Educational Homogamy

Lijun Song

Department of Sociology
Center for Medicine, Health, and Society
Vanderbilt University

Rachel Skaggs
Cleothia Frazier

Department of Sociology
Vanderbilt University

Educational Homogamy

As a proverb says, birds of a feather flock together. Homophily is the social fact that people tend to associate with those who have similar attributes to themselves (McPherson, Smith-Lovin, and Cook, 2001). One major homophilous phenomenon is homogamy, that is, people are inclined to marry those with similar characteristics (e.g., age, race/ethnicity, nativity, religion, and status, both ascribed and achieved). Status homogamy refers to assortative mating based on similar socioeconomic positions. It is one of the central linkages connecting multi-level social factors (Merton, 1941; for reviews, see Blossfeld, 2009; Kalmijn, 1998; Ganzeboom, Treiman and Ultee, 1991; Schwartz, 2013). Status homogamy is shaped by and in turn shapes various macro-level social structures (e.g., social hierarchy, societal openness/closure, population structure, and educational, economic, political, religious, and cultural systems). It also directly affects and is affected by meso-level institutions (e.g., marriage and family) and organizations (e.g., social networks) as well as micro-level social relationships and interactions.

Educational homogamy, that is, people’s tendency to marry those with similar educational attainment, has received much more attention than status homogamy on other dimensions such as occupation, income, social class, and social origin (for a review, see Blossfeld, 2009). Education is a stronger, more stable, and convenient assortative factor than other status indicators in industrial societies (Kalmijn, 1998). It is a crucial determinant of the distribution of various forms of resources (e.g., social, economic, and cultural capital) and serves as a key mate selection criterion (Blau and Duncan, 1967;

State socialist China has witnessed drastic demographic, educational, economic, cultural, and political changes in its contemporary history relative to other societies (e.g., Bian, 2002; Cao and Nee, 2005; Hannum and Park, 2007; Lu, 2005; Shu and Zhu, 2012; Walder and Hu, 2009; Wang, 2008; Wu, 2010; Wu and Zhou, 2015; Xu, 1998; Xu, Li, and Yu, 2014; Zang, 1993; Zhao and Zhou, 2002; Zhou, 2004). These various structural changes can shape the degree and trend of educational assortative mating in various ways over time. China therefore serves as a unique context for us to study social dynamics of educational homogamy. In this chapter, we aim to review the existing literature on the trend of educational homogamy and its causes and consequences in China. We first introduce major theoretical arguments, next summarize results from systematic studies in China, and then propose directions for future research.

THEORIES

TRENDS AND CAUSES

The central question in the educational homogamy literature is why and how the degree of educational assortative mating varies across time. Various theories have been proposed to explain the mixed trends of educational homogamy in contemporary societies:
decreasing, increasing, or non-linear. Despite their different arguments and focuses on disparate causes, these theories center on two mechanisms, opportunity structure and preference, and explain educational homogamy as the result of one or both of these two mechanisms (Blossfeld and Timm, 2003; Kalmijn, 1998; Mare, 1991). In brief, the opportunity structures for mate selection along with people’s preferences for mates who have comparable educational levels to themselves are both positively associated with the educational resemblance of spouses. We first introduce theories that are proposed mainly based on western contexts and then describe one institutional theory that is developed based on Chinese society.

Western Contexts

Fifteen theories are developed to explain the trend of educational homogamy in western contexts. Among them, five theories—educational homogenization, time gap, promoted diversity, promoted sameness, and the winnowing effect of cohabitation—stress that the strength of educational homogamy depends on the opportunity structure for marital selection on identical education. The educational homogenization hypothesis conceives of educational systems as marriage markets and predicts an increasing trend of educational assortative mating (Kalmijn, 1991; Mare, 1991; Schwartz and Mare, 2005). It argues that the structuration of “educationally homogeneous” school classes and the
expansion of education in both gender groups over time can increase people’s chance of marring others with similar years of schooling.

The time gap hypothesis takes into consideration the distance between two key life transition points: departure from school and entry into marriage (Mare, 1991). It states that people’s likelihood of finding a spouse resembling themselves on education increases with the shortened time gap between schooling and marriage as a result of increased educational attainment and lowered age at marriage. Otherwise, the theory states, this likelihood decreases.

Two competing hypotheses emerge to explain the controversial role of new information, communication, and community technologies (such as cell phones, and networking and dating websites) for educational homogamy: promoted diversity and promoted sameness (Ellison, Steinfield, and Lampe, 2007; Rosenfeld and Thomas 2012; Schwartz, 2013). The promoted diversity hypothesis argues that the use of IT can increase people’s chance of meeting potential partners with dissimilar characteristics including education (e.g., Rosenfeld and Thomas 2012). For example, people could interact with individuals in a chat room who they would not have met by chance. In contrast, the promoted sameness hypothesis maintains that the use of IT can only facilitate people’s search for mates with comparable attributes (e.g., Ellison et al. 2007). This is the case for many internet dating sites that use algorithms and user-supplied data to match individuals on points of similarity.

The winnowing effect of cohabitation is related to one major demographic change
in contemporary societies: the rise of cohabitation (Blackwell and Lichter, 2004; Schwartz, 2013). Scholars predict that homogeneous partners are more likely to successfully move from cohabitation to marriage while their counterparts with fewer similarities are more likely to end in cohabitation.

Nine theories—status attainment, romantic love or general openness, inverted U-curve or modernization, saturation, structural transformation, exclusivity, female economic attractiveness, female autonomy, and gender inequality—emphasize that the degree of educational assortative mating varies with people’s preference for equally educated spouses. The status attainment hypothesis is deeply embedded in the social stratification tradition. It assumes that marriage serves as a mechanism for social mobility, horizontal or vertical (Buss et al., 2001; Kalmijn, 1991a, 1991b; Schoen and Wooldredge, 1989; South, 1991; Blau and Duncan, 1967; Weber, [1946b] 1958b). This hypothesis argues that increasing industrialization and motivation for status attainment (i.e., social, economic, and cultural) leads to more educational homogamy (Smits, et al.1998; Ultee and Luijkx, 1990). Industrialization increasingly relies on human capital, tightly links education with status attainment and mobility, and further strengthens both men’s and women’s preference for marital mates with higher or at least equal levels of education in order to maximize their status.

In contrast, the romantic love or general openness hypothesis predicts educationally homogamous marriages to decrease (Smits, 2003; Smits, et al. 1998; Burgess and Locke, 1945; Merton, 1941; Ultee and Luijkx, 1990; Cancian, 1987). It
maintains that mate selection tends to be motivated more by love and emotional needs than by money and material needs in increasingly modern societies where parental control decreases and social circles are enlarged and intersected as a result of urbanization, greater geographic mobility, and expanded mass communication.

These two hypotheses—status attainment and romantic love—are not conflicting explanations. They are integrated to develop an inverted U-curve hypothesis or a modernization hypothesis (Smits et al., 1998). This hypothesis states that mate selection will be driven more by utilitarianism at an early stage of industrialization and economic development but shift toward romanticism at a later stage of industrialization and economic growth. When a relatively high standard of living is reached, mate selection is less focused on interdependence and material gains (not only between parents and children and but also between spouses), and individuals have more freedom in mate selection.

To modify the inverted U-curve hypothesis, scholars later propose another two modernization-related hypotheses: saturation and structural transformation. The saturation hypothesis argues that the decrease in educational homogamy in a highly industrialized society (as the romantic love hypothesis predicts) will slow down and level off as the society reaches a high level of openness (Raymo and Xie, 1998; Smits, Ultee, and Lammers, 2000). The structural transformation hypothesis states that the decrease in educational homogamy is stronger in the context of more rapid modernization as the disintegration of traditionally ascribed social boundaries is not immediately replaced by
the rise of new achieved social boundaries (Smits, 2003; Smits et al., 2000).

The exclusivity hypothesis pertains to the boundary separating highly educated people from others and theorizes mate selection preference among educational elites (Smits, 2003; Smits and Park, 2009). It argues that highly educated people tend to marry within the same educational group rather than marry down when their group size is relatively small. The smaller the group size, the greater the value of a high educational level will be, leading to a larger demand for highly educated mates on the marriage market. In turn, elite group members’ awareness of their exclusive position increases, leading to an increase in those members’ desire to exclude outgroup members, those with lower levels of education, when searching for a mate.

Three hypotheses are related to gender: female economic attractiveness, female autonomy, and gender inequality. The first two hypotheses—female economic attractiveness and female autonomy—are contradictory in that they expect educational intermarriage to decrease and increase, respectively (England and Farkas, 1986; Fernández, Guner, and Knowles, 2005; Kalmijn, 1991; Mare, 1991; Oppenheimer, 1977, 1988; Schwartz and Mare, 2005; Smits and Park, 2009). Both hypotheses recognize women’s increasing participation in the labor force, their increasing economic value, and the social construction of new female roles (not only as mothers and homemakers but also as breadwinners). But these two hypotheses make different arguments on women’s preference in mate selection. In line with the status attainment hypothesis, the female economic attractiveness hypothesis assumes that women, regardless of employment
status and income levels, desire partners with more education and better future economic prospects. It argues that changing female roles motivate both men and women to prefer and compete for partners with more compatible socioeconomic status to their own on the marriage market. In contrast, in accordance with the romantic love hypothesis, the female autonomy hypothesis maintains that financially independent women depend less on their spouses, thus preferring romantic love over economic criteria in mate selection.

The gender inequality hypothesis centers on the degree of gender discrimination on the job market (Fernández et al., 2005). It states that the presence of greater gender gap in status attainment, in particular the disparity in earnings, will motivate women to seek compensation through marriage and strengthen their preference for economic security and partners with more (or at least equal) education over love and spouses with less education.

The last hypothesis—economic inequality—considers both mechanisms (i.e., opportunity structures and preference) for the changing degree of educational homogamy. It hypothesizes that the economic gaps between educational groups are positively associated with the strength of educational assortative mating (Fernández et al., 2005; Mare, 2016; Schwartz and Mare, 2005). It argues that increasing economic inequality can enlarge the social and economic distance between educational groups, which not only decreases people’s chance of meeting potential partners across educational barriers but also increases the cost of marrying down and people’s preference for equally educated spouses.
Chinese Society

The above fifteen theories are mainly developed in western contexts, and share one major implicit assumption. They assume that modern societies are characterized by an increasing level of industrialization and further, a universalistic rise of education which works as a primary means of industrialization (Parsons, 1970; Treiman, 1970; Kerr, Dunlop, Harbison, and Meyers, 1960). Western societies exemplify this assumption. They are generally characterized by the upward linear growth of industrialization, and by the persistent legitimacy and value of education over time. The above fifteen theories thus do not take into consideration the possibility that the value of education may change nonlinearly over time due to shifting institutional arrangements.

However, the assumption on the universal legitimacy of education may not hold in other institutional contexts. Institutional theory (Ganzeboom et al., 1991; Kerckhoff, 1995; Mayer and Schoepflin, 1989) states that social stratification patterns and processes vary with shifting institutional policies across time and space. The Institutional theory of status homogamy could be traced back to classic stratification theories. Both Weber ([1946a] 1958a) and Sorokin (1959) have noted the dynamic stratification process of status homogamy. They suggest that the strength of status homogamy depends on the degree of institutionalized legitimacy of status variables.

Volatile state policies are typical of modern China. Enhanced by the political centralization of China as a state socialist country, shifting government policies lead to varying values of education and a fluctuating educational achievement processes
(Hannum and Park, 2007; Zhou, 2004; Deng and Treiman, 1997). The varying value of education further directly affects the importance of education as one mate selection criterion (Croll, 1981, 1984; Parish, 1984; Whyte, 1990; Whyte and Parish, 1984). The effect of the changing value of education on educational legitimacy is theorized by the educational legitimacy hypothesis derived from an institutional perspective (Song, 2009).

The educational legitimacy hypothesis argues that the institutionalized legitimacy of education exerts a positive effect on spousal resemblance when it comes to education through its positive impact on people’s preference for spouses with more or at least equal education. Specifically, if educational value is highly institutionalized, marriage candidates who achieve higher levels of education will be more competitive in the marriage market. An individual would favor mates whose educational levels are higher than his or hers, or are at least equal. If an individual must select a mate who has a lower level of education that him or herself, he or she would still favor the mate whose educational level is relatively higher and closer to his or hers. In such an institutional structure, the educational distance between husbands and wives would have a less dispersed distribution and educational homogamy will be stronger. In contrast, if educational value is degraded by macro-level institutions, educational achievement will no longer predict the competitiveness of marriage candidates. An individual would favor mates who possess other valuable resources rather than education. Such an institutional structure leads to inattention to education in the marriage market. Therefore, the educational distance between husbands and wives would have a more dispersed
distribution, and educational homogamy will get weaker.

Applying this hypothesis to the trend of educational homogamy in contemporary China and distinguishing three marriage cohorts with the ten-year Cultural Revolution as the watershed (1949-1965, 1966-1976, and after 1977), we expect a V-shaped trend. Education was highly institutionalized and intellectuals, symbolizing higher education, were preferred in the marriage market before the Cultural Revolution. Then education lost its legitimacy and intellectuals became undesirable partners during the Revolution. After the revolution, education has regained its legitimacy.

In the first period (1949-1965), the new state government worked toward economic recovery through efficiency after years of wars. This new regime legitimated education and intellectuals’ social status as a valued mechanism for achieving the goal of economic recovery. According to the Chairman Mao Zedong, “to resume and develop people’s education was one of current key tasks” (1951) and “intellectuals are also laborers” (1957). The communist government, aiming at gender equality, instituted policies to drastically expand educational opportunities for women (Hooper, 1991; Lavely et al., 1990). Such policies not only increased the chance of finding a spouse at the same level of academic achievement but also raised the preference of education in the marriage market for both gender groups. As a result, the education-status attainment linkage was institutionalized for both gender groups. Education predicted not only political status but also socioeconomic status, and individuals achieving higher educational levels, especially intellectuals, were favorable partners (Croll, 1981, 1984;
Furthermore, two other policies in this period should be noted. One is the Marriage Law of 1950, which disrupted traditional arranged marriage by parents or families and legalized free choice marriage (Croll, 1981, 1984; Xu, 1998; Xu, Ji, and Tung, 2000; Xu and Whyte, 1990). This legislation paved the way for rationally motivated mate selection in an open marriage market. Individuals had more freedom to choose mates based on various social status hierarchies, especially those with highly valued education.

Additionally, the household registration system, established in 1955 and still partially in effect, greatly constrained spatial mobility, especially residential mobility, from rural to urban areas (Wu and Treiman, 2004). It separated the urban marriage market from the rural one to some degree. Rural-urban inequality in access to educational opportunities is long-lasting in China (Hannum, 1999). Urban residents have greater access to education than those who live in rural areas. The household registration system reinforced the degree of educational homogamy in the both urban and rural marriage markets by blocking rural-urban intermarriage.

The second period is the ten-year Cultural Revolution (1966-1976). During this period, the state government implemented radical destratification policies to diminish inequality (Parish, 1984). These egalitarian policies delegitimated the value of education and the status of intellectuals. They replaced meritocracy with political loyalty as the criteria for educational admission and occupational allocation. They severely criticized Confucianism and labeled intellectuals as members of politically inferior class.
According to Mao Zedong, “the phenomenon of our schools being dominated by bourgeois intellectuals could not be continued” (1966).\(^3\) Universities and high schools were permanently closed, interrupting individual educational trajectories (Zhou, 2004). As a result, the education-status attainment linkage was broken. Education no longer predicted political status or socioeconomic status, and intellectuals were no longer preferred mates (Walder, 1990; Xie and Lin, 1986; Croll, 1981, 1984; Parish, 1984; Whyte and Parish, 1984).

Further, the Sent-Down Movement (1967-1978) had considerable influence on the marriage market. About seventeen million urban school graduates were sent to rural areas for reeducation during this movement (Zhou and Hou, 1999). Residential propinquity connected the relatively highly-educated urban marriage market with the lowly-educated rural marriage market to some degree. Rural-urban intermarriage, characterized by heterogamous education, increased (for qualitative evidence, see Croll, 1981, 1984).

The third period is the Post-Mao Era, which began in 1977. The state government shifted its focus from equity to efficiency through the market-oriented economic reform. The value of education as well as the status of intellectuals was re-legitimated. In 1978, the Chairman Deng Xiaoping stated “scientific technology is the production force” and “intellectuals are part of proletariat”. Meritocracy, including the entrance examination system and the key school system, was reestablished. Further exemplifying the reemergence of the valued status of education, Teachers’ Day was established in 1984. The Compulsory Education Law was promulgated in 1986 and revised in 2006. Higher
education has been expanded since 1999. In this time period, education becomes more associated with status attainment over the economic transformation (Zhao and Zhou, 2002; Zhou et al., 2000; Zhou, 1996; Nee, 1989). Dissolution of marriages, for example, between intellectuals and peasants formed during the Cultural Revolution also happened due to the increasing of value of education in social status attainment (Croll, 1984).

**SOCIAL CONSEQUENCES**

As reviewed above, social causes of educational assortative mating have been analyzed from various theoretical perspective, but its social consequences have been given relatively limited attention (for a review see Schwartz, 2013). Earlier theoretical work on the role of homogamy mainly takes a social conflict perspective. It conceives of marital sorting as a social closure mechanism (Tilly, 1998; Weber, [1946a] 1958a), an approach to horizontal social mobility (Sorokin, 1959), and a social reproduction process (Bourdieu, [1983] 1986). Consistent with that social conflict tradition, the extant studies on social consequences of educational homogamy focus on the production and reproduction of two forms of stratification: intragenerational and intergenerational inequality.

Rival explanations are developed on the impact of educational assortative mating on intragenerational inequality: reinforcement and decomposition. As the reinforced inequality argument states, increasing marital sorting on education can exacerbate social differences and distances between couples and families because of the occupational and
income gaps across educational categories (Blossfeld and Timm, 2003; Breen and Anderson, 2012; Fernández, Guner, and Knowles, 2005; Torche, 2010). In contrast, as the decomposition perspective maintains, the within-generational stratifying role of educational homogamy is complicated, and depends on its relative impact on the two components of overall inequality: between- and within- household type inequality, where household types are classified in terms of men’s and women’s education (Breen and Anderson, 2012; Breen and Salazar, 2011). Between-household type inequality refers to differences in the average earnings between household types, while within-household type inequality reflects the average variation in earnings within types of household. Increasing spousal resemblance on education can affect these two forms of inequality through changing the distribution of household types. If household types in which both couple members achieve high education and further high income become more numerous, for example, between-household type inequality can increase, while within-household type inequality can be further contingent on labor supply decisions and the extent to which education and non-educational factors determine income. If differences in labor supply decision increase and non-educational factors (e.g., age, race/ethnicity, living arrangement, and fertility decisions) affect income more strongly, earning inequality within levels of education and further within-household type inequality can be promoted. In brief, in the presence of rising educational homogamy, overall inequality can be exacerbated if both within- and between-household type inequality increase, but can be reduced if the decrease in within-household type inequality offsets the increase in
between-household type inequality.

Hu and Qian (2015) applies the decomposition perspective to urban China. As they argue, rising marital sorting on education can increase between-household type inequality due to the economic polarization of households, which is reinforced by the expansion of college education since the late 1990s and the reduced economic returns to low-education groups. Rising educational assortative mating can decrease within-household type inequality due to the strengthened connection between education and earnings, which is a result of not only college education expansion, but also the market-oriented reform since the late 1970s, the abolition of the state job allocation system in the 1990s, the emergence of independent labor markets, and reduced gender pay inequality. Finally, rising spousal resemblance on education can reduce overall inequality because within-household type inequality is a more important source of overall inequality than between-household type inequality, which is a consequence of the relatively weak sensibility of the immature labor market to educational credentials.

The reproduction perspective dominates studies on the effect of educational homogamy on intergenerational inequality (Fernández and Rogerson, 2001; Katrňák, Fučík, and Luijkx, 2012; Kremer, 1997; Mare, 2000, 2016; Schwartz, 2013). It states that rising marital sorting on education can increase differences in family backgrounds of the next generation of children and promote educational and income inequality in future generations due to the persistent role of education in status attainment and social mobility. Also, rising educational homogamy can reinforce inequality across generations through
intergenerational transmission of marital homogamy. Raised up in homogamous families, future generations may prefer and be exposed to partners with similar socioeconomic status.

FINDINGS

TRENDS AND CAUSES

There are ten existing studies on the trend of educational homogamy in China. These studies as a whole examine five hypotheses out of these reviewed earlier: status attainment, romantic love, educational homogenization, time gap, and educational legitimacy. Note that these studies in general differ in their analysis samples, measurement of education, and construction of marriage cohorts.

Four studies find evidence for decreasing spousal resemblance (Smits, 2003; Smits et al., 2000; Smits and Park, 2009; Raymo and Xie, 2000). Their findings are consistent with the romantic love or general openness hypothesis but not the status attainment hypothesis or the inverted U-curve hypothesis. The work of Smits and colleagues also finds evidence for possible social explanations.

Raymo and Xie (2000) apply the inverted U-curve hypothesis, in particular one of its sub-hypothesis (the status attainment hypothesis) (Smits et al., 1998), and expect educational homogamy to increase in developing countries such as China. They use community-level trend data from the 1985 In-Depth Fertility Survey of ever-married women under age 50 residing in three provinces (Hebei, Shaanxi, and Shanghai). They
restrict their analysis to recently married couples and construct two marriage cohorts: 1970-1974 and 1984-1985. They measure husbands’ and wives’ educational attainment in four ordinal categories: primary school or less, junior high school, senior high school, and university or more. Results show a decreasing trend of assortative marriage by education in the period under study.

Three studies from Smits and colleagues (Smits et al., 2000; Smits, 2003; Smits and Park, 2009) report further evidence for the decreasing trend of educational homogamy. Results from their multivariate analysis support a couple of possible social explanations. Smits et al. (2000) use a one percent sample from the 1982 Census data and limited their analysis to husbands aged 23 to 52, and wives aged 20 to 49 who married during the period from the 1940s to 1982. They split the China data into trend data and use wife’s age of 33 as a cut-off and construct two biological marriage cohorts. They code husbands’ and wives’ educational levels in four categories: none, primary school, junior middle school, senior middle school or higher.

China is one of the sixty countries that Smits et al. (2000) study. They pool trend data based on two marriage cohorts from these countries and measure two explanatory variables at two time points: modernization (i.e., the proportion of workers not in agriculture and the energy consumption per capita) and speed of modernization (i.e., the annual average growth rate of energy consumption per capita). Their multivariate analysis of these sixty-country trend data shows that modernization and the speed of modernization have a negative and positive effect on the decrease in educational
homogamy, respectively. These findings imply that two explanatory hypotheses—saturation and structural transformation—may apply to China.

Although using the same census data and the same two biological marriage cohorts as in the study of Smits et al. (2000), Smits (2003) is interested in the degree of educational homogamy among those with higher levels of education. The analysis sample is larger and younger and is composed of females aged 18-49 and males aged 18-52. Smits measures husbands’ and wives’ education in two categories based on the boundary of whether people complete a senior secondary or higher education. Note that China is only one of the fifty-five countries Smits (2003) studies. He combines trend data based on two marriage cohorts from these countries and measures three explanatory variables at two time points: modernization, speed of modernization, and the group size of the highly educated (i.e., the percentage of persons with a completed secondary or higher education). His explanatory multivariate analysis of these trend data from the countries he sampled suggests that the structural transformation hypothesis and the exclusivity hypothesis (but not the saturation hypothesis) may be applicable to the trend of educational assortative mating among the highly educated in China.

Smits and Park (2009) extend the study period into the 1990s and find the same decreasing trend. They analyze data from three sources: a one percent sample from the 1982 Census data, the 1985/1987 Fertility Survey representative of the population in eight provinces, and the 1997 China Health and Nutrition Survey conducted in nine provinces. They target people who got married during the period from the 1950s to 2000,
and group them into five marriage cohorts based on actual or estimated marriage dates: 1950s, 1960s, 1970s, 1980s, and 1990s. Instead of coding education as a multi-category variable, Smits and Park focus on six boundaries in the educational structure: some primary education or more vs. no education, completed primary education or more vs. less than a completed primary education, completed lower secondary education or more vs. less than a completed lower secondary education, completed upper secondary education or more vs. less than a completed upper secondary education, completed lower tertiary education or more vs. less than a completed lower tertiary education, and completed tertiary education vs. less than a completed tertiary education. China is only one of the ten East Asian societies Smits and Park (2009) study. Smits and Park pool these ten-society trend data, and measure four explanatory variables at five time points: modernization (i.e., GDP per capita), speed of modernization (i.e., the average yearly change in GDP), the group size of the highly educated (i.e., the percentage of males with a higher education level than the boundary under study), and women’s employment (i.e., the percentage of women age 15 or older who are economically active). Multilevel analysis of these ten-society data shows that the exclusivity hypothesis and the female autonomy hypothesis (but not the saturation hypothesis and the structural transformation hypothesis) may apply to China.

In contrast with the above four studies, the other six studies show evidence for either a V-shaped trend or an increasing trend of educational homogamy (Li, 2008, 2011; Han, 2010; Qi and Niu, 2012; Song, 2009; Xu, Ji, and Tung, 2000). Their results support
the educational legitimacy hypothesis, the status attainment hypothesis, the educational homogenization hypothesis, and the time gap hypothesis.

Xu et al. (2000) use data from two separate community surveys of women aged 20-70 residing in two cities (Chengdu and Baoding) at two points of time (1987 and 1991). The Chengdu survey data measure education at the time of the first marriage, and the Baoding survey data measure education at the interview time for currently married couples. Xu et al. code husbands’ and wives’ education in four categories: elementary school or less, middle school, high school, and college and beyond. They construct three marriage cohorts based on retrospective data: 1933-1957, “high Maoism” (1958-1976), and “reform era” (1977-1991). This study finds one significant result. The likelihood of an intermarriage between a person with at least a middle school education and a person with less than a middle school education increased from the earlier marriage cohort (1933-1957) to the “high Maoism” marriage cohort (1958-1976). Consistent with the educational legitimacy hypothesis, this finding suggests a decrease in the legitimacy of education from the earlier cohort to the “high Maoism” cohort.

less, junior high school, senior high school, and university and above, and the results support the educational legitimacy hypothesis. The trend of educational homogamy across the three periods takes a V shape, indicating that the strength of association between couples’ education during the Cultural Revolution is weaker than before and after the Cultural Revolution.

Han (2010) analyzes nationally representative data from two sources: the 2000 China Population Census and the 2001 Demographic Reproductive Health Survey. She uses a sample of women aged 15 to 49 and constructs six marriage cohorts: 1970-1974, 1975-1979, 1980-1984, 1985-1989, 1990-1994, and 1995-2001. Han measures couples’ current educational levels in four categories in the urban sample (elementary school or less, junior high school, senior high school, and college and up) and in four different categories in the rural and national samples (illiterate, elementary school, junior high school, and senior high school and up). Results show a V-shaped trend in both the national and rural samples: the strength of educational homogamy first declines in the first three older cohorts and then climbs in the three younger cohorts. These findings are consistent with the educational legitimacy hypothesis. Results from the more highly educated urban sample, however, show an increasing trend since the very first cohort. This finding implies that the status attainment hypothesis may be more applicable to urban China.

Li (2008) uses a one percent sample from the 2000 Census data and limits his analysis to couples in their first marriage. He measures education in five categories: less
than elementary school, elementary school, junior high school, high school, and associate
degree or above. He constructs fifty-two yearly marriage cohorts between 1949 and 2000.
Results show a V-shaped trend of educational homogamy in the fifty years under study.
The degree of educational homogamy declines after the People’s Republic of China was
established in 1949, levels off between the late 1950s and the late 1960s, declines
between the late 1960s and the late 1970s, and rises since the early 1980s. These findings
confirm the educational legitimacy hypothesis.

Li (2011) further analyzes data from the 2006 Chinese General Social Survey
(CGSS) and restricts his analysis to couples in their first marriage during the period from
1950 to 2006. He constructs three marriage cohorts: pre-reform era (1949-1978), early
reform era (1979-1992), and deepened reform era (1993-2006) and measures education in
four categories: elementary school or less, junior high school, senior high school, and
associate degree or above. Results show an increasing trend after the market-oriented
reform was launched. These results are consistent with the status attainment hypothesis
and partially support the educational legitimacy hypothesis.

Qi and Niu (2012) also use data from the 2006 CGSS. But their study differs from
the work of Li (2001) in analysis samples, measurement of education, and construction of
cohorts and reports different findings. They measure education in five categories
(elementary school or less, junior high school, senior high school, vocational college, and
college or above) and construct four marriage cohorts (1950-1965, 1966-1976,
over time. These results support the status attainment hypothesis.

Xu, Li, and Yu (2014) employ nationally representative data from two waves of the Chinese Family Panel Studies in 2010 and 2012. They group education into five groups (illiterate, primary school, secondary school, high school, and college and above) and create five marriage cohorts (before 1970, 1970-1979, 1980-1989, 1990-1999, and 2000-2012). Results show a nonlinear trend such that the degree of educational homogamy slightly increases during the 1970s, slightly decreases and levels off during the 1980s, and increases again after the late 1980s.

Hu and Qian (forthcoming) is specifically concerned with the effect of one rapid social transformation—expansion of higher education—on educational homogamy, which began in 1999. They draw data from the Shanghai Post-80s Generation Survey collected in 2013, which are representative of Shanghai residents born in the 1980s. Education is classified into five levels: elementary school or below, junior high school or equivalent, senior high school or equivalent, junior college or equivalent, and regular college or equivalent. Three birth cohorts are created among the married: 1980-1983, 1984-1986, and 1987-1989. Results show a V-shaped trend: the likelihood of educational homogamy slightly drops between the first and second cohorts but then climbs between the second and third cohorts. Hu and Qian conclude that the increasing trend between the two younger cohorts supports a “structural transition theory.” This theory is based on the educational homogenization hypothesis and the time gap hypothesis (Kalmijn, 1991; Mare, 1991; Schwartz and Mare, 2005).
SOCIAL CONSEQUENCES

Only one study examines social consequences of educational homogamy in China (Hu and Qian, 2015). It analyzes the association between educational homogamy and earnings inequality in urban China, using data from the Chinese Household Income Project. Education is measured at three levels: below senior high school, senior high school, and college-level education. Hu and Qian (2015) find that between 1998 and 2007, increasing educational homogamy among urban married couples with senior high school and tertiary-level education is associated with growing inter-household type earning gaps and decreasing intra-household type earnings gaps. Overall earnings inequality is reduced in that the decrease in intra-household type earnings inequality offsets the increase in inter-household type earnings inequality.

FUTURE RESEARCH DIRECTIONS

What do we know about the trend of educational homogamy in China? The ten existing studies find mixed patterns. These inconsistent results may be due to inconsistencies in analysis samples and/or measurement (of both education and marriage cohorts). Four studies report a decreasing trend and support the romantic love or general openness hypothesis (Smits, 2003; Smits et al., 2000; Smits and Park, 2009; Raymo and Xie, 2000). Among these four studies, the first two examine the trend of educational assortative mating averaged over all educational boundaries (Smits et al., 2000; Raymo and Xie, 2000), while the other two analyze the trend of intermarriage across specific educational
boundaries. In contrast, the other six studies report a V-shaped trend or an increasing trend averaged over all educational boundaries, and in general they support the educational legitimacy hypothesis, the status attainment hypothesis, the educational homogenization hypothesis, and the time gap hypothesis (Li, 2008, 2011; Han, 2010; Qi and Niu, 2012; Song, 2009; Xu et al., 2000). Overall, there is relatively more evidence for the V-shaped trend and the increasing trend. Note that only one study examines social consequences of educational assortative mating in China (Hu and Qian, 2015). It documents that rising educational homogamy actually reduces overall earnings inequality in urban China.

Prior studies are praiseworthy, but more work is needed for a more comprehensive understanding of educational homogamy in China. We propose five major future research directions, methodologically and theoretically. First, in the face of inconsistent results from prior work on the trend of educational assortative mating, both the measurement of education and the construction of marriage cohorts need to be more theoretically driven and justified. Note that even studies using the same data sets group education into different categories and delineate marriage cohorts in different ways (see Li, 2011; Qi and Niu, 2012; also see Han, 2010; Li, 2008). Future research may study whether results may vary with the categorization of education at the time of the first marriage. More importantly, future studies on China should distinguish the Cultural Revolution separately in their classification of historical contexts. It is during the Cultural Revolution that educational legitimacy was radically challenged. Now with more data collected in the
three-decade post-Cultural Revolution era, future studies should classify unique marriage cohorts based on shifting institutional arrangements instead of simply based on chronological age.

Second, methodologically, we should pay more attention to multivariate analysis through which we can include potential explanatory variables into statistical models and directly examine possible causes of the trend of educational homogamy. Prior studies are mainly devoted to exploring the trend of educational homogamy rather than its causes. Their speculation on possible determinants receives little examination. Smits and colleagues (Smits et al., 2000; Smits, 2003; Smits and Park, 2009) conduct multivariate analysis, but in their large-scale cross-society comparative studies, China is only one of the many societies in the analysis samples. Based on their work, for example, we may tentatively conclude that some social explanations (e.g., exclusivity, female autonomy, and structural transformation) may apply to China. More specific multivariate research on Chinese society is overdue. Such research is necessary in order for us to understand what structural factors are influential on the degree of educational assortative mating.

Third, related to the second future research direction, scholars should examine various social explanations for the trend of educational homogamy. As the literature review suggests, the strength of spousal resemblance on education has been increasing in the past three decades. As Figure 1 summarizes, seven hypotheses predict an increasing trend: educational homogenization, status attainment, educational legitimacy, economic inequality, promoted sameness, female economic attractiveness, and gender inequality.
How to disentangle the explanatory power of these eight possible explanations will be a challenging theoretical and methodological task in the future. In contemporary China, the rapid educational expansion and rising return to education may lead support to three hypotheses: educational homogenization, status attainment, and educational legitimacy (Wu, 2010; Zhao and Zhou, 2002). As indicated by the Gini index, income inequality in China is rising. It has risen into .45 at the very beginning of the 21st century which exceeds the alarming level of .40 (United Nations Development Programme, 2004; Wang, 2008). This increasing economic gap requires attention to the economic inequality hypothesis. The impact of Internet dating on educational homogamy in China is unknown. The proportion of Internet users in China has sharply risen from 1.8 percent in 2000 to 52 percent in 2016 (Internet Live Stats). Whether the use of the Internet, in particular Internet dating, promotes sameness in mate selection remains a question. Additionally, gender-related social factors play a role in spousal resemblance on educational attainment. The increasing gender segregation in occupations and earning differentiation calls for research on the gender inequality hypothesis (Shu, 2005). Increasing women’s labor force participation (possibly driven by the surge in living costs) in urban China since the beginning of the 21st century may give support to the female economic attractiveness hypothesis (Wu and Zhou, 2015).

Furthermore, social consequences of educational homogamy deserve more research attention. As reviewed earlier, only one study investigates educational assortative mating as one social antecedent (Hu and Qian, 2015). It examines the role of spousal resemblance
in education for earnings inequality. Future research should also look into the function of educational homogamy in intergenerational mobility. Note that status homogamy is one crucial mechanism through which various forms of valuable resources get distributed and redistributed. Economic capital represents only one form of assets. Cultural (e.g., lifestyle) and social (e.g., social connections, and network members’ resources) capital, for example, are another two forms of crucial resources (Bourdieu, [1983] 1986; Lin, 2001a; Merton, 1941; Song, 2012). Future research needs to explore the effect of educational homogamy on inequality in the obtainment of cultural and social capital. Considering the dominance of collectivistic culture or guanxi culture in China (Lin, 2001b), educational homogamy may play a stronger role in access to social capital in China than in individualistic societies.

Finally, but not the least important, there are two Chinas: urban and rural China. The application of these reviewed hypothesis on the trend, causes, and consequences of educational homogamy varies by the rural-urban divide partly because of differences in population structure and marriage patterns (Han, 2010). The explanatory power of these reviewed hypotheses can also be contingent on the persistent rural-urban inequality in access to various scarce resources such as education, employment opportunities, and health care (Bian, 2002; Wu and Treiman, 2004). China is witnessing rapid urbanization. The proportion of urban population was less than 20 percent in 1978, is now more than 50 percent, and will each 70 percent by 2030 (The World Bank and Development Research Center of the State Council of the People’s Republic of China, 2014). Studies on educational homogamy will serve as one window for us to understand the impact of
rapid urban expansion. To our knowledge, there is only one study on educational homogamy (Han, 2010) that makes the effort to examine rural and urban population separately. Han (2000) finds an increasing trend of education homogamy in urban China but a V-shaped trend in rural China. The different patterns between rural and urban China in Han’s work further necessitates future separate research on rural and urban China.
REFERENCES


<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Opportunities for EH</th>
<th>Preferences for EH</th>
<th>Trend in EH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational Homogenization</td>
<td>+</td>
<td></td>
<td>Increase</td>
</tr>
<tr>
<td>Time Gap</td>
<td>-</td>
<td></td>
<td>Decrease</td>
</tr>
<tr>
<td>Information and Communication Technology</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promoted Diversity</td>
<td>-</td>
<td></td>
<td>Decrease</td>
</tr>
<tr>
<td>Promoted Sameness</td>
<td>+</td>
<td></td>
<td>Increase</td>
</tr>
<tr>
<td>Winnowing Effect of Cohabitation</td>
<td>+</td>
<td></td>
<td>Increase</td>
</tr>
<tr>
<td>Status Attainment</td>
<td>+</td>
<td></td>
<td>Increase</td>
</tr>
<tr>
<td>Romantic Love/General Openness</td>
<td>-</td>
<td></td>
<td>Decrease</td>
</tr>
<tr>
<td>Inverted U-Curve/Modernization</td>
<td>+/-</td>
<td></td>
<td>Inverted-U Curve</td>
</tr>
<tr>
<td>Saturation</td>
<td>+</td>
<td></td>
<td>Increase</td>
</tr>
<tr>
<td>Structural Transformation (Speed of Modernization)</td>
<td>+</td>
<td></td>
<td>Increase</td>
</tr>
<tr>
<td>Exclusivity (Elite Size)</td>
<td>-</td>
<td></td>
<td>Decrease</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female Economic Attractiveness</td>
<td>+</td>
<td></td>
<td>Increase</td>
</tr>
<tr>
<td>Female Autonomy</td>
<td>-</td>
<td></td>
<td>Decrease</td>
</tr>
<tr>
<td>Gender Inequality</td>
<td>+</td>
<td></td>
<td>Increase</td>
</tr>
<tr>
<td>Economic Inequality</td>
<td>-</td>
<td>+</td>
<td>Increase</td>
</tr>
<tr>
<td>Educational Legitimacy</td>
<td>+</td>
<td></td>
<td>Increase</td>
</tr>
</tbody>
</table>