Are the More Educated Less Likely to Divorce? Changing Educational Gradient of Divorce in China

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Background

In the past few years, scholars have revealed a negative relationship between education and divorce in developed countries (e.g. Martins, 2006; Matysiak, Styrc, and Vignoli, 2014). Specifically, not only are the less educated more likely to divorce but also are the increases in divorces increasingly concentrated at the lower end of the socioeconomic strata around the world (Chen, 2012). Particularly, this kind of relational change between social class and marital dissolution, from positive to negative, is recently observed in East Asian societies, for example, in Japan, South Korea, and Taiwan (Cheng, 2016; Park and Raymo, 2013; Raymo, Fukuda, and Iwasawa, 2013). Theoretical explanations accounted for this educational crossover are context-specific. For Western societies, such as the U.S. and many European countries, cost theory (Goode, 1962; 1963; 1993) that stresses the importance of declining divorce costs, whether economic, legal, or social cost, is reasonable. Regarding East Asian societies, where reduction in economic cost and social cost of divorce is limited while family change is rapid, the mechanisms are less clear (Raymo et al., 2013). More research is expected.

However, either due to the deficiency in reliable data or lack of attention given to family area studies, research on developing countries, for example, on China's educational gradient of divorce is rather rare. Currently available papers on divorce in China either uses macro level census or registration data to study the changing trend of divorce *rate* in China (Zeng and Wu, 2000; Wang and Zhou, 2010) or utilizes micro-level marital information data, such as the Chinese Family Panel Studies (CFPS) data, in predicting the *determinants* of divorce (Xu, Yu, and Qiu, 2015; Xu, Qiu, and Li, 2016). To my best knowledge, however, no such paper has been devoted deliberately to explore the relationship between education and divorce in China, and no relevant mechanisms have been given.

In terms of the context, China provides an interesting case in studying the changing risk of divorce and its relationship between education over time, particularly in a rapidly developing environment. During the past 40 years, China has gone through dramatic social change, such as rapid industrialization and massive urbanization, as well as huge family changes, including later marriage, lower fertility rate, rising cohabitation before marriage, etc (Chen, 2012; Xu, Li, and Yu, 2014; Raymo et al., 2015). However, scholars have argued what exists in China is a "transitional family", i.e., new trends coexist with powerful old patterns (Xu et al., 2014). Particularly, some parts of the family behavior received limited change in China, such as the paramount importance of family lineage and strong family ties (Raymo et al., 2015), and large class and regional differences exist among huge family changes (Xu et al., 2014).

Based on the background of rapid family changes in China during the past 40 years as well as intensifying class and regional differentials in marriage and family behaviors, studying the linkages between family change and processes of stratification, for example, the relationship between education and divorce, is not only meaningful, but also necessary in China.

Theory and the Chinese Context

I will firstly provide a brief review on the theories, including cost theory, gender theory, and other mechanisms around East Asian contexts that help account for the emergence of negative educational gradient of divorce. Then I will get further into the Chinese context, discussing the application of previous theories and mechanisms onto the Chinese case.

Theories accounted for the Educational Crossover
- **Cost Theory**

Following the tradition of classical modernization theory, Goode (1962; 1963; 1993) firstly argued that *divorce cost* matters. Particularly, cost theory posits that marital dissolution is more common among the highly educated when its legal, social, and economic costs are high, but becomes increasingly common among those with lower levels of education as divorce becomes more widespread and normatively accepted, and thus more "affordable" (Raymo et al. 2013). To put it in another way, when financial stress emerges as a primary reason for marital dissolution while the legal, social, and economic barriers to divorce wane, the educational gradient may become negative (Goode 1963; Raymo et al. 2013).

- **Gender Theory**

Though relatively new, gender theory is also powerful in explaining divorces through gender lens (Becker, 1981; Oppenheimer, 1997; Chen, 2012). According to the theory, the model of marriage has experienced a transition from the breadwinner-homemaker model (Becker, 1981) to gender-egalitarian model (Oppenheimer, 1997) and changes in gender relations, either inside (meso-level) or outside family (macro-level), may influence the possibility of marital dissolution. While some early scholars are interested in explaining the higher divorce rate among the more educated through more gender-related conflicts and thus lower marital satisfaction (Becker, 1981), recent research has focused on the *protective effect of education on marriage* (Chen, 2012). For instance, women's education may represent higher likelihood of economic independence and more liberal and gender egalitarian-values, which provide better chances at opting-out bad marriage (Chen, 2012), i.e., selection matters. Also, taking into account the marriage model transformation from specialization to symmetry, in recent marriage cohorts, the high education doesn't represent more gender conflicts any more, but symbolizes higher earnings, doubled household income, stable economic foundation of marriage, as well as a better-educated spouse who is more willing to share family responsibilities (Sweeney, 2002; Chen, 2012).

- **Other Explanations around the East Asian Contexts**

The negative educational gradient in divorce is interesting in East Asia partly because it is not consistent with hypotheses derived from cost theory suggesting that marital dissolution should be positively related to educational attainment in societies where divorce remains socially and economically expensive (Raymo et al., 2015). One commonality of these East Asian societies is the historical influence of Confucian culture and patriarchal systems as well as relatively high level of gender inequality (Raymo et al., 2013). From this point of view, the gender theory above may help to explain the educational crossover. Scholars also provide other *contextual modifications to standard theory* that help account for the unexpected theoretical puzzle. For example, when studying the case of Japan, Raymo and his colleagues (2013) concluded that the perspectives of economic stress, women's economic independence (in the Japanese context, see paper for details), work-family balance, and social stigma and the role of "face" are possible mechanisms accounted for the crossover. However, empirical study doesn't support either assumptions, thus new potential explanations including more depth measurements of economic hardship, unexpected dimensions of face and status, and high expectations on children's education, are added, yet for further empirical examination.

Theories in the Chinese Context

The past 40 years have witnessed massive social, economic, and demographic changes in China, consisting of rapid economic growth, increasing openness regarding cultural values, a sharp decline in the fertility rate, and a dramatic increase in population migration (Xu et al., 2014). ***How do previous theoretical explanations apply to such a rapidly developing Chinese context? Are there other contextual modifications devoted to the Chinese case?***

In traditional China, divorce was to some extent prohibited (Zeng and Wu, 2000). Starting

from the 1978 reform, which leads to a national transition to market economy and high education expansion, China has experienced tremendous family changes (see Xu et al., 2014 etc). However, marriage is still universal in modern China and the change in the nature of stated desires for marriage and children is limited (Xu et al., 2014; Raymo et al., 2015; Yu and Xie, 2015). While the legal cost of divorce became minimal (e.g. No-fault divorce allowed in 2001 New Marriage Law) and the divorce procedure simplified, cost theory seems less reasonable in explaining the Chinese case since the economic and social cost associated with divorce remains high. Moreover, the cost is intensified by rare joint custody arrangements as well as limited children support from the government policies after divorce. ***To sum up, standard cost theory may not suit in the Chinese context.***

The traditional Chinese family has long been featured as patriarchal, patrilinear, and patrilocal, making women at a severe social disadvantage relative to men (Thornton and Lin, 1994). However, since the founding of People's republic of China in 1949, huge changes such as high education expansion and political movements that encouraged women's labor participation have rapidly increased the economic and educational opportunities for women (Ye and Wu, 2011). Along with this process is the changing gender ideology from strict gender specialization towards more egalitarian views. However, the overall level of gender equity in China is still low when compared with other developed OECD countries (Economic Forum, 2017) and people from higher level of socioeconomic distribution benefit much more from the rising women status. In all, it is reasonable to assume that, though the transition of gender model from specialization to symmetry has not been fully reached in China, ***gender theory may help account for the changing educational gradient of divorce in the Chinese context***.

In spite of gender theory, three other possible contextual modifications are interesting in China: ***selection into marriage; economic factors, and specific cultural features such as the importance of face and reputation and the expectations on children's education success.*** First, selection may matter. Research around the second demographic transition in China has approved the diffusion of innovative behavior, such as late marriage and premarital cohabitation, from higher level of socioeconomic groups to the lower counterparts (Yu and Xie, 2015). In China, more educated couples are, on average, marrying later and more likely to be never-married (e.g. Xu et al., 2014). It is possible that the high educated who do marry are more selective than their less educated counterparts with respect to the effort invested in the spouse search process, marital commitment, or other unobservable factors associated with marital stability (Raymo et al., 2013). In such case, education serves as a mechanism in opting out bad marriage and contributing to the lower divorce rate of the highly educated.

Second, economic factors may also play a role in recent China. Research revealed that the economic correlates of entry to marriage have increased importance in urban areas following economic reforms (Yu and Xie, 2014), i.e., the economic foundation of marriage in China is becoming more important. With the rising economic cost of living and particularly raising children, higher educated couples who own double-income, are more successful in the labor market, and have wealthier parents taking care of their grandchildren through monetary and nonmonetary supports, may experience less insecurities inside marriage, which increases the marital satisfaction and protects the marriage in the long term.

Third, specific cultural features such as the importance of face and reputation as well as the high expectations towards children's education success are interesting in China. In a traditional patriarchal society like China, where social controls over people of the higher levels of socioeconomic status, social costs of a "failed" marriage are possibly greater for families at the higher end of the socioeconomic distribution (Goode, 1963; Raymo et al., 2013). Also, the social stigma from colleagues may be stronger for those who work in the *danwei*, a state-owned form of economy that usually maintains high welfare, inside of which highly educated people are more likely to work. In such case, the highly educated are less likely to divorce. Another

related cultural factor is the stronger commitment to, and familial investment in, children's educational success among more highly educated couples. As an important part of the Confucian culture, children's education is of paramount importance throughout the history and education still serves as a strong predictor for individual's future life outcomes. In the current context in which private expenditures on education are large and competition for entrance into more prestigious schools is fierce (Raymo et al., 2013), it is likely that highly educated people may disregard divorce or postpone it due to children's education. ***In a word, contextual modifications of the Chinese case, including the selection into marriage, economic factors, and specific cultural features, are possible mechanisms accounting for the changing educational gradient of divorce in a rapidly developing and culturally distinct country.***

To make it clear, these theories and contextual modifications are not strictly exclusive, yet partly related to each other in China. This paper aims not to discern the clear boundary between those explanations, but to maintain a complicated view of all possibilities that help account for the changing educational gradient of divorce in China.

Research Questions and Hypotheses

Based on the review of previous literature, particularly the application of relevant theories onto the Chinese context, I will address the following research questions and hypotheses.

First, in the previous part, I have revealed tremendous family changes in China over the past 40 years (cohorts), especially in shifting gender relations. My first research question speaks to one important dimension of the family behavior - the changing divorce risk over time. Particularly, I ask "Does divorce risk increase across marriage cohorts in China?" And I hypothesize, according to the literature, that:

H1: The risk of divorce in China is increasing in recent marriage cohorts.

Second, I have shown class differentiations in gender ideologies as well as in broader family behaviors, under the background of increased educational and economic opportunity, particularly for women. Also, the negative educational gradient of divorce has been revealed in other East Asian societies, which hold similar cultural background with China. For example, the negative relationship became stronger through time in South Korea (Park and Raymo, 2013) and recently changed from positive to negative in Taiwan (Chen, 2012). Thus my second research question arises: "Does the negative educational gradient of divorce exist in China? If so, in which marriage cohort did the transition from positive to negative happen?" Based on the review, I hypothesize that:

H2: The educational crossover of divorce, i.e., from positive to negative relationship, could be observed in China, but only in recent marriage cohorts.

Third, considering that standard cost theory may not account for the negative educational gradient of divorce in China, which represents a distinctive case of rapidly developing context, I raise my third research question: "Based on the specific historical and socioeconomic environments of China, whether gender theory or other contextual modifications are reasonable in explaining the educational crossover of divorce?" Having reviewed the Chinese context as well as applications of the possible theories, I assume that:

H3: The explanations for China's negative educational gradient will be a combination of changing gender relations as well as specific contextual modifications, including selection into marriage, economic factors, and cultural features such as the importance of face and reputation and expectations on children's education success.

In order to answer the research questions and testify the hypotheses, I will reach out to national-representative quantitative data as well as qualitative data that collected through my in-depth interviews in China this summer. More details will be given in the following section.

Data and Methods

Data

I use both quantitative and qualitative data in this research, while the quantitative data constructs the main source and the qualitative data complements it. Particularly, I utilize the Survey on Chinese Women's Social Status in 2010 (henceforth WOMEN2010), a national-representative data covering both sexes. WOMEN2010 was jointly conducted by the All China Women's Federation and the National Bureau of Statistics of China in 2010. It surveyed 23,390 adult (with 46.9% male and 53.1% female) individuals aged 18 to 64 years in 31 provinces, autonomous regions, and municipalities in both urban and rural China. It used a multilevel stratified sampling procedure of four levels: city, street, neighborhood, and household (Shu, Zhu, and Zhang, 2012). Adults were randomly selected from each of the chosen households. There are 717 divorced individuals (341 men (3.1%) and 376 (3.0%) women; 517 urban (4.8%) and 200 rural (1.6%)) who have provided with useful information.

For the qualitative part, I rely on several in-depth interviews back in two Chinese cities, Beijing and Changsha, during the summer of 2018. Each interview was about an-hour long and I asked several questions associated with the divorce topic. For example, I generally asked the divorced people "why did you divorce?". I try to discern the inner mechanisms associated with the educational gradient of divorce in China, through these interviews.

Methods

Considering that the objective of this paper is to make clear the linkage between education and divorce in China, as well as what possible theories/mechanisms may help account for this relationship, I will utilize quite a few descriptive exercises. I will also construct multivariate regression models into predicting the odds of divorce from education (H1 & H2). Besides, I add some qualitative interviews to testify the inner mechanisms between social class and marital dissolution in China (H3).

Preliminary Results

Here I present my preliminary results from descriptive exercises and regression models.

- **Description of the Variables**

Details are shown in table 1. The dependent variable is a dummy variable "Divorce", with being divorced coded as 1; The independent variables consist of education, marriage cohort, and the interactions between education and marriage cohorts. Notice that I adopt the relative measure of education here, rather than absolute education, considering that educational opportunities for individual have increased rapidly for the past few decades in China (Chen, 2012). The same educational level has very different meanings for different marriage cohorts and the adoption of relative education helps to erase off the confounding effect brought by the rapid college expansion in China over the past years (Ye and Wu, 2011).

- **Tabulations of Divorce by Education and Marriage Cohorts**

Details could be found in table 2. The overall chi-square test shows a P<0.001, meaning significant relationship between education and divorce. All chi-square tests conducted in each marriage cohort are also statistically significant.

- **Regression Results**

I conducted six basic models, among which model 1 to model 4 were constructed in each marriage cohort, while model 5 to 6 included all samples (results in table 3). The interaction term between education and marriage cohort was included in model 6. The preliminary result shows that some ***hypotheses are approved***: the possibility of divorce in China is increasing in recent marriage cohorts (significant positive coefficients for marriage cohort variables), i.e., the overall level of divorce is higher in recent marriage cohorts, thus hypothesis 1 is approved; the changing relationship of educational gradients in divorce, from positive to negative, has been observed in China, but only in the latest cohort of 2000-2010 (negative coefficient only

in cohort 2000-2010), hens hypothesis 2 approved.

- **Figure of the Divorce Risks across Educational Groups**

I generate the figure of divorce risks for each educational group throughout the marriage cohorts in Figure 1. ***We can observe the apparent rise of divorce risk for the low educated group throughout marriage cohorts, and the negative educational gradient of divorce in recent marriage cohort 2000-2010***. However, in the earliest marriage cohort (before 1980), the divorce risk of the highest educated is rather the lowest. This may be related to the insufficient data that few people married before 1980 own top 25% education among all samples. Also, in the recent cohort, people with the lowest divorce risks are not the highest educated, but the middle educated group. It is possible that in China, the highly educated is still experiencing a decreasing divorce risk and we may see fully negative educational gradient in the near future, or that China is a special context that needs further explanations.

Next Steps

Based on what have been done so far, I plan to take the following future steps: First, in order to test more theory-related hypotheses, I will construct more specified models, including gender models and residency models; Second, I will operationalize and add more variables into the analysis according to previous literature, for example, the age at marriage, gender relations inside family, number of children, children's gender structure, father's education, couple's income, couple's assortative mating, and women's economic independence (Raymo et al., 2013; Xu et al., 2015). The adding of these variables enable me to answer the theoretical questions in an empirical way; Finally, I will sort up the qualitative data from summer field work and try to discern/testify the inner mechanisms of this negative relationship that is embedded in China's specific historical process and changing socioeconomic environments.

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Tables

Table 1: Descriptive Statistics and Operationalization of Variables
(among ages 18-64, N=23,390)

Dependent Variable	Description	Mean	SD
Divorce (=1)	Current marital status as divorced	0.034	0.17
Independent Variable			
Education			
Low (=0)	Education level about bottom 25%	0.23	0.42
Middle (=1)	Education level about middle 50%	0.50	0.50
High (=2)	Education level about top 25%	0.27	0.44
Control Variable			
Marriage cohort			
1980 before (=0)	<1980	0.20	0.40
1980s (=1)	1980-1990	0.31	0.46
1990s (=2)	1990-2000	0.29	0.45
2000s (=3)	2000-2010	0.20	0.40

Data Source: Survey of Chinese Women's Social Status 2010 (WOMEN2010)

Table 2. Tabulations of of Divorce, by Education and Marriage Cohorts
(among ages 18-64, N=23,390)

	Marriage cohort Before 1980			Marriage Cohort 1980-1990		
	divorced	Not divorced	Total	Divorced	Not divorced	Total
Low (N)	23	2188	2211	30	1615	1645
Percent (%)	1.04	98.96	100	1.82	98.18	100
Middle (N)	44	1884	1928	151	3977	4128
Percent (%)	2.28	97.72	100	3.66	96.34	100
High (N)	5	469	474	69	1436	1505
Percent (%)	1.05	98.95	100	4.58	95.42	100
Total (N)	72	4541	4613	250	7028	7278
Percent (%)	1.56	98.44	100	3.44	96.56	100
	Marriage cohort 1990-2000			Marriage cohort 2000-2010		
Low (N)	34	1195	1229	16	303	319
Percent (%)	2.77	97.23	100	5.02	94.98	100
Middle (N)	131	3354	3485	49	2189	2238
Percent (%)	3.76	96.24	100	2.19	97.81	100
High (N)	96	1992	2088	63	2077	2140
Percent (%)	4.60	96.16	100	2.94	97.06	100
Total (N)	261	6541	6802	128	4569	4697
Percent (%)	3.84	96.16	100	2.73	97.27	100

Data source: Survey of Chinese Women's Social Status 2010 (WOMEN2010)

Table 3. Multivariate Logit Models predicting the Odds of Divorce (N=23,390)

Marriage Cohorts	Model 1 Before 1980	M2 1980-1990	M3 1990-2000	M4 2000-2010	M5 All	M6 All (Interact)
Independent Variable						
Education (ref.=low)						
Middle	0.798***	0.715***	0.317	-0.858***	0.418***	0.798***
High	0.0141	0.950***	0.527***	-0.554*	0.586***	0.0141
Control Variables						
Marriage Cohort (ref.=before 1980)						
1980-1990					0.692***	0.569**
1990-2000					0.772***	0.996***
2000-2010					0.354**	1.614***
Education*Marriage						
Middle						
*1980-1990						-0.0834
*1990-2000						-0.481
*2000-2010						-1.657***
High						
*1980-1990						0.936*
*1990-2000						0.513
*2000-2010						-0.568
Constant	-4.555***	-3.986***	-3.560***	-2.941***	-4.405***	-4.555***
Observations	4,613	7,278	6,802	4,697	23,390	23,390

b = Coefficient; SE omitted due to the limit of space. ref. = reference group
* $p<0.05$; ** $p<0.01$; *** $p<0.001$

Figures
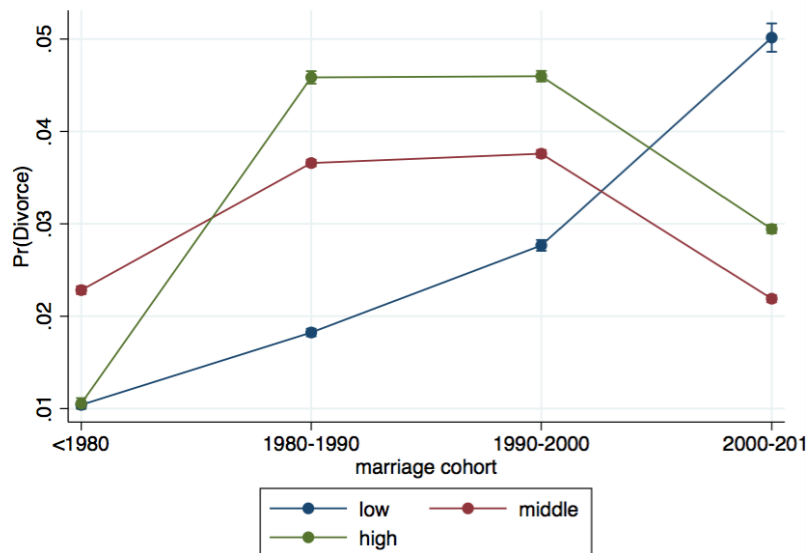
Figure 1. Estimated Probabilities of Divorce, by Marriage Cohorts and Education