and Hispanic individuals rely much more on their extended families (Stack 1974; Goldscheider and Lawton 1998; Sabogal et al 1987) than do non-Hispanic White Americans. Black children and Hispanic children in the US are more likely than non-Hispanic White

children to be born to unmarried mothers (Acs et al 2013). Cross (2020) found that growing up with a single parent had significantly less negative effect on the educational outcomes of Hispanic youth and Black youth compared to non-Hispanic White youth, and Cross offered two potential explanations. First, extended family systems of Hispanic Americans and Black Americans may moderate the harm of missing one parent. Second, the greater stress experienced by racial minorities in the US may make any additional stressor less impactful (see also Cross et al 2022; Fomby 2022).

We extend Cross's (2020) theory of the racial moderation of childhood educational outcomes to the adult outcome of marital dissolution. Following Cross (2020) we hypothesize that teen marriage, not having a BA degree, premarital cohabitation, and coming from a non-intact family of origin may be less associated with marital dissolution for Black women and Hispanic women than for non-Hispanic White women. There is a dearth of prior tests of the statistical significance of racial differences in the non-racial predictors of divorce in the US. Most prior research on the predictors of marital dissolution included race and ethnicity either as control variables (Brines and Joyner 1999; Teachman 2002; Li and Wu 2008; Reinhold 2012; Kuperberg 2014; Rosenfeld and Roesler 2019) or else as separate analyses by race (Martin and Bumpass 1989; Bramlett and Mosher 2002; Raley and Bumpass 2003; Sweeney and Phillips 2004). We build on prior work by testing racial differences across the non-racial predictors of marital dissolution while controlling for other predictors of marital dissolution.

The Converging Destinies Hypothesis

Whereas the Diverging Destinies Hypothesis predicts a divergence over time in divorce

risk, the Converging Destinies Hypothesis predicts convergence over time in divorce risk between groups. The Converging Destinies Hypothesis was first addressed with respect to the heightened divorce risk associated with premarital cohabitation. When the association between premarital cohabitation and marital dissolution was first discovered in the 1980s (Booth and Johnson 1988; Bumpass and Sweet 1989), researchers argued that premarital cohabitation was associated with higher rates of divorce because socially liberal people (who were presumed to have had fewer qualms about premarital sex or divorce) selected themselves into premarital cohabitation (Axinn and Thornton 1992; Lillard, Brien and Waite 1995). Once premarital cohabitation went from being selective to being the norm however, selection into cohabitation no longer could easily explain the association between premarital cohabitation and divorce. Dush et al (2003) referred to this as the selection hypothesis. According to the selection hypothesis, as premarital cohabitation became more common the divorce rate of premarital cohabiters should have converged with the divorce rate of non-cohabiters. Schoen (1992) was an early advocate of this same hypothesis; see also the diffusion hypothesis of Liefbroer and Dourleijn (2006) and the normalization hypothesis of Rosenfeld and Roesler (2019).

Premarital cohabitation increased from 10% of first marriages in 1970 to more than 60% of first marriages after 2000 in the US (see Figure 1). The rise in premarital cohabitation was accompanied by a decline in the percentage of Americans who said that premarital sex was “always wrong” (Treas 2002), suggesting that the stigma against premarital cohabitation had mostly disappeared. Extramarital cohabitation (and sex outside of marriage in general) was formally illegal (though rarely prosecuted) in most US states in the early 1960s. By the early 2000s almost all the U.S. state laws against extra-marital cohabitation had been either repealed

by state legislatures or were nullified by court precedents, and the few remaining laws are probably unenforceable (Mahoney 2005).

Premarital cohabitation has previously been found to be associated with higher risk of marital dissolution for Hispanic wives and non-Hispanic White wives, but not for non-Hispanic Black wives (Bramlett and Mosher 2002, P. 65). Some scholars have found that premarital cohabitation consistently predicts higher rates of marital dissolution across marriage cohorts (Teachman 2002, Rosenfeld and Roesler 2019, Dush et al. 2003). Other scholars have argued that the association between marital dissolution and premarital cohabitation has disappeared in recent marriage cohorts (Kuperberg 2014, Reinhold 2012). A decline across marriage cohorts in the association between premarital cohabitation and the risk of marital dissolution would (if true) be consistent with the Converging Destinies Hypothesis. For a review of the debate over premarital cohabitation and the risk of divorce see Manning, Smock, and Kuperberg (2021) and Rosenfeld and Roesler (2021).

The Converging Destinies Hypothesis expands from a robust literature on premarital cohabitation and divorce to other predictors of marital dissolution that have become more common or less stigmatized over time. Interracial couples were barred from marriage in the U.S. in 16 states prior to the *Loving v. Virginia* (1967) Supreme Court decision which legalized interracial marriage across the U.S. Subsequent to *Loving*, American opposition to interracial marriage dissipated (Schuman et al. 1997, Bobo et al. 2012) and the number of interracial married couples increased (Rosenfeld 2007). Interraciality (across the NSFG's 3 racial categories) among newlywed heterosexual couples increased from 5% in 1975 to 12% in 2013. Interracial couples have had a higher rate of divorce than same-race couples in the past.

According to the Converging Destinies Hypothesis, we should see a convergence in the divorce rates of interracial and same-race couples as the stigma against interraciality has declined.

Parental divorce disadvantages children, which is why adults from non-intact families of origin have higher divorce rates even after controlling for other predictors of divorce (Amato and Cheadle 2005). The Converging Destinies Hypothesis would lead us to expect that as the divorce rate in the U.S. rose after 1970 and divorce became less stigmatized (Cherlin 1992, Cherlin 2014), the intergenerational transmission of divorce would have decreased. Wolfinger (1999, 2011) used the General Social Survey and found that parental divorce had a declining association over time with children's own divorce rate (a result that if true, would be consistent with the Converging Destinies Hypothesis). Li and Wu (2008), used data from the 1987-88 National Survey of Families and Households and found a stable association between parental divorce and children's marital instability in the 1970s and 1980s. Teachman (2002) found no significant change across marriage cohorts in the association between parental divorce and the hazard of children's marital dissolution.

The structural disadvantage of Black people in the U.S. was greater before the Civil Rights revolution of the mid 1960s (Wilson 1980, Schuman et al. 1997). Because of the Civil Rights movement, the Civil Rights Act of 1964, the Voting Rights Act of 1965 and the Fair Housing Act of 1968, Black Americans won new rights and better life chances. White Americans' attitudes toward Black Americans liberalized substantially after the Civil Rights movement (Bobo et al. 2012, Hyman and Sheatsley 1964, Rosenfeld 2017). To the extent that racial oppression against Black Americans would have been associated with higher marital dissolution rates before Civil Rights, the Converging Destinies Hypothesis predicts a convergence in marital dissolution rates between Black women and White women during and

after the 1960s, as the citizenship and basic rights of Black Americans were partly normalized after the 1960s.

As Bloome and Ang (2020) point out, marriage and family decisions are personal but every personal decision in the US takes place within a racialized context that powerfully shapes personal decisions (see also Baker and O'Connell 2022). Racial comparisons are always fraught, and have a troubled history especially from the early days of social science (Zuberi 2001; Gould 1996). The NSFG data are silent about the historical origins of their racial and ethnic classification system that distinguishes between Black respondents, White respondents, and Hispanic respondents (Williams 2019). We present the racial and ethnic comparisons in marital dissolution rates in the spirit of trying to understand the current US inequality regime as lived through marital stability and instability.

The Hispanic population of the US increased dramatically as a result of the immigration reforms of 1965 (Bean and Tienda, 1987). The proportion of newlywed wives who were Hispanic has increased from 4% in 1950 to 23% in 2015. Intermarriage between Hispanic individuals and non-Hispanic individuals (i.e. interethnic marriage) also increased, from 7% in 1970 to 10% in 2015. Although Hispanic Americans have not faced the same degree of discrimination as have African Americans in the US (Massey and Denton 1993), the Converging Destinies Hypothesis would apply to Hispanic married individuals and to interethnic unions in a similar way as the hypothesis applies to Black married individuals and interracial unions. With the passage of time from 1960s, the Converging Destinies Hypothesis predicts that Hispanic wives' marriages and interethnic unions will have divorce rates that converge with non-Hispanic wives' unions and with non-interethnic unions respectively.

Hypotheses

The *Diverging Destinies Hypothesis* predicts diverging marital dissolution rates across marriage cohorts between disadvantaged and advantaged groups. Specifically, the hazard ratio of marital dissolution for disadvantaged wives (wives without BAs, wives who married as teenagers, wives from non-intact families of origin, Black wives and Hispanic wives, wives in intermarriages) will increase beyond 1 net of other predictors of marital dissolution, especially after 1980 (as economic inequalities in the US have grown).

Conversely, as groups that were once uncommon or stigmatized became more common, less stigmatized or less subject to discrimination, the *Converging Destinies Hypothesis* predicts convergence in marital dissolution rates across marriage cohorts. Specifically, premarital cohabiters, intermarried couples, Black spouses and Hispanic spouses after the 1960s, and wives from non-intact families of origin should have hazard ratios of marital dissolution declining towards 1 across marriage cohorts, net of other predictors of marital dissolution.

A third hypothesis, the *Racial Minority Moderation* hypothesis suggests that circumstances and challenges that are associated with higher rates of marital dissolution for non-Hispanic White women will be less impactful for the marital survival risk of Black women and Hispanic women, net of other predictors of marital dissolution.

Data and Methods

We use ten cycles, 1973, 1976, 1982, 1988, 1995, 2002, 2006-10, 2011-13, 2013-15, and 2015-17 of the National Survey of Family Growth (hereafter NSFG) to analyze first marriages for women age 15-44 (expanded to ages 15-49 in the 2015-17 wave). NSFG was designed to

study fertility, hence the age restriction to subjects in the childbearing years. Due to the focus in NSFG surveys on male-female couples, all marriages in the data were between a man and a woman. We examine women in first marriages exclusively because second and third marriages occur later in life, often beyond the NSFG's age window.

We created a harmonized couple-year dataset with first marriages of all durations for female respondents from the NSFG. The full event history dataset (including control variables that were available in all waves) has 47,390 women in first marriages, 424,225 couple-years for couples without missing data in any of the predictors, and 14,236 marital dissolutions. The NSFG data had no missing values for subject's race, the time-varying presence of children, or age at first marriage after NSFG imputation of missing values. Family of origin intactness and subject's education were each missing in less than 1% of subjects. Husband's race and Hispanicity (wave 1995 and later), and premarital cohabitation with the man who would become the first husband (wave 1988 and later) were also missing in less than 1% of cases. Mother's education, a control variable available starting in the 1982 wave was also missing in less than 1% of cases. Our dependent variable is marital dissolution, which transitions from zero to 1 in the year of divorce or separation, whichever came first. Marriages that ended with death of the spouse or which were intact at the time of the survey are right censored at year of death of the spouse or survey year, respectively.

We rely on Cox proportional hazards regression (Kalbfleisch and Prentice 2002) of the form

$$h(t) = h_0(t) \exp(\beta_1 x_1 + \dots + \beta_k x_k)$$

where $h(t)$ is the hazard of marital dissolution, t is marital duration in years, $h_0(t)$ is the baseline hazard function of marital duration which is not specified, and the x_i covariates are either

time invariant (e.g. race) or else are functions of marriage cohort, or calendar time, or couple-specific time varying variables such as the presence of children or wife's education. The hazard ratio of characteristic x_i is e^{β_i} .

The following variables are available in every wave and are used as controls in every event history model below: wife's race (distinguishing between White women, Black women, and women of other races), wife's education (time varying), wife's age at marriage, whether wife was living with an intact two parent family of origin at age 14 or not, marital duration of wife's first marriage (time varying), and the presence of minor children in the home (time varying). On the importance of making use of time-varying data on children in the home see Rosenfeld and Roesler (2021).

The specific reason for non-intactness of each respondent's family of origin was asked about in the 1973-1988 waves. We operationalize education as time-varying (following Martin 2006), but with a limitation: NSFG only recorded the year of BA attainment in the 1995 wave and in the 2006 wave and later. When we estimate the direct association between having a BA and marital dissolution, we use the specific time varying education of the wife and we discard the other waves. The models with accurate information about age at BA predict marital dissolution better than models that assume BA holders obtained their BAs at age 22, see Appendix Table 2.

Alternatively, when we use subject's education as one of several controls for other predictors of marital dissolution, we include all waves and we make the simplifying assumption that subjects who obtained a high school degree did so at age 18, and that subjects who obtained a BA degree did so at age 22. In the NSFG waves that recorded the year the BA degree was

obtained, the modal year of attaining a BA for married women was 22 years of age. Two percent of women who obtained the BA did so at age 20 or younger, and 25% did so at age 25 or older.

NSFG lacks data on income over time. Researchers using the Panel Study of Income Dynamics (PSID) have explored the income and work determinants of marital dissolution (Brines and Joyner 1999, Killewald 2016). While the PSID covers a similar time period and has the advantage of longitudinal income and work data, the NSFG has an order of magnitude larger sample size of couples and marital dissolutions (14,236 dissolutions in our NSFG event history data compared to 1,684 in Killewald's PSID sample). The larger sample size of the NSFG results in greater statistical power.

Our descriptive statistics from NSFG are weighted by a cross-wave harmonized analytic weight (weights rescaled to have mean equal to 1 within each wave; see also Raley and Bumpass 2003). Complex sampling information is available from NSFG for all waves except for the 1988 wave. When we combine all waves and employ the complex sampling information we start with the instructions from the NSFG (2015) methodological appendices, and we use STATA's svy complex survey tools. We make the strata non-overlapping across waves (following advice from NSFG) and we treat the 1988 wave as simple survey data, with a single strata and each subject from the 1988 wave as their own primary sampling unit. In the NSFG data, Black respondents were oversampled and under-weighted, so the outcomes for race and interracial unions were more affected than other outcomes by implementation of the weights.

Because there are a number of different ways to model marital dissolution risk with these data, we present alternatives in Online Appendix Tables 1a-1h and we summarize these alternatives next to our main findings in Table 1 as a way to evaluate the robustness of the findings with respect to modeling decisions:

- a) We stratify the baseline hazard by marriage cohort decade.
- b) We use discrete time event history models in logistic form (applying the weights and the complex sampling parameters) instead of the Cox models used throughout the paper. In the logistic models, the log odds of marital dissolution decline linearly with marital duration.
- c) We run the Cox models while disregarding the weights, clusters, and strata. On the debate over the use of weights in multivariable regressions, see Bollen et al (2016).
- d) We take the unweighted Cox models from Appendix 1c and we test interactions with the parsimony-favoring and harder-to-satisfy BIC test (Raftery 1995). This approach is closest to the modeling approach in Teachman (2002).
- e) We interact the changes over time in predictors of divorce with calendar time rather than with marriage cohort, using Cox models accounting for weights, clusters, and strata.
- f) We restrict the sample to couples married within 15 years of each survey with Cox models (accounting for weights, clusters, and strata). Discarding the data on marriages celebrated more than 15 years before the NSFG surveys reduces the full sample by 30% of marriages (from 47,390 to 33,374) and the number of marital dissolutions by 43%. The rationale for discarding data is to limit recall bias (Sweeney and Phillips 2004) at the cost of reduced statistical power.
- g) We discard the subjects in the 2015-2017 wave who were 45 or older at the time of the survey for consistency with the age limit on the prior survey waves, using Cox models (accounting for weights, clusters, and strata). This filter eliminates less than 1% of the NSFG marriage histories, and eliminates only 21 out of 1,598 marriages celebrated in 2010 or later.
- h) We run weighted Cox models but ignore the clusters and strata (see also Li and Wu 2008; Reinhold 2010).

Results

[Figure 1 here]

Figure 1 shows the extraordinary change in the social demography of women at the time of first marriage, using weighted NSFG data smoothed by a 5 year moving average. Figure 1 shows that the proportion of married women who had lived with both mother and father at age 14 steadily declined from about 79% in 1972, to about 65% in 2006, before rising back to 69% in 2010.

Eleven percent of women who married for the first time in 1970 had cohabited with the marital partner before marriage. The percentage of women who cohabited with the marriage partner before first marriage rose dramatically in the subsequent years, reaching 34% in 1980, 46% in 1990, 60% in 2000, and peaking at 69% in 2011.

The proportion of women holding a college degree at time of first marriage rose from 5% in 1960 to 43% in 2011, a change that resulted from society-wide increasing education, the delay of first marriages, and the increasing selectivity of women with college degrees transitioning into marriage. Hispanicity rose dramatically after the mid-1960s as US immigration policy changed. The percentage of married couples who were interracial, was 5% in 1975, rising to 12% in 2012. In 1960, 52% percent of NSFG recorded first marriages were women in their teen years, which declined steadily to 4% by 2015.

[Figure 2 here]

Figure 2 shows the hazard ratios of breakup with and without controls for each marriage cohort decade (i.e. marriages celebrated in the 1950s, in the 1960s, and so on) with 95%

confidence intervals (derived from the models with controls) for eight predictors of breakup in the NSFG: wife's race (Black wives compared to non-Black wives; the contrast between Black wives and White wives yields the same results), Hispanic wives compared to non-Hispanic wives, interracial marriages (compared to same-race), interethnic marriages (compared to couples who were endogamous on Hispanicity), women without BAs (compared to women with BAs), women who cohabited with their husbands before marriage (compared to women who did not), women from non-intact families of origin (compared to women from intact families of origin), and women who married before the age of 20 (compared to women who married later). The Y axes of the figures in Figure 2 plot the hazard ratios of breakup with respect to the comparison group on a log scale, because the natural log of the hazard ratio is asymptotically Normal. Hazard ratios of greater than 1 indicate a higher hazard rate of marital dissolution compared to the comparison category. Figure 2 shows that there is no significant trend over marriage cohorts in the raw or adjusted hazard ratios of breakup for premarital cohabitation or interraciality.

For Black women, the hazard of marital breakup was significantly higher (compared to non-Black women) for marriages celebrated in the 1950s and the 1960s. The marriage stability gap between Black wives and non-Black wives was converging towards an odds ratio of 1 from the marriage cohorts of the 1950s to the cohorts of the 1990s, consistent with the Converging Destinies Hypothesis and consistent with the impact of the Civil Rights revolution in the U.S, and consistent with the results of Teachman (2002). For marriages celebrated in 2000 and after, the marital dissolution rates of Black wives and non-Black wives significantly diverged again, consistent with the findings of Raley and Bumpass (2003) and Sweeney and Phillips (2004). The

apparent re-emergence in the 2000s of wider divisions between Black families and non-Black families is consistent with the Diverging Destinies Hypothesis.

The hazard ratio for marital dissolution for Hispanic wives appears to have declined from the 1950s marriage cohorts to the 1990s marriage cohorts, consistent with the Converging Destinies Hypothesis. Figure 2 shows no evidence of a post-2000 bounce back in the hazard of divorce for Hispanic wives compared to non-Hispanic wives, so there is no evidence for the Diverging Destinies Hypothesis for Hispanic wives.

Figure 2 shows the hazard of marital dissolution for women with less than a BA rose significantly across marital cohorts compared to the hazard of marital dissolution for women with BAs, consistent with the Diverging Destinies Hypothesis. Women from non-intact families of origin appear to have an upward trend across marriage cohorts in the hazard ratio of breakup compared to women from intact families of origin. Figure 2 shows what appears to be a sharp rise in the hazard of marital dissolution for women married in their teen years compared to women who married later, also apparently consistent with the Diverging Destinies Hypothesis.

[Table 1 here]

For each of the eight predictors of marital dissolution in Figure 2, Table 1 presents formal tests of the significance of the interactions with marriage cohort. The right-most columns of Table 1 report whether the tests for each predictor of change over time is significant or insignificant under the alternate modeling assumptions in appendices 1a-1h. Table 1 confirms the lack of significant change over time in association between premarital cohabitation and marital

dissolution and the lack of change over time in the association between interracial unions and marital dissolution, across the main and alternate tests.

The change in the hazard ratio of marital dissolution between Black wives and non-Black wives, and between teen brides and women who married later, are the statistically most robust change-over-time results. First there was the decline in marital dissolution for Black wives after the marriage cohorts of the 1950s (supporting the Converging Destinies Hypothesis), and then there was the almost-as-strong rise in relative hazard of marital dissolution for Black wives in the marriage cohorts of the 2000s (supporting the Diverging Destinies Hypothesis). Eight of the nine tests show significant changes over marriage cohorts and over time for the hazard ratio of marital dissolution for Black wives compared to non-Black wives, and the ninth test (the BIC test for unweighted models) is very close: BIC of -9.87, slightly above the usual cutoff value of -10 or less (Raftery 1995; see also Online Appendix Tables 1d and 7).

For women whose first marriage occurred before age 20, Figure 2 showed an increasing hazard ratio of marital dissolution over time (compared to women who married at age 20 or later) and Table 1 confirms this result which is consistent with the Diverging Destinies Hypothesis. The significantly increasing hazard of marital dissolution for women who married as teens was consistent across seven of the eight alternate approaches described in the appendices, with the one exception being the model that stratified the baseline hazard by marriage cohort decade.

Aside from the marital dissolution predictors that clearly have *not* changed over time (premarital cohabitation and interraciality), and the two predictors of marital dissolution that have changed over time (race and teen marriage), the other predictors of marital dissolution in the NSFG have varyingly ambiguous relationships with change over time, and therefore ambiguous relationships with the Diverging Destinies Hypothesis or the Converging Destinies

Hypothesis. The apparent decline in the hazard ratio of divorce for Hispanic wives (compared to non-Hispanic wives) in the 1950s and 1960s observed in Figure 2 was marginally not significant in Table 1 because the sample size of Hispanic wives in the pre-1970 NSFG marriage cohorts was small. The F-statistic of 2.67 reported in Table 1 for Hispanic wives' change over marriage cohorts has a P value of 0.07, just above the usual 0.05 threshold. Most of the alternate models fail to reject the null hypothesis of no change over time in marital dissolution of Hispanic wives compared to non-Hispanic wives. The association between time and interethnic unions (marriages between a Hispanic spouse and a non-Hispanic spouse) is similarly fragile, with most of the evidence failing to reject the null hypothesis of no change in the hazard ratio of marital dissolution over time.

Table 1 supports (at least partially) two additional results that are consistent with the Diverging Destinies Hypothesis. First, the marital stability gap between women without BAs and women with BAs appears to be significantly widening. Second, the hazard of breakup for wives from non-intact families of origin appears to have been growing compared to wives from intact families of origin.

If we take family of origin non-intactness as the predictor of interest, then Figure 2 and Table 1 suggest at least partial support for the Diverging Destinies Hypothesis. When we break the non-intact families of origin into their constituent causes using NSFG waves through 1988, Appendix Figure 3 shows that parental divorce had an unchanged relationship with the hazard ratio of daughters' marital dissolutions across the daughters' marriage cohorts, consistent with Li and Wu (2008) and Teachman (2002). Parental divorce has increasingly replaced parental death as the main source of parental family non-intactness. Between parental divorce and parental death, parental divorce has had a stronger association with children's risk of divorce.

Selectivity into Marriage

The selective retreat from marriage is a potential factor that could affect our estimates of the modest changes over time in predictors of marital dissolution. The retreat from (or delay of) marriage has been especially pronounced for non-Hispanic Black women (Lichter et al 1992; Bloome and Ang 2020). We describe a variety of dimensions of change across birth cohorts in selection into marriage using NSFG data in Appendix Figure 4, and we briefly summarize the results here. For women born in the 1930s, 97% of non-Hispanic White women and 87% of non-Hispanic Black women had ever married by age 30. For the 1980s birth cohorts, only 40% of non-Hispanic Black women had ever married by 30 years of age, compared to 69% of non-Hispanic White women.

The BA degree delays marriage so that at age 25, women with BAs have always (back to the birth cohorts of the 1930s) been substantially less likely to have ever married. The 1980s birth cohorts were the first NSFG birth cohorts in which women with BAs were more likely to have been married by age 30 compared to women without BAs (66% compared to 62%). Coming from an intact family of origin has historically increased the chance of ever marrying by age 30, and in the 1980s birth cohorts this advantage had increased (to 66% compared to 58% for women from non-intact families). How changes in selection into marriage might bias the estimates of change-over-time in predictors of divorce is beyond the scope of this paper (but see Lillard et al 1995 and Bernardi and Martinez-Pastor 2010).

Evaluating the alternative approaches

Among the alternative tests for change over time in the hazard ratios of predictors of marital dissolution that are summarized in Table 1 and reported in more detail in Appendix Tables 1a-1h, alternative (a) adds stratification of the baseline hazard by marriage cohort which reduces the change-over-cohort association between teen marriage and marital dissolution to insignificance but is otherwise consistent with the main models. Alternative (b), replacing the weighted Cox models with weighted discrete time models in logistic form yields substantively the same results as the main Cox models, consistent with what the literature leads us to expect (Mills 2011). Alternative (c) drops the weights and complex sampling from the main Cox models, and results in smaller standard errors that elevate changes across cohorts in both Hispanic wives' marriages (compared to non-Hispanic wives' marriages) and interethnic marriages' (compared to non-interethnic marriages) to significance.

Alternative (d) starts with the unweighted Cox models from (c) and applies the parsimony-favoring BIC test. Relying on the BIC test, only the teen marriage change over marital cohorts is significant with a BIC of -11.34, however race (BIC of -9.87) and education (BIC of -9.19) were close to the -10 BIC significance cutoff.

Alternative (e) uses interactions with calendar time instead of interactions with marriage cohort. Interactions with calendar time show fewer significant changes compared to interactions with marriage cohort. When interacting predictors of dissolution with calendar time only race and teen marriage have significant changes over time.

Alternative (f) eliminates subjects whose married more than 15 years prior to their interview, which reduces the number of marital dissolutions in the full dataset by 42%. The reduction reduces the statistical power of the tests while yielding no discernible advantage.

Alternative (g) eliminates survey respondents who were older than 44 at time of survey, reducing the number of marital histories by less than 1%, with no substantive effect on the results.

Alternative (h), ignoring the NSFG's complex sampling, has no substantive effect on the results, suggesting that in these multivariable models the weights can be influential on the results but the strata and clusters together are less so. In Appendix Table 5 we show how similar the weighted standard errors of the key predictors are with and without considering the complex sampling parameters. In Appendix Table 6 we decompose the design effects into design effect due to the weights (DEFT range from 0.78 to 1.55) and a design effect due to complex sampling (DEFT range from 0.89 to 1.11). DEFT is a measure of the ratio between the standard errors in the model and what the standard errors would be under simple random sampling. The complex sampling parameters have a much smaller effect than the weights have on the standard errors of the key estimates. Weights and clustering tend to increase standard errors, while stratification tends to decrease standard errors (West and McCabe 2012).

[Table 2 here]

First marriage survival rates:

To explore the roots of observed changes over time in marital dissolution, Table 2 presents the Kaplan-Meier (1958) weighted marital survival (against the risk of dissolution) at 5 and 10 years for the various predictors of marital dissolution and the relevant comparison categories, by marriage cohort decade. In Table 2 we observe that Black wives' cumulative rate of marriage survival at 10 years declined from 63% for marriages celebrated in the 1990s, to 49% for marriages celebrated in the 2000s. At the same time, cumulative marital stability for

White wives was steady or slightly increasing, from 69% in the 10th year for marriages celebrated in the 1990s to 71% for marriages celebrated in the 2000s. The divergence between the marital trajectories of Black wives and White wives in the post-2000 era is mostly due to the greater dissolution rates of Black women's marriages.

Women who married young (especially women who married at 18-19 years of age) experienced sharply declining marital stability across cohorts, whereas the women who married at age 25 or later experienced relatively steady marital stability across marital cohorts from the 1970s forward. Table 2 shows that the divergence in marital dissolution risk in recent marriage cohorts is driven by higher marital dissolution risk among disadvantaged groups (Black women, women who married as teens), rather than greater marital stability among advantaged groups. See also Online Appendix Table 4.

[Table 3 here]

Interactions with Race

Table 3 shows the interactions between race and ethnicity and the non-racial predictors of marital dissolution. These interactions have rarely been tested before in a multivariable context (controlling for other predictors of marital dissolution) to our knowledge. Table 3 provides a number of findings consistent with the Racial Minority Moderation Hypothesis, i.e. that racial minorities would experience milder disadvantages (in terms of lower hazard ratios of marital dissolution) when facing the same circumstances, compared to non-Hispanic White women. Premarital cohabitation has been associated with marital dissolution (hazard ratio of 1.30) for

non-Hispanic White wives, but there has been no such association for non-Hispanic Black wives, and the difference between White women and Black women is statistically significant.

For non-Hispanic White women without a BA degree, the hazard rate for marital dissolution was 1.86 times higher than for non-Hispanic White women with the BA degree, but for Hispanic women there was no marital survival disadvantage at all (hazard ratio of 0.73) associated with not having the BA degree (controlling for other factors), and the difference between Hispanic women and non-Hispanic White women was significant by both the coefficient and the BIC tests. Among women married as teenagers all racial groups had higher rates of marital dissolution compared to women who married later, but for non-Hispanic Black wives (hazard ratio 1.44) and for Hispanic wives (hazard ratio 1.41) the hazard ratio penalty for early marriage was significantly lower than for non-Hispanic White wives (hazard ratio 1.77). We found no significant three-way interactions of (race/ethnicity) \times (non-racial predictor of marital dissolution) \times (time).

Conclusion

We find little support for the Converging Destinies Hypothesis, with one exception: the decline in the divorce gap between Black women and non-Black women during and immediately after the Civil Rights revolution in the U.S. According to the Converging Destinies Hypothesis, the dramatic increase of premarital cohabitation, parental divorce, and interracial unions in the US should have normalized those categories and erased their associations with higher divorce rates. These predicted convergences in marital dissolution rates have not taken place.

The verdict on the Diverging Destinies hypothesis depends in part on seemingly arbitrary modeling choices. Race and age at marriage are the two predictors of marital dissolution whose

change across cohorts is most consistent with the Diverging Destinies hypothesis. We also observe (in 6 out of 9 models) a rising divergence in marital dissolution rates between women without the BA degree and women with the BA degree, consistent with Härkönen and Dronkers (2006), Martin (2006), and Raley and Bumpass (2003). The divergence in marital dissolution rates between women from intact and non-intact families of origin is due to compositional changes in the sources of family of origin non-intactness.

We found evidence supporting the Racial Minority Moderation Hypothesis. Non-Hispanic Black women's chances of marital dissolution have been unaffected by premarital cohabitation. Hispanic women's chances of marital dissolution have been unaffected by the women's lack of a BA degree. Both non-Hispanic Black women and Hispanic women have higher rates of marital dissolution when they marry before the age of 20, but the hazard ratio of marital dissolution when marrying as teens (compared to marrying later) is significantly less for both groups than it is for non-Hispanic White women.

Discussion

Along with the NSFG's strengths (good sample size of first marital histories, coverage of marriage cohorts back to the 1950s, a strong legacy of prior research) there are many limitations as well. The retrospective nature of the NSFG surveys precludes useful attitude data from subjects before marriage. NSFG lacks consistent measures of subjects' income over time. The narrow age window of NSFG subjects precludes analysis of later-in-life marriages and divorces. NSFG lacks data on time use and on the division of household labor. Some key questions (subject's age at BA degree, reason for family of origin non-intactness) were not measured consistently across NSFG waves. NSFG's sample size (though very good) was not enough to

generate statistically powerful tests of all the interactions of interest, which leaves some uncertainty about how to interpret the results.

Because the interactions between predictors of marital dissolution and time are modest in effect sizes in the NSFG data, we show that a variety of seemingly arbitrary methodological choices (whether to apply the weights, to use BIC tests or traditional frequentist tests, to interact changes with calendar time or marriage cohort) can determine the statistical significance of some of the results. Accounting for NSFG complex sampling parameters mattered less as long as the weights were applied. Trimming the data to include only the most recent marriages in NSFG provided no benefits but did have a downside of reducing sample size and power.

Methodological narrowness hampers the literature on the predictors of divorce. As different studies use different statistical tests and make different choices about weights, controls, data filters, and which functional forms to estimate, results often lack comparability. Too much reliance on a single methodological approach can lead to over-confidence in results and a lack of replicability (Leamer 1983). We not only provide results from a broad set of methodological choices, but we also provide the NSFG extract and Stata files that allow for replication of the key results (as recommended by NCFR 2020) and we urge others to do likewise.

The literature on predictors of divorce is vast. Among the subset of studies that focus on change over time in predictors of divorce, most focus on one predictor of divorce, thus limiting the field's ability to compare and synthesize across predictors of divorce. Descriptive analyses that are broad and synthetic are essential to understanding how marital dissolution has or has not changed over time.

There is a dearth of published multivariable analyses of the racial differences in the predictors of divorce in the U.S., yet the racial differences appear to be quite significant. The

reasons for the racial differences in the predictors of marital dissolution are not discernible with NSFG data. Further investigation is necessary into the Racial Moderation Hypothesis (Cross 2020), i.e. that people from racial minority groups in the U.S. are shielded somewhat from additional stresses by their greater integration with extended families and their prior experience with stress and disadvantage.

The polarization of family life (i.e. results consistent with the Diverging Destinies Hypothesis) in the U.S. observed here, though modest in its extent, would if true be consistent with recent research in Europe (Esping-Anderson 2016). Marital dissolution in the U.S. appears to be increasingly an experience for women with less education, for Black women, and for women who marry young. Entry into marriage is increasingly the province of White women, women from intact families of origin, and (most recently) women with BA degrees.

The second (and equally valid in our view) way of making sense of the tests of stability and change in the predictors of marital dissolution over time is to be more skeptical of the changes whose statistical significance is not robust to all the different modeling choices we have presented here. The skeptical view is bolstered by reliance on the parsimony-favoring BIC test, or by relying on interactions with calendar time instead of with marriage cohort. Relying on the BIC tests, teen marriage's rise in marital dissolution rates would be the only robustly significant change in recent decades. Relying on interactions with calendar time, only race and teen marriage appear to be significantly changing over time in their association with marital dissolution. Following this more skeptical view, all the other predictors of marital dissolution aside from race and teen marriage are seen as surprisingly consistent in their association with marital dissolution across decades of profound change to the marriage system. This interpretation is consistent with Teachman's (2002) results from a generation ago.

The relative stability over time in predictors of marital dissolution is the fundamental finding if one accepts the more skeptical interpretation of the Diverging Destinies results. More research is necessary to explain why and how the predictors of marital dissolution (except for race and early marriage) can have been so relatively consistent over time while the demographics and social experiences of marriage and divorce have changed so much.

Cases:

Loving v. Virginia, 388 U.S. 1 (1967).

References:

Acs, G., Braswell, K., Sorensen, E. & Turner, M. A. (2013) The Moynihan Report Revisited. The Urban Institute. <https://www.urban.org/research/publication/moynihan-report-revisited>

Amato, P. R. & Cheadle, J. (2005). The Long Reach of Divorce: Divorce and Child Well-Being Across Three Generations. *Journal of Marriage and Family*, 67, 191-206. <https://doi.org/10.1111/j.0022-2445.2005.00014.x>

Axinn, W. G. & Thornton, A. (1992). The Relationship between Cohabitation and Divorce: Selectivity or Causal Inference? *Demography*, 29, 357-374. <https://doi.org/10.2307/2061823>

Baker, R. S. & O'Connell, H. A. (2022). Structural Racism, Family Structure, and Black-White Inequality: The Differential Impact of the Legacy of Slavery on Poverty among Single Mother and Married Parent Households. *Journal of Marriage and Family*, 84, 1341-1365. <https://doi.org/10.1111/jomf.12837>

Bean, F. D. & Tienda, M. (1987). *The Hispanic Population of the United States*, New York: Russell Sage.

Bernardi, F. & Martínez-Pastor, J.-I. (2010). Female Education and Marriage Dissolution: Is it a Selection Effect? *European Sociological Review*, 27, 693-707. <https://doi.org/10.1093/esr/jcq031>

Bloome, D. & Ang, S. (2020). Marriage and Union Formation in the United States: Recent Trends across Racial Groups and Economic Backgrounds. *Demography*, 57. <https://doi.org/10.1007/s13524-020-00910-7>

Bobo, L. D., Charles, C. Z., Krysan, M. & Simmons, A. D. (2012) The *Real* Record on Racial Attitudes. In P. V. Marsden (Ed.), *Social Trends in American Life: Findings from the General Social Survey since 1972*. (pp. 38-83), Princeton, NJ: Princeton University Press.

Bollen, K. A., Biemer, P. P., Karr, A. F., Tueller, S. & Berzofsky, M. E. (2016). Are Survey Weights Needed? A Review of Diagnostic Tests in Regression Analysis. *Annual Review*

- of Statistics and its Application*, 3, 375-392. <https://doi.org/10.1146/annurev-statistics-011516-012958>
- Booth, A. & Johnson, D. (1988). Prematrimonial Cohabitation and Marital Success. *Journal of Family Issues*, 9, 255-272. <https://doi.org/10.1177/019251388009002007>
- Bramlett, M. D. & Mosher, W. D. (2002) Cohabitation, Marriage, Divorce, and Remarriage in the United States. National Center for Health Statistics.
- Brandolini, A. & Smeeding, T. M. (2006). Patterns of Economic Inequality in Western Democracies: *PS: Political Science and Politics*, 39, 21-26. <https://doi.org/10.1017/s1049096506060124>
- Bratter, J. L. & King, R. B. (2008). But Will It Last?: Marital Instability Among Interracial and Same-Race Couples. *Family Relations*, 57, 160-171. <https://doi.org/10.1111/j.1741-3729.2008.00491.x>
- Brines, J. & Joyner, K. (1999). The Ties that Bind: Principles of Cohesion in Cohabitation and Marriage. *American Sociological Review*, 64, 333-355. <http://dx.doi.org/10.2307/2657490>
- Bumpass, L. L. & Sweet, J. A. (1989). National Estimates of Cohabitation. *Demography*, 26, 615-625. <https://doi.org/10.2307/2061261>
- Cherlin, A. J. (1992). *Marriage, Divorce, Remarriage*. Harvard University Press.
- Cherlin, A. J. (2014). *Labor's Love Lost: The Rise and Fall of the Working-Class Family in America*, New York: Russell Sage Foundation.
- Cross, C. (2020). Racial/Ethnic Differences in the Association Between Family Structure and Children's Education. *Journal of Marriage and Family*, 82, 691-712. <https://doi.org/10.1111/jomf.12625>
- Cross, C. J., Fomby, P. & Letiecq, B. (2022). Interlinking Structural Racism and Heteropatriarchy: Rethinking Family Structure's Effects on Child Outcomes in a Racialized, Unequal Society. *Journal of Family Theory & Review*, 14, 482-501. <https://doi.org/10.1111/jftr.12458>
- Dush, C. M. K., Cohan, C. L. & Amato, P. R. (2003). The Relationship between Cohabitation and Marital Quality and Stability: Change across Cohorts? *Journal of Marriage and Family*, 65, 539-549. <https://doi.org/10.1111/j.1741-3737.2003.00539.x>
- Esping-Anderson, G. (2016). *Families in the 21st Century*, Stockholm, Sweden: SNS Förlag.

- Fomby, P. (2022) Accounting for Race Differences in How Family Structure Shapes the Transition into Adulthood. Pp 193-227 in J. Kimmel (Ed.), *Intergenerational Mobility: How Gender, Race and Family Structure Affect Adult Outcomes*. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.
- Frazier, E. F. (1966). *The Negro Family in the United States*. University of Chicago Press.
- Goldscheider, F. K. & Lawton, L. (1998). Family Experiences and the Erosion of Support for Intergenerational Coresidence. *Journal of Marriage and Family*, 60, 623-632.
<https://doi.org/10.2307/353533>
- Goode, W. J. (1962). Marital Satisfaction and Instability: a Cross-Cultural Class Analysis of Divorce Rates. *International Social Science Journal*, 14, 507-526.
- Goodwin, P. Y., Mosher, W. D. & Chandra, A. (2010) Marriage and Cohabitation in the United States: A Statistical Portrait Based on Cycle 6 (2002) of the National Survey for Family Growth. National Center for Health Statistics.
- Gould, S. J. (1996). *The Mismeasure of Man*, New York: W.W. Norton.
- Härkönen, J. & Dronkers, J. (2006). Stability and Change in the Educational Gradient of Divorce: A Comparison of Seventeen Countries. *European Sociological Review*, 22, 501-517. <https://doi.org/10.1093/esr/jcl011>
- Hyman, H. H. & Sheatsley, P. B. (1964). Attitudes Towards Desegregation. *Scientific American*, 211, 16-23. <https://doi.org/10.1038/scientificamerican0764-16>
- Iceland, J. (2019). Racial and Ethnic Inequality in Poverty and Affluence, 1959-2015. *Population Research & Policy Review*, 38, 615-654. <https://doi.org/10.1007/s11113-019-09512-7>
- Kalbfleisch, J. D. & Prentice, R. L. (2002). *The Statistical Analysis of Failure Time Data*, New York: John Wiley & Sons.
- Kaplan, E. L. & Meier, P. (1958). Nonparametric Estimation from Incomplete Observations. *Journal of the American Statistical Association*, 53, 457-481.
<https://doi.org/10.1080/01621459.1958.10501452>
- Killewald, A. (2016). Money, Work, and Marital Stability: Assessing Change in the Gendered Determinants of Divorce. *American Sociological Review*, 81, 696-719.
<https://doi.org/10.1177/0003122416655340>

- Kuperberg, A. (2014). Age at Coresidence, Premarital Cohabitation, and Marriage Dissolution: 1985-2009. *Journal of Marriage and Family*, 76, 352-369.
<https://doi.org/10.1111/jomf.12092>
- Leamer, E. E. (1983). Let's Take the Con out of Econometrics. *American Economic Review*, 73, 31-43.
- Lehrer, E. L. & Son, Y. J. (2017). Women's Age at First Marriage and Marital Instability in the United States: Differences by Race and Ethnicity. *Demographic Research*, 37, 229-250.
<https://doi.org/10.4054/demres.2017.37.9>
- Li, J.-C. A. & Wu, L. L. (2008). No Trend in the Intergenerational Transmission of Divorce. *Demography*, 45, 875-883. <https://doi.org/10.1353/dem.0.0030>
- Lichter, D. T., McLaughlin, D. K., Kephart, G. & Landry, D. J. (1992). Race and the Retreat from Marriage: A Shortage of Marriageable Men? *American Sociological Review*, 57, 781-799. <https://doi.org/10.2307/2096123>
- Liefbroer, A. C. & Dourleijn, E. (2006). Unmarried Cohabitation and Union Stability: Testing the Role of Diffusion Using Data from 16 European Countries. *Demography*, 43, 203-221. <https://doi.org/10.1353/dem.2006.0018>
- Lillard, L. A., Brien, M. J. & Waite, L. J. (1995). Premarital Cohabitation and Subsequent Marital Dissolution: A Matter of Self-Selection? *Demography*, 32, 437-457.
<https://doi.org/10.2307/2061690>
- Mahoney, M. M. (2005). Forces Shaping the Law of Cohabitation for Opposite Sex Couples. *Journal of Law & Family Studies*, 7, 135-204.
- Manning, W. D., Smock, P. J. & Kuperberg, A. (2021). Cohabitation and Marital Dissolution: A Comment on Rosenfeld and Roesler. *Journal of Marriage and Family*, 83, 260-267.
<https://doi.org/10.1111/jomf.12724>
- Martin, T. C. & Bumpass, L. L. (1989). Recent Trends in Marital Disruption. *Demography*, 26, 37-51. <https://doi.org/10.2307/2061492>
- Martin, S. P. (n.d.) Growing Evidence for a 'Divorce Divide'? Education and Marital Dissolution Rates in the US since the 1970s. Russell Sage Foundation.
- Martin, S. P. (2006). Trends in Marital Dissolution by Women's Education in the United States. *Demographic Research*, 15, 537-560. <http://dx.doi.org/10.4054/DemRes.2006.15.20>

- Massey, D. S. & Denton, N. A. (1993). *American Apartheid: Segregation and the Making of the Underclass*, Cambridge, Mass.: Harvard University Press.
- McLanahan, S. (2004). Diverging Destinies: How Children are Faring Under the Second Demographic Transition. *Demography*, 41, 607-627.
<https://doi.org/10.1353/dem.2004.0033>
- McLanahan, S. & Percheski, C. (2008). Family Structure and the Reproduction of Inequalities. *Annual Review of Sociology*, 34, 257-276.
<https://doi.org/10.1146/annurev.soc.34.040507.134549>
- McLanahan, S. & Sandefur, G. (1994). *Growing Up with a Single Parent: What Hurts, What Helps*, Cambridge, Mass.: Harvard University Press.
- Mills, M. (2011). *Introducing Survival and Event History Analysis*, Los Angeles: Sage Publications.
- National Council on Family Relations (2020) Journal of Marriage and Family (JMF) Style Guide. <https://www.ncfr.org/jmf/submit-jmf/jmf-style-guide>. Accessed on October 7, 2020.
- National Survey of Family Growth (2015) 2011-2013 NSFG User's Guide Appendix 2: SAS and STATA syntax guidelines for common file manipulations.
https://www.cdc.gov/nchs/data/nsfg/NSFG_2011-2013_UG_App2_FileManipulations_v2.pdf. Accessed on March 24, 2021
- Oppenheimer, V. K. (1988). A Theory of Marriage Timing. *American Journal of Sociology*, 94, 563-591. <https://doi.org/10.1086/229030>
- Piketty, T. (2014). *Capital in the Twenty-First Century*, Cambridge, Mass: Belknap Press of Harvard University Press.
- Raftery, A. E. (1995). Bayesian Model Selection in Social Research. *Sociological Methodology*, 25, 111-163. <http://dx.doi.org/10.2307/271063>
- Raley, R. K. & Bumpass, L. (2003). The Topography of the Divorce Plateau: Levels and Trends in Union Stability in the United States after 1980. *Demographic Research*, 8, 245-160.
<https://doi.org/10.4054/DemRes.2003.8.8>
- Reinhold, S. (2012). Reassessing the Link between Premarital Cohabitation and Marital Instability. *Demography*, 47, 719-733. <https://doi.org/10.1353/dem.0.0122>

- Rosenfeld, M. J. (2007). *The Age of Independence: Interracial Unions, Same-Sex Unions, and the Changing American Family*, Cambridge, Mass.: Harvard University Press.
- Rosenfeld, M. J. (2017). Moving a Mountain: The Extraordinary Trajectory of Same-sex Marriage Approval in the U.S. *Socius*, 3, 1-22.
<https://doi.org/10.1177/2378023117727658>
- Rosenfeld, M. J. & Roesler, K. (2019). Cohabitation Experience and Cohabitation's Association with Marital Dissolution. *Journal of Marriage and Family*, 81, 42-58.
<https://doi.org/10.1111/jomf.12530>
- Rosenfeld, M. J. & Roesler, K. (2021). Premarital Cohabitation and Marital Dissolution: A Reply to Manning, Smock, and Kuperberg. *Journal of Marriage and Family*, 83, 268-279. <https://doi.org/10.1111/jomf.12744>
- Sabogal, F., Marín, G., Otero-Sabogal, R., Marín, B. V. & Perez-Stable, E. J. (1987). Hispanic Familism and Acculturation: What Changes and What Doesn't? *Hispanic Journal of Behavioral Sciences*, 9, 397-412. <https://doi.org/10.1177/07399863870094003>
- Schoen, R. (1992). First Unions and the Stability of First Marriages. *Journal of Marriage and Family*, 54, 281-284. <https://doi.org/10.2307/353059>
- Schuman, H., Steeh, C., Bobo, L. & Krysan, M. (1997). *Racial Attitudes in America: Trends and Interpretations*, Cambridge, Mass.: Harvard University Press.
- Stack, C. (1974). *All Our Kin*, New York: Basic Books.
- Sweeney, M. M. & Phillips, J. A. (2004). Understanding Racial Differences in Marital Disruption: Recent Trends and Explanations. *Journal of Marriage and Family*, 66, 639-650. <https://doi.org/10.1111/j.0022-2445.2004.00043.x>
- Teachman, J. (2002). Stability across Cohorts in Divorce Risk Factors. *Demography*, 39, 331-351. <https://doi.org/10.1353/dem.2002.0019>
- Teachman, J. (2003). Premarital Sex, Premarital Cohabitation, and the Risk of Subsequent Marital Dissolution among Women. *Journal of Marriage and Family*, 65, 444-455.
<https://doi.org/10.1111/j.1741-3737.2003.00444.x>
- Treas, J. (2002). How Cohorts, Education, and Ideology Shaped a New Sexual Revolution on American Attitudes Toward Nonmarital Sex, 1972-1998. *Sociological Perspectives*, 45, 267-283. <https://doi.org/10.1525/sop.2002.45.3.267>

- Waite, L. J. & Spitze, G. D. (1981). Young Women's Transition to Marriage. *Demography*, 18, 681-694. <https://doi.org/10.2307/2060955>
- West, B. T. & McCabe, S. E. (2012). Incorporating Complex Sample Design Effects when only Final Survey Weights are Available. *The Stata Journal*, 12, 718-725. <https://doi.org/10.1177/1536867x1201200410>
- Williams, D. T. (2019). A Call to Focus on Racial Domination and Oppression: A Response to "Racial and Ethnic Inequality in Poverty and Affluence, 1959-2015". *Population Research & Policy Review*, 38, 655-663. <https://doi.org/10.1007/s11113-019-09538-x>
- Wilson, W. J. (1980). *The Declining Significance of Race*, Chicago: University of Chicago Press.
- Wolfinger, N. H. (1999). Trends in the Intergenerational Transmission of Divorce. *Demography*, 36, 415-420. <https://doi.org/10.2307/2648064>
- Wolfinger, N. H. (2011). More Evidence for Trends in the Intergenerational Transmission of Divorce: A Completed Cohort Approach Using Data from the General Social Survey. *Demography*, 48, 581-592. <https://doi.org/10.1007/s13524-011-0025-4>
- Zuberi, T. (2001). *Thicker than Blood: How Racial Statistics Lie*, Minneapolis, MN: University of Minnesota Press.

Table 1: Interactions between predictors of marital dissolution and marriage cohort, from Cox proportional hazard regressions

Predictor	Baseline	marriage cohort interaction	interaction (hazard ratio)	t or F stat	statistic	Main analysis evidence for change	Alternate models evidence for Convergence (Con) or Diverging Destinies (Div)
Premarital Cohabitation	1.31***	Linear	0.997	t	-1.00	None	None
Wife Black	1.54***	decade dummy var	1950s: 1.48*** 2000s: 1.44***	F	19.97***	Convergence first, and then Divergence	Con and then Div: a, b, c, e, f, g, h
Wife Hispanic	0.82***	decade dummy var	1950s: 1.37 1960s: 1.30*	F	2.67	None	Con: c
Wife without BA	1.62***	Linear	1.015***	t	3.47***	Divergence	Div: a, b, c, g, h
Wife non-intact family of origin	1.50***	Linear	1.004**	t	2.73**	Divergence	Div: a, b, c, g, h
Interracial couple	1.31***	Linear	0.999	t	-0.25	None	None
Interethnic couples	1.45***	Linear	0.992	t	-1.38	None	Con: c, f
Married as teen	1.68***	Linear	1.008***	t	4.56***	Divergence	Div: b, c, d, e, f, g, h

Source: First marriage data from NSFG waves 1973- 2015, except interracial (spouses differ based on Black identity, White identity or other racial identity), interethnic (spouses differ based on Hispanic identity), BA (accurate, time varying) and premarital cohabitation include more recent subsets of waves. N of couples in the full set is 47,390 and N of marital dissolution events is 14,236; for premarital cohabitation (N= 27,550 couples and 9,392 marital dissolutions) and interraciality and interethnic (N= 22,077 couples and 7,544 marital dissolutions) and wife with BA (18,575 cases and 6,562 marital dissolutions). Controls include age at marriage, minor children in the household (time varying), respondent educational attainment (time varying), intact family of origin, and respondent race. Interraciality, interethnic and BA have premarital cohabitation as an additional control; interraciality, interethnic and premarital cohabitation have mother's educational attainment as an additional control. Baseline association is association of predictor with marital dissolution, with other controls but with no interactions between predictor and marriage cohort. All models account for weights and complex sampling. *** P<0.001; ** P<0.01; * P<0.05.

Alternate version descriptions: a) stratifies baseline hazard by marriage cohort; b) discrete time logistic version; c) unweighted; d) unweighted with BIC tests; e) interactions with calendar time rather than marriage cohort; f) married within 15 years of survey; g) eliminates survey respondents older than 44; h) weighted but ignoring complex sampling. See appendices for details.

Table 2: Kaplan-Meier marriage survival at month 60 and 120 by marriage cohort decade

	at month	1950s	1960s	1970s	1980s	1990s	2000s	2010s
All	60	0.92	0.87	0.81	0.79	0.82	0.82	0.86
	120	0.85	0.77	0.68	0.65	0.70	0.69	--
Wife Black	60	0.83	0.78	0.73	0.71	0.78	0.67	--
	120	0.69	0.61	0.57	0.52	0.63	0.49	--
Wife White	60	0.93	0.88	0.81	0.79	0.81	0.83	0.86
	120	0.87	0.78	0.69	0.66	0.69	0.71	--
Wife Other	60	--	0.94	0.87	0.84	0.89	0.85	--
	120	--	0.83	0.74	0.74	0.79	0.77	--
Interracial	60	--	--	--	0.69	0.76	0.72	--
	120	--	--	--	0.52	0.65	0.61	--
Non-interracial	60	--	--	0.77	0.79	0.82	0.83	0.86
	120	--	--	0.64	0.66	0.70	0.70	--
Wife Hispanic	60	0.90	0.85	0.83	0.82	0.86	0.81	--
	120	0.81	0.76	0.70	0.71	0.74	0.70	--
Wife non-Hispanic	60	0.92	0.87	0.81	0.78	0.81	0.82	0.84
	120	0.85	0.77	0.68	0.65	0.69	0.69	--
Interethnic union	60	--	--	0.73	0.69	0.71	0.73	--
	120	--	--	0.50	0.49	0.60	0.61	--
not interethnic union	60	--	--	0.77	0.79	0.83	0.82	0.85
	120	--	--	0.65	0.66	0.70	0.70	--
Premarital cohabitation	60	--	--	0.75	0.77	0.80	0.81	0.84
	120	--	--	0.61	0.61	0.66	0.67	--
non premarital cohab	60	--	--	0.80	0.80	0.84	0.83	0.90
	120	--	--	0.68	0.68	0.74	0.72	--
Parents divorced	60	0.87	0.78	0.73	--	--	--	--
	120	0.78	0.65	0.61	--	--	--	--
non-intact fam of origin	60	0.89	0.81	0.73	0.70	0.76	0.72	--
	120	0.81	0.69	0.58	0.51	0.59	0.56	--
intact fam of origin	60	0.93	0.89	0.83	0.82	0.84	0.86	0.87
	120	0.86	0.79	0.71	0.71	0.74	0.75	--
wife marry at age <18	60	0.83	0.76	0.68	0.62	0.67	0.59	--
	120	0.73	0.60	0.52	0.48	0.53	--	--
at 18-19	60	0.93	0.85	0.77	0.71	0.69	0.62	--
	120	0.85	0.73	0.62	0.57	0.53	0.45	--
at 20-24	60	0.95	0.91	0.84	0.81	0.80	0.79	0.86
	120	0.91	0.83	0.73	0.68	0.63	0.65	--
at 25+	60	0.97	0.94	0.87	0.86	0.89	0.88	0.88
	120	0.92	0.85	0.81	0.73	0.80	0.78	--

Source: Weighted first marriage data from NSFG through 2015. Survival here is defined as the absence of separation or divorce.

Table 3: Race-specific predictors of marital dissolution, hazard ratios (SE) from weighted Cox regressions without and with controls

Predictor of marital dissolution	No controls		With controls		BIC
	Hazard Ratio of Marital dissolution	Significance of difference from NH White wives	Hazard Ratio of marital dissolution	Significance of difference from NH White wives	
Premarital Cohabitation					
NH White wives	1.20*** (0.05)		1.30*** (0.06)		
NH Black wives	1.01 (0.07)	*	1.10 (0.08)	*	5.1
Hispanic wives	1.26** (0.10)		1.28** (0.11)		
Wife without BA					
NH White wives	2.42*** (0.15)		1.86*** (0.12)		
NH Black wives	1.51** (0.21)	**	1.37* (0.19)		
Hispanic wives	0.96 (0.17)	***	0.73 (.13)	***	-26.8
Wife from non-intact family of origin					
NH White wives	1.63*** (0.06)		1.44*** (0.05)		
NH Black wives	1.38*** (0.09)	*	1.28 (0.08)		
Hispanic wives	1.83*** (0.14)		1.87*** (0.15)	**	-1.4
Wife married as teen					
NH White wives	1.70*** (0.05)		1.77*** (0.07)		
NH Black wives	1.25*** (0.06)	***	1.44*** (0.08)	***	-15.0
Hispanic wives	1.43*** (0.10)	*	1.41*** (0.11)	**	-19.8

Source: NSFG first marriages from 1973- 2015 waves, except BA (accurate, time varying) and premarital cohabitation include more recent subsets of waves. All models account for complex sampling. The abbreviation 'NH' means non-Hispanic. There were no significant 3-way interactions (predictor \times race \times time). N of couples in the full set is 47,390 and N of marital dissolution events is 14,236. Controls include age at marriage, minor children in the household (time varying), respondent educational attainment (time varying), intact family of origin, and respondent race. For wives with BA, additional control were mother's education and premarital cohabitation. For premarital cohabitation, mother's education was an additional control. *** P<0.001; ** P<0.01; * P<0.05. BIC statistics computed from unweighted regressions. BIC values <-10 are considered significant.

Characteristics of first marriages at time of marriage

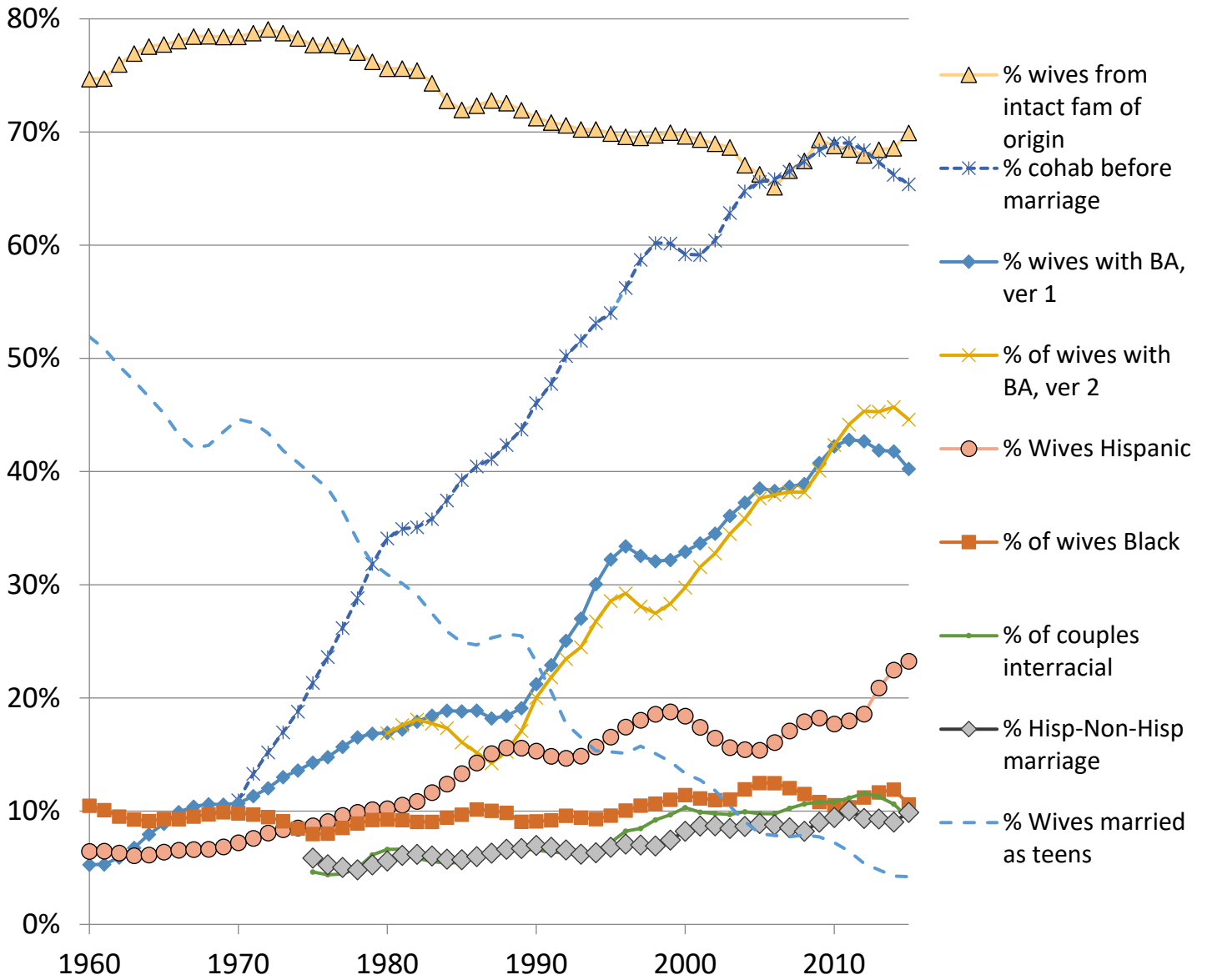


Figure 1: Weighted NSFG data on first marriages, smoothed with 5 year moving average. Data points for 2016 and 2017 not shown because there were too few new first marriages reported in NSFG for 2016 and 2017. N of marriages is 48,816. Version 1 of “% wives with BA” uses all waves and assumes people who obtained the BA did so at age 22, the norm. Version 2 of “% wives with BA” uses actual age of BA attainment with the 1995 wave and waves 2006 and later.

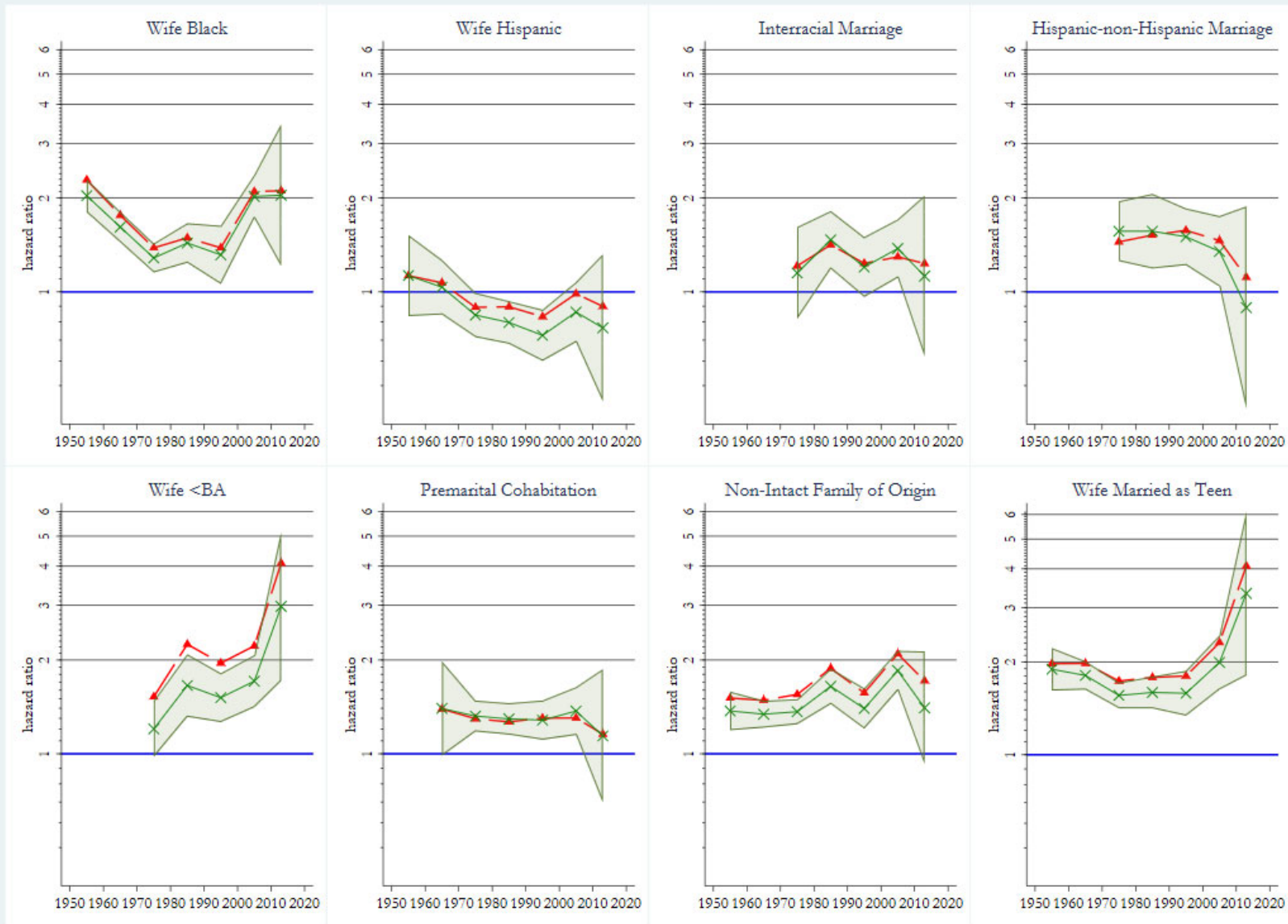


Figure 2: Hazard Ratios of Marital Dissolution, with and without additional controls, from weighted Cox models by marriage cohort decade.

Source: NSFG data on first marriages, accounting for complex sampling. Adjusted hazard ratio accounts for all available additional controls (see text).

