DEVELOPMENT AND SOCIETY
Volume 39 | Number 1 | June 2010, 163-185

# Temporal Variation in the Strength of Educational Assortative Marriage in Korea: A Birth Cohort Analysis of the 2000 Korea Census*

LEE MYOUNG-JIN | Korea University

*This paper investigates the trend in assortative marriage with respect to education among a large Korean cohort born in the 1930s to the 1970s. The two-percent sample data from the 2000 Korea Census is used to investigate changes in the association between couples' educational attainment across different time periods. The primary assumption of this study is that status distance inhibits social association such as friendship and marriage. With increasing difference in status between individuals, the rate of social association among individuals is negatively correlated to status difference. Being one of the most important associations, this would suggest that marriage becomes less frequent with increasing status distance between potential spouses, thus producing assortative marriage with respect to social status.*

*Various types of log-linear models and $L^2$ (likelihood ratio chi-square)-distance measures are used to analyze the temporal change of educational assortative marriage in this paper, and the main findings are as follows. First, with Korea's rapid economic growth since the 1960s, earlier birth cohorts show an increase in educational assortative marriage. Korea's unique historical experiences appear to heighten the importance of achieved status, such as educational attainment, as a new basis for social hierarchy. Second, educational assortative marriage decreases among later birth cohorts. However, this decrease does not necessarily tend to increase general social openness because new types of status base, such as family background, emerge and gain increased importance in marriage selection in line with increased stability of social stratification.*

***Keywords:*** *Educational Assortative Marriage, Cohort Analysis, 2000 Korea Census, Log-linear Models*

---

*This work was supported by National Research Foundation- Grant funded by the Korean Government (National Research Foundation- KRF-2009-322-B00013)

## Introduction

Despite some important and historical exceptions, married life is universally considered to be the most normal and desirable type of existence for adults. Marriage is a choice for a long-term relationship focusing on procreation and characterized by physical attraction between a husband and a wife, emotional intimacy, close family ties, children, and physical comfort (Goode, 1963; Adams, 1971). In general, marriage involves mutual undertakings by the husband and wife with respect to joint residence, sexual rights, and economic cooperation. It also frequently influences transactions between the families of a couple or the spouses themselves with regard to money, inheritance, services, status, and political power (Becker, 1974; Hutter, 1981; Kalmijn, 1991).

Yet, in almost every society, choosing a marriage partner is subject to restrictions or preference of prospective spouses, other related persons, or groups in which the prospective spouses belong. In other words, spouse selection is not random, and therefore, marriage forms a certain pattern that is a systematic departure from random association (Becker, 1981; Sweet and Bumpass, 1987). The non-random marriage pattern involves an assortative marriage that features a certain pattern of association between spouses' characteristics: Restriction or preference of spouses to someone with like traits is called positive assortative marriage, and conversely, restriction or preference of a partner with unlike traits is called negative assortative marriage (Eckland, 1968; Becker, 1981).

This assortment arises as men and women compete to seek the best mate offered at the marriage market (Becker, 1974; 1981; Oppenheimer, 1988; Lichter, 1990). People who enter the marriage market are likely to marry partners with similar traits or complementary traits appreciated by themselves or by their family members. In particular, assortative marriage can be linked to social status—prestige, rank, or standing associated with inequality in the distribution of social rewards.

The study of assortative marriage with respect to social status (hereafter "assortative marriage") involves examining the effect of socioeconomic attributes during the process of spouse selection. The study of assortative marriage investigates the degree of social rigidity by looking at certain marriage patterns. Many sociologists often profess an interest in societal rigidity (or openness) in relations among social strata—how the pattern and degree of assortative marriage change over time (Michielutte, 1972; Kalmijn, 1991; Mare, 1991). A large body of empirical research has been compiled in this area. At the early stage,

most typical approaches analyzed a single marriage table. Such research usually examined the pattern of assortative marriage at one point (Berent, 1954; Hall, 1954; Blau and Duncan, 1967). Yet because an isolated study in a particular society cannot by itself address the question of whether its pattern is typical or anomalous or whether its degree high or low, there have been several attempts at temporal and cross-national comparisons (Lipset and Zetterberg, 1959; Rockwell, 1976; Johnson, 1980; Hout, 1982; Ultee and Luijkx, 1990; Mare, 1991; Smits, Ultee, and Lammers, 1998; Schwartz and Mare, 2005; Smits et al., 2009). Recently, a group of Korean sociologists with similar interests to those of Western scholars have conducted similar empirical research (Cha, 1990; Park, 1990; Cha and Chang, 1994; Chang, 1999) in that they examined the pattern and degree of assortative marriage in Korea through using data from national samples in the 1980s and 1990s.

However, a debate has continued about two questions on assortative marriage research: the extent to which a particular dimension of social status determines spouse selection, and its international and temporal variation (Ultee and Luijkx, 1990; Chang, 1999; Smits, Ultee, and Lammers, 2000). Moreover, accumulation of knowledge is not completely satisfactory in answering such questions the field of assortative marriage. In fact, professed interests and actual results have diverged to some extent because concepts related to this field such as assortative marriage, homogamy, and heterogamy have not been precisely defined in previous studies. Additionally, they suffered from measurement problems (Lee, 2000).

To overcome these shortcomings, this study provides a temporal description of assortative marriage in Korea. Recent large-scale economic development and related changes in Korea offer a valuable context within which to empirically examine the questions of assortative marriage and social rigidity. Compared to Western countries, industrialization commenced relatively late in Korea. From being one of the poorest countries in the world at the end of the 1950s, South Korea has become the 11$^{th}$ largest trading country in the world by the end of the 1990s. Korea's rapid economic growth began in the early 1960s when its government instituted economic reforms with emphasis on exports and labor-intensive industries.

Concern with the part played by social status in marriage underlines the substantial research effort directed at the trend and explanation of observed assortative marriage. More specifically, this investigation focuses on explaining the impact of Korean society's macro change on the trend in assortative marriage. With this purpose, models are introduced for more precise measurement and clear incorporation of the main concepts. Furthurmore, the comparison of

several birth cohorts will be performed, which allows examination of the influence over time through the use of various statistical models.

## Theoretical Framework

In this study, trends of and possible explanations for assortative marriage are examined. Longitudinal or comparative studies are essential to assortative marriage research, perhaps more so than in other fields of research, and analysis of a single society at a particular time can reveal unequal marriage chances in social strata. However, we can never be certain that what we observe to be regularities are not merely particularities, products of some limited set of historical, cultural, or political circumstances. Moreover, possible explanations for variations of or changes in assortative marriage can hardly be derived from a single study.

Thus, to analyze a macro-level phenomenon like assortative marriage, longitudinal or comparative research is valuable because it forces us to revise our interpretations to account for the differences and inconsistencies that could never be uncovered in a single research. Two different types of theories are purported to explain a trend in assortative marriage and social rigidity. These theories are concerned with the impact of industrialization or structural economic changes on assortative marriage (Goode, 1964; Kalmijn, 1991; Mare, 1991). The first theory, known as industrialism, holds that socioeconomic development and technological growth, characterized by expansion of mass education, mass communication and transportation, and urbanization, influence strata relations (Hughes, 1963). One major claim of industrialism is that the various processes of industrialization increase contact and communication, reduce strata distinction, and lead to societal assimilation. In other words, industrial society is characterized by conditions in which individuals can envision personal advancement quite apart from their original strata. A society is comprised of individuals of more heterogeneous social origins, which implies that individuals are characterized by a relatively short average tenure in a given stratum. Both heterogeneity and short average tenure suggest high rate and volume of mobility and imply lower inequality in the ascription-based distribution of social rewards (Kelly, 1978; Kelly, Robinson, and Klein, 1981; Treiman, 1970; Hirshman and Wong, 1984). In particular, expansion of mass communication and transportation weakens cultural barriers among social strata (Treiman, 1970). Urbanization creates densely populated urban areas that increase physical proximity and the number of potential contacts between persons, including prospective spouses,

originating from different groups (Blau, Blum and Schwartz, 1984). A higher level of mass education brings about a more marriageable population of heterogeneity in its social origins, and such expansion is also expected to change the cultural outlook of more people at a marriageable age. All these trends contribute to declining differences in outlook, customs, and taste among people from different family backgrounds. As the social preferences based on family backgrounds become more similar, the importance of ascribed status in marriage decreases (Blau and Duncan, 1967; Kalmijn, 1991). In short, the theory of industrialism holds that economic development entails a process of rationalization which weakens ascribed allocation of roles in favor of a specialized and efficient work force. It argues that achieved qualities are now the dominant criteria for distribution of life chance, which necessitates a fundamental reorientation in the values and normative standards guiding social action. Factors that reduce ascription's importance in occupational mobility in industrial societies also reduce ascription's influence on assortative marriage (Treiman, 1970). Under the prevalence of achievement-based stratification, marriage connects individuals independently of their ascribed status (Glass, 1954; Lipset and Zetterberg, 1959; Blau and Duncan, 1967). The second theory considered here, the theory of reproduction, also argues that patterns of assortative marriage follow economic process. This approach holds that socioeconomic development and technological growth should decrease the importance of social origins, especially of family background, in spouse selection. Both the reproduction approach and the industrialism approach claim that ongoing industrialization decreases the effects of ascribed status on intergenerational mobility and assortative marriage. Industrialism focuses on the crucial shift from ascription to achievement as the principal determinant of status in advanced societies. Then it suggests that, in modern industrial societies, ascription is increasingly irrelevant to the principal criterion of spouse selection. More specifically, this argument states that we should expect the association between social origin and achievement (such as educational attainment) to decline over the years, as talented children of lower-stratum backgrounds avail themselves of expanding opportunities to gain credentials (Treiman, 1970; Treiman and Yip, 1989). Yet, unlike the theory of industrialism, the theory of reproduction objects to this idea through its need to maintain and replicate existing relations among social strata, focusing instead on the tendency to transfer ascribed status into achieved status. There are two types of path to reproduction of social strata. One is a direct transmission of status origin to status destination, and the other is an indirect transfer of status origin to status destination through education. As industrialization proceeds, direct transfer of a family's resources into its children's status destination decreases. In

order to counteract the diminishing influence of the control over children's status, parents tend to invest their resources heavily in other strategies of reproduction (Collins, 1971; Ultee and Luijkx, 1990). Since the standards of high achieved status are higher, the family must expend their energy and resources in dealing with this transfer. By definition, upper-stratum families have more resources in a given society, and can apply them to this task. Upper-stratum parents can therefore control the future of their children more effectively. This differential control is the key in socially advantaged families transforming their resources to their children.

Education and marriage are well-known strata-reproduction strategies, and are somewhat interrelated. Bourdieu (1973) describes how the social order of ascribed status is converted into achieved status. Therefore, such cultural and educational mechanisms of reproducing social strata take precedence over the more traditional mechanism of spouse selection. The tendency toward increasing assortative marriage with respect to achievement reflects the tendency toward increasing transfer from ascribed status to achieved status. Thus, if direct transfer of social origins to children diminishes, assortative marriage increases.

A large body of sociological discussion has emphasized the importance of ascribed status in the attainment of achieved status. A position which at first glance clearly appears to be based on achievement is clearly proven to be affected by ascribed status (Blau and Duncan, 1967; Featherman and Hauser, 1978). Numerous studies have elaborated on the connection between ascribed status and achieved status.

Research related to this theory has generated conflicting reports. For example, Kerckhoff and Trott (1993) specifically examined the Oxford Mobility Data to test for the impact of the 1944 Education Act on the link between social origin and educational attainment. They found that social origin indeed exerted increasing influence on educational achievement. By contrast, Hout, Raftery and Bell (1993) have reported that stratum-based inequalities in educational outcomes are declining in the United States. However, some studies of other industrial societies report an apparent lack of change (Yossi and Kraus, 1990; Dronkers, 1993). The question is to what extent such transfer from generation to generation has been successful.

Empirical evidence on trends in assortative marriage in Korea is not conclusive. On the one hand, some scientists have observed increasing assortative marriage and social rigidity, but others have observed the opposite. Related empirical results by Park (1990) and Shin (1996) have reported an increase in assortative marriage, whereas Cha and Chang (1994) reported a decrease in assortative marriage and rigidity in the face of Korea's economic development.

Recently, Smits et al. (2009) found that educational homogamy declined over time. Undoubtedly, the relationship between the trend in assortative marriage and economic development has undergone a change, but this trend nevertheless cannot be generalized into representing a certain direction (Lee, 2000).[1]

## Data, Measurement, and Method

### *Data Collection and Measurement*

Basically, Korea census consists of two types of survey: complete enumeration and sample enumeration. The 2000 Korea census collected the following detailed information: 1) personal information (name, family origin, relationship to the head of household, gender, age, school attendance, and educational attainment, place of birth, marital status), and 2) housing information (type of household, number of rooms, type of kitchen, toilet, and bathroom, type of tenure, type of living quarters, type of detached house, and type of occupancy). Sample enumeration survey contains more detailed information such as employment, duration of current work, occupation, and so on (KNSO, 2006).

Data in this study conducted by the Korea National Statistical Office (KNSO, 2001) came from the two-percent sample of the Korea 2000 population and housing census comprised of 883,845 male and female subjects. The first population and housing census in Korea was conducted in 1925, and it has been conducted every five years since then. The characteristics of the 2000 census are as follows. It was designed to assess all persons and households in Korea; methods used for data collection were self-enumeration and direct interviews. Its reference date was November 1, 2000, and its numeration period was November 10, 2000.

Marriage tables were created based on the educational information of the household head and his/her spouse. In total, 238,607 cases were included in the marriage tables. A certain type of cohort categorization is required to examine the trend in assortative marriage, and debate continues on defining the best way for categorization (Lee, 2006).

For the purpose of this study, the year of birth of households is used as the

[1] These conflicting empirical results may be partly because previous studies have not given precise meaning to the related concepts (e.g., assortative marriage, homogamy, and heterogamy) and their relations to statistical models in this field. For issues on log-linear models and their implications, see Lee (1998).

standard for cohort categorization with the following 5 cohort distinctions: 1) those born before 1940, 2) born in the 1940s, 3) born in the 1950s, 4) born in the 1960s, and 5) born in the 1970s. It is obvious that this categorization cannot ensure total comparability within cohorts. Historical experiences of each generation in Korea may cause differences in the composition of cohorts over time. Moreover, the problem of representation arises among older-aged cohorts due to attrition by death. Several measurement issues also require consideration when analyzing these marriage tables. First, the number of cases differs widely across the tables. The marriage tables in this study are based on census of less than a million couples; yet, the number of couples varied by cohort. The temporal variation in the sample size poses a comparability problem by, for example, affecting the log-likelihood ratio statistic (Grusky and Hauser, 1984), but one way to solve this problem is to assume that all data sets have the same number of cases (Erickson, Goldthorpe and Portocarero, 1982).

Second, educational attainment is chosen rather than occupation as the basis of status for two main reasons. First of all, educational attainment can be measured in more couples than occupation because a considerable proportion of women are housewives. Even when these housewives are included in the analysis, it is difficult to determine their position in the occupational hierarchy. Additionally, women's occupation may not be a reliable index of their achieved status. Especially in developing countries, many women regard paid employment as a temporary position, to be given up by the time of marriage or the birth of the first child. Many women have no choice but to accept occupations lower in prestige than those taken up by men with same qualifications (Park, 1990).To compare the marriage tables, the following classifications are used: 1) college (post-secondary school), 2) high school (higher secondary school), 3) middle school (lower secondary school), and 4) elementary school.

*Method*

The log-linear model is introduced to analyze data sets that contain categorical variables (nominal or ordinal), e.g., educational level, religion, etc. It provides tools for more powerful analyses of contingency tables. The traditional way of identifying an association between or among categorical variables is to calculate percentages within categories of variables and comparing the percentages across these categories. If the percentages differ significantly between or among categories, association is assumed to occur among categories (Knoke and Burke, 1990). However, log-linear analysis cannot be applied simply, even for comparison of marriage tables from just two periods. This is particularly

true where models with multiple parameters are used to capture the pattern of assortative marriage.[2] Even though the added parameter may improve the model's fit, it further complicates the comparison: a society's degree of assortative marriage cannot be easily summarized. Simple summary measures are therefore urgently needed to provide a frame of reference for comparative studies. One solution to this issue is to introduce a single parameter model (e.g., the fixed-distance model or the uniform association model), allowing the relative strength of assortative marriage to be compared by the single parameter for interaction effects between spouses' statuses. The problem with this type of measure is that the pattern of association is such that the simplest model may not fit the data, which necessitates a more complex model. By definition, the more complex model uses more parameters than the single parameter model in order to capture the degree of association that increases the statistical complexity in simultaneously comparing several parameters in the table. To overcome these problems, I used likelihood ratio statistic on $L^2$-distance measures (DBs) calculated after standardization. The $L^2$ statistic associated with a certain log-linear model can be interpreted as the distance between the observed frequencies and the expected frequencies in the model. For instance, the $L^2$ statistic associated with the independence model provides us with conventional summary statistics that indicates the degree to which the observed frequencies deviate from the independence model (Cochran, 1954; Birch, 1964; Bishop, Fienberg and Holland, 1975).

Moreover, $L^2$-distance is easily decomposed by using a series of related models. A measure was obtained to show the distance between the models (Bishop, Fienberg and Holland, 1975; Agresti, 1984).[3] However, the problem of this DB is that $L^2$ is influenced by other factors, such as sample size and marginal

---

[2] On number of parameters, see Clogg and Eliason (1987).

[3] Suppose that there are two log-linear models, A and B. Model A is simpler than model B, which contains only subsets of B's parameters. $L^2$-distance associated with model A can be decomposed into two parts: 1) the distance of expected frequencies under model B from the expected frequencies under model A, and 2) the distance of expected frequencies under model B from observed frequencies. This decomposition is defined as follows:

$$
\begin{aligned}
L^2(A) &= -2\left(\sum_{i,j} f_{ij}\log f_{ij} - \sum_{i,j} f_{ij}\log m_{ij}^{A}\right) \\
&= -2\left(\sum_{i,j} f_{ij}\log m_{ij}^{B} - \sum_{i,j} f_{ij}\log m_{ij}^{A}\right) - 2\left(\sum_{i,j} f_{ij}\log m_{ij}^{B} - \sum_{i,j} f_{ij}\log f_{ij}\right) \\
&= L^2[(A)\mid(B)] + L^2(B)
\end{aligned}
$$

where $L^2[(A)\mid(B)]$ or $L^2(A) - L^2(B)$ is the "conditional measure" for model A, given model B (Bishop, Fienberg and Holland, 1975: 126).

distribution. To reduce such effects, sample size and marginal distributions were adjusted, keeping the internal odds ratios (Bishop, Fienberg and Holland, 1975). For the purpose of $L^2$ calculation, the simplest standardization was to assume that sample sizes are uniform across tables. First, the size of each table was adjusted to 1,000; sometimes the disparity of marginal distribution between spouses influenced the measure of assortative marriage. Therefore, the table was re-adjusted to assume equal educational distribution for husbands and wives. However, another type of marginal effect is uneven marginal distribution between or among categories. Double standardization was therefore introduced to reduce this type of marginal effect. After double standardization, each table was fixed to have the same size, equal marginal distribution for husbands and wives, and even marginal distribution. The variation introduced by sample size and marginal distributions, which are deemed irrelevant for intrinsic degree of assortative marriage, was eliminated through comparison of $L^2$-distances based on the double standardized marriage tables for societies.

## Models and Results

### *Models*

In this study, assortative marriage means any type of systematic departure from random association (Becker, 1981; Sweet and Bumpass, 1987). That is, suppose that there are $M$ eligible males and $F$ eligible females in the marriage market. In practice, not all $M \times F$ possible pairs are equally likely. The nonrandom marriage pattern leads to assortative marriage.

The key to modeling assortative marriage lies in the appropriate use of the basic notion of status persistence and status barrier in marriage, and the basic notion of status hierarchy, status distances, and openness of the stratification system. One type of models gives priority to the notions of status persistence and status barriers while another gives priority to the notion of status hierarchy and distance. The first type of models focuses on the pattern of relative frequencies as the cells move away from the main diagonals. Included in this type are four specific models: 1) diagonal, 2) persistence, 3) fixed-distance, and 4) crossings (Goodman, 1979a; Johnson, 1980; Lindsey, 1989; Ultee and Luijkx, 1990; Kalmijn, 1991; Mare, 1991). In particular, the diagonal model assumes that there is a tendency toward homogamy in marriage tables—that is, people with equal status are likely to marry. Once a couple deviates from this tendency, the model does not concerns which other status they marry. Moreover, the degree

of homogamy is assumed to be uniform in the diagonal model. This diagonal model can be extended to a more complex one (i.e., persistence model) by eliminating the requirement that the relative homogamy of main diagonal cells be uniform. The persistence model includes a separate parameter for each stratum.

Both diagonal and persistence models assume that there is an overall tendency to marry a partner with the same social status: once a person marries out of the same status group, the choice among the remaining status categories is assumed to be random. The fixed-distance model and crossings model incorporate a certain type of status barriers. The fixed-distance model focuses on the fact that many observed tables of social mobility and marriage show greater frequencies in the main diagonals and smaller frequencies as one moves toward off-diagonal cells (Goodman, 1979a; Haberman, 1979). This model contains one single parameter to represent such a tendency, which is symmetric and equally strong in both directions (Ultee and Luijkx, 1990; Kalmijn, 1991). The crossings model (CD) is widely used in the area of assortative marriage research (Johnson, 1980; Kalmijn, 1991; Mare, 1991). This model attempts to incorporate the same idea as the fixed-distance model. Unlike the fixed-distance model, the crossings model allows different parameters between categories. This type of model, however, fails to contain the idea of social status. In terms of odds ratio, these models do not imply consistent effect of status hierarchy, only in competition involving certain status combinations.

The second type of models concentrates more on the notion of status hierarchy and distance between or among statuses. In this type of models, considered to be the indirect results of status competition in the marriage market, are the patterns of the marriage tables showing the prevalence of frequencies in the main diagonals and scarcity of frequencies as the cells move away from the main diagonals. These models are known as association models (Goodman, 1979b; 1984; Clogg, 1982a; 1982b; Hout, 1984). The association models' simplest form is the uniform association (UNI) model. The UNI model is based on the conjecture that the odds ratio of adjacent cells is the same as each other. The interaction term of this model is the product of two linear scales to represent the idea that row and column variables are ordinal and that the distance between categories is equal. Unlike the fixed-distance model, this model consistently focuses on social hierarchy. Under the UNI model, all odds ratio involving the consecutive $2 \times 2$ tables are the same or uniform, i.e., 4. This ratio indicates the advantages of higher-status men over those of the next lower status in marrying higher-status women who are between the two adjacent statuses. The odds ratio also specifies distance. The distance for both men and women are meaningful in this model.

The notion of hierarchy and distance introduced by the UNI model can be generalized and operationalized in several ways. It may be hypothesized that odds ratio remains the same across the columns but vary across the rows, perhaps indicating that order inherent in the row categories is not uniform, while order in the column categories is. In other words, the distance between two consecutive row categories varies while it remains constant for the column categories. Such an association pattern is known as the row-effects association model, not because the column variables do not have any effect but because an equal-interval scale works for it. The column-effects association model is obtained if we reverse the role of these variables.

The homogeneous row-column effects (HRC) model, whose odds ratio changes across the row and the column, may be hypothesized, but the corresponding pair of categories in the row and the column shares the same odds ratio. This model accommodates different intervals in each variable, as long as the corresponding intervals are homogeneous across the variables (Fienberg, 1980; Yamaguchi, 1987; Agresti, 1990).

The association models, however, do not adequately capture one particular aspect of the observed status system—the fact that there is a tendency toward a "stratum specific persistence," that is, the frequency in the main diagonal of observed marriage tables tends to be greater than expected even when most of the association models are taken into consideration. To overcome the problems of the two types of models, introduced was the persistence model which is a combination of two types of models: the association model for the off-diagonal cells, and the stratum-specific persistence model for the diagonal cells.[4] This combination model captures the tendency toward a stratum-specific persistence as well as status competition in the marriage market.

*Results*

Let us begin with a description of marriage tables for the couple's education according to observed frequencies. Table 1 presents observed marriage tables for couples' education for each period. The distribution of each table illustrates increasing educational attainment for men and women over time as a result of the relatively recent availability of mass education in Korea.[5]

[4] The same principal can be applied to combinations of both diagonal and association models.

[5] During the past several decades, Korea's higher education has shown dramatic expansion. In 1965, the number of students enrolled in higher education institutions was only 112,557. In 2006, the enrollment increased to more than 3.5 million. In 2005, more than 95% of eighteen-year-old children graduated from high schools, and more than 80% of them advanced to higher education institutions.

**Table 1.** Marriage Table by Cohort (Raw Data)

| | | Wife | | | | |
|---|---|---|---|---|---|---|
| | | College | High School | Middle School | Elementary School | Total |
| 1930s Husband | College | 1,077 | 2,194 | 1,013 | 1,659 | 5,943 |
| | High School | 176 | 1,349 | 2,052 | 4,756 | 8,333 |
| | Middle School | 75 | 246 | 1,118 | 4,343 | 5,782 |
| | Elementary School | 150 | 464 | 442 | 16,296 | 17,352 |
| | Total | 1,478 | 4,253 | 4,625 | 27,054 | 37,410 |
| 1940s Husband | College | 2,917 | 4,392 | 1,217 | 1,274 | 9,800 |
| | High School | 425 | 5,543 | 5,343 | 3,737 | 15,048 |
| | Middle School | 161 | 620 | 3,899 | 4,127 | 8,807 |
| | Elementary School | 159 | 472 | 783 | 8,451 | 9,865 |
| | Total | 3,662 | 11,027 | 11,242 | 17,589 | 43,520 |
| 1950s Husband | College | 7,877 | 9,473 | 1,126 | 841 | 19,317 |
| | High School | 1,049 | 19,156 | 7,512 | 2,462 | 30,179 |
| | Middle School | 241 | 1,816 | 6,287 | 2,456 | 10,800 |
| | Elementary School | 212 | 842 | 1,090 | 4,045 | 6,189 |
| | Total | 9,379 | 31,287 | 16,015 | 9,804 | 66,485 |
| 1960s Husband | College | 17,880 | 12,138 | 288 | 591 | 30,897 |
| | High School | 2,039 | 24,654 | 2,518 | 1,489 | 30,700 |
| | Middle School | 210 | 1,728 | 1,987 | 729 | 4,654 |
| | Elementary School | 724 | 1,492 | 535 | 666 | 3,417 |
| | Total | 20,853 | 40,012 | 5,328 | 3,475 | 69,668 |
| 1970s Husband | College | 6,708 | 2,732 | 129 | 295 | 9,864 |
| | High School | 1,489 | 7,906 | 354 | 503 | 10,252 |
| | Middle School | 86 | 381 | 158 | 85 | 710 |
| | Elementary School | 197 | 397 | 69 | 35 | 698 |
| | Total | 8,480 | 11,416 | 710 | 918 | 21,524 |

*Source*: KNSO, 2001.

However, percentage analysis may not present an accurate picture since any measures from the analysis are not independent of marginal distribution or the categorization method. The figures over time are not directly comparable. Therefore, observed frequencies of each table were adjusted or standardized, and then compared. First, the sample size of each table was adjusted to 40,000. The

Korea's enrollment rate in higher education is one of the highest in the world (KNSO, 2006).

**Table 2.** Distance Measure of Independent Model ($L^2$IND)

| | SZ | HS | DS |
|---|---|---|---|
| 1930s | 14,168.63 | 17,465.46 | 16,270.53 |
| 1940s | 20,936.92 | 28,892.38 | 23,923.42 |
| 1950s | 21,435.66 | 31,468.28 | 29,241.27 |
| 1960s | 17,301.81 | 37,516.85 | 23,054.62 |
| 1970s | 13,225.85 | 6,522.96 | 13,905.56 |

Note: SZ (Size Adjustment); HS (Adjusted to the Distribution of Husband's Education); DS (Double Standardization)

number of cases of each birth cohort ranged from 21,524 to 69,668. The adjusted sample size was used based on a generated grand mean. The number of educational categories was also taken into consideration. Second, the difference in marriage patterns over time was assumed to be due to the disparity between the education of the husbands and wives. Then, the table was re-adjusted to assume equal educational distribution for husbands and wives. In particular, the wives' education was adjusted to the husbands'. As a final step, double standardization was introduced in which an equal educational distribution for spouses and an even distribution for each educational category were assumed. In other words, the effects of marginal distribution are controlled.

Table 2 presents the $L^2$-DB for adjusted tables over time. The first measure SA was based on the size-adjusted tables while the second measure AH was adjusted to the husbands' education (equal marginal distribution). Finally, the third measure DB was obtained after double standardization, which eliminates some of the problems of earlier measures.

To summarize the rather complex study results succinctly, birth cohorts of the 1950s had higher values of the $L^2$-DB. Other birth cohorts had lower values of education in marriage selection. For example, birth cohorts of the 1970s had the lowest $L^2$-DB value of 13,905.56, followed by 16,270.53 for those of the 1930s. In contrast, birth cohorts of the 1940s and 1960s had higher values at 23,923.42 and 23,054.62, respectively. Figure 1 shows the three $L^2$-measures for DBs for each birth cohort and GNI per capita (in USD) in 1970, 1975, 1985, 1995 and 2005. I assumed that the midpoint for the age of first marriage would be 35: 1970, 1975, 1985, 1995, and 2005.[6] This result is similar to the convex (inverted U-shaped) relationship between economic development and educational homogamy (Smits, Ultee and Lammers, 1998).

[6] Statistics on the GNI per capita for 1965 were not available.

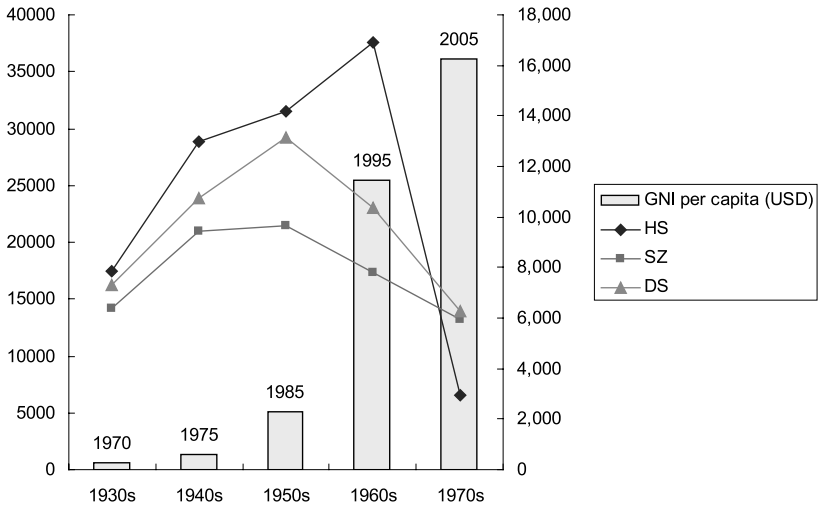


**Figure 1.** Distance Measure of Independent Model ($L^2_{IND}$) and GNI per capita (USD).
*Source*: KNSO, 2010.

**Table 3.** Trend of Degrees of Different Types of Association Measured by $L^2$-Decomposition for Double-Standardized Tables in Korea

| | D-IND | D-UNI | D-HRC | D-CD |
|---|---|---|---|---|
| 1930s | 16,270.53 | 9,889.97 | 10,065.25 | 12,293.82 |
| 1940s | 23,923.42 | 16,089.38 | 16,176.25 | 20,751.28 |
| 1950s | 29,241.27 | 21,111.96 | 21,481.57 | 27,341.19 |
| 1960s | 23,054.62 | 11,528.00 | 14,528.98 | 20,461.21 |
| 1970s | 13,905.56 | 3,416.98 | 9,995.54 | 13,397.98 |

Note: D-IND = $L^2_{IND}$; D-UNI = $L^2_{IND}$-$L^2_{UNI}$; D-HRC = $L^2_{IND}$-$L^2_{HRC}$; D-CD = $L^2_{IND}$-$L^2_{CD}$

To illustrate the relationship between possible aspects of assortative marriage for each period, Table 3 and Figure 2 present the overall association based on the independence model ($L^2_{IND}$) and different types of association assumed by several models (UNI, HRC, CD) for double-standardized tables. For each birth cohort, the pattern of association assumed by the diagonal and association models appeared to resemble that of the overall degree of assortative marriage based on the independence model. Yet, the temporal change differed according to each model. The association assumed by the diagonal model was more similar to that of the overall degree of assortative marriage based on the indepen-

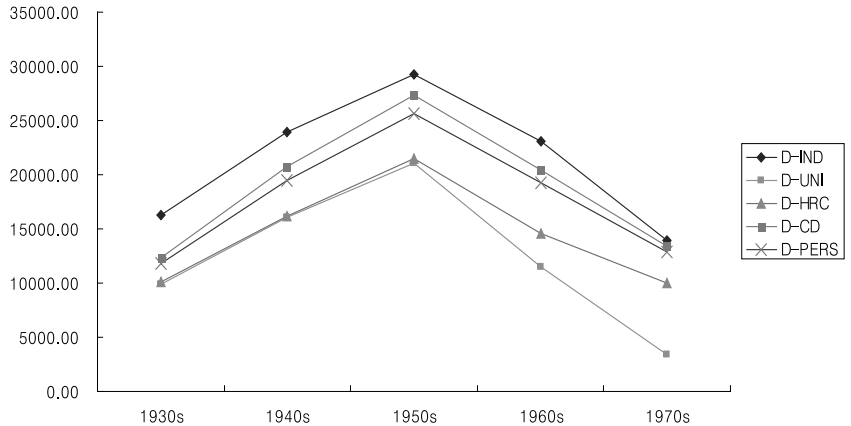


**Figure 2.** Trend of Different Types of Association Measured by $L^2$-Decomposition for Double-Standardized Table.

dence model. In contrast, the association assumed by the association models uniformly increased and decreased over time, which explained the change of status rigidity in Korea. The association assumed by status hierarchy and distance mainly contributed to the overall decrease in assortative marriage among birth cohorts of the 1960s and 1970s, indicating that the tendency to marry within one's stratum was relatively more important for birth cohorts of those married in the 1960s and 1970s.

## Discussion

This study has attempted to examine variations in the strength of assortative marriage in Korea. Similar to previous studies on intergenerational mobility, the strength of assortative marriage was assumed to act as an indicator of the possibility of an individual being able to cross social strata (Raymo and Xie, 2000). By employing log-linear models and $L^2$-DBs, the study results demonstrated the temporal change in the strength of assortative marriage among birth cohorts from the 1930s to the 1970s.

The main finding of this study was that the temporal change can be described by a convex (inverted U-shaped) relationship over time. The degree of educational assortative marriage increased among earlier birth cohorts from the 1930s to the 1950s, but decreased among later birth cohorts of the 1960s and

1970s. The degree of assortative marriage with respect to both status persistence and status barrier, and to status hierarchy and status distance, constantly increased among earlier birth cohorts, peaked among birth cohorts of the 1950s, and eventually declined among birth cohorts of the 1960s and 1970s. The effect of education became increasingly important in spouse selection.

In particular, the degree of assortative marriage with respect to status persistence and status barrier largely increased from birth cohorts of the 1940s to those of the 1950s. The difference between the degree of status persistence and status hierarchy was maximized among birth cohort of the 1950s.

This result is somewhat contrary to recent empirical findings by Smits et al. (2009), which support the general openness hypothesis of various processes of modernization making the boundaries of social strata more permeable. There may be some potential reasons for such differences. One of the main reasons may be that Smits and Park focused on the "the degree to which individuals marry across specific boundaries" (Smits et al., 2009: 237), whereby they stressed the notions of status persistence and status barriers in a sense. These notions focus on the pattern of relative frequency as the cells move away from the main diagonals. By contrast, this study uses an overall measure to capture a general pattern of assortative marriage for general openness of stratification system, and then it tries to decompose the general pattern into specified ones, i.e., status persistence and status barrier, as well as status hierarchy and distance.

Rather, this result appears to be consistent with the convex trend reported by Smits, Ultee and Lammers (1998). They argued that as a country develops economically, assortative marriage first increases to a maximum, and then declines, that a positive relationship between economic development and assortative marriage is found since the achieved status, such as education, becomes a salient factor with economic development. Thus, the status of attainment hypothesis seems to provide a plausible explanation for the temporal change among birth cohorts of the 1930s, 1940s, and 1950s. As shown in the GNI per capita and Figure 2, the degree of assortative marriage largely increased in line with rapid economic development during the 1970s and 1980s.

It is plausible that increased structural openness, especially in terms of ascribed status, in Korean society has brought people in contact with a wider variety of outsiders from more various family backgrounds. People have gained greater freedom to make more personal choices in a marriage partner. Korean society has undergone dramatic historical changes over the last century, such as Japanese colonization from 1905 to 1945 during which time various attempts were conducted to root out the old nationalist class and the Korean War from 1950 to 1953. In addition, the land reform policy and the rapid industrialization

program led by the Korean government also induced a dramatic change in the foundation of social stratification which heightened the strength of education as the basis of social stratification. As a result, educational level became more salient in the process of marriage or other important life-cycle events.

After presenting the general pattern of temporal variation in assortative marriage among earlier birth cohorts, this study explored the temporal change among later birth cohorts. The importance of this effect decreased as of birth cohorts of the 1960s. The degree of assortative marriage decreased after the GNI per capita surpassed US$10,000. Smits, Ultee and Lammers (1998) explain this phenomenon with the use of the general openness hypothesis, which states that people are able to afford the luxury of romantic love with improved economic conditions and can meet a more diverse range of potential spouses due to urbanization, greater geographical mobility, and the spread of mass communication; in other words, boundaries between all social groups become more permeable.

However, while educational assortative marriages decreased among recent birth cohorts, this did not necessarily weaken the strength of social rigidity in general. It is necessary to consider the changes in education in terms of its qualitative aspect in Korea. Under a strong tradition of Confucianism, there has been a long history of implementing education as one of the main state-ruling mechanisms. Moreover, Korea's unique historical experience further strengthened such social values placed on education. Japanese colonial rule in Korea (1910-1945) and the 1950s almost destroyed the old conservative order and traditional elite (Vogel, 1991). State-leading economic success further encouraged Koreans' eagerness to learn to improve individual socioeconomic success. Such social uncertainty promotes the importance of academic meritocracy and motivates higher education. This is externalized as an explosive widening of formal education. The growth of education since 1945 has been impressive by any standard. Enrollment in middle school doubled in a decade beginning in 1952, and more than doubled in another decade. The growth of enrollment in higher education is represented by Korea holding one of the highest college enrollment ratios in the world (KNSO, 2001). Social incentives such as significant salary and promotion differentials based on the level of education attained have been implemented (Koo, 1995).

However, expansion of education has recently slowed down[7] In that pos-

[7] According to KNSO, the rate of high school students enrolling for college has decreased by 1.9% point to 81.9% when compared with 83.8% in 2008. This rate decreased for the first time since 1990 (KNSO, 2009).

session of a college degree was no longer considered sufficient to have a decent job in the Korean labor market. In a sense, Korea has entered a saturated stage in the quantitative aspect of education. As a result, there may be a possible increase in the importance of other types of status base such as family background. Assortative marriage should be examined with respect to social status—prestige, rank, or standing associated with inequality in the distribution of social rewards. Examples include rights and perquisites that contribute to sustenance and comfort, humor and diversion, and self-respect and ego expansion (Davis and Moore, 1945; Weber, 1947; Fairchild, 1970; Treiman, 1970). Since social status often depends on multiple dimensions, the meaning of assortative marriage needs to be assessed differently according to the dimension of status. For this reason, assortative marriage should be viewed from a multidimensional perspective. Such a perspective has not received adequate attention in research literature on assortative marriage because most assortative marriage research have been based on a single dimension of status (either ascriptive or achieved), which has limited the ability to simultaneously examine the strengths of various dimensions of status. The implications of assortative marriage and their generalizability would have been clearer if assortative marriage had been investigated from a multidimensional rather than a unidimensional perspective.

## References

Adams, Bert N. 1971. *The American Family*. Chicago: Markham Publishing.

Agresti, Alan. 1984. *Analysis of Ordinal Categorical Data*. New York: John Wiley & Sons.

_____. 1990. *Categorical Data Analysis*. New York: Wiley & Sons.

Becker, Gary S. 1974. "A Theory of Marriage." In Theodore W. Schultz, ed., *Economics of the Family: Marriage, Children, and Human Capital*, Chicago: Post Secondary of Chicago Press. pp. 299-344.

_____. 1981. *A Treatise on the Family*. Cambridge: Harvard Post Secondary Press.

Berent, Jerzy. 1954. "Social Mobility and Marriage: A Study of Trends in England and Wales." In David Glass, ed., *Social Mobility in Britain*, London: Routledge & Kegan Paul. pp. 321-338.

Birch, M. W. 1964. "The Detection of Partial Association, I: The 2 x 2 Case." *Journal of the Royal Statistical Society Series* B 26: pp. 313-324.

Bishop, Yvonne M., Stephen E. Fienberg, and Paul W. Holland. 1975. *Discrete Multivariate Analysis: Theory and Practice*. Cambridge, MA: MIT Press.

Blau, Peter M., and Otis D. Duncan. 1967. *The American Occupational Structure*. New York: Wiley.

Blau, Peter M., Terry C. Blum, and Joseph E. Schwartz. 1984. C*rosscutting Social Circles:*

*Testing a Macrostructural Theory of Intergroup Relations*. New York: Academic Press.

Bourdieu, Pierre. 1973. "Cultural Reproduction and Social Reproduction." In Richard Brown, ed., *Knowledge, Education, and Cultural Change*, London: Tavistock. pp. 71-112.

Cha, Jongchun. 1990. "The Stratificational Meaning of Spouse Selection in Seoul." In Korean Social History Association, ed., *Female and Family in Korea*, Seoul: Moonhak and Jiseong. [In Korean]

Cha, Jongchun, and Sang Soo Chang. 1994. "Stratification Reproduction by Educational Attainment and Marriage." Paper presented at the annual meeting of Korean Sociological Association. [In Korean]

Chang, Sang Soo. 1999. "Marriage Pattern with Respect to Educational Level and Its Change in Korea." *Korean Journal of Sociology* 33: pp. 417-448. [In Korean]

Clogg, Clifford D. 1982a. "Using Association Models in Sociological Research: Some Examples." *American Journal of Sociology* 88: pp. 114-134.

_____. 1982b. "Some Models for the Analysis of Association in Multi-Way Cross-Classifications Having Ordered Categories." *Journal of the American Statistical Association* 77: pp. 114-134.

Clogg, Clifford D., and Scott R. Eliason. 1987. "Some Common Problems in Log-Linear Model." *Sociological Methods and Research* 16: pp. 8-44.

Cochran, William G. 1954. "Some Methods for Strengthening the Common 2 Tests." *Biometrics* 10: pp. 417-451.

Collins, Randall. 1971. "Functional and Conflict Theories of Educational Stratification." *American Sociological Review* 36: pp.1002-1019.

Davis, Kingsley, and W. E. Moore. 1945. "Some Principles of Stratification." *American Sociological Review* 10: pp. 233-397.

Dronkers, J. 1993. "Educational reform in the Netherlands: Did it Change the Impact of Parental Occupation and Education?" *Sociology of Education* 66: pp.262-277

Eckland, Bruce K. 1968. "Theories of Mate Selection." *Eugenics Quarterly* 13: pp. 285-290.

Erickson, R., J. H. Goldthorpe, and L. Portocarero. 1982. "Social Fluidity in Industrial Nations." *British Journal of Sociology* 33: pp. 1-34

Fairchild, Henry P. 1970. *Dictionary of Sociology*. New Jersey: A Helix Book.

Featherman, David L., and Robert M. Hauser. 1978. *Opportunity and Change*. New York: Academic Press.

Fienberg, Stephen E. 1980. *The Analysis of Cross-Classified Categorical Data*. Cambridge: The MIT Press.

Glass, D. V. 1954. *Social Mobility in Britain*. Glencoe (Ill.): Free Press.

Goode, William J. 1963. *World Revolution and Family Patterns*. London: The Free Press.

_____. 1964. *The Family*. Englewood Cliffs: Prentice-Hall.

Goodman, Leo. 1979a. "Multivariate Models for the Analysis of Occupational Mobility Tables and Other Kinds of Cross-Classification Tables." *American Journal of*

*Sociology* 84: pp. 804-819.

_____. 1979b. "Simple Models for the Analysis of Association in Cross-Classifications Having Ordered Rows and Columns." *Journal of the American Statistical Association* 74: pp. 537-552.

_____. 1984. *The Analysis of Cross-Classified Data Having Ordered Categories*. Cambridge: Harvard Post Secondary Press.

Grusky, David, and Robert M. Hauser. 1984. "Cross-National Variation in Occupational Distributions, Relative Mobility Chances, and Intergenerational Shifts in Occupational Distributions." *American Sociological Review* 48: pp. 723-741.

Haberman, Shelby J. 1979. *Analysis of Qualitative Data*. New York: Academic Press.

Hall, J. R. 1954. "A Comparison of the Degree of Social Endogamy in England and Wales and the U.S.A." In David V. Glass, ed., *Social Mobility in Britain*, London: Routledge & Kegan Paul. pp. 344-346.

Hirshman, Charles, and Morrison G. Wong. 1984. "Socioeconomic Gains of Asian American, Black, and Hispanic: 1960-1976." *American Journal of Sociology* 90: pp. 584-607.

Hout, Michael. 1982. "The Association between Husbands' and Wives' Occupations in Two-Earner Families." *American Journal of Sociology* 88: pp. 397-409.

_____. 1984. "Status, Autonomy, and Training in Occupational Mobility: The American Occupational Structure of the 1980s." *American Journal of Sociology* 89: pp. 1379-1409.

Hout, Michael, A. E. Raftery, and E. O. Bell. 1993. "Making the Grade: Educational Stratification in the United States, 1925-1989." In Y. Shavit and H. P. Blossfeld, eds., *Persistent Inequality: Changing Educational Attainment in Thirteen Countries*, Boulder: Westview Press. pp. 25-49.

Hughes, Everett C. 1963. " Professions." *Daedalus* 92(4): pp. 655-668.

Hutter, Mark. 1981. *The Changing Family: Comparative Perspectives*. New York: John Wiley & Sons, Inc.

Johnson, Robert Alan. 1980. *Religious Assortative Marriage in the United States*. New York: Academic Press.

Kalmijn, Mattijs. 1991. "Status Homogamy in the United States." *American Journal of Sociology* 97: pp. 496-523.

Kelly, Jonathan. 1978. "Wealth and Family Background in the Occupational Career: Theory and Cross-Cultural Data." *British Journal of Sociology* 29: pp. 94-109.

Kelly, Jonathan, Rovert V. Robinson, and Herbert S. Klein. 1981. "A Theory of Social Mobility, with Data on Status Attainment in a Peasant Society." *Research in Social Stratification and Mobility* 1: pp. 27-66.

Kerckhoff Alan C., and J. M. Trott. 1993. "Educational Attainment in a Changing Educational System: The Case of England and Wales." In Y. Shavit and H. P. Blossfeld, eds., *Persistent Inequality: Changing Educational Attainment in Thirteen Countries*, Boulder: Westview Press. pp. 133-153

Knoke, David, and Richard Burke. 1990. *Log-Linear Analysis Models*. Beverly Hills: Sage

Publication.
Korea National Statistical Office (KNSO). 2001. *2000 Korea Census of Population and Housing*. Daejoen: KNSO. [In Korean]
_____. 2006. *2005 Education Statistics*. Daejoen: KNSO. [In Korean]
_____. 2009. *Social Indicators*. Daejoen: KNSO. [In Korean]
_____. 2010. *Distance Measure of Independent Model ($L^2_{IND}$) and GNI per capita*. Daejoen: KNSO. [In Korean]
Koo, Bon Ho. 1995. "Sociocultural Factors in the Industrialization of Korea." In Ho Koo and Dwight H. Perkins, eds., *Social Capacity and Long-Term Economic Growth*, New York: St. Martin's Press. pp. 181-202.
Lee, Myoung-Jin. 1998. "The Meanings and Limitations of Log-linear Models for Social Mobility and Social Association." *Korea Journal of Sociology* 32(2): pp. 475-485. [In Korean]
_____. 2000. "Assortative Marriage in Korea: Its Temporal Change and Cross-National Comparison." *Korea Journal of Sociology* 34: pp. 297-324. [In Korean]
_____. 2006. "Temporal Variation in the Strength of Educational Assortative Marriage in Korea." Paper presented at the Japanese Sociological Society's Annual Meeting, organized by Japanese Sociological Society. Kyoto, Japan, October 28-29.
Lichter, Daniel T. 1990. "Delayed Marriage, Marital Homogamy, and the Mate Selection Process among White Women." *Social Science Quarterly* 71: pp. 802-811.
Lindsey, J.K. 1989. *The Analysis of Categorical Data Using GLIM*. Berlin: Springer-Verlag.
Lipset, Seymour M., and Hans L. Zetterberg. 1959. "Social Mobility in Industrial Society." In Seymour M. Lipset and Reinhard Bendix, eds., *Social Mobility in Industrial Society*, Berkeley: University of California Press. pp. 11-75.
Mare, Robert D. 1991. "Five Decades of Educational Assortative Mating." *American Sociological Review* 56: pp. 15-32.
Michielutte, Robert. 1972. "Trends in Educational Homogamy." *Sociology of Education* 45: pp. 288-302.
Oppenheimer, Valerie K. 1988. "A Theory of Marriage Timing: Assortative Mating under Varying Degrees of Uncertainty." *American Sociological Review* 94: pp. 563-591.
Park, Mee-Hae. 1990. *Educational Assortative Marriage and Social Stratification in Korea and the USA: 1950-79*. Unpublished Ph.D. Dissertation, The University of Wisconsin-Madison.
Rockwell, Richard R. 1976. "Historical Trends and Variations in Educational Homogamy." *Journal of Marriage and the Family* 38: pp. 83-95.
Raymo, James M., and Yu Xie. 2000. "Temporal and Regional Variation in the Strength of Educational Homogamy." *American Sociological Review* 65: pp. 773-781.
Shin, Kwangyung. 1996. "Class and Social Inequality." In Wan Sang Han, ed., *Korean Sociology*, Seoul: Mineumsa. [In Korean]
Smits, Jeroen, Wout Ultee, and Jan Lammers. 1998. "Educational Homogamy in 65

Countries: An Explanation of Differences in Openness Using Country-Level Explanatory Variables." *American Sociological Review* 63: pp. 264-285.

_____. 2000. "More or Less Educational Homogamy? A Test of Different Versions of Modernization Theory Using Cross-Temporal Evidence for 60 Countries." *American Sociological Review* 65: pp. 781-788.

Smits, Jeroen, Wout Ultee, Jan Lammers, and Hyunjoon Park. 2009. "Five Decades of Educational Assortative Mating in 10 East Asian Societies." *Social Forces* 88(1): pp. 227-256.

Schwartz, Christine R., and Robert D. Mare. 2005. "Trend in Educational Assortative Marriage from 1940 to 2003." *Demography* 42(4): pp. 621-646.

Sweet, James, and Larry Bumpass. 1987. *American Families and Households*. New York: Russel Sage Foundation.

Treiman, Donald. 1970. "Industrialization and Social Stratification." *Social Inquiry*. Special Issue: Stratification Theory and Research 40: pp. 207-234.

Treiman, Donald, and Kam-Bor Yip. 1989. "Educational and Occupational Attainment in 21 Countries." In Melvin L. Kohn, ed., *Cross-National Research in Sociology*, Newbury Park, CA: Sage Publication. pp. 373-394.

Ultee, Wout C., and Rudd Luijkx, 1990. "Educational Heterogamy and Father-to-Son Occupational Mobility in 23 Industrial Nations: General Societal Openness or Compensatory Strategies of Reproduction?" *European Sociological Review* 6: pp. 125-149.

Vogel, Ezra F. 1991. *The Four Little Dragons: The Spread of Industrialization*. Cambridge: Harvard University Press.

Yossi, Shavit, and Vered Kraus. 1990. "Educational Transitions in Israel: a Test of the Industrialization and Credentialization Hypotheses." *Sociology of Education* 63: pp.133-141.

Yamaguchi, Kazuo. 1987. "Models for Comparing Mobility Tables: Toward Parsimony and Substance." *American Sociological Review* 52: pp. 482-494.

Weber, Max. 1947. *The Theory of Social and Economic Organization*, trans. by A. M. Henderson and Talcott Parsons. New York: Oxford University Press.

***LEE MYOUNG-JIN*** is associate professor of the Department of Sociology at Korea University. He graduated from University of Iowa. His main interests are com-parative study of social stratification, quantitative analysis and information society.

*Address*: Dept. of Sociology, Korea University, Anam-dong, Seongbuk-gu, Seoul, 136-701, Republic of Korea [*Email*: leemj@korea.ac.kr]