Working Paper Series 740
(ISSN 2788-0443)

Who Divorces Whom: Unilateral Divorce Legislation and the Educational Structure of Marriage

Geghetsik Afunts
Štěpán Jurajda

CERGE-EI
Prague, November 2022

ISBN 978-80-7343-547-9 (Univerzita Karlova, Centrum pro ekonomický výzkum a doktorské studium)
ISBN 978-80-7344-659-8 (Národohospodářský ústav AV ČR, v. v. i.)

Who Divorces Whom: Unilateral Divorce Legislation and the Educational Structure of Marriage*

Geghetsik Afunts[1] and Stepan Jurajda[2]

[1]CERGE-EI, Deutsche Bundesbank†

[2]CERGE-EI‡

Abstract

There is evidence that the introduction of unilateral divorce legislation (UDL) starting in the late 1960s increased US divorce rates. We ask whether making divorce easier affected the educational structure of marriage. Based on marriage and divorce certificate data covering 1970-1988, we provide new evidence on the evolution of the educational structure of marriage inflows (newlyweds) and outflows (divorces), and estimate UDL difference-in-differences effects on both flows. While UDL did not contribute to rising homogamy (the tendency towards married partners having the same level of education), it did affect the educational structure of marriage: it made generally unstable hypogamous couples (women marrying less educated partners) less likely to divorce, and it made homogamous couples more stable than hypergamous ones (women marrying more educated partners).

---

*We thank Joshua Angrist, Pierre-André Chiappori, Randall Filer, Paola Giuliano, Nikolas Mittag, and Selma Walther for their helpful comments, and Justin Wolfers for the open-access state-level data. Afunts gratefully acknowledges support from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No. 681228.

†Disclaimer: The views expressed in this paper are those of the authors and do not necessarily reflect the views of the Deutsche Bundesbank or the Eurosystem.

‡A joint workplace of Charles University in Prague and the Economics Institute of the Czech Academy of Sciences, Politickych veznu 7, 111 21 Prague 1, Czech Republic. Emails of the authors: geghetsik.afunts@cerge-ei.cz ; stepan.jurajda@cerge-ei.cz .

1 Introduction

A large body of work in demography, economics, and sociology suggests that educational homogamy, the tendency to assortatively match into marriage and cohabitation based on one's education level, has increased significantly in the US since the 1960s (Schwartz & Mare, 2005; Siow, 2015).[1] This period has also been characterized by a dramatic increase in divorce rates and a decline in marriage rates, which has been partly attributed to the adoption of unilateral divorce legislation (UDL) that made divorce easier and affected marriage (inflow) decisions through anticipated welfare from marriage (Gruber, 2004; Rasul, 2006; Wolfers, 2006). Marriage outflow (divorce) structure clearly contributed to the rise in educational homogamy (henceforth, homogamy) in marriage stocks because homogamous marriages are less likely to divorce (Schwartz, 2010). This is driven by hypogamous couples (women marrying less educated partners) being most likely to divorce of all educational marriage types (Tzeng, 1992; Tzeng & Mare, 1995).[2]

Despite the evidence on the importance of UDL for overall divorce rates, there is no research on whether UDL affected the *educational structure* of marriage outflows. Similarly, little is known about UDL effects on the educational structure of marriage inflows (newlyweds). In this paper, we ask whether UDL contributed to the increase in educational homogamy by quantifying UDL impacts on the educational structure of newlyweds and divorces using a difference-in-differences approach prevalent in the UDL literature. We rely on precise measures of marriage inflows and outflows by state and year based on under-utilized administrative data from certificates of marriages and divorces,[3] and study three marriage types—homogamous (where the education level of the wife is equal to that of the husband, W=H), hypogamous (W>H), and hypergamous (H>W).

The availability of easier divorce could affect marriage and/or divorce decisions particularly strongly for marriage types that are generally less stable (more likely to divorce), i.e., hypogamous couples. Education provides a signal about future earnings as well as

[1] Rising homogamy contributed to growing household income inequality (Greenwood et al., 2014; Dupuy & Weber, 2018; Gonalons-Pons et al., 2021) and intergenerational inequality, as investments in the human capital of children are affected by educational assortative matching (Chiappori et al., 2017).

[2] The share of hypogamous couples among newlyweds started rising during the 1970s (Appendix Figure B.1), as changing social norms made them increasingly acceptable (Schwartz & Han, 2014).

[3] Hence, this paper focuses on marriage as opposed to co-habitation patterns.

values and attitudes. One of the explanations for the lower stability of non-homogamous couples is that they may have more value-driven disagreements in marriage (e.g., in decisions on raising children). If the availability of easier divorce thanks to UDL makes the generally risky hypogamous marriages even more likely to end in divorce (unstable), educational homogamy in the stock of prevailing marriages will increase. Next, fewer couples may enter risky non-homogamous marriages under UDL, and there can be adjustments to compensate for lower stability by improving match quality in other dimensions.[4] We find no evidence that UDL affected homogamy at marriage inflow, but we find that the unstable hypogamous marriages (W>H) as well as homogamous ones (W=H) become *less* likely to divorce thanks to UDL, relative to hypergamous marriages (H>W). We provide a discussion and tantalizing evidence on the potential mechanisms behind these effects.

Our analysis proceeds in four steps. We first confirm that the marriage and divorce certificate data we use, which include marriages formed during 1970-1988, display similar levels of educational homogamy in the stock of marriages to that measured using Current Population Survey (CPS) data. Second, we provide evidence on the evolution of the educational structure of marriage outflows (divorces) and inflows (newlyweds): It is well established from survey data that homogamous marriages are less likely to end in divorce (Schwartz, 2010; Goldstein & Harknett, 2006). We confirm this marriage stability gap by combining marriage and divorce certificates, and highlight that it is due to hypogamous marriages (W>H), while hypergamous marriages are about as stable as homogamous ones. These differences in divorce risk across educational marriage types are stable over our sample frame.[5] We provide novel evidence that much of the stability advantage of homogamy plays out within the first two years of marriage.[6]

[4]Such an adjustment is one of the equilibrium consequences of the introduction of UDL in a marriage market model based on imperfectly transferable utility (Reynoso, 2022). Similar mechanisms have been suggested in the literature on co-habitation (Schoen & Weinick, 1993; Brines & Joyner, 1999).

[5]Schwartz & Han (2014) find that homogamous and hypogamous marriages became more stable relative to hypergamous marriages for marriage cohorts spanning 1950 to 2004 in PSID and NSFG data. Similar to our certificate-based evidence, they find these stability gaps to be stable from 1970 to 1988.

[6]This is relevant to the literature studying marriage inflows using survey data in which newlyweds are identified as those recently married, because such samples are already affected by survival bias. For example, Reynoso (2022) studies newlyweds by relying on CPS data on first marriages that occurred at most two years before the survey interview.

Turning to newlyweds, we find that, while homogamy among newlyweds did not increase relative to non-homogamy,[7] there were significant changes in the educational structure at marriage inflow in the US during our sample frame: The odds of hypogamy (W>H) increase relative to hypergamy ('traditional' H>W newlyweds), and so do the odds of homogamy relative to hypergamy.

Third, we examine the role of unilateral divorce legislation (UDL) for educational sorting in marriage inflows and outflows. We use our state-year measures and employ a difference-in-differences identification strategy similar to that used in the literature studying the effects of UDL on overall divorce and marriage rates (Alesina & Giuliano, 2006; Wolfers, 2006).[8] Using data covering 1970 to 1988, we find little evidence that making divorce easier increased homogamy at marriage inflow, but we uncover robust evidence that UDL lowers the stability of hypergamous marriages relative to homogamous ones, and that it reduces the large stability disadvantage of hypogamous couples. Our estimates paint a picture of a marriage market in which the tendency to form newlywed couples in which women are more educated than their spouses has increased, these marriages are generally less stable, but their stability disadvantage has been reduced thanks to UDL. In the final part of our analysis, we explore match quality changes driven by UDL in the first steps towards understanding the underlying mechanisms.

Our analysis brings two types of novel findings to the literature. First, we extend the homogamy literature (Schwartz, 2010; Siow, 2015) by exploring administrative data, which are larger and more precise than previously employed surveys. This allows us to not only study inflows and outflows jointly, but also to offer new state-by-state descriptive evidence on homogamy among newlyweds. Second, we extend the UDL literature (Gruber, 2004; Wolfers, 2006) by showing that it is not only the rates of divorce, but also the educational structure of divorce that is affected by UDL, which supports the empirical case against marriage market models based on fully transferable utility (Chiappori et al., 2015). The estimates we provide can form an input for the study of UDL within equilibrium marriage market models based on imperfectly transferable utility (Reynoso, 2022).

[7] This finding is in line with that of Gonalons-Pons & Schwartz (2017) who rely on PSID data to conclude that economic homogamy among newlyweds has not substantially increased.

[8] Gruber (2004) asks whether the timing of UDL is related to marriage market fundamentals affecting outcomes, and argues that UDL was introduced primarily to avoid the burden to states that resulted from lengthy divorce cases. For evidence of lack of geographical correlation in UDL, see Reynoso (2022).

2 Educational Homogamy and Unilateral Divorce

A secular increase in homogamy and a dramatic rise in divorce rates, together with declining marriage rates, occurred simultaneously on the US marriage market starting in the 1960s.[9] The study of these two trends is only partially connected. Most of the literature studying educational homogamy, including our analysis, relies on log-linear models to capture the supply-free tendency to match assortatively on education.[10] Estimates of homogamy's rise in marriage stocks are typically based on estimating these models on Census or survey data such as the Current Population Survey. Rising homogamy has been linked to various causes (Schwartz, 2013) including increasingly shared culture and values (DiMaggio & Mohr, 1985; Kalmijn, 1994), lower partner search costs for college educated (Bicakova & Jurajda, 2016; Pestel, 2021), and shared interest in investing in the human capital of children (Chiappori et al., 2017). Easier divorce, where UDL makes it possible to leave marriage without the partner's agreement, can affect the importance of these factors for divorce as well as marriage decisions, to the extent these are based on anticipation of marriage stability. Reynoso (2022) builds an equilibrium marriage market model suggesting that the marriage stability disadvantage of marrying someone with a different level of education can be compensated under UDL in newly formed non-homogamous marriages by improving the quality of the match on other dimensions.

As a matter of accounting, the increase in homogamy in prevailing marriages (marriage stocks) since the 1970s was brought about by a changing educational structure of entry into marriage (newlyweds) and/or by selective exits (divorces). Using the National Longitudinal Survey of Youth (NLSY79), Schwartz (2010) finds that homogamous marriages are significantly less likely to end in divorce, while Schwartz & Han (2014) rely on multiple surveys to conclude that the relative stability of homogamous marriages has increased. Several CPS analyses attempt to focus on newlyweds by studying marriages that are at most two years old (e.g., Mechoulan, 2006; Reynoso, 2022). With the exception of Reynoso (2022), whose empirical analysis focuses on marriage inflows, this literature does not connect the changing education structure of marriage inflows and outflows to UDL.

From the end of the 1960s, US states began to change the grounds for divorce, moving

[9] A third simultaneous trend is the rise in the share of women among college graduates. It is now well established that marriage-market returns to college are higher for women than for men (Zhang, 2021).

[10] A disadvantage of these models is that they ignore those who do not marry (Choo & Siow, 2006).

from fault-based to unilateral and no-fault divorce. Within two decades, 29 states changed their marriage dissolution laws to a unilateral system, which allows one to divorce without without the agreement of one's spouse. A body of research based on the difference-in-differences design quantifies the impact of unilateral divorce laws (and no-fault divorce laws, which are similar to unilateral divorce legislation) on divorce and marriage rates, as well as several other outcomes.[11] There is consensus that UDL led to higher divorce rates. In an influential early analysis, Friedberg (1998) controls for state specific time trends and concludes that UDL explains 17 percent of the increase in US divorce rates between 1968 and 1988, and that this effect is permanent.[12] Wolfers (2006) extends the sample frame to 1956-1988 and concludes that adoption of UDL increases divorce rates immediately, but that this effect dissipates within a decade of the legislative reform. The evidence on the entry side of marriage is mixed: Rasul (2004) implies that UDL lowers marriage rates, Drewianka (2008) finds no UDL effect on family formation, and Alesina & Giuliano (2006) use the same administrative data we employ in this paper to suggest that UDL increases marriage rates.

The literature is yet to consider potential differences across educational marriage types in UDL effects on marriage inflows and outflows simultaneously within one analytical framework. This is likely due to a lack of large individual-level data spanning these legislative changes. The administrative data we employ allow for such analysis, and bring to the analysis of UDL effects key advantages as well as some disadvantages we discuss below.

Studying potential UDL effects on the educational structure of marriage inflows and outflows is important not only for understanding the sources of the rise in homogamy. It is also useful as a test of workhorse marriage market models based on an assumption of fully transferable utility within couples (Chiappori et al., 2015). The Becker-Coase theorem (Becker, 1991) implies that, so long as couples contemplating a divorce can easily bargain

[11] Other outcomes explored in the literature include investments in marriage-specific capital (Stevenson, 2007), domestic violence (Stevenson & Wolfers, 2006; Dee, 2003; Parkman, 1992), the family-formation behavior of children affected by UDL (Gruber, 2004), and labor supply of spouses and intra-household bargaining (Voena, 2015; Stevenson, 2007; Mechoulan, 2006; Chiappori et al., 2002; Gray, 1993).

[12] For similar US findings see Nakonezny et al. (1995), Rodgers et al. (1999, 1997), and Gruber (2004). González & Viitanen (2009) and Kneip & Bauer (2009) find the UDL effect to be quantitatively large in the EU, explaining one fifth of the total EU increase in divorce rates, and to be highly persistent.

with each other, i.e., easily transfer utility, whether or not mutual consent is required for divorce to occur should not affect divorce decisions. Evidence that UDL affects marriage and divorce rates, as well as any evidence on differential UDL effects by homogamy type, thus lends support to models based on imperfectly transferable utility within couples.

3 Data

To study the effects of UDL on the educational composition of marriage inflows and outflows, one would ideally rely on longitudinal data following the duration of a large sample of inflowing marriages sorted by state and year, including information on the mobility of couples across state borders. Homogamy analyses of divorces and newlyweds (e.g., Schwartz, 2010; Schwartz & Han, 2014; Reynoso, 2022) are typically based on longitudinal surveys such as the Panel Study of Income Dynamics (PSID), which are well suited for US-level analyses, but contain few divorce or newlywed observations for typical state-year cells. The number of available observations is limited even in the substantially larger CPS, because most states are grouped for the years in which UDL was introduced (1968-1976 in CPS March), and because the year (or age) of (first) marriage is available only for some years. Only few recent marriages are available by state and year to approximate newlyweds. If sampling error renders many of the state-year average outcomes uninformative, it reduces the effective number of clusters employed in the difference-in-differences research design (Carter et al., 2017; Brewer et al., 2018). Furthermore, one does not observe newlyweds in the CPS, but only recent marriages that survived a certain time window, such that inflow proxies can be affected by early-marriage-outflow effects.

We use the CPS primarily for comparison purposes and in our main analysis, we rely on administrative data from the National Vital Statistics System of the National Center for Health Statistics (NCHS), which report characteristics that couples provide when applying for a marriage or divorce: residency, education, race and age of bride and groom, date of marriage (divorce), and the number of previous marriages.[13] The NCHS database covers all divorces and marriages from small states and provides a 10 to 50% sample in large states. However, the number of states with data on the education of

[13]The data used in this paper were downloaded in Sep 2017 from its NBER archive at https://www.nber.org/research/data/marriage-and-divorce-data-1968-1995.

spouses varies across years. Appendix Table A.1 compares available sample sizes and state-year coverage in the CPS and the certificate data. The certificate data cover fewer states than the CPS, but they provide large annual samples by state and year, facilitating the measurement of marriage inflow and outflow structures by homogamy type, typically measured using a 5x5 educational-category match matrix. In contrast, in four-fifths of states, fewer than 10 newlywed couples are observed annually in the CPS.[14] The certificate data cover 1970-1988, such that, unlike survey data, they cannot be used to study the effect of UDL on the stability of marriages that began before 1970, i.e., before the first US introduction of UDL. However, the underutilized certificates cover the introduction period of most UDL, and allow for study of marriage inflows in the 1970s and 1980s without survival biases. They provide precise measures of both inflows into and outflows from marriage by educational type, order of marriage, and state and year of registration—a key characteristic supporting state-level panel-data analyses exploring the importance of legislative reforms.

We observe the state and year of marriage for divorced couples, which allows us to combine marriage and divorce certificates to study divorce rates. Our divorce analysis focuses on the share of marriages registered in a given year and state (by educational type) lasting more than two (four) years. Appendix C provides details of these calculations. The NCHS data code the education of spouses by years of schooling. We divide this scale into 5 educational categories following Schwartz & Mare (2005).[15]

The certificate data reproduce key features of educational assortative matching found in surveys. During our study period, gender gaps in education narrow and reverse as the share of educated women (and wives) increases faster than that of men. In 1970, 34% of newlywed wives had either some college or 4+ years of college, compared to 40% of husbands, in 1988 the corresponding shares are 49% and 47%, respectively (Appendix Table A.2). The evolution of the educational structure of newlyweds is similar in CPS March and the certificate data.[16] Among newlywed men with 4+ years of college in

[14]The CPS also does not allow one to approximate the educational structure of recent divorces, because divorced respondents are not asked about the education level of their ex-spouse.

[15]We also used a categorization based on Acemoglu & Autor (2011). The dynamics of marginal-free measures of homogamy and our estimated UDL effects were not affected (Appenxid Tables A.4 - A.7).

[16]Appendix Figure B.2 shows this for two key education categories—high school and 4+ years of college.

1970, 46% marry women with the same education; the share increases to 60% by 1988 (Appendix Table A.3; again, this pattern is similar in the CPS, Appendix Figure B.3).

To compare the odds of homogamy[17] between the CPS and the certificate data, we mimic the certificate data and focus on the CPS stock of marriages formed after 1970; we can perform a consistent comparison for the 1980 stock that had 10 years to build.[18] We apply the Schwartz & Mare (2005) log-linear estimation strategy (presented in the next section) to the 1980 CPS June sample and to our 1980 pseudo stock of marriages generated from the certificate data (see Appendix C). As in the rest of the analysis, we analyze marriages in which the women entering the marriage were aged 16-40. In both data-sets, we uncover near-identical homogamy levels: for first marriages (from the wife's perspective), the 1980 log-odds level is 3.3; for higher-order marriages, it is 2.2.[19]

While the certificate database does not provide an ideal data source to study the US-wide evolution of homogamy in the 1970s and 1980s, due to its focus on recent marriages and incomplete coverage of states and years, it reproduces basic features of the US marriage market and allows one to simultaneously consider the educational structure of marriage inflows and outflows by state and year. Our main analysis conditions on state fixed effects and thereby aims to minimize the impact of state composition on our findings.

4 Homogamy in Marriage Inflow and Outflow

When the educational composition of the marriage market is changing, it is not clear to what extent changes in the share of homogamous couples are driven by assortative matching and to what extent they are a result of changes in supply structure (marginal distributions). The widely used log-linear homogamy model generates marginal-free homogamy measures by controlling for shifts in marginal distributions. Let i and j denote education

[17]The odds of educational homogamy measure positive assortative matching as the likelihood to be matched with someone with the same education rather than someone with a different education level.

[18]Several CPS June supplements from the 1970s and 1980s include information on the year of first marriage, but only the 1980, 1990 and 1995 June supplements also report the number of times a person has been married.

[19]We additionally compared the homogamy levels for all years between 1980 and 1988, where we cannot distinguish prevailing first marriages starting after 1970 in the CPS. In none of these years were log-odds homogamy levels different by more than 0.19 points (or 5.8 %) between the CPS and the NCHS data.

levels of husbands and wives in observed ij marriage matches, where $i, j = 1, 2, ..., 5$ are education categories corresponding to a 5x5 match-type matrix. The log-linear model (e.g., Schwartz & Mare, 2005) explains the counts of these matches by year t as:

$$ln\mu_{ijt} = \lambda + \lambda_{ij} + \sum_{n=t,s} (\lambda_{in} + \lambda_{jn}) + \gamma_t^D + \epsilon_{ijt}, \tag{1}$$

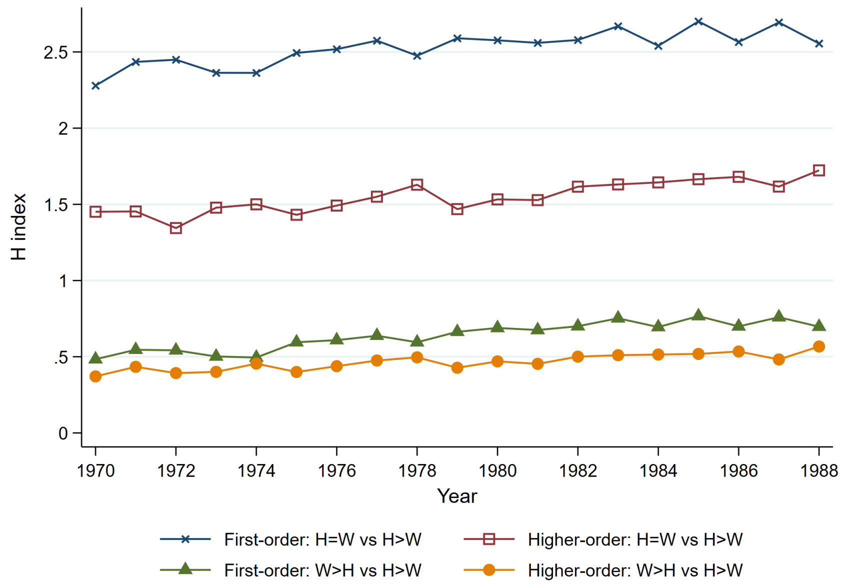
where $t = 1, ..., T$, λ_{ij} is the fixed effect for ij match-type pairs, λ_{in} and λ_{jn}, $n = t, s$, are a set of (marginal) fixed effects for each year and state. In addition to these fixed effects, the simple model controls for diagonal (homogamy) elements of the match matrix by year γ_t^D. The evolution of γ_t^D over time speaks to the trajectory of homogamy (the H homogamy index following Schwartz & Mare, 2005).[20] In our preferred specifications, we separate the selective non-homogamous couples in which wives are more educated (hypogamous marriages or W>H) and the larger group of 'traditional' non-homogamous couples in which husbands are more educated (hypergamous marriages, H>W). Following Schwartz & Han (2014), we use hypergamy as the base; in terms of Equation 1, we thus add an above-diagonal coefficient γ_t^{AD}, leaving the below-diagonal elements in the base case.

The evolution of the log odds of homogamy against the base case of hypergamy in our *newlywed* data is shown in Figure 1, which also tracks the log odds of hypogamy against the base case of hypergamy. Homogamy (W=H) at marriage inflow is increasing against the 'H>W' benchmark for both first and higher-order marriages. There is a similar upward trend in the marriage inflow for the smaller group of 'W>H' couples. Appendix Figure B.4 then shows the evolution of the log odds of homogamy (H) among newlyweds against the combined base case of both non-homogamous marriage types. Overall homogamy at marriage inflow is *decreasing* among first marriages and stable for higher-order marriages.[21]

[20] An H value of 3 means that a person is 3 times more likely to be married to someone with the same level of education rather than to someone with a different level.

[21] Marriage order is measured from the wife's perspective. The finding is not driven by the changing state coverage of the certificate data, as it is replicated in most US states (Appendix Figures B.5 and B.6), and it is not materially affected when we focus only on first marriages of the homogenous group of white couples or when we restrict the age gap between the spouses to 5 years at the most.

Figure 1: Homogamy in Marriage Inflows for First and Higher-Order Marriages, NCHS Data



Note: Only marriages that women entered when they were between the ages of 16 and 40 are included. We do not use data from states where we have less than 3 years of coverage, or state-year pairs with fewer than 50 observations. We control for state fixed effects and state specific time trends.

Source: National Vital Statistics System of the National Center for Health Statistics (NCHS).

Next, we ask about trends in the relative stability of homogamous and non-homogamous marriages. We study survival rates of homogamous and non-homogamous couples, i.e., shares of marriage types (binary h index based on the 5x5 educational-type matrix) who are still married after two (four) years of marriage:

$$ln(Share\ of\ survived\ marriages_{hst}) = \beta Homogamous_{hst} + \lambda_s + \lambda_t + \lambda_s t + \epsilon_{hst}. \qquad (2)$$

Here, $Homogamous$ (W=H) is an indicator corresponding to homogamous vs. non-homogamous couples, λ_s are state fixed effects, λ_t are year fixed effects and $\lambda_s t$ are state-specific time trends. Again, in our preferred specification we add a coefficient for the selective W>H marriages and keep only 'H>W' in the base case. Hypogamous 'W>H' marriages are particularly unstable (risky), while more 'traditional' hypergamous marriages (H>W) are at least as stable as the homogamous ones (Table 1).[22]

[22] In higher order marriages, hypergamous couples (H>W) are the most stable.

Table 1: Survival of hypogamous (W>H) and homogamous (W=H) couples relative to hypergamous (H>W)

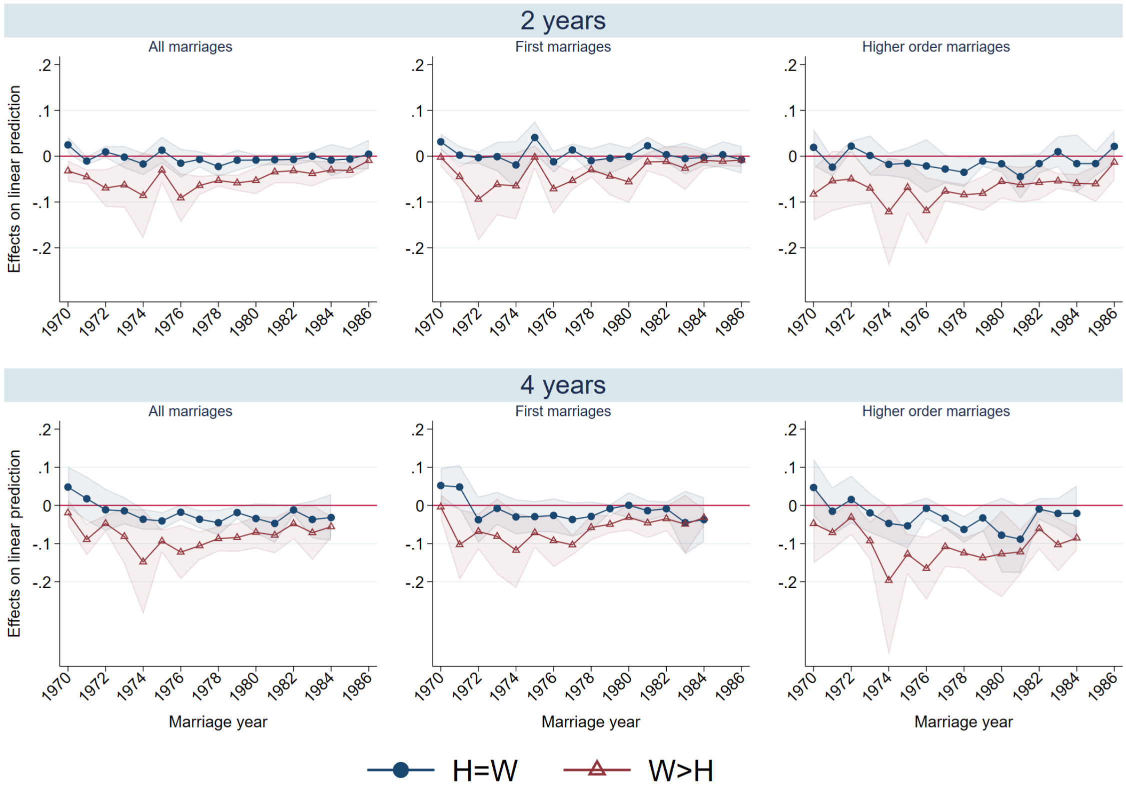
	All marriages		First marriages		Higher order marriages	
	(1)	(2)	(3)	(4)	(5)	(6)
			Up to 2 year old marriages			
H = W	−0.005	−0.005	0.003	0.003	−0.012*	−0.013*
	(0.006)	(0.006)	(0.007)	(0.007)	(0.006)	(0.006)
W > H	−0.046***	−0.046***	−0.032***	−0.032***	−0.067***	−0.067***
	(0.008)	(0.008)	(0.010)	(0.010)	(0.008)	(0.008)
Observations	28,331	28,331	16,122	16,122	12,209	12,209
Marriages from	1970 − 1986	1970 − 1986	1970 − 1986	1970 − 1986	1970 − 1986	1970 − 1986
Number of states	15	15	15	15	15	15
			Up to 4 year old marriages			
H = W	−0.025**	−0.025**	−0.017	−0.017	−0.033***	−0.033***
	(0.010)	(0.010)	(0.013)	(0.013)	(0.008)	(0.008)
W > H	−0.079***	−0.080***	−0.059***	−0.059***	−0.109***	−0.109***
	(0.016)	(0.016)	(0.015)	(0.015)	(0.018)	(0.018)
Observations	27,548	27,548	15,649	15,649	11,899	11,899
Marriages from	1970 − 1984	1970 − 1984	1970 − 1984	1970 − 1984	1970 − 1984	1970 − 1984
Number of states	15	15	15	15	15	15
State FEs	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Year FEs	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
State Specific TT	*No*	*Yes*	*No*	*Yes*	*No*	*Yes*

Standard errors in parentheses. $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: Only marriages that women entered when they were between the ages of 16 and 40 are included. The specifications also control for age groups of wives, marriage order and an indicator for inter-race marriages. Standard errors are clustered at the state level. Regressions are weighted by state-year population. TT stands for time trends. We do not use data from states where we have less than 3 years of coverage, or state-year pairs with fewer than 50 observations. All of the estimated W>H coefficients remain statistically significant at the 1% level based on wild bootstrap inference following Cameron & Miller (2015); the statistical significance of the H=W coefficients declines based on wild bootstrap.

Source: National Vital Statistics System of the National Center for Health Statistics (NCHS).

Figure 2: Year x Homogamy coefficients for marriage survival: homogamous (W=H) and hypogamous (W>H) couples relative to hypergamous (H>W)



Note: Only marriages that women entered when they were between the ages of 16 and 40 are included. The specifications also control for age groups of wives, marriage order, and an indicator for inter-race marriages. Standard errors are clustered at the state level, and regressions are weighted by state-year population. We do not use data from states where we have less than 3 years of coverage, or state-year pairs with fewer than 50 observations. We control for state, year, and month of marriage fixed effects, and state-specific time trends.

Source: National Vital Statistics System of the National Center for Health Statistics (NCHS).

Our findings highlight that stability gaps between hypogamous marriages and other marriage types open early, within two years of marriage. Another novel finding is that homogamous marriages are less stable than hypergamous ones for higher-order marriages, but not for first marriages. The combination of these patterns implies that the share of homogamous marriages that survive more than two (four) years is higher than the share of surviving non-homogamous ones (Appendix Table A.8). These findings based on the certificate data are thus in line with the survey-based evidence (Schwartz, 2010; Schwartz & Han, 2014); they imply that the stability gap between homogamous and hypogamous marriages mechanically contributes to rising homogamy levels in marriage stocks. Figure 2 also suggests that the stability advantages across educational marriage types (at 2 or 4 years of marriage) do not change much over our sample frame.

5 UDL and Homogamy

The legislative change from divorce based on mutual agreement to UDL makes divorce easier and more likely to occur (Wolfers, 2006). Since hypogamous marriages are generally the least stable, does the introduction of UDL curb the rise of hypogamy (and thus support the rise of homogamy) at marriage inflow due to the additional riskiness of these marriages? To investigate this, we introduce a UDL indicator into the log-linear equation for marriage inflows (Equation 1), together with the interaction term between UDL and marriage type.[23] Table 2 coefficients for the interaction of UDL with homogamy and hypogamy (with the base case of hypergamy) are all statistically insignificant and close to one, i.e., they signal no UDL impact on the educational structure of newlyweds.[24] We obtain the same conclusion when we combine the two non-homogamous marriage types in Appendix Table A.9 and when we use the economics classification of education types in Appendix A.5.

[23] We use the timing of divorce legislation changes from Voena (2015); nevertheless, we receive similar results when we rely on the year of legislative changes defined by Wolfers (2006) and Friedberg (1998).

[24] In a log-linear homogamy model $\mu_{ijst} = \beta_h X + \beta_u U_{st} + \epsilon_{ijst}$, the impact of unilateral divorce (U) on the dependent variable is $ln\left(\frac{\mu_{ijst}|U_{st}=1}{\mu_{ijst}|U_{st}=0}\right) = exp(\beta_u)$. Therefore, states with unilateral divorce laws have $exp(\beta_u)$ times as many homogamous marriages, as those with no UDL. The closer $exp(\beta_u)$ is to 1, the smaller is the impact of UDL. In Table 2, we have already calculated $exp(.)$s of coefficients.

Table 2: The impact of UDL on marriage inflow structure

	All marriages		First marriages		Higher order marriages	
	(1)	(2)	(3)	(4)	(5)	(6)
UDL	1.070	0.929	1.044	0.936	1.240	0.911
	(0.126)	(0.065)	(0.100)	(0.068)	(0.228)	(0.085)
UDL x H = W	1.007	1.010	1.006	1.006	0.972	0.980
	(0.038)	(0.038)	(0.044)	(0.044)	(0.028)	(0.029)
UDL x W > H	0.867	0.871	0.866	0.867	0.860	0.874
	(0.093)	(0.093)	(0.100)	(0.100)	(0.083)	(0.080)
H = W	2.359***	2.353***	2.727***	2.725***	1.585***	1.573***
	(0.080)	(0.080)	(0.110)	(0.109)	(0.035)	(0.036)
W > H	0.694***	0.692***	0.774***	0.773***	0.526***	0.524***
	(0.048)	(0.048)	(0.066)	(0.066)	(0.016)	(0.017)
Observations	17,101	17,101	8,611	8,611	8,490	8,490
Marriages from	1970 – 1988	1970 – 1988	1970 – 1988	1970 – 1988	1970 – 1988	1970 – 1988
Number of states	24	24	24	24	24	24
State FEs	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Year FEs	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
State Specific TT	*No*	*Yes*	*No*	*Yes*	*No*	*Yes*

Exponentiated coefficients; Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: The estimates correspond to the log-linear model, Equation (1). Only marriages that women entered when they were between the ages of 16 and 40 are included. Standard errors are clustered at the state level. TT stands for time trends. We do not use data from states where we have less than 3 years of coverage, or state-year pairs with fewer than 50 observations. All of the statistically significant coefficients remain significant at the 1% level when we alternatively rely on wild bootstrap inference (Cameron & Miller, 2015).

Source: National Vital Statistics System of the National Center for Health Statistics (NCHS).

Reynoso (2022) measures homogamy as the within-couple similarity in years of education, and finds in linear specifications that UDL increases homogamy. We rely on educational categories and marginal-free measures of homogamy based on the log-linear model and find no effect of UDL on homogamy. In Appendix D, we provide estimates based on the Reynoso (2022) approach and estimated off the CPS and the certificate data after we apply highly similar sample definitions. Based on both datasets, we obtain statistically indistinguishable and insignificant positive UDL coefficients; the CPS-based one is close to that of Reynoso (2022). It could be that UDL leads to changes in the educational similarity of couples measured in years of education that do not lead to changing structures measured in educational categories.

In the second part of our UDL analysis, we focus on marriage outflow structure and introduce a UDL indicator with its homogamy and hypogamy interactions (with hypergamy as the base case) into Equation 2 estimated at 2 and 4 years of marriage duration in Tables 3 and 4, respectively. While we detect no effect of UDL on the educational structure of marriage inflows, we do find statistically significant and sizeable effects of UDL on the educational structure of marriage outflows. First, UDL makes homogamous first marriages more likely to survive, i.e., less likely to divorce (relative to first hypergamous marriages). In other words, for first marriages (from the wife's perspective), UDL opens a stability gap between homogamous and more 'traditional' hypergamous marriages. Second, much of the survival disadvantage of hypogamous marriages (relative to hypergamous and homogamous) disappears thanks to UDL for first marriages. UDL has no impact on the outflow structure of higher-order marriages, but it changes the survival structure of first marriages considerably. These findings are not sensitive to several robustness checks.[25] In the next section, we discuss potential underlying mechanisms consistent with this pattern of findings.

[25] In a companion paper, Afunts (2022) studies whether the impact of joint custody laws (JCLs) and UDL on fertility differs between homogamous and non-homogamous couples. JCLs require that decisions about children should be made jointly by both parents after a divorce. Our UDL estimates are fully robust to additionally including JCL controls. The estimates are also robust to alternatively relying on the educational categories used in Acemoglu & Autor (2011) as Appendix Tables A.6 and A.7 attest.

Table 3: The impact of UDL on 2-year marriage survival: hypogamous (W>H) and homogamous (W=H) couples relative to hypergamy (H>W)

	All marriages		First marriages		Higher order marriages	
	(1)	(2)	(3)	(4)	(5)	(6)
		Up to 2 year old marriages				
UDL	−0.001	−0.043	−0.032*	−0.055**	0.046	−0.023
	(0.028)	(0.026)	(0.016)	(0.025)	(0.032)	(0.025)
H = W	−0.009	−0.009	−0.003	−0.003	−0.013*	−0.014*
	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
W > H	−0.053***	−0.053***	−0.042***	−0.042***	−0.068***	−0.068***
	(0.008)	(0.008)	(0.009)	(0.009)	(0.009)	(0.009)
UDL x H = W	0.016*	0.015*	0.024**	0.023**	0.004	0.004
	(0.008)	(0.008)	(0.010)	(0.010)	(0.011)	(0.011)
UDL x W > H	0.029**	0.029**	0.038***	0.038***	0.002	0.002
	(0.011)	(0.011)	(0.009)	(0.009)	(0.019)	(0.019)
Observations	28,331	28,331	16,122	16,122	12,209	12,209
Marriages from	1970 − 1986	1970 − 1986	1970 − 1986	1970 − 1986	1970 − 1986	1970 − 1986
Number of states	15	15	15	15	15	15
State FEs	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Marriage year FEs	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Marriage month FEs	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
State Specific TT	*No*	*Yes*	*No*	*Yes*	*No*	*Yes*

Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: Only marriages that women entered when they were between the ages of 16 and 40 are included. The specifications also control for the age group of wifes, higher order and inter-race marriages. Standard errors are clustered at the state level, and regressions are weighted by state-year population. TT stands for time trends. We do not use the states where we have less than 3 years of coverage, and state-year pairs with fewer than 50 observations. All of the estimated W>H and W>H x UDL coefficients that are statistically significant at the 1% level or the 5% level based on clustered standard errors remain statistically significant at least at the 5% level based on wild bootstrap inference (Cameron & Miller, 2015).

Source: National Vital Statistics System of the National Center for Health Statistics (NCHS).

Table 4: The impact of UDL on 4-year marriage survival: hypogamous (W>H) and homogamous (W=H) couples relative to hypergamy (H>W)

	All marriages		First marriages		Higher order marriages	
	(1)	(2)	(3)	(4)	(5)	(6)
		Up to 4 year old marriages				
UDL	−0.012	−0.058	−0.061	−0.097	0.068	0.003
	(0.066)	(0.065)	(0.052)	(0.064)	(0.070)	(0.057)
H = W	−0.032***	−0.032***	−0.029**	−0.029**	−0.034***	−0.034***
	(0.010)	(0.010)	(0.013)	(0.013)	(0.008)	(0.008)
W > H	−0.089***	−0.090***	−0.072***	−0.072***	−0.111***	−0.111***
	(0.018)	(0.018)	(0.016)	(0.016)	(0.022)	(0.022)
UDL x H = W	0.031*	0.031*	0.048***	0.048***	0.005	0.005
	(0.015)	(0.015)	(0.016)	(0.016)	(0.021)	(0.021)
UDL x W > H	0.041*	0.041*	0.052***	0.053***	0.011	0.010
	(0.020)	(0.020)	(0.015)	(0.015)	(0.027)	(0.027)
Observations	27,548	27,548	15,649	15,649	11,899	11,899
Marriages from	1970 − 1984	1970 − 1984	1970 − 1984	1970 − 1984	1970 − 1984	1970 − 1984
Number of states	15	15	15	15	15	15
State FEs	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Marriage year FEs	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Marriage month FEs	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
State Specific TT	*No*	*Yes*	*No*	*Yes*	*No*	*Yes*

Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: Only marriages that women entered when they were between the ages of 16 and 40 are included. The specifications also control for the age group of wife, higher order and inter-race marriages. Standard errors are clustered at the state level, regressions are weighted by state-year population. TT stands for time trends. We do not use the states where we have less than 3 years of coverage, and state-year pairs with fewer than 50 observations. All of the coefficients that are statistically significant at the 1% level or the 5% level based on clustered standard errors remain statistically significant at least at the 5% level based on wild bootstrap inference (Cameron & Miller, 2015), aside from the H=W coefficients for first marriages.
Source: National Vital Statistics System of the National Center for Health Statistics (NCHS).

6 Mechanisms

Our results paint a picture of a marriage market on which more 'traditional' hypergamous (H>W) marriages are losing ground among newlyweds to both homogamy (H=W) and hypogamy (W>H), and where hypogamous marriages are more likely to end in divorce. These patterns hold for both first and higher-order marriages. With the introduction of unilateral divorce, this picture changes substantially for first marriages, but not for higher-order ones (with marriage order defined from the wife's perspective). Among first marriages, UDL makes hypogamy almost as stable as hypergamy, while homogamy begins to enjoy a stability advantage over hypergamy. What underlying mechanism could be responsible for these findings?

A growing literature asks why hypogamous couples are relatively unstable. One possibility is that a more educated (higher earning) wife may feel or be perceived as a threat to her husband's gender identity as primary breadwinner.[26] Under UDL, the increasing instability of marriage may be perceived particularly strongly among those contemplating a hypogamous marriage, which may in turn lead to compensating behavior where hypogamous newlyweds become better matches on dimensions other than education to improve their expected marriage stability. A smaller within-couple age gap is an indicator of more egalitarian and stable unions (e.g., Van de Putte et al., 2009). Second, higher-order marriages are more risky, and this includes marriages that are first for the wife, but second or higher-order for the husband. Third, inter-racial marriage is also more risky.[27] Finally, the unilateral nature of divorce may also give more agency to the less happy side of the marriage, affecting whether wives or husbands end up applying for divorce.

To explore these potential mechanisms, we rely on our newlywed certificates. First, we ask whether UDL affects (i) the probability that a woman entering her first union marries a man who has already been married, (ii) the share of inter-racial marriages, and (iii) the

[26] E.g., Tichenor (2005, 1999); Kaukinen (2004). This may lead to lower marriage satisfaction (Bertrand et al., 2015), and higher infidelity and domestic violence risks (Munsch, 2010; Atkinson et al., 2005).

[27] Using the certificate data from state-year combinations before the introduction of UDL, a couple who are 4 years apart in age (corresponding to one standard deviation of the within-couple absolute age gap of 4.2 at marriage inflow) is 16 percentage points more likely to end up divorced within 4 years of marriage than a couple who are equal in age. An inter-racial marriage is 13 percentage points more likely to end in divorce within four years than a same-race marriage. A wife's marriage is 4 percentage points more likely to end in divorce if she is married to a husband who was previously married rather.

within-couple age gap (in years). For each of these outcomes, we calculate averages by state, year, and our three educational marriage types, and we estimate linear difference-in-differences UDL effects. We focus on first marriages (from the wife's perspective), as we have no evidence on UDL affecting higher-order marriages. Columns (1) and (2) of Table 5 imply that UDL lowers the share of hypogamous first-marriage wives marrying husbands who have previously been married. In the specification with state-specific time trends in column (2), the decline corresponds to about half of the base case hypogamy effect of 4 percentage points. UDL has no such effect on the other two educational marriage types. In columns (3) and (4), the dependent variable is the share of inter-racial marriages (by state, year, month, and marriage type). UDL increases this share for all marriage types by 1 to 2 percentage points, but this effect is not statistically significant in the specification with state-specific time trends. Finally, the estimates in the last two columns suggest that, for homogamous first marriages and, even more, for hypogamous first marriages, there is more similarity in terms of age under UDL. The evidence is thus consistent with the notion that hypogamous couples compensate for the (perceived) higher riskiness of marriage under UDL by forming better (closer) matches and that this is responsible for much of the reduction in stability gaps.[28]

In the second step, we employ information on who files for divorce that is provided on divorce certificates in 20 states starting in 1974. In Table 6, we regress the share of first-marriage divorces that were initiated by wives on the UDL indicator and interactions with educational marriage types. Hypergamous marriages are again the base case. The estimates imply that UDL increases the share of wife-initiated divorces by more than 10% (by about 6 percentage points relative to the control mean of 54%) for hypergamous marriages, which have higher divorce risks under UDL. This is consistent with less educated wives who could not leave a marriage without UDL taking advantage of unilateral divorce. In contrast, the share of divorces filed by wives increases little with UDL for homogamous marriages (by about 3 percentage points relative to the control mean of 65%), while there is almost no change for hypogamous marriages.[29] This is consistent

[28]In Appendix Table A.10, we find no evidence of compensation on match quality for higher-order marriages. If couples entering first hypogamous marriages are better able to compensate for UDL by forming closer matches than older couples entering higher-order ones, this could explain why under UDL we find more stability and better match quality for first, but not for higher-order hypogamous marriages.

[29]We find similar effects on wife-initiated divorces for higher-order marriages in Table A.11.

Table 5: UDL and match quality among newlyweds: homogamous (W=H) and hypogamous (W>H) wives' first marriages relative to hypergamy (H>W)

	Husband's higher order marriage, %		Inter-racial marriage, %		Absolute within-couple age diff.	
	(1)	(2)	(3)	(4)	(5)	(6)
UDL x H=W	-0.235	-0.232	-0.180	-0.185	-0.160^{***}	-0.160^{***}
	(0.240)	(0.241)	(0.237)	(0.236)	(0.042)	(0.043)
UDL x W>H	-2.668^{***}	-2.668^{***}	-0.032	-0.031	-0.335^{***}	-0.335^{***}
	(0.618)	(0.618)	(0.263)	(0.264)	(0.087)	(0.087)
UDL	2.446^{*}	0.806	0.985^{**}	1.980	0.235	0.083
	(1.184)	(0.477)	(0.455)	(1.550)	(0.153)	(0.130)
H=W	-2.905^{***}	-2.905^{***}	-0.545^{***}	-0.543^{***}	-0.839^{***}	-0.839^{***}
	(0.176)	(0.176)	(0.081)	(0.081)	(0.026)	(0.026)
W>H	4.088^{***}	4.087^{***}	-0.438^{***}	-0.437^{***}	-0.410^{***}	-0.410^{***}
	(0.375)	(0.375)	(0.120)	(0.120)	(0.049)	(0.049)
Observations	25,064	25,064	23,694	23,694	25,064	25,064
Marriages from	1970 − 1988	1970 − 1988	1970 − 1988	1970 − 1988	1970 − 1988	1970 − 1988
Number of states	24	24	23	23	24	24
State FEs	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Marriage year FEs	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Marriage month FEs	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
State Specific TT	*No*	*Yes*	*No*	*Yes*	*No*	*Yes*

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: The share of first-marriage wives marrying higher-order-marriage husbands and the share of inter-racial marriages are expressed in percentage points. The within couple age gap is defined in years. The specifications also control for the age group of wives. Only marriages in which women are entering when they were between the ages of 16 and 40 are included. Standard errors are clustered at the state level, regressions are weighted by state-year population. TT stands for time trends. We do not use data from states where we have less than 3 years of coverage, or state-year pairs with fewer than 50 observations. The number of observations is smaller for specifications in columns (3) and (4) because for some states the information on race is missing.

Source: National Vital Statistics System of the National Center for Health Statistics (NCHS).

with UDL having little effect on egalitarian homogamy unions, and with hypogamy newlyweds compensating on match quality to lower divorce risks and to leave unchanged the degree of the wife's need to file for divorce.

Table 6: The impact of UDL on the share of wife-applied divorces: homogamous (W=H) and hypogamous (W>H) first marriages relative to hypergamy (H>W)

	(1)	(2)
UDL	0.063***	0.059***
	(0.011)	(0.009)
UDL x H = W	−0.033***	−0.033***
	(0.008)	(0.008)
UDL x W > H	−0.053***	−0.053***
	(0.013)	(0.013)
H = W	0.128***	0.127***
	(0.005)	(0.005)
W > H	0.256***	0.256***
	(0.009)	(0.009)
Observations	27,590	27,590
Marriages from	1970 − 1988	1970 − 1988
Divorces from	1974 − 1988	1974 − 1988
Number of states	20	20
State FEs	*Yes*	*Yes*
Marriage year FEs	*Yes*	*Yes*
Marriage month FEs	*Yes*	*Yes*
State Specific TT	*No*	*Yes*

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: Only marriages that women entered when they were between the ages of 16 and 40 are included. The specifications also control for the age group of wives and inter-race marriages. Standard errors are clustered at the state level, regressions are weighted by state-year population. TT stands for time trends. We do not use data from states where we have less than 3 years of coverage, or state-year pairs with fewer than 50 observations. We use divorce certificates starting in 1974, because information on who applied for divorce is not available from earlier years. We study only divorces from marriages that began during 1970-1988.

Source: National Vital Statistics System of the National Center for Health Statistics (NCHS).

7 Conclusion

By employing administrative data, we are able to study the educational structure of marriage inflows and outflows at US state-year level within one analytical framework. We confirm several existing findings and show that the substantial marriage stability disadvantage of hypogamous couples (where wives are more educated than their husbands), relative to other marriage types plays out strongly within the first two years of marriage. We also find that homogamy among newlyweds (the tendency to form marriages in which spouses are equally educated) was decreasing (relative to non-homogamy) from 1970 to 1988, implying that the secular rise in homogamy in marriage stocks is due to the higher stability of homogamous marriages. We then provide the first study of the joint effect of unilateral divorce legislation on the educational structure of both marriage inflows and outflows.

Our findings depict a marriage market where, among newlyweds, more 'traditional' hypergamous marriages (in which husbands are more educated) are losing ground to both homogamy and hypogamy, and where hypogamous marriages are more likely to end in divorce. These patterns hold for both first and higher-order marriages. With the introduction of unilateral divorce legislation (UDL), the picture changes substantially for first marriages, but not for higher-order ones. Among first marriages, under UDL, hypogamy becomes almost as stable as hypergamy, while homogamy begins to enjoy a stability advantage over hypergamy. Our tantalizing evidence on potential underlying mechanisms is consistent with UDL allowing wives to leave hypergamous marriages they would not leave without UDL (with no adjustment on match quality at marriage entry), and with hypogamous newlyweds compensating for the higher (perceived) riskiness of marriage implied by UDL by improving their marriage stability through forming better matches in other respects.

The evidence that unilateral divorce introduction affects divorce rates (Wolfers, 2006) as well as the evidence provided here on its effects on who divorces whom is not consistent with the predictions of marriage market models based on fully transferable utility (Chiappori et al., 2015), and lends support to models based on imperfectly transferable utility (limited bargaining) within couples (Reynoso, 2022).

References

Acemoglu, D. & Autor, D. (2011). Skills, tasks and technologies: Implications for employment and earnings. In *O. Ashenfelter, D. Card (Eds.), Handbook of labor economics*, volume 4 (pp. 1043–1171). Elsevier.

Afunts, G. (2022). *Family reforms and fertility sorting on education.* Unpublished manuscript, Center for Economic Research and Graduate Education - Economics Institute.

Alesina, A. & Giuliano, P. (2006). *Divorce, fertility and the shot gun marriage.* Working Paper No. 12375, National Bureau of Economic Research.

Atkinson, M. P., Greenstein, T. N., & Lang, M. M. (2005). For women, breadwinning can be dangerous: Gendered resource theory and wife abuse. *Journal of Marriage and Family*, 67(5), 1137–1148.

Becker, G. S. (1991). Family background and the opportunities of children. In *A treatise on the family: Enlarged edition* (pp. 179–200). Harvard University Press.

Bertrand, M., Kamenica, E., & Pan, J. (2015). Gender identity and relative income within households. *The Quarterly Journal of Economics*, 130(2), 571–614.

Bicakova, A. & Jurajda, S. (2016). *Field-of-study homogamy.* Discussion Paper No. 9844, IZA Institute of Labor Economics.

Brewer, M., Crossley, T. F., & Joyce, R. (2018). Inference with difference-in-differences revisited. *Journal of Econometric Methods*, 7(1), 20170005.

Brines, J. & Joyner, K. (1999). The ties that bind: Principles of cohesion in cohabitation and marriage. *American Sociological Review*, 64(3), 333–355.

Cameron, A. C. & Miller, D. L. (2015). A practitioner's guide to cluster-robust inference. *Journal of Human Resources*, 50(2), 317–372.

Carter, A. V., Schnepel, K. T., & Steigerwald, D. G. (2017). Asymptotic behavior of at-test robust to cluster heterogeneity. *Review of Economics and Statistics*, 99(4), 698–709.

Chiappori, P.-A., Fortin, B., & Lacroix, G. (2002). Marriage market, divorce legislation, and household labor supply. *Journal of Political Economy*, 110(1), 37–72.

Chiappori, P.-A., Iyigun, M., & Weiss, Y. (2015). The Becker–Coase theorem reconsidered. *Journal of Demographic Economics*, 81(2), 157–177.

Chiappori, P.-A., Salanié, B., & Weiss, Y. (2017). Partner choice, investment in children, and the marital college premium. *American Economic Review*, 107(8), 2109–2167.

Choo, E. & Siow, A. (2006). Who marries whom and why. *Journal of Political Economy*, 114(1), 175–201.

Dee, T. S. (2003). Until death do you part: The effects of unilateral divorce on spousal homicides. *Economic Inquiry*, 41(1), 163–182.

DiMaggio, P. & Mohr, J. (1985). Cultural capital, educational attainment, and marital selection. *American Journal of Sociology*, 90(6), 1231–1261.

Drewianka, S. (2008). Divorce law and family formation. *Journal of Population Economics*, 21(2), 485–503.

Dupuy, A. & Weber, S. (2018). *Marital patterns and income inequality*. Discussion Paper No. 11572, IZA Institute of Labor Economics.

Friedberg, L. (1998). Did unilateral divorce raise divorce rates? Evidence from panel data. *American Economic Review*, 88(3), 608–627.

Gihleb, R. & Lang, K. (2020). Educational homogamy and assortative mating have not increased. In *S.W. Polachek, K. Tatsiramos (Eds.), Change at home, in the labor market, and on the job*, volume 48 (pp. 1–26). Emerald Publishing Limited.

Goldstein, J. R. & Harknett, K. (2006). Parenting across racial and class lines: Assortative mating patterns of new parents who are married, cohabiting, dating or no longer romantically involved. *Social Forces*, 85(1), 121–143.

Gonalons-Pons, P. & Schwartz, C. R. (2017). Trends in economic homogamy: Changes in assortative mating or the division of labor in marriage? *Demography*, 54(3), 985–1005.

Gonalons-Pons, P., Schwartz, C. R., & Musick, K. (2021). Changes in couples' earnings following parenthood and trends in family earnings inequality. *Demography*, 58(3), 1093–1117.

González, L. & Viitanen, T. K. (2009). The effect of divorce laws on divorce rates in Europe. *European Economic Review*, 53(2), 127–138.

Gray, J. S. (1993). *The impact of divorce laws on marital stability and married women's labor supply*. Unpublished dissertation, University of Pennsylvania.

Greenwood, J., Guner, N., Kocharkov, G., & Santos, C. (2014). Marry your like: Assortative mating and income inequality. *American Economic Review*, 104(5), 348–53.

Gruber, J. (2004). Is making divorce easier bad for children? The long-run implications of unilateral divorce. *Journal of Labor Economics*, 22(4), 799–833.

Kalmijn, M. (1994). Assortative mating by cultural and economic occupational status. *American Journal of Sociology*, 100(2), 422–452.

Kaukinen, C. (2004). Status compatibility, physical violence, and emotional abuse in intimate relationships. *Journal of Marriage and Family*, 66(2), 452–471.

Kneip, T. & Bauer, G. (2009). Did unilateral divorce laws raise divorce rates in Western Europe? *Journal of Marriage and Family*, 71(3), 592–607.

Mechoulan, S. (2006). Divorce laws and the structure of the American family. *The Journal of Legal Studies*, 35(1), 143–174.

Munsch, C. L. (2010). The effect of unemployment and relative income disparity on infidelity for men and women. In *American Sociological Association meetings, Atlanta, GA*.

Nakonezny, P. A., Shull, R. D., & Rodgers, J. L. (1995). The effect of no-fault divorce law on the divorce rate across the 50 states and its relation to income, education, and religiosity. *Journal of Marriage and the Family*, 52(2), 477–488.

Parkman, A. M. (1992). Unilateral divorce and the labor-force participation rate of married women, revisited. *American Economic Review*, 82(3), 671–678.

Pestel, N. (2021). Searching on campus? The marriage market effects of changing student sex ratios. *Review of Economics of the Household*, 19(4), 1175–1207.

Rasul, I. (2004). *The impact of divorce laws on marriage*. Unpublished manuscript, University of Chicago.

Rasul, I. (2006). Marriage markets and divorce laws. *Journal of Law, Economics, and Organization*, 22(1), 30–69.

Reynoso, A. (2022). The impact of divorce laws on the equilibrium in the marriage market. *Journal of Political Economy (R&R)*.

Rodgers, J. L., Nakonezny, P. A., & Shull, R. D. (1997). The effect of no-fault divorce legislation on divorce rates: A response to a reconsideration. *Journal of Marriage and Family*, 59(4), 1026–1030.

Rodgers, J. L., Nakonezny, P. A., & Shull, R. D. (1999). Did no-fault divorce legislation matter? Definitely yes and sometimes no. *Journal of Marriage and Family*, 61(3), 803–809.

Schoen, R. & Weinick, R. M. (1993). Partner choice in marriages and cohabitations. *Journal of Marriage and Family*, 55(2), 408.

Schwartz, C. R. (2010). Pathways to educational homogamy in marital and cohabiting unions. *Demography*, 47(3), 735–753.

Schwartz, C. R. (2013). Trends and variation in assortative mating: Causes and consequences. *Annual Review of Sociology*, 39(1), 451–470.

Schwartz, C. R. & Han, H. (2014). The reversal of the gender gap in education and trends in marital dissolution. *American Sociological Review*, 79(4), 605–629.

Schwartz, C. R. & Mare, R. D. (2005). Trends in educational assortative marriage from 1940 to 2003. *Demography*, 42(4), 621–646.

Siow, A. (2015). Testing Becker's theory of positive assortative matching. *Journal of Labor Economics*, 33(2), 409–441.

Stevenson, B. (2007). The impact of divorce laws on marriage-specific capital. *Journal of Labor Economics*, 25(1), 75–94.

Stevenson, B. & Wolfers, J. (2006). Bargaining in the shadow of the law: Divorce laws and family distress. *The Quarterly Journal of Economics*, 121(1), 267–288.

Tichenor, V. (2005). Maintaining men's dominance: Negotiating identity and power when she earns more. *Sex Roles*, 53(3), 191–205.

Tichenor, V. J. (1999). Status and income as gendered resources: The case of marital power. *Journal of Marriage and the Family*, 61(3), 638–650.

Tzeng, J. M. & Mare, R. D. (1995). Labor market and socioeconomic effects on marital stability. *Social Science Research*, 24(4), 329–351.

Tzeng, M.-S. (1992). The effects of socioeconomic heterogamy and changes on marital dissolution for first marriages. *Journal of Marriage and the Family*, 54(3), 609–619.

Van de Putte, B., Van Poppel, F., Vanassche, S., Sanchez, M., Jidkova, S., Eeckhaut, M., Oris, M., & Matthijs, K. (2009). The rise of age homogamy in 19th century Western Europe. *Journal of Marriage and Family*, 71(5), 1234–1253.

Voena, A. (2015). Yours, mine, and ours: Do divorce laws affect the intertemporal behavior of married couples? *American Economic Review*, 105(8), 2295–2332.

Wolfers, J. (2006). Did unilateral divorce laws raise divorce rates? A reconciliation and new results. *American Economic Review*, 96(5), 1802–1820.

Zhang, H. (2021). An investment-and-marriage model with differential fecundity: On the college gender gap. *Journal of Political Economy*, 129(5), 1464–1486.

A Appendix: Tables

Table A.1: Annual averages of the number of observations (number of years covered) in the CPS and in the certificate data

State	CPS Newlyweds	Marriage Certificates	Divorce Certificates	UDL Year
Alabama	6 (14)	.	1,177 (11)	1971
Alaska	8 (13)	.	2,179 (18)	pre-1967
Arizona	5 (15)	.	.	1973
Arkansas	5 (14)	.	.	.
California	36 (20)	7,105 (19)	3,533 (8)	1970
Colorado	6 (14)	.	.	1972
Connecticut	4 (18)	4,672 (8)	3,223 (18)	1973
Delaware	5 (12)	.	.	1968
D. of Columbia	2 (19)	.	.	.
Florida	15 (20)	.	.	1971
Georgia	9 (20)	.	1,993 (7)	1973
Hawaii	3 (13)	5,115 (19)	2,571 (18)	1972
Idaho	6 (14)	.	.	1971
Illinois	16 (20)	55,296 (19)	29,117 (18)	.
Indiana	9 (20)	.	.	1973
Iowa	6 (16)	4,281 (6)	3,472 (17)	1970
Kansas	8 (15)	4,336 (19)	2,796 (19)	1969
Kentucky	6 (18)	3,219 (5)	.	1972
Louisiana	8 (19)	3,395 (19)	.	.
Maine	4 (12)	10,364 (11)	.	1973
Maryland	7 (19)	.	.	.
Massachusetts	9 (16)	.	.	1975
Michigan	14 (16)	.	1,238 (15)	1972
Minnesota	6 (15)	165 (6)	.	1974
Mississippi	7 (15)	2,879 (10)	.	.
Missouri	10 (20)	34,035 (14)	15,799 (15)	.
Montana	13 (13)	6,962 (13)	2,593 (11)	1973
Nebraska	6 (13)	11,688 (19)	3,997 (18)	1972
Nevada	5 (12)	.	.	1967
New Hampshire	6 (14)	8,420 (19)	3,482 (10)	1971
New Jersey	13 (20)	.	.	.
New Mexico	5 (14)	.	.	pre-1967

New York	21 (20)	.	36,814 (18)	.
North Carolina	13 (16)	4,344 (19)	.	.
North Dakota	6 (12)	.	.	1971
Ohio	16 (20)	.	.	1992
Oklahoma	7 (16)	.	.	pre-1967
Oregon	4 (18)	.	.	1971
Pennsylvania	16 (20)	.	.	.
Rhode Island	3 (14)	6,533 (19)	2,100 (17)	1975
South Carolina	4 (15)	3,513 (3)	.	.
South Dakota	5 (13)	.	.	1985
Tennessee	8 (20)	3,244 (19)	1,053 (18)	.
Texas	23 (20)	.	.	1970
Utah	8 (14)	4,200 (19)	1,519 (18)	1987
Vermont	4 (12)	4,728 (19)	1,482 (17)	.
Virginia	7 (15)	54,837 (19)	15,385 (18)	.
Washington	5 (15)	.	.	1973
West Virginia	4 (18)	.	.	1984
Wisconsin	7 (16)	29,253 (11)	2,247 (11)	1978
Wyoming	5 (13)	2,521 (19)	1,761 (16)	1977

Note: Annual averages of marriage observations with education of spouses available for women entering their marriage aged 16-40. We combine March&June CPS samples and proxy newlyweds as marriages that are less than one year old at the time of the survey. The CPS annual averages cover 1962, 1965, 1967-1971, 1976-1977, 1979-1983, 1986-1988, 1990, 1992 and 1994. NCHS data cover 1970-1988. In NCHS, as in the rest of the paper, we do not use data from states where we have less than 3 years of coverage, or state-year pairs with fewer than 50 observations. The number of years covered with necessary variables available in each data-set for each state is in brackets next to the average number of observations per year. The 'UDL year' column gives the year of the introduction of unilateral divorce legislation based on Voena (2015).
Source: CPS March&June and National Vital Statistics System of the National Center for Health Statistics (NCHS).

Table A.2: The % share of newlywed wives and husbands with different education levels

Education levels	Wife 1970	1988	Husband 1970	1988
0-9 years of education	7.14	3.38	9.02	3.91
10-11 years of education	15.56	8.35	11.50	8.12
High school degree	42.86	39.38	39.76	40.75
Some college	22.95	25.97	24.66	22.61
4+ years of college	11.49	22.92	15.06	24.61
Total	100.00	100.00	100.00	100.00
N	58,451	292,846	58,451	292,846

Note: Only marriages that women entered when they were between the ages of 16 and 40 are included. We do not use data from states where we have less than 3 years of coverage, or state-year pairs with fewer than 50 observations.

Sources: CPS March&June and National Vital Statistics System of the National Center for Health Statistics (NCHS).

Table A.3: The education structure (in %) of *partners* of newlyweds with 4+ years of college

Newlyweds with 4+ years of college:	Husband 1970	1988	Wife 1970	1988
Education of their spouses:				
0-9 years of education	0.27	0.32	0.97	0.40
10-11 years of education	1.43	0.79	1.13	1.02
High-school degree	17.33	14.47	13.05	14.75
Some college	35.26	24.83	24.94	19.84
4+ years of college	45.71	59.60	59.91	63.99
Total	100.00	100.00	100.00	100.00
N	8,802	72,069	6,715	67,121

Note: Only marriages that women entered when they were between the ages of 16 and 40 are included. We do not use data from states where we have less than 3 years of coverage, or state-year pairs with fewer than 50 observations.

Sources: CPS March&June and National Vital Statistics System of the National Center for Health Statistics (NCHS).

Table A.4: The impact of UDL on marriage inflow structure - economics categorization

	All marriages		First marriages		Higher order marriages	
	(1)	(2)	(3)	(4)	(5)	(6)
UDL	1.083	0.937	1.050	0.938	1.218	0.895
	(0.130)	(0.059)	(0.100)	(0.058)	(0.224)	(0.080)
UDL x Non-Homogamy	0.935	0.935	0.940	0.940	0.962	0.960
	(0.044)	(0.044)	(0.045)	(0.045)	(0.036)	(0.035)
Non-Homogamy	0.359***	0.359***	0.327***	0.327***	0.467***	0.471***
	(0.003)	(0.003)	(0.002)	(0.002)	(0.006)	(0.006)
Observations	16,977	16,977	8,583	8,583	8,394	8,394
Marriages from	1970 – 1988	1970 – 1988	1970 – 1988	1970 – 1988	1970 – 1988	1970 – 1988
Number of states	24	24	24	24	24	24
State FEs	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Year FEs	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
State Specific TT	*No*	*Yes*	*No*	*Yes*	*Yes*	*Yes*

Exponentiated coefficients; Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: The estimates correspond to the log-linear model, Equation (1). Only marriages, where women are entering their marriage aged 16-40, are included. Standard errors are clustered at the state level. TT stands for time trends. We do not use data from states where we have less than 3 years of coverage, or state-year pairs with fewer than 50 observations.

Source: National Vital Statistics System of the National Center for Health Statistics (NCHS).

Table A.5: The impact of UDL on marriage inflow structure - economics categorization

	All marriages		First marriages		Higher order marriages	
	(1)	(2)	(3)	(4)	(5)	(6)
UDL	1.064	0.920	1.046	0.934	1.210	0.884
	(0.124)	(0.064)	(0.098)	(0.067)	(0.218)	(0.083)
UDL x H = W	1.014	1.016	1.002	1.002	1.005	1.012
	(0.036)	(0.036)	(0.040)	(0.040)	(0.029)	(0.029)
UDL x W > H	0.891	0.894	0.880	0.882	0.921	0.930
	(0.086)	(0.087)	(0.090)	(0.090)	(0.086)	(0.084)
H = W	2.120***	2.116***	2.442***	2.441***	1.406***	1.396***
	(0.063)	(0.063)	(0.087)	(0.087)	(0.029)	(0.029)
W > H	0.573***	0.572***	0.634***	0.633***	0.422***	0.422***
	(0.036)	(0.036)	(0.049)	(0.049)	(0.013)	(0.013)
Observations	$16,977$	$16,977$	$8,583$	$8,583$	$8,394$	$8,394$
Marriages from	$1970-1988$	$1970-1988$	$1970-1988$	$1970-1988$	$1970-1988$	$1970-1988$
Number of states	24	24	24	24	24	24
State FEs	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Year FEs	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
State Specific TT	*No*	*Yes*	*No*	*Yes*	*No*	*Yes*

Exponentiated coefficients; Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: The estimates correspond to the log-linear model, Equation (1). Only marriages, where women are entering their marriage aged 16-40, are included. Standard errors are clustered at the state level. TT stands for time trends. We do not use data from states where we have less than 3 years of coverage, or state-year pairs with fewer than 50 observations.

Source: National Vital Statistics System of the National Center for Health Statistics (NCHS).

Table A.6: The impact of UDL on 2-year marriage survival: hypogamous (W>H) and homogamous (W=H) couples relative to hypergamous (H>W) - economics categorization

	All marriages		First marriages		Higher order marriages	
	(1)	(2)	(3)	(4)	(5)	(6)
		Up to 2 year old marriages				
UDL	−0.003	−0.047*	−0.024	−0.052*	0.032	−0.037
	(0.027)	(0.024)	(0.017)	(0.025)	(0.031)	(0.023)
H = W	−0.018*	−0.018*	−0.019	−0.018	−0.014**	−0.014**
	(0.009)	(0.009)	(0.012)	(0.012)	(0.006)	(0.006)
W > H	−0.053***	−0.053***	−0.040***	−0.040***	−0.073***	−0.072***
	(0.007)	(0.007)	(0.007)	(0.007)	(0.013)	(0.012)
UDL x H = W	0.014	0.013	0.021	0.021	0.004	0.004
	(0.010)	(0.011)	(0.014)	(0.014)	(0.013)	(0.013)
UDL x W > H	0.031***	0.031***	0.030***	0.030***	0.018	0.018
	(0.009)	(0.009)	(0.008)	(0.008)	(0.021)	(0.021)
Observations	28,221	28,221	16,130	16,130	12,091	12,091
Marriages from	1970 – 1986	1970 – 1986	1970 – 1986	1970 – 1986	1970 – 1986	1970 – 1986
Number of states	15	15	15	15	15	15
State FEs	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Marriage year FEs	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Marriage month FEs	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
State Specific TT	*No*	*Yes*	*No*	*Yes*	*No*	*Yes*

Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: Only marriages, where women are entering their marriage aged 16-40, are included. The specifications also control for the age group of wife, higher order and inter-racial marriages. Standard errors are clustered at the state level, regressions are weighted by state-year population. TT stands for time trends. We do not use the states where we have less than 3 years of coverage, and state-year pairs with fewer than 50 observations.

Source: National Vital Statistics System of the National Center for Health Statistics (NCHS).

Table A.7: The impact of UDL on 4-year marriage survival: hypogamous (W>H) and homogamous (W=H) couples relative to hypergamous (H>W) - economics categorization

	All marriages		First marriages		Higher order marriages	
	(1)	(2)	(3)	(4)	(5)	(6)
		Up to 4 year old marriages				
UDL	-0.016	-0.063	-0.058	-0.088	0.056	-0.019
	(0.066)	(0.063)	(0.052)	(0.063)	(0.071)	(0.057)
H = W	-0.042^{**}	-0.043^{**}	-0.043^{**}	-0.044^{**}	-0.040^{**}	-0.040^{**}
	(0.017)	(0.017)	(0.019)	(0.019)	(0.015)	(0.015)
W > H	-0.092^{***}	-0.093^{***}	-0.075^{***}	-0.075^{***}	-0.117^{***}	-0.117^{***}
	(0.018)	(0.018)	(0.013)	(0.013)	(0.026)	(0.026)
UDL x H = W	0.029	0.029	0.040^{*}	0.040^{*}	0.013	0.012
	(0.021)	(0.021)	(0.021)	(0.021)	(0.028)	(0.028)
UDL x W > H	0.048^{**}	0.048^{**}	0.045^{***}	0.046^{***}	0.037	0.036
	(0.019)	(0.019)	(0.013)	(0.013)	(0.029)	(0.029)
Observations	27,507	27,507	15,689	15,689	11,818	11,818
Marriages from	1970 – 1984	1970 – 1984	1970 – 1984	1970 – 1984	1970 – 1984	1970 – 1984
Number of states	15	15	15	15	15	15
State FEs	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Marriage year FEs	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Marriage month FEs	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
State Specific TT	*No*	*Yes*	*No*	*Yes*	*No*	*Yes*

Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: Only marriages, where women are entering their marriage aged 16-40, are included. The specifications also control for the age group of wife, higher order and inter-racial marriages. Standard errors are clustered at the state level, regressions are weighted by state-year population. TT stands for time trends. We do not use the states where we have less than 3 years of coverage, and state-year pairs with fewer than 50 observations.

Source: National Vital Statistics System of the National Center for Health Statistics (NCHS).

Table A.8: Survival rates of non-homogamous (i.e., hypogamous (W>H) and hypergamous (W<H)) couples relative to homogamy (W=H)

	All marriages		First marriages		Higher order marriages	
(1)	(2)	(3)	(4)	(5)	(6)	
		Up to 2 year old marriages				
Non-Homogamous	-0.017^{***}	-0.017^{***}	-0.019^{***}	-0.019^{***}	-0.019^{**}	-0.019^{**}
	(0.004)	(0.004)	(0.003)	(0.003)	(0.007)	(0.007)
Observations	28,331	28,331	16,122	16,122	12,209	12,209
Marriages from	1970 – 1986	1970 – 1986	1970 – 1986	1970 – 1986	1970 – 1986	1970 – 1986
Number of states	15	15	15	15	15	15
		Up to 4 year old marriages				
Non-Homogamous	-0.013^{**}	-0.013^{**}	-0.012^{*}	-0.012^{*}	-0.018^{*}	-0.017^{*}
	(0.006)	(0.006)	(0.006)	(0.006)	(0.009)	(0.009)
Observations	27,548	27,548	15,649	15,649	11,899	11,899
Marriages from	1970 – 1984	1970 – 1984	1970 – 1984	1970 – 1984	1970 – 1984	1970 – 1984
Number of states	15	15	15	15	15	15
State FEs	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Marriage year FEs	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Marriage month FEs	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
State Specific TT	*No*	*Yes*	*No*	*Yes*	*No*	*Yes*

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: Only marriages, where women are entering their marriage aged 16-40, are included. The specifications also control for the age group of wife, higher order and inter-racial marriages. Standard errors are clustered at the state level, regressions are weighted by state-year population. TT stands for time trends. We do not use the states where we have less than 3 years of coverage, and state-year pairs with fewer than 50 observations.

Source: National Vital Statistics System of the National Center for Health Statistics (NCHS).

Table A.9: The impact of UDL on marriage inflow structure

	All marriages		First marriages		Higher order marriages	
	(1)	(2)	(3)	(4)	(5)	(6)
UDL	1.082	0.941	1.053	0.945	1.214	0.898
	(0.132)	(0.060)	(0.102)	(0.059)	(0.225)	(0.080)
UDL x Non-Homogamy	0.928	0.928	0.928	0.928	0.961	0.960
	(0.050)	(0.050)	(0.053)	(0.053)	(0.034)	(0.034)
Non-Homogamy	0.354***	0.355***	0.323***	0.323***	0.463***	0.465***
	(0.003)	(0.003)	(0.002)	(0.002)	(0.005)	(0.005)
Observations	17,101	17,101	8,611	8,611	8,490	8,490
Number of states	24	24	24	24	24	24
Marriages from	1970 – 1988	1970 – 1988	1970 – 1988	1970 – 1988	1970 – 1988	1970 – 1988
State Specific TT	*No*	*Yes*	*No*	*Yes*	*No*	*Yes*

Exponentiated coefficients; Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: The estimates correspond to the log-linear model, Equation (1). Only marriages, where women are entering their marriage aged 16-40, are included. Standard errors are clustered at the state level. TT stands for time trends. We do not use data from states where we have less than 3 years of coverage, or state-year pairs with fewer than 50 observations.

Source: National Vital Statistics System of the National Center for Health Statistics (NCHS).

Table A.10: UDL and match quality among newlyweds: homogamous (W=H) and hypogamous (W>H) wives' higher-order marriages relative to hypergamy (H>W)

	Husband's higher order marriage, %		Inter-racial marriage, %		Absolute within-couple age diff.	
	(1)	(2)	(3)	(4)	(5)	(6)
UDL x H=W	0.335	0.388	−0.029	−0.030	−0.019	−0.019
	(0.601)	(0.611)	(0.291)	(0.292)	(0.074)	(0.075)
UDL x W>H	−1.017	−1.093	0.564	0.564	−0.089	−0.090
	(1.394)	(1.385)	(0.511)	(0.513)	(0.116)	(0.116)
UDL	3.043	0.530	0.117	1.254	0.163	0.073
	(2.793)	(1.078)	(0.540)	(0.899)	(0.139)	(0.129)
H=W	−0.012	−0.031	−0.318***	−0.316***	−0.524***	−0.523***
	(0.543)	(0.545)	(0.056)	(0.056)	(0.070)	(0.070)
W>H	3.073***	3.089***	−0.243***	−0.246***	0.019	0.020
	(0.923)	(0.926)	(0.048)	(0.047)	(0.109)	(0.109)
Observations	23,592	23,592	22,297	22,297	23,596	23,596
Marriages from	1970 – 1988	1970 – 1988	1970 – 1988	1970 – 1988	1970 – 1988	1970 – 1988
Number of states	24	24	23	23	24	24
State FEs	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Marriage year FEs	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Marriage month FEs	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
State Specific TT	*No*	*Yes*	*No*	*Yes*	*No*	*Yes*

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: The share of higher-order-marriage wives marrying higher-order-marriage husbands and the share of inter-racial marriages are expressed in percentage points. The within couple age gap is defined in years. The specifications also control for the age group of wives. Only marriages, where women are entering their marriage aged 16-40, are included. Standard errors are clustered at the state level, regressions are weighted by state-year population. TT stands for time trends. We do not use data from states where we have less than 3 years of coverage, or state-year pairs with fewer than 50 observations. The number of observations is smaller for specifications in columns (3) and (4) because for some states the information on race is missing.

Source: National Vital Statistics System of the National Center for Health Statistics (NCHS).

Table A.11: The impact of UDL on the share of divorces applied for by wives: homogamous (W=H) and hypogamous (W>H) higher-order marriages relative to hypergamy (H>W)

	(1)	(2)
UDL	0.062***	0.059***
	(0.010)	(0.011)
UDL x H = W	−0.049***	−0.049***
	(0.010)	(0.010)
UDL x W > H	−0.050***	−0.050***
	(0.016)	(0.016)
H = W	0.128***	0.128***
	(0.004)	(0.004)
W > H	0.244***	0.243***
	(0.012)	(0.012)
Observations	22,675	22,675
Marriages from	1970 − 1988	1970 − 1988
Divorces from	1974 − 1988	1974 − 1988
Number of states	20	20
State FEs	*Yes*	*Yes*
Marriage year FEs	*Yes*	*Yes*
Marriage month FEs	*Yes*	*Yes*
State Specific TT	*No*	*Yes*

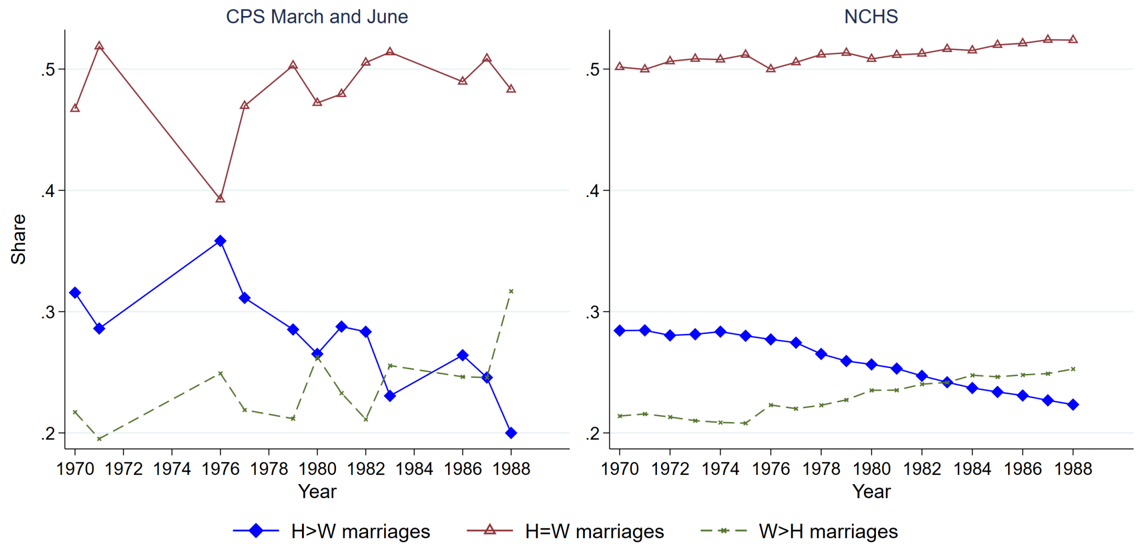
Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: Only marriages, where women are entering their marriage aged 16-40, are included. The specifications also control for the age group of wife and inter-racial marriages. Standard errors are clustered at the state level, regressions are weighted by state-year population. TT stands for time trends. We do not use data from states where we have less than 3 years of coverage, or state-year pairs with fewer than 50 observations. We use divorce certificates starting from 1974 since information on which spouse applied for divorce is not available from earlier years. We study only divorces from marriages that began during 1970-1988.

Source: National Vital Statistics System of the National Center for Health Statistics (NCHS).

B Appendix: Figures

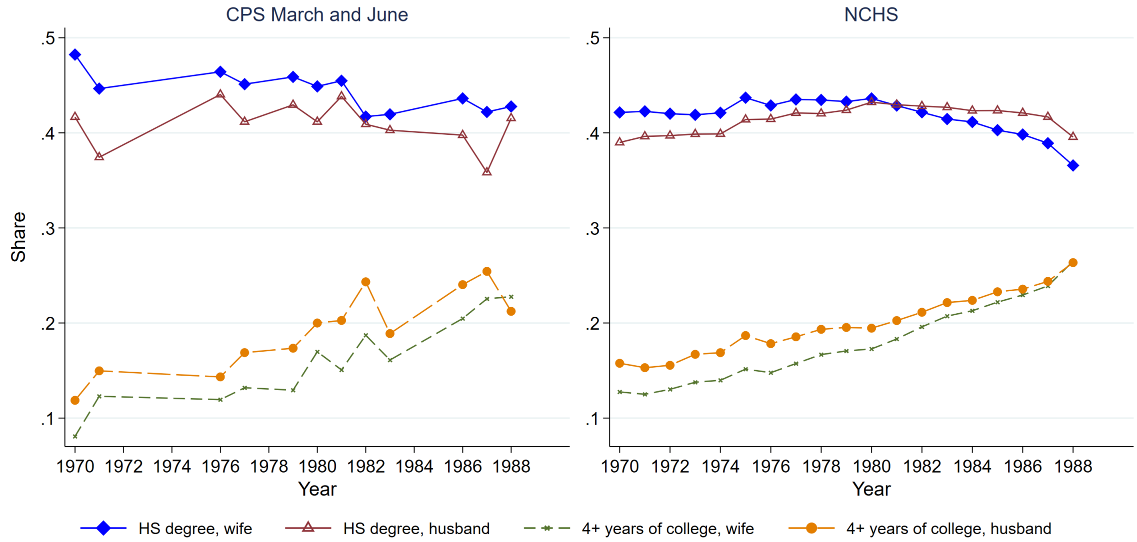
Figure B.1: The educational structure of newlyweds



Note: Only marriages, where women are entering their marriage aged 16-40, are included from both CPS and NCHS. In NCHS, as in the rest of the paper, we do not use data from states where we have less than 3 years of coverage, or state-year pairs with fewer than 50 observations. In CPS data, we proxy newlyweds using marriages that are less than one year old at the time of the survey. Here NCHS is also restricted to first order marriages for the graphs to be comparable. The sample sizes are as follows: total number observations N=4,319 in CPS and N=2,545,052 in NCHS.

Sources: CPS March&June and National Vital Statistics System of the National Center for Health Statistics (NCHS).

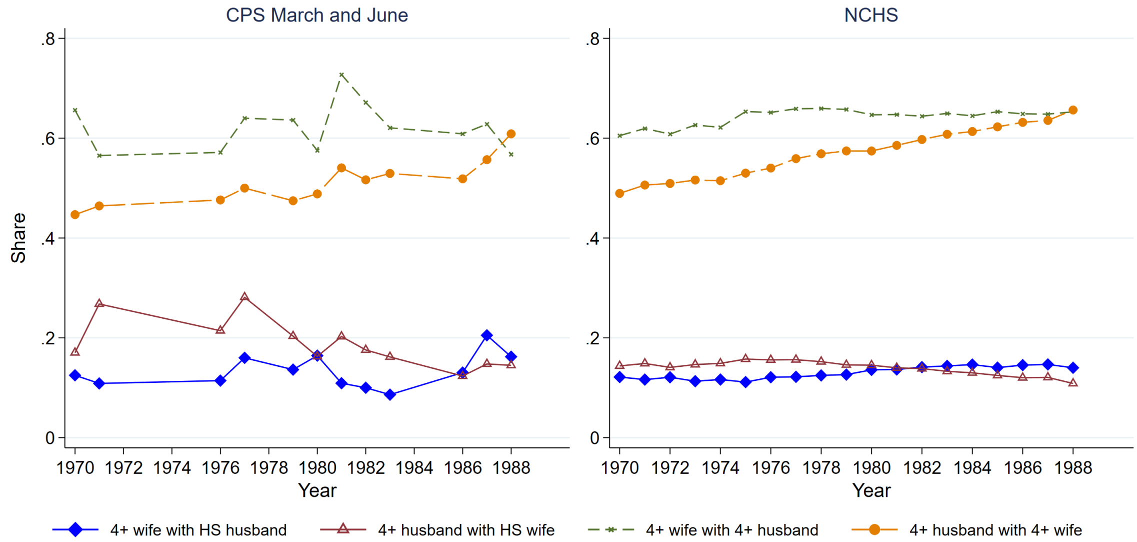
Figure B.2: The share of newlywed wives (husbands) by their education level by year of marriage



Note: Only marriages, where women entering first marriage are aged 16-40, are included from both CPS and NCHS. In NCHS, as in the rest of the paper, we do not use data from states where we have less than 3 years of coverage, or state-year pairs with fewer than 50 observations. In CPS data, we proxy newlyweds using marriages that are less than one year old at the time of the survey. Here NCHS is also restricted to first order marriages for the graph to be comparable to CPS. The sample sizes for the two displayed educational categories are as follows: for wives N=2,603 in CPS and N=1,546,877 in NCHS; for husbands N=2,589 in CPS and N=1,598,934 in NCHS.

Sources: CPS March&June and National Vital Statistics System of the National Center for Health Statistics (NCHS).

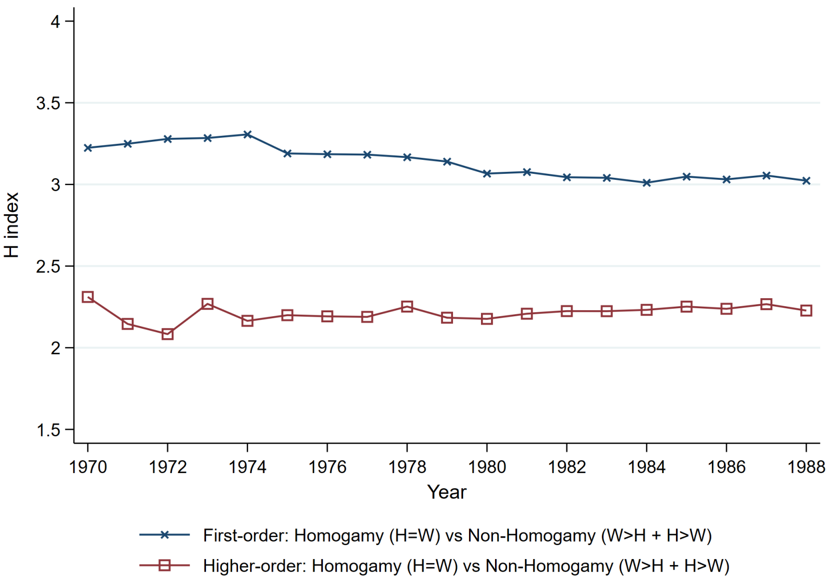
Figure B.3: The educational structure of partners of newlyweds with 4+ years of college



Note: Only marriages, where women are entering their marriage aged 16-40, are included from both CPS and NCHS. In NCHS, as in the rest of the paper, we do not use data from states where we have less than 3 years of coverage, or state-year pairs with fewer than 50 observations. In CPS data, we proxy newlyweds using marriages that are less than one year old at the time of the survey. Here NCHS is also restricted to first order marriages for the graph to be comparable to CPS. The sample sizes are as follows: total number of wives with 4+ years of college N=684 in CPS and N=490,685 in NCHS; total number of husbands with 4+ years of college N=825 in CPS and N=534,462 in NCHS.

Sources: CPS March&June and National Vital Statistics System of the National Center for Health Statistics (NCHS).

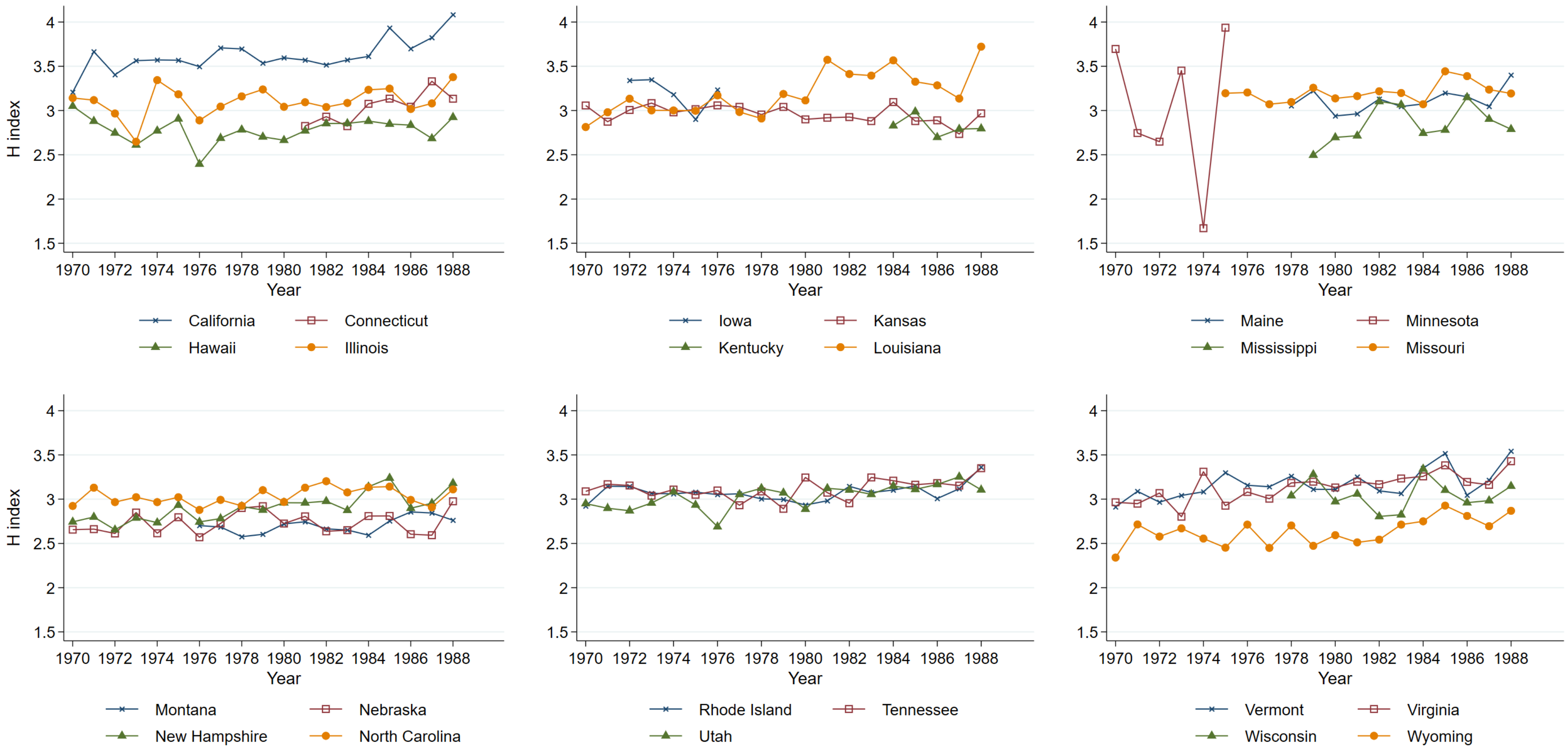
Figure B.4: Homogamy Evolution in Marriage Inflow (Newlyweds) for First and Higher-Order Marriages, NCHS Data



Note: Only marriages, where women are entering their marriage aged 16-40, are included. We do not use data from states where we have less than 3 years of coverage, or state-year pairs with fewer than 50 observations. We control for state fixed effects and state specific time trends.

Source: National Vital Statistics System of the National Center for Health Statistics (NCHS).

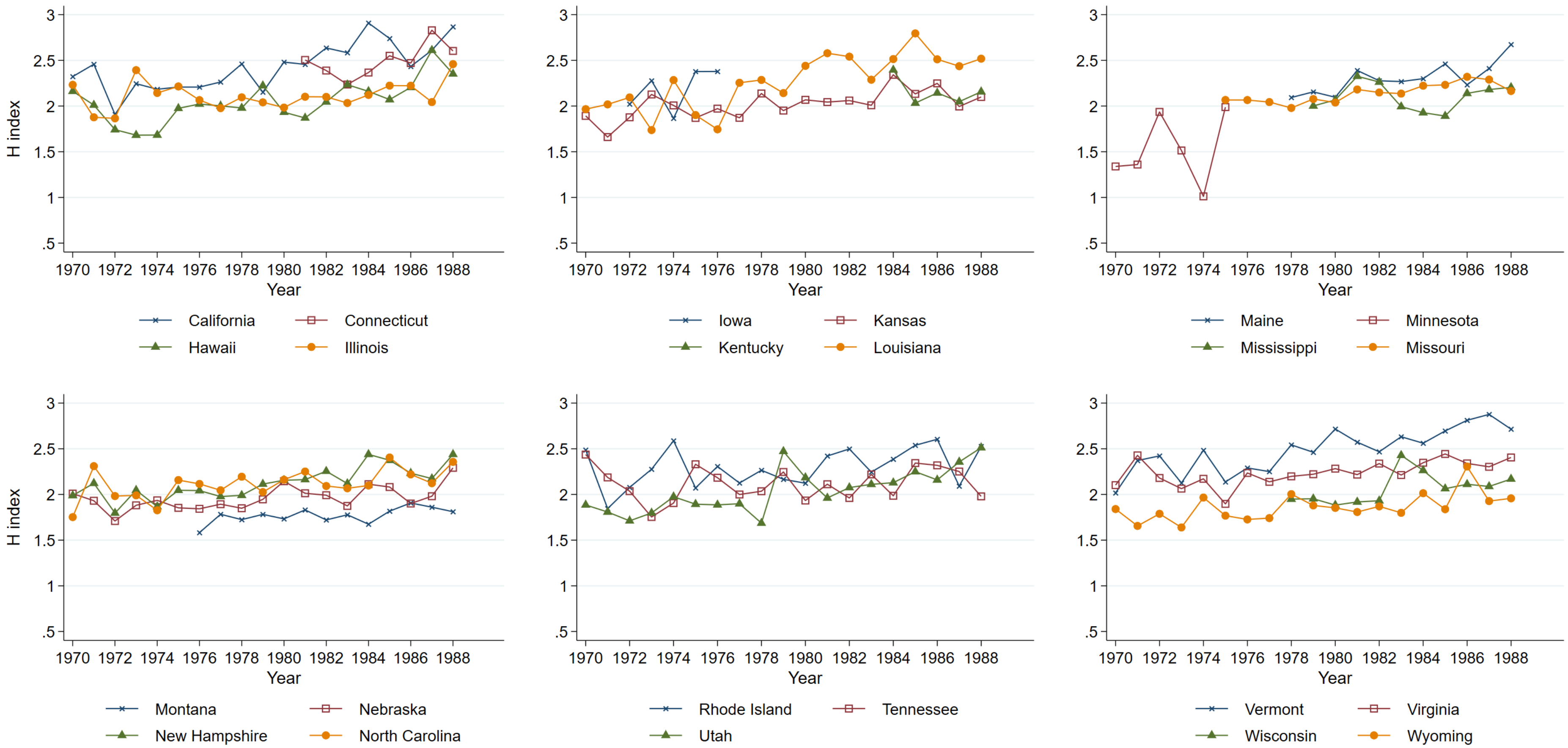
Figure B.5: Homogamy Evolution in Marriage Inflows (Newlyweds) for First-Order Marriages, NCHS Data



Note: Only marriages, where women are entering their marriage aged 16-40, are included. We do not use data from states where we have less than 3 years of coverage, or state-year pairs with fewer than 50 observations.

Source: National Vital Statistics System of the National Center for Health Statistics (NCHS).

Figure B.6: Homogamy Evolution in Marriage Inflows (Newlyweds) for Higher-Order Marriages, NCHS Data



Note: Only marriages, where women are entering their marriage aged 16-40, are included. We do not use data from states where we have less than 3 years of coverage, or state-year pairs with fewer than 50 observations.

Source: National Vital Statistics System of the National Center for Health Statistics (NCHS).

C Appendix: NCHS Data

The National Vital Statistics System of the National Center for Health Statistics (NCHS) certificate data include information that couples report in order to apply for marriage or divorce during 1968-1995: residency, education, race and age of bride and groom, date of marriage/divorce, and the number of previous marriages. The education of spouses is measured in years of schooling. To check for sensitivity as suggested in Gihleb & Lang (2020), we use two different categorizations of education, one from sociology (Schwartz & Mare, 2005), the other from economics (Acemoglu & Autor, 2011). The sociology literature defines 5 categories of education as: $<$ 10 years, 10-11 years, 12 years/high school, some college, 4+ years of college. The economics literature separates education categories differently: $<$ 12 years, 12 years/high school, some college, 4 years of college, 4+ years of college. Our marginal-free measures of homogamy are not sensitive to the specification of educational categories. We report baseline estimates based on the 'sociology' classification; Appendix A shows selected estimates based on the alternative categorization.

The NCHS database covers all marriages and divorces in small-population states; in large-population states the data correspond to 10-50% random samples. In all calculations, we thus adjust for NCHS sampling rates. Our analysis focuses on 1970-1988, because information on the education level of partners is only available during this period in the certificate data. The number of states with available education information grows over time. In total, 24 states provide education information in marriage certificates (with the average number of observations across state-year cells being 31,149), while 22 states provide this information in divorce certificates (on average, 20,346 divorces are observed across state-year cells). Table A.1 in Appendix A shows details of the certificate data coverage.

We code the state of the UDL right-hand-side variable based on the year of divorce. While marriage inflow measures can be directly constructed from marriage certificate data, constructing outflow (divorce) measures requires us to combine information from marriage and divorce certificates. Consider measuring the share of marriages formed in year t in state s that survive more than two (four) years. In the absence of data on the cross-border mobility of recently married couples, we calculate the divorce rate (one minus the survival rate) as follows: The numerator is the number of separations (of a given educational type) registered in state s occurring at most two (four) years (measured in months) after the year of marriage t. The denominator equals the number of newlywed couples (of a given educational type) in state s and year t. We apply this approach based on combined certificate data to generate state-year pseudo stocks of first marriages registered during 1970-1988.

We cannot link marriage and divorce certificates for specific couples. This creates the potential for measurement error driven by unbalanced mobility of couples across state borders. The numerator of our divorce rate is measured without any error, but it includes couples divorcing in state s who married in states other than s. In our sample, the share of such 'cross-border' divorces within both two and four years of marriage is 19%. The true denominator of the divorce rate, which we do not observe, is affected by net cross-border mobility of recently married couples, including those who never divorce, such that their mobility is not observable in certificate data.[30] However, if the net cross-border mobility of recently married couples is independent of unilateral divorce legislation, mobility generates measurement error in our outcome variable that need not affect the consistency of the estimated effects of the key causal variable—the UDL indicator. Below we present CPS-based evidence supporting such independence.

Measuring the cross-border mobility of recently married couples is difficult even in the large CPS samples from the 1970s and 1980s due to data issues discussed in Section 3. Specifically, the state of residence as of one year prior is only available in CPS March, and only from 1982 onward (except in 1985), when the age of first marriage in CPS March is not available. Instead of studying the mobility of recently married couples, we therefore study the mobility of married couples who are similarly young as couples who married after 1970, which form the basis of our main analysis. Specifically, in the first two columns of Table C.1, we focus on the 4,494 married couples in CPS March from 1982 to 1988 where the age of the wife is below 40, who moved across state borders in the prior year.

The second two columns offer evidence based on 5,486 such married couples aged up to 59. We form net annual migration flows across state pairs and ask whether these flows depend on the gap across the two states in employment rates and on the change in UDL status. The estimated coefficients from regressions controlling for year fixed

[30] A similar issue with cross-state mobility arises in survey data, such as the CPS, where one does not observe the state of marriage. Existing studies do not detail how they deal with cross-border mobility.

effects and state-pair fixed effects, clustered at state-pair level, are shown in Table C.1. The employment-gap coefficient has the expected sign and is significant in some of the specifications, but the difference in UDL status (compared to no difference) across state borders does not significantly affect the migration flows of young couples, and has the opposite sign than expected; we conclude that measurement error is not a major threat to our main regression analysis of divorce behavior

Table C.1: Cross-state-border gross mobility of married couples

	age up to 40 years		age up to 59 years	
	(1)	(2)	(3)	(4)
Employment rate gap	-0.020^{**}	-0.014	-0.025^{***}	-0.007
	(0.009)	(0.021)	(0.009)	(0.021)
From NUDL to UDL	-0.005	-0.077	-0.165	-0.114
	(0.181)	(0.217)	(0.174)	(0.221)
From UDL to NUDL	-0.011	0.096	0.014	0.036
	(0.121)	(0.267)	(0.091)	(0.202)
Observations	2,901	2,901	3,279	3,279
Number of state pairs	897	897	944	944
Year FEs	*Yes*	*Yes*	*Yes*	*Yes*
Pair FEs	*Yes*	*Yes*	*Yes*	*Yes*
Both State Specific TT	*No*	*Yes*	*No*	*Yes*

Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: The dependent variable is the natural logarithm of flows between state pairs within the prior year. The corresponding employment gap in percentage points is defined as the unemployment rate of the sending state minus the employment rate of the receiving state (the average employment gap in our sample is-0.8% with a 5.5 standard deviation). The residuals are clustered at the state-pair level.

Source: CPS Match, year coverage 1982-1984, 1986-1988.

.

D Appendix: Replicating the Reynoso (2022) approach with CPS and NCHS data

To study the composition of newlyweds, we also estimate the Reynoso (2022) equation

$$\begin{aligned} Ed^w_{cts} =& \beta_0 + \beta_1 U_{ts} + \beta_2 Ed^h_{cts} U_{ts} + \beta_{3t} Ed^h_{cts} + \beta_{4s} Ed^h_{cts} + \beta_{5s} t + \\ & + \gamma_t + \gamma_s + \epsilon_{cts}, \end{aligned}$$

where Ed^w_{cts} (Ed^h_{cts}) are years of education of wife (husband) for couple c in state s at time t (coded to at most 17 years) and U_{ts} is a dummy equal to one if state s at time t has unilateral divorce legislation in place. Next, γ_t and γ_s are time and state specific effects, respectively, and β_s and β_t control for the state- and year-specific association of spouses' education levels. In Table D.1 we estimate this Reynoso (2022) specification on the certificate NCHS data and on the CPS, using a sample frame that maximizes comparability of year coverage.

Table D.1: UDL impact on newlywed composition (education in years): CPS vs NCHS

	CPS		NCHS	
	(1)	(2)	(3)	(4)
$Educ^h$UD (β_2)	0.0972	0.0919	0.0211	0.0184
	(0.104)	(0.104)	(0.0404)	(0.0407)
Observations	8,276	8,276	1,184,891	1,184,891
Number of states	51	51	29	29
State Specific TT	*No*	*Yes*	*No*	*Yes*

Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: We follow Reynoso (2022) sample definition. In columns (1)-(2) the sample consists of CPS couples entering first marriage within less than a year of the survey year (we use a one-year window rather than two years as in Reynoso (2022) to minimize survival biases), and in which the husband is at most 25 years old. We use the years 1970,1971, 1976,1977, 1979-1983, 1986-1988 in both datasets to match with CPS March coverage. In columns (3)-(4) we use marriage certificates. All specifications are for first marriages. Standard errors are clustered at the state level.

Source: CPS March&June and National Vital Statistics System of the National Center for Health Statistics (NCHS).

Abstrakt

Legislativní změny umožňující tzv. jednostranný rozvod (bez souhlasu obou partnerů) v USA od konce 60. let vedly k navýšení rozvodovosti. V tomto článku se ptáme, zda usnadnění rozvodu ovlivnilo vzdělanostní strukturu manželství. S použitím oddacích a rozvodových listů z let 1970-1988, tj. administrativních dat, nabízíme nové poznatky o vývoji vzdělanostní struktury svatebčanů (příchod do stavu manželství) a rozvádějících se (odchod ze stavu manželství) a odhady vlivu legislativních změn na strukturu obou změnových toků založené na metodě rozdílů v rozdílech. Reformy rozvodů nejsou důvodem navyšující se vzdělanostní homogamie v manželství, tj. podobnosti úrovně vzdělání manželských párů. Reformy ale změnily relativní stabilitu (pravděpodobnost rozvodu) tak, že typicky nestabilní páry, kde ženy mají vyšší vzdělání, se díky reformám staly stabilnějšími než dříve, zatímco páry, kde muži mají vyšší vzdělání, se staly méně stabilními než homogamní manželství.

Working Paper Series
ISSN 2788-0443

Individual researchers, as well as the on-line version of the CERGE-EI Working Papers (including their dissemination) were supported from institutional support RVO 67985998 from Economics Institute of the CAS, v. v. i.

Specific research support and/or other grants the researchers/publications benefited from are acknowledged at the beginning of the Paper.

Published by
Charles University, Center for Economic Research and Graduate Education (CERGE)
and
Economics Institute of the CAS, v. v. i. (EI)
CERGE-EI, Politických vězňů 7, 111 21 Prague 1, tel.: +420 224 005 153, Czech Republic.
Phone: + 420 224 005 153
Email: office@cerge-ei.cz
Web: https://www.cerge-ei.cz/

Editor: Byeongju Jeong

The paper is available online at https://www.cerge-ei.cz/working-papers/.

ISBN 978-80-7343-547-9 (Univerzita Karlova, Centrum pro ekonomický výzkum a doktorské studium)
ISBN 978-80-7344-659-8 (Národohospodářský ústav AV ČR, v. v. i.)