Spousal Characteristics and Divorce Risk: Gender and family changes in contemporary Taiwan, 1998-2013

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Research on the sex gap in educational attainment has shown a tremendous improvement of women's educational and occupational attainment in many developed societies. Such a converging socioeconomic status of men and women undoubtedly affects their other life outcomes, and one example would be union stability. Research in the past has often found that women's higher status tends to de-stabilize marriages. Today, with more and more women having a college degree and are gainfully employed in the labor market, whether their rising socioeconomic status still affect the outcomes of their marriages remain an important issue to tackle. When dual-earner families have become more normative than previous times in many societies, it deviates from the traditional breadwinner-homemaker division of labor. In turn, investigating the determinants of divorce should certainly take into account the joint characteristics of both men and women. This study aims to utilize the nationwide marriage and divorce registration data to explore how age and educational homogamy vs. heterogamy are associated with divorce risk for two recent marriage cohorts in Taiwan.

PAST RESEARCH

Existing research on spousal characteristics and divorce risk has lent support to the exogamy hypothesis. For example, in Sweden mixed unions where spouses with different nationalities face higher risk of marital dissolution. In addition, unions where the wife is much younger (5+ years) than the husband or is much less educated than the husband also have higher divorce risk (Bumpass and Sweet 1972; Dribe and Lundh 2012).

More recent research on the association between wife's education and divorce risk has shown that recent marriages where wives were more educated no longer have elevated risk of divorce, which is in contrast to prior marriages where wives had educational advantage over husbands tend to be more likely to dissolve (Schwartz and Han 2014). In addition, this study also shows that the stability of educationally homogamous marriages has increased over time.

The authors conclude that their findings reveal an important shift away from traditional gender specialization toward more egalitarian marital relationships in contemporary America.

THE TAIWANESE CONTEXT

Educational expansion has taken place along with industrialization in Taiwan since the 1970s. Increasingly more women have advanced to tertiary education after finishing secondary education. In 1975, only 4.1% of Taiwanese aged 15 and above had a tertiary degree (5.7% for men and 2.4% for women) and 83% of them did not have a high school degree. By 2010, about 30% of the population aged 15+ had tertiary education, and those without a high school degree had declined to 38.5%. Women made up 21% of college students in 1960, and this rose to 36% in 1970 and further to 50% in 2010 (Ministry of Education 2012). The improvement in human capital among women propelled a surge in labor force participation rates at prime working ages, with a tremendous increase from 56% to 84% at ages 25 to 29 and from 55% to 77% at ages 30 to 34 between 1987 and 2010 (DGBAS 1987-2010). As a result, more women have become economically independent than in prior generations. All these social and economic changes have formed the backdrop to various changing family behaviors in Taiwan.

Over the past half a century, a rapid upsurge in divorce risk has been observed for couples in Taiwan. While changes in divorce patterns in the last century have been documented in prior research (Barclay 1954; Goode 1993; Thornton and Lin 1994), very little attention has been paid to the social variations in marital dissolution. Even the Statistical Yearbook published by the government has released only registered divorce counts by age *or* by education (and never by age, sex, and education), not to mention investigating divorce risk using characteristics of both husbands and wives. Hence, this study aims to investigate two research questions: (1) Have age homogamous marriages become more stable since 1998? (2) Is the stability of educational homogamy changing since 1998?

Based on the literature reviewed before, there are two sets of competing hypotheses to be tested in the event history analyses of this study. First of all, gender-role attitudes have been improving, along with women's rising socioeconomic attainment, over the past few decades in Taiwan. Hence it is hypothesized that gender relations within educationally hypogamous marriages also improve and such unions have become more stable (Hypothesis 1a). With rising gender equality, it is also hypothesized that age hypergamy no longer is more stable (Hypothesis 1b). On the other hand, recent patterns of marriage suggest there is a continuing reliance on men's economic resources, as educationally hypergamous unions are still increasing in recent years. When homogamy and hypergamy are both rising in recent years, educationally hypogamous unions have become less common. Such a less normative union is

hypothesized to be more fragile during times when it is less common (Hypothesis 2a). Similarly, it is also hypothesized that age hypergamous unions are still more stable overtime.

RESEARCH DESIGN

Data

This study makes use of the nationwide marriage and divorce registration records acquired from the Department of Household Registration, Ministry of the Interior. Given that electronic records of marriage and divorce registration are only available for years after 1998 and the last available year is 2013, this study aims to analyze the marriage cohorts of 1998 and 2008 for two reasons: (1) they represent two marriage cohorts one decade apart, before and after post-industrialization in Taiwan; (2) they are comparable in a sense that divorces happen within 5 years of marriage can both be tracked and observed for these two marriage cohorts.

To find out which marriages formed in 1998 and 2008 have been dissolved in subsequent five years, the 1998-2013 divorce records need to be linked with the 1998-2013 marriage records. The data files acquired have been removed of citizen identification numbers for confidentiality purposes. Hence, husband and wife's birth dates (year, month, and day), along with marriage years and months were used to link the 1998 marriage files with the divorce files from 1998 to 2003. Of all the 17,894 marriages dissolved from 1998 and 2003 for those who married in 1998, this method has identified 15,848 unique pairs of marriage and divorce records. When this matching approach is applied to the 2008 marriage cohorts, 17,106 marriages that ended between 2008 and 2013 (out of an actual 17,291 divorces) were identified. Once the matching is done, additional variables included in the divorce files were merged back with the original marriage files for years 1998 and 2008. A dummy variable indicating a matched divorce record was created to mark the dissolution of a marriage. These two files that contained 138,378 marriages formed in 1998 and 144,231 marriages formed in 2008 are the data used for the subsequent analyses.

Variables

The variables included in this study are: husband's and wife's birth cohorts, age differences between husband and wife, husband's and wife's education, educational differences between husband and wife, previous marriage history, and data year. For birth cohorts, a 9-group categorical variable was created for husband and wife: prior to 1940, 1940-49, 1950-54, 1955-59, 1960-64, 1965-69, 1970-74, 1975-79, 1980 and later. Age differences is a 5-category variable: same age (age difference +- 1 year), husband older for 2-4 years, husband older for 5+ years, wife older for 2-4 years, wife older to 5+ years. Education is a 7-category variable which includes: less than primary education, primary educated, junior high school, high

school, junior college, university/4-year college, and graduate degree. Educational difference is calculated by subtracting wife's education from husband's education, and a 7-category variable is created: same education, husband's education higher for 1 level, husband's education higher for 2 levels, husband's education higher for 3+ levels, wife's education higher for 1 level, wife's education higher for 2 levels, and wife's education higher for 3+ levels. Finally, a four-category variable indicating the prior marital history of both spouses is also included: first marriage for both, remarriage for husband, remarriage for wife, and remarriage for both. In addition, a time-metric variable for year and a dummy variable indicating whether a marriage is dissolved in a given year are also created for conducting the event history analysis.

Analytical Strategies

This study will first offer an overview of the socio-demographic characteristics of the 1998 and 2008 marriage cohorts. Then, discrete-time event history analyses will be carried out to examine the risk of marital dissolution within 5 years of marriage for these two cohorts.

PRELIMINARY FINDINGS

Results from the descriptive statistics show that for those who married in 1998 and 2008, husbands are on average older than their wives. As for matching patterns by age, there are increasingly more age homogamous and hypogamous unions in 2008 than in 1998. Hypergamous marriages where the husbands are much older than the wives (for more than 5 years) have declined from 1998 to 2008. In terms of educational attainment, the share of women with tertiary education (junior college and higher) has increased from about 18.7% in 1998 to 52.5% in 2008; whereas the comparable proportions of men with similar education have changed from 20.6% to 51.9%. In other words, the average educational attainment of women has improved so much that by 2008 it has surpassed that of men. For the educational differences between husband and wife, the figures in Table 1 indicate that educational homogamous unions have increased from 30.3% in 1998 to 41.3% in 2008 of all marriages. While couples with very different educational background (> 2-3 levels of education) have declined to both educationally hypergamous and hypogamous unions, hypergamous marriages where the husband's education is one level higher than the wife have become more prevalent in 2008 than in 1998. Finally, the share of remarriages that involve at least one party of a union has also increased from 1998 to 2008.

Next, Table 2 presents the findings from discrete-time event-history analyses for 1998 and 2008. The model for the 1998 marriage cohort indicates that for both men and women, divorce risk for younger cohorts is higher than for older cohorts. In addition, heterogamous

marriages where husbands and wives differ in ages for more than 2 years are much more likely to dissolve. In particular, marriage where the wife is much older than the husband has the highest risk of dissolution. For both men and women, having received tertiary education is associated with lower risk of divorce, particularly among women. In terms of educational assortative matching, unions where the husband is less educated than the wife tend to have higher risk of divorce. Marital unions that involve at least one previously married individual are more fragile than first marriages, and the risk of dissolution for two previously married individuals is the highest.

The second model for the 2008 marriage cohort shows that the youngest birth cohorts still have the highest risk of divorce, and such a positive generational gradient has shrunk when compared to 1998. Unions with age differences, be it older husband or older wife, are still more fragile for this cohort, although the relative divorce risk of age heterogamous to age homogamous marriages has grown from 1998 to 2008. Higher education is still associated with lower risk of divorce for women in this marriage cohort, but the educational gradient no longer exists for men. The negative educational gradient in divorce risk for women has grown wider for women from 1998 to 2008, but it has declined for men in the same period. For educational differences between spouses, hypergamous marriages are more stable than homogamous unions. In contrast, hypogamous unions where the wife is better educated than the husband appear to be the more vulnerable to marital disruption. When compared to 1998, the stability of educational hypergamy improved, but educational hypogamy becomes more fragile in 2008. Finally, marriages that involve at least one remarried partner are still more fragile than those formed by two never married partners. However, the relative stability of remarriages over first marriages has improved from 1998 to 2008.

PLANNED ANALYSES

This study plans to further plot and survival curves of marriage cohorts by assortative mating patterns. Additional analyses for exploring nativity status and interaction terms of age difference and educational differences will be done to see how different spousal characteristics affect the risk of marital dissolution for recent marriage cohorts in Taiwan.

REFERENCES

Barclay, G.W. (1954). *Colonial Development and Population in Taiwan*. Princeton, New Jersey: Princeton University Press.

Bumpass, L.L., and Sweet, J.A. (1972). Differentials in Marital Instability: 1970. *American Sociological Review* 37(6): 754-766.

DGBAS. (1987-2010). Yearbook of Manpower Survey Statistics: 1987-2010. Taipei, Taiwan: Directorate General of Budget, Accounting and Statistics, Executive Yuan.

Dribe, M., and Lundh, C. (2012). Intermarriage, Value Context and Union Dissolution: Sweden 1990–2005. *European Journal of Population / Revue européenne de Démographie* 28(2): 139-158.

Goode, W.J. (1993). *World Changes in Divorce Patterns*: Yale University Press.

Ministry of Education. (2012). Number of Students at All Educational Levels by Sex. Taipei, Taiwan: Ministry of Education.

Schwartz, C.R., and Han, H. (2014). The Reversal of the Gender Gap in Education and Trends in Marital Dissolution. *American Sociological Review* 79(4): 605-629.

Thornton, A., and Lin, H.-S. (1994). *Social Change and the Family in Taiwan*. Chicago, Illinois: University of Chicago Press.

Table 1. Descriptive statistics for the characteristics of husbands and wives from marriage cohorts of 1998 and 2008, Taiwan.

	1998	2008
Wife's birth cohort		
prior to 1940	0.26	0.07
1940-49	0.90	0.31
1950-54	1.30	0.61
1955-59	2.45	1.09
1960-64	5.94	1.83
1965-69	18.75	3.38
1970-74	40.17	9.32
1975-79	26.81	34.12
1980 and later	3.42	49.28
Husband's birth cohort		
prior to 1940	2.59	0.76
1940-49	1.69	0.92
1950-54	2.60	1.31
1955-59	5.77	2.15
1960-64	14.15	3.56
1965-69	32.06	6.87
1970-74	31.52	17.20
1975-79	8.92	40.37
1980 and later	0.71	26.86
Age differences		
Age diff <=1 yr	26.86	33.17
hus older 2-4 yrs	28.90	27.26
hus older >=5 yrs	37.93	30.46
wif older 2-4 yrs	4.57	6.78
wif older >=5 yrs	1.74	2.33
Wife's education		
< primary education	8.80	0.71
Primary educated	17.59	3.26
Junior high school	22.40	13.05
High school	32.47	30.48
Junior college	10.96	18.56
University/4-year college	6.71	29.50
Graduate degree	1.06	4.45
Husband's education		
< primary education	5.88	0.31
Primary educated	16.78	2.28
Junior high school	27.27	13.08
High school	29.51	32.41
Junior college	10.62	16.42
University/4-year college	7.63	26.27
Graduate degree	2.31	9.21
Educational differences		
same level	30.29	41.28
husband>wife for 1 level	19.65	22.20
husband>wife for 2 levels	10.78	7.75
husband>wife for 3+ levels	6.70	2.28
wife>husband for 1 level	18.45	18.34
wife>husband for 2 levels	9.14	6.79
wife>husband for 3+ levels	4.99	1.37
Prior marital history		
first marriage for both	82.45	79.70
remarriage for husband	7.63	7.73
remarriage for wife	5.03	5.66
remarriage for both spouses	4.89	6.91
Total marriages	138097	144187
Number of divorces within 5y	14743	16482

Table 2. Odds ratios predicting a divorce within 5 years of marriage for marriage cohorts of 1998 and 2008, Taiwan.

	1998		2008	
Wife's cohort (ref. 1970-74)				
prior to 1940	0.38	***	0.14	***
1940-49	0.59	***	0.33	***
1950-54	0.96		0.41	***
1955-59	1.18	**	0.62	***
1960-64	1.15	**	0.77	***
1965-69	1.06	+	0.94	
1975-79	1.48	***	0.98	
1980 and later	2.49	***	1.19	***
Husband's cohort (ref. 1970-74)				
prior to 1940	0.70	***	0.86	
1940-49	0.59	***	0.84	*
1950-54	0.69	***	0.88	+
1955-59	0.61	***	0.83	**
1960-64	0.71	***	0.84	***
1965-69	0.77	***	0.94	+
1975-79	1.54	***	1.07	*
1980 and later	1.76	***	1.60	***
Age differences (ref. age diff. +- 1 year)				
husband older 2-4 yrs	1.08	**	1.15	***
husband older>=5 yrs	1.25	***	1.42	***
wife older 2-4 yrs	1.24	***	1.22	***
wife older>= 5 yrs	1.27	***	1.42	***
Wife's education (ref. HS)				
< primary education	1.34	*	2.03	**
Primary educated	1.21	*	2.07	***
Junior high school	1.18	**	1.82	***
Junior college	0.82	**	0.52	***
University/4-year college	0.74	**	0.36	***
Graduate degree	0.47	***	0.32	***
Husband's education (ref. HS)				
< primary education	1.12		0.55	*
Primary educated	1.06		0.76	
Junior high school	1.05		1.05	
Junior college	0.85	**	0.99	
University/4-year college	0.81	*	1.01	
Graduate degree	0.70	*	0.99	
Educational differences (ref. same education)				
husband>wife for 1 level	0.99		0.86	+
husband>wife for 2 levels	0.91		0.71	*
husband>wife for 3+ levels	0.89		0.57	*
wife>husband for 1 level	1.02		1.34	**
wife>husband for 2 levels	1.09		1.82	***
wife>husband for 3+ levels	1.15		2.41	**
Prior marital history (ref. first marriage for both)				
remarriage for husband	2.02	***	1.69	***
remarriage for wife	2.66	***	1.90	***
emarriage for both spouses	4.21	***	2.89	***
Year (ref. 1998; 2008)				
1999 / 2009	3.08	***	2.88	***
2000 / 2010	3.25	***	3.12	***
2001 / 2011	3.35	***	3.13	***
2002 / 2012	3.66	***	2.74	***
2003 / 2013	3.46	***	2.62	***