

Gender Differences in the Effects of Cultural Capital and Shadow Education on Educational Attainment in Japan

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Abstract

Why does educational success correlate with parents' socio-economic status and educational level? Family background inequalities are transmitted to children's educational outcomes through family strategies that are the transmission of cultural capital by parents and their investment in shadow education. In this paper, I investigate the effects of cultural capital acquired during childhood and experiences of shadow education on educational attainment and academic performance for the past half century, using data from the 1995 SSM survey in Japan.

I created indexes of embodied cultural capital, objectified cultural capital, and shadow education. The index of embodied cultural capital during childhood is measured by the experiences of fine art culture and reading culture with the family. Fine art culture consists of two items: participation in classical music and visit to art museums/art galleries with the family in childhood. Reading culture is measured by the experience in which a family member reads books aloud to the respondent during childhood. Objectified cultural capital is measured by the cultural possession of the family when the respondent is 15 years old, such as a piano, literature collection and art works or antiques. Investment in extra-curricular education, namely shadow education, is measured by the number of

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extra-curricular lessons (cram schools, private tutors, and correspondence courses).

I estimate the coefficients of structural equation models using the LISREL software package to analyze the causal relationship between family backgrounds and educational attainment. The analysis is conducted separately for men and women at each birth cohort, i.e., 20-34, 35-49, 50-69 years old.

The analysis shows that the respondents' cultural capital and academic performance at ninth grade (the third year of middle school in Japan) had strong effects on final educational attainment. Though meritocratic selection permeates the educational system in Japan, family backgrounds also affect academic performance at the ninth grade.

Controlling by family backgrounds, the functions of family strategies such as cultural capital, on educational outcomes differ by gender and birth cohort. For women, cultural capital increased their academic performance at the ninth grade and final educational attainment, but not for men. Embodied cultural capital during childhood has a strong direct effect on women's educational outcomes, because cultural capital is converted to the academic performances at middle school. Its effect was minimal for men and decreased in men's younger cohort.

Social background variables measured by father's occupation and financial resources measured by the number of siblings as a proxy variable, have a strong impact on the educational attainment for men and women.

Women have achieved their education by merit and cultural capital. Cultural selection functions for women's educational attainment process. The impacts of cultural capital on men's educational outcomes, however, have diminished, and shadow education that is converted from family background inequalities still has effects on the educational attainment of men.

1. Focus on Family Strategy in the Educational Attainment Process

This paper focuses on the strategies adopted by the family such as cultural capital and shadow education during the process of educational attainment in Japan. By using the 1995 Social Stratification and Mobility survey (SSM), which has been conducted every 10 years since 1955 in Japan, this paper clarifies that there are gender differences in the effects of cultural capital and supplemental education (shadow education) and that such effects have changed over time.

An overview of the Japanese research on the status attainment process revealed that socioeconomic background affects educational attainment (Naoi and Fujita 1978; Fujita 1979 1987; Kondo ed. 2000). Family background, such as the father's occupation and

the parents' educational backgrounds, have never been weak determinants of children's educational attainment levels, and furthermore, their influence has been consistent throughout the post-war period (Imada 1989). Existing research, however, has not examined in detail issues such as: 1) Why children with highly educated parents or parents with high socio-economic status can also attain high-level education; and 2) What the effects of family background variables suggest. Several studies began to focus on the effects of cultural capital and family environments (DiMaggio 1982; De Graaf 1986, 1988; Katsillis and Rubinson 1990; Kataoka 1992, 1996b, 1997a, 1997b, 1998a, 1998b).¹ Following Bourdieu, cultural capital is the main factor in the reproduction of social class (Bourdieu 1979). Thus, this paper will consider mainly the issue of cultural capital as a family strategy in educational attainment. Bourdieu (1979) argued that social class reproduction is not automatic, but is rather a result of strategies adopted by individuals or family units, and that children's academic successes are determined by the amount of inherited cultural capital and investments in education.

In this article, I consider the effect of the following three educational strategies adopted by families in the market where individuals compete for educational attainment:

(1) Cultural capital, viewed from the context of cultural reproduction theory by Bourdieu and Passeron (1977). How cultural capital affects academic performance and educational attainment through the family environment in Japan.

(2) Parental investment in shadow education such as cram schools, academic tutoring and extra-curricular exam-preparation schools or courses for their children.

(3) The declining birthrate strategy, namely the parental strategy to maximize the effects of educational investment per child by reducing the number of children.

As shown in Figure 1, I examine how cultural capital and shadow education as family strategies positively affect three educational outcomes of children: students' academic performance at the ninth grade; the academic levels of high school measured by the average percentage of students enrolling in universities (high school quality); and their final educational achievement. In this analytical model, cultural capital and

shadow education intermediate between family background and educational outcomes.



Figure 1.

2. Meritocracy and Cultural Selection

Why are inequalities of family background such as parental education and father's occupation translated into educational inequalities of children, even though meritocratic principles are spreading to society and the educational selection system? In response to such a question, the concept of "cultural capital" (Bourdieu 1973, 1986) by cultural reproduction theorists or "cultural resources" by neo-Weberians emerged.

According to neo-Weberians and Bourdieu, the mechanism of cultural selection by status culture continues to play an important role even in a society that sets a greater value on the individual's academic attainment or in a credential society (Bourdieu 1979; Collins 1979; DiMaggio 1982; De Graaf 1986, 1988).² These authors say the embodiment of a dominant cultural code facilitates individuals' upward social mobility or maintains their present social position. Cultural capital or cultural resources translate family background into an individual's educational attainment and become the currency used for such upward mobility. This social mechanism possibly results in reproduction of social class. In other words, the educational system is not a tool for neutrally evaluating individual capabilities, but instead it functions as a biased screening device to select certain individuals with cultural capital (De Graaf 1988).

These theories are similar in the way that they all share the common presupposing theory of cultural discontinuity, suggesting that failure at school is caused by the mismatch of family culture and school culture. Because school culture reflects the culture of the dominant class, children who inherit the family culture of the dominant class, namely the cultural capital, are more likely to succeed in the educational system. In other words, children who embody bourgeois culture can convert such a class culture

into good academic performance in the school system. Otherwise, they cannot survive the educational selection process. As cultural selection processes operate through the match of children's cultural background and school culture characteristics of middle-class culture, although educational opportunity by financial means may have been equalized, the equality of educational outcomes has not yet been achieved (De Graaf 1988: 212).

The argument that the cultural selection or cultural reproduction theory does not fit Japanese society, however, is persistent among scholars in Japan. Most scholars in Japan have negative attitudes toward the presupposition of the cultural reproduction theory, namely that Japanese school culture does not reflect the dominant class culture, due to three factors: (1) Japanese school culture is relatively more class-neutral than that of its European or U.S. counterparts, i.e., de-stratification of school culture; (2) highly transparent examinations are adopted in the selection process; and (3) the so-called belief in the centrality of "effort" in Japanese society, meaning that anyone who strives hard is rewarded (Takeuchi 1995; Kariya 1995), is widespread. Furthermore, Kataoka (2000) clarified that the cultural exclusion by highbrow culture, which is an important presupposition of the cultural reproduction theory, is weak in Japan and concluded that Japanese cultural activities are better explained by the "cultural omnivorous hypothesis," as Bryson has shown (1996), rather than by the hypothesis that the Japanese "elites exclusively prefer high culture over popular culture." In other words, Japanese elites are rather culturally mixed and enjoy both popular and high culture (cultural omnivores), (Kataoka ed. 1998; Kataoka 2000). Although theoretical presupposition of the cultural reproduction theory is rejected in Japan in such a way, some research has revealed that the early familial cultural environment and aesthetic and reading cultural capital in childhood significantly affect educational attainment and status attainment (Kataoka 1992, 1996b, 1998a, 1998b). The accumulation of cultural capital through early family socialization as Bourdieu suggested is important in the educational attainment process also in Japan. How should these contradictions be accounted for?

3. Educational Inequality Viewed from Murphy's Theory

A large part of the Japanese school curriculum and exam questions consist of fragmented knowledge accessible to anyone, rather than those attached to specific class culture (Kariya 1995). In actuality, however, inequalities in family background are reproduced, and the children from the dominant class are more likely to succeed in the supposedly "autonomous" and "fair" school system. In other words, the higher the class the children belong to, the easier it is for them to adapt to school and become capable of reaping the rewards of the school system.

The fact that upper-class children are more likely to acquire the benefits of an autonomous and neutral school system can be understood by applying Murphy's concept of "power to profit" (Murphy 1988). Murphy categorized power into "power to command", "power to constrain", and "power to profit". Profiting power is a form of ruling that is particularly difficult to grasp. It is believed that the dominant class in Japan does not force its own culture, namely high culture, upon schools (not exercising the power to command), nor does it attempt to bring the school culture closer to its own (not exercising the power to constrain). Schools appear to be free from the influences of such commanding or constraining power on the part of the dominant class, while mobilizing the power to profit in order to justify social inequality. To ensure that the school system maintains its autonomous status and escapes from the commanding power of the dominant class, the meritocratic selection of students needs to be continuously applied. Meritocratic selection is also the best way to enable the school system to conceal the social reproduction of the dominant class.

Applying such thoughts reveals that it is highly probable that the Japanese education system simultaneously and internally applies cultural as well as meritocratic selection. In other words, the cultural reproduction and functionalist theories are both valid and they do not necessarily contradict one other. Students' human capital, the effective factor in a meritocratic society, comprises a part of *habitus* that is determined by the family background.³ In other words, the functional view of children's achievements

by the combination of IQ and efforts (merit) and the class cultural view of the family culture's impacts on children, both comprise the indicators of educational attainment level and academic performance. Merit and cultural capital will be investigated and discussed in the following sections.

4. Family Strategy and Social Class in the Educational Attainment Process

To examine the causes explaining class differences in educational attainment⁴, the potential family factors affecting the gaps in educational attainment can be classified into four factors. Nos. 2, 3, and 4 in Table 1 are the factors related to family education strategies, and No. 1 sets the social basis for Nos. 2, 3, and 4. Parents themselves do not necessarily have to be conscious of such family strategies. Both intentional and unintentional parental strategies⁵ are included.

| | |
|----------|---|
| Table 1. | <ul style="list-style-type: none"> (1) Economic Obstacle Theory or Economic Status Reflection Theory (2) Cultural Reproduction (Cultural Strategy) Theory (3) The Strategy of Investments in Extra-curricular Education (Shadow Education) (4) Declining Birthrate Strategy |
|----------|---|

Each of the four factors in Table 1 can be explained as follows:

(1) Economic Obstacle Theory or Economic Status Reflection Theory: This is the theory that argues that there are certain economic obstacles to educational attainment and that family economic status determines the quality of schools that a student can enter. Alternatively, the theory argues that the economic status of a student's family is transferred to the level of regular and supplemental education expenses, finally determining the quality of schools the student can enter. This first factor determines the basis for factors Nos. 2 and 3, namely the family education strategies.

(2) Cultural Reproduction (Cultural Strategy) Theory: As a result of intentional or unintentional inheritance of cultural capital from parents to children or cultural investments in children by their parents, gaps in children's academic success at

school emerge and, in the end, cultural capital has a positive effect on their academic performances and level of educational attainment. Cultural capital comprises school cultural capital such as the practical knowledge for school entrance exams as well as cultural capital based on class culture such as the manner of speech and aesthetic sense. Special attention should be paid to the fact that the sense of educational effectiveness, the awareness of how education could be useful in enhancing life or attaining higher status or meeting parents' expectations on education and educational aspirations, is a type of cultural capital historically accumulated within families. It seems that it is easier for children who belong to a high social class to embody such cultural capital as a form of class culture through early cultural experiences in their family and its accumulation.

(3) The Effect of Investments in Extra-curricular Education (Shadow Education): Families have their children utilize various extracurricular education opportunities such as cram schools or exam-preparation schools, private tutors, and correspondence courses. Stevenson and Baker (1992) define these as shadow education. These are examples of family education strategies for the purpose of assisting children to enter high-quality schools, improving their academic performance, and helping them to achieve a high level of educational attainment. By investing in these specific educational purposes using this strategy, parents aim to increase human capital, which is the school-type cultural capital, and, in the end, to facilitate their children's success in schools.

(4) Declining Birthrate Strategy (efficient investment strategy by having fewer children): This is the strategy of having fewer children in the sense of Becker's human capital theory (Becker 1981) and thereby maximizing the effects of educational investments. This is a parental attempt to increase the financial allocation per child or improve the quality of socialization of children at home by having fewer children. Therefore, this paper uses the number of siblings as a variable expressing the family economic situation and the level of supplemental educational expenses for children (De Graaf 1988, Sakazume 1999).

5. Methods of Analysis, Data, and Variables

Applying the concepts explained so far, the mechanisms of educational attainment in Japan will be analyzed using multiple regression and covariance structural analysis using LISREL software. By using the LISREL modeling method, we can test direct and indirect effects of variables on educational outcomes can be measured and the model most suitable for the data can be found.⁶

My data come from the 1995 Social Stratification and Mobility Survey (SSM), cross-national random sample survey in Japan, containing data on both men and women aged 20-69, with a total sample size of 2,653 (1,248 men and 1,405 women).⁷

Dependent variables

The three following variables of educational outcomes are used as dependent variables:

- (1) Academic performance in the ninth grade (this is the third year of middle school in Japan): this consists of self-reported grades, 1 being the lowest, and 5 the highest, relative to peers in the same school and grade.
- (2) High school academic quality: this score is self-reported by the respondent of the prestige of the high school attended, which is based on the proportion of classmates who proceed on to university or junior college.⁸
- (3) Final educational attainment level⁹: this is measured as years of formal schooling.

Major explanatory variables

Major explanatory variables are social background (major occupation of the father, parents' level of education), attributes (gender, age), cultural capital (respondent's experiences of high culture during childhood, cultural assets of the family when the respondent was 15 years old, investments in extra-curricular education, and number of siblings. Details of the variables are as follows:

(1) Cultural Capital and Cultural Environment of the Family

Bourdieu suggested cultural capital is classified into three types, namely embodied

cultural capital, objectified cultural capital, and institutionalized cultural capital. Based on this, I created the following three cultural capital variables as indicators (Kataoka 1997b: 191-193):

(a) Embodied cultural capital: I measured embodied cultural capital in childhood using three types of family participation in cultural activities during the respondent's childhood, that is, reading aloud by parents, classical music experiences with the family and visiting museums or art galleries with the family.¹⁰ These cultural experiences during childhood (childhood cultural capital) are internalized at the embodied level; they comprise "reading cultural capital" and "artistic (fine art) cultural capital" (Kataoka 1998a). This type of cultural capital, in particular, is the practice of the parental cultural strategy to encourage their children to participate in rich cultural activities and accumulate such cultural capital by embodying it as *habitus*. It is measured by questions, such as (1) "When you were a child, how often did a family member read aloud to you?" (2) "When you were an elementary school student, how often did you listen to classical music at home or go to classical concerts with your family?" and (3) "When you were an elementary school student, how often did your family take you to a museum or art gallery?" A scale of 0-3 is used for these questions as follows: "often" (3), "sometimes" (2), "seldom" (1), or "never (0)." I have already tested embodied cultural capital variables that play an important role in the educational attainment process in Japanese data: a 1992 Kobe survey done by Kataoka (1992), and revised the indicators and wording to measure the embodied cultural capital to use that data in a 1995 SSM survey. Embodied cultural capital will be hereafter called "Cultural Capital in Childhood."

(b) Objectified cultural capital: "a family's high cultural assets when the respondent was 15 years old,¹¹" such as a piano, a literature collection or encyclopedia, and/or art works or antiques were measured.

(c) Institutionalized cultural capital: "parents' educational attainment level as an asset¹²" is the institutionalized cultural capital according to Bourdieu. Parents' educational level is the determining factor in increasing the educational aspirations of

their children relative to entering schools of higher quality and attaining higher levels of education (Nakayama and Kojima 1979); parental education also affects the cultural environment and cultural activities of the family.

Table 2 shows how three variables of the embodied cultural capital and objectified cultural capital are differentiated with respondent's age, gender, father's education, father's occupation, and respondent's education. These are the outcome of family cultural strategy, and class gaps in reading cultural capital are relatively small, whereas

Table 2. Indexes of Embodied Cultural Capital and Objectified Cultural Capital

| | Embodied cultural capital acquired during childhood | | | Objectified Cultural Capital at 15 years old | | |
|---------------------|---|-----------------------------------|---|---|---|--------------------|
| | Reading cultural capital Read to by parents | Classical music experiences | Fine arts activities with parents | Piano | Complete set of literature or encyclopedia | Art or antiques |
| ALL | 48.8 | 12.1 | 19.5 | 11.0 | 38.3 | 16.2 |
| Age 50-69 | 41.4 | 8.9 | 11.9 | 1.7 | 23.3 | 16.4 |
| 35-49 | 45.3 | 11.6 | 17.2 | 10.3 | 40.8 | 15.3 |
| 20-34 | 68.8 | 19.1 | 37.9 | 29.7 | 63.0 | 17.3 |
| Sex Male | 45.1 | 9.7 | 17.9 | 7.7 | 32.9 | 14.0 |
| Female | 52.1 | 14.3 | 21.0 | 13.9 | 43.2 | 18.2 |
| Father's education | | | | | | |
| Compulsory | 39.7 | 6.5 | 11.3 | 4.5 | 27.3 | 11.5 |
| High school | 60.4 | 18.1 | 29.7 | 17.9 | 55.3 | 22.2 |
| Higher Education | 75.8 | 32.9 | 45.7 | 33.2 | 73.2 | 31.7 |
| Father's occupation | | | | | | |
| Professional | 71.2 | 27.9 | 48.2 | 27.3 | 67.9 | 32.1 |
| Managerial | 67.4 | 29.2 | 36.7 | 27.7 | 71.9 | 31.9 |
| Clerical | 65.7 | 19.7 | 32.4 | 18.3 | 53.0 | 18.7 |
| Service worker | 49.8 | 12.7 | 16.5 | 11.8 | 40.5 | 20.7 |
| Skilled worker | 44.4 | 8.4 | 17.9 | 7.0 | 32.9 | 11.9 |
| Semi-skilled worker | 47.0 | 9.0 | 19.7 | 10.3 | 39.1 | 11.4 |
| Unskilled worker | 42.4 | 9.1 | 13.3 | 4.0 | 24.2 | 8.1 |
| Farmer | 33.7 | 3.2 | 4.4 | 1.5 | 17.4 | 11.9 |
| Education | | | | | | |
| Compulsory | 30.5 | 3.4 | 5.2 | 0.7 | 10.3 | 7.0 |
| High school | 48.9 | 9.5 | 18.7 | 7.5 | 38.5 | 16.2 |
| Higher education | 65.9 | 26.1 | 35.0 | 28.1 | 64.7 | 25.3 |

- 1) Values of embodied cultural capital are the % rate of respondents who experienced each item.
- 2) Values of objectified cultural capital are the % rate of respondent's family possessions when a respondent is at 15 years old.
- 3) Higher education includes four-year universities, two-year junior colleges and graduate schools

class gaps in artistic cultural capital, such as the experiences of listening to classical music or visiting museums, are large. Furthermore, when comparing the educational attainment levels of respondents, the respondents whose families exposed them to more artistic cultural experiences are more likely to attain high levels of education as a result. The major issue of this paper is whether cultural capital gradually lost its power to gain rewards from schools as students began to be selected in an increasingly meritocratic way. Thus, I will examine the hypothesis of whether cultural capital has resulted in less rewards from schools in the younger generation.

(2) Investment in Extra-curricular Education (Shadow Education)

Parents in Japan invest in extra-curricular education after school; this is called shadow education (Stevenson & Baker 1992). As Table 3 shows, shadow education is measured as three types of supplemental education during elementary or middle school, for at least six months, namely: ① *juku* (cram schools) or *yobiko* (private exam-preparation schools); ② private tutoring; and ③ correspondence courses for exam preparation. The experienced categories were totaled and converted to a scale from zero to three for the analysis. Table 3 shows that 25.9% used *juku* (cram schools) or exam-preparation schools, and the use of these is rapidly increasing among the younger generation. There were no significant gender differences in this scale. In addition, those with higher educational attainment levels tended to use more extra-curricular education. Although it is not shown in this article, 43.0% of those who used shadow education graduated from two-year junior colleges or four-year universities, but merely 14.6% of those who didn't use shadow education graduated from their colleges or universities. Those who used shadow education strategy tended to attain a higher level of education, but this relation should be further examined by controlling for age and gender in section 9.

Existing research has accumulated knowledge on the investments in extra-curricular education, and there are divergent views on the effects on educational achievements. Naoi and Fujita (1978) argue that extra-curricular education is, in fact, effective for achieving a higher level of educational attainment, whereas Seiyama and Noguchi

(1984)¹³ assert that there are no such effects. Neither of these analyses is based on Japanese cross-national data.

Table 3 Shadow Education

| | Juku or Yobiko (exam-preparation schools) | Private tutoring | Correspondence courses |
|---------------------|--|------------------|------------------------|
| Total | 25.9 | 7.1 | 2.6 |
| Age 50-70 | 8.2 | 3.3 | 0.4 |
| 35-49 | 25.0 | 7.9 | 1.7 |
| 20-34 | 50.7 | 11.0 | 7.2 |
| Sex Male | 24.9 | 6.4 | 2.6 |
| Female | 26.8 | 7.8 | 2.7 |
| Father's education | | | |
| Compulsory | 18.9 | 2.7 | 1.2 |
| High school | 38.1 | 11.4 | 5.1 |
| Higher Education | 42.2 | 20.3 | 6.4 |
| Father's occupation | | | |
| Professional | 35.6 | 13.4 | 6.0 |
| Managerial | 39.5 | 17.6 | 3.9 |
| Clerical | 35.3 | 10.3 | 3.5 |
| Service worker | 23.6 | 10.9 | 0.9 |
| Skilled worker | 29.3 | 2.9 | 2.7 |
| Semi-skilled worker | 35.5 | 6.8 | 4.4 |
| Unskilled worker | 16.1 | 2.3 | 2.3 |
| Farmer | 9.7 | 1.0 | 0.8 |
| Education | | | |
| Compulsory | 3.7 | 0.5 | 0.2 |
| High school | 24.9 | 5.1 | 1.3 |
| Higher education | 43.8 | 15.9 | 7.1 |

Values are the % rate of respondents that experienced each item.

6. Analysis and Results (1):

Do women with cultural capital achieve higher academic performance in school?

Before turning to birth cohort analysis, this section examines how determinants differ between gender with two dependent variables, which are ninth-grade academic performance and high school quality. Control variables are age, number of siblings, father's occupational prestige, parents' education, shadow education, and two variables of embodied cultural capital, i.e., reading by parents (reading cultural

capital) and fine arts activities with parents (artistic cultural capital). I did not include objectified cultural capital index in Table 4 and 5, because the index had no effect on the dependent variables. Table 4 shows the results of multiple regression analysis to examine the determinants of academic performance in ninth grade (the third year of middle school). It shows that there are clear gender differences in the effects of embodied cultural capital and of shadow education, even though the control variables have strong effects on academic performance. Males who have experienced shadow education tend to achieve higher academic performance at the ninth grade, and shadow education is much less effective for females. Women with embodied cultural capital, who experienced high cultural activities in childhood, are more likely to be able to obtain higher academic performance, but embodied cultural capital does not affect men's academic performance. Table 5 shows the results of ordered logistic regression analysis predicting the determinants of the quality of the high school attended by the respondent. Dependent variables of high school quality are counted as 1 for prestigious high schools, which means that most students go to university, or 0 for less prestigious high schools.

Table 4. Determinants of Academic Performance in Ninth Grade

| Variables | Male β | Female β |
|--|-----------------|-------------------|
| Controls | | |
| Age | .291** | .339** |
| Father's occupational prestige | .132** | .093* |
| Parents' education | .113* | .117* |
| Economic assets | .142** | .108* |
| Number of Siblings | -.124** | -.064 |
| Embodied Cultural Capital | | |
| Read to by parents (Reading cultural capital) | .032 | .092* |
| Fine arts activities with parents (Artistic cultural capital) | .046 | .107* |
| Shadow Education index | .080* | .012 |
| R ² | .137 | .145 |
| Adj. R ² | .127 | .137 |
| F | p<0.0001 | p<0.0001 |

*p<.05. **p<.01.

As Table 4 shows, reading and artistic cultural capital will lead to good academic performance for women, but they did not have an impact on men. Therefore, growing up in a culturally rich environment did not have any relevance in terms of obtaining good academic performance for men. Moreover, as Table 5 shows, women with more artistic cultural capital tend to be able to enter a prestigious high school. As highlighted by these findings, the strategy of investing in shadow education is effective for men, and the strategy of inheriting or investing in family cultural capital is effective for women in terms of gaining rewards within the educational system.

Here, DiMaggio's hypothesis on the data on American high school students is also applicable. DiMaggio suggested that "High cultural involvements may have been part of an identity kit that academically successful, high status girls, but not similar boys, possessed." (DiMaggio 1982). In other words, there is a causal relationship between cultural capital and educational success for women but not for men. The meaning of the results in Tables 4 and 5 is that cultural capital in Japan has a different social significance between men and women as Kataoka (1992, 1997a, 2000) has already

Table 5. Ordered Logistic Regression Predicting High School Quality

| Variables | Male Odds Ratio | Female Odds Ratio |
|--|--------------------|----------------------|
| Controls | | |
| Age | 1.01 | 0.96 |
| Father's occupational prestige | 1.02 | 1.00 |
| Father's education | 1.03 | 1.10 |
| Mother's education | 1.09 | 1.11 |
| Economic assets | 1.20** | 1.28** |
| Number of siblings | 0.72** | 0.76* |
| Academic Performance in Ninth Grade | 2.89** | 2.80** |
| Embodied Cultural Capital | | |
| Read to by parents (Reading cultural capital) | 0.92 | 0.82 |
| Fine arts activities with parents (Artistic cultural capital) | 1.09 | 1.28* |
| Shadow education Index | 1.49* | 1.06 |
| R ² | .219 | .249 |
| Max-rescaled R ² | .405 | .455 |
| χ^2 (d.f.=10) | 180.4** | 233.6** |

*p<.05. **p<.01.

shown. Particularly in the case of Japan, educational attainment differs according to gender and generation (Iwamoto 1998, Ojima & Kondo 2000). Therefore, in the next section, covariance structure analyses clarify the mechanisms of the educational attainment process among generations by gender, using LISREL's structural equation modeling method.

7. Analysis and Results (2): Changes in the Mechanisms of Educational Attainment

To clarify the best model of the causal relationship determining a respondent's final educational attainment, the following procedures were taken. First, path analysis was conducted, and further analysis was undertaken using LISREL's structural equation modeling to select the model that best fits the data. To find the final model, first, the full model with possible paths among factors was calculated, and then the statistically insignificant paths were eliminated. This process means nothing but the adoption of the parsimony principle of statistical methods. Then, based on AIC, GFI and AGFI values as the standards, the best fit model for each data set was selected (Jöreskog and Sörbom 1979, 1996; Shirakura 1991). Because the data were divided by gender, as well as by three age cohorts, six data sets were analyzed and six best-fit models were obtained. The results of the analyses for men are shown in Figure 2 and those for women in Figures 3. The best model of the educational attainment process in each cohort is different, and AGFI, the data fitness indexes for all final models, are extremely good. I combined three variables of embodied cultural capital shown in Table 2 into the index of embodied cultural capital in childhood in this analysis. The path value in the figures indicates the direct effect on each variable. The total effects of embodied cultural capital, objectified cultural capital and shadow education on final education and academic performance at the ninth grade are calculated and shown in the eighth section of this paper.

As the figures show, educational attainment mechanisms is different for men and women. First, the higher the parents' education or father's occupational prestige,

the greater the respondent's embodied cultural capital, cultural assets, and shadow education. This is the same for both men and women. Although these strategies are mediated between socio-economic background and educational attainment, shadow education determines men's academic performance and final educational attainment rather than cultural capital (see Figures 2). On the other hand, women are characterized by the effects of cultural capital being intermediated and becoming the determining factors for academic performance and final educational attainment (see Figures 3). The following sections explain the effects of the family strategies of cultural capital and declining numbers of children.

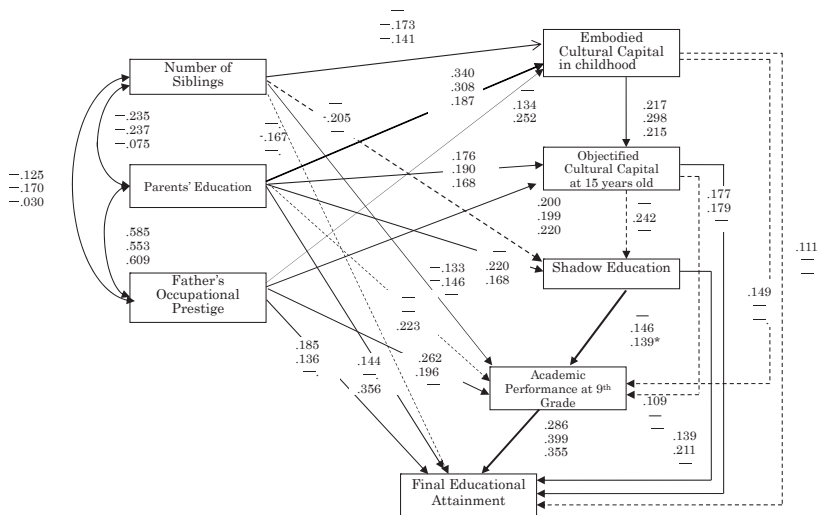
7.1 The Effects of the Number of Siblings

The number of siblings certainly has some effects and exhibits some negative direct influence on academic performance and educational attainment levels. According to Dumon's hypothesis, the larger the number of siblings, the lower the academic performance, and smaller family size is more favorable for upward social mobility (Dumon 1965, Yasuda 1971). In addition, following Becker's argument, the number of siblings is the variable showing the financial basis of the family. How much impact does a family's financial status have on the children's educational attainment in today's affluent society? The direct effect of the number of siblings on academic performance at the ninth grade (the third year of middle school in Japan) was significant for the following groups: 1) men aged 50-69 (significant effect at the ninth grade); 2) men aged 35-49 (grades and educational attainment); 3) women aged 35-49 (educational attainment); and women aged 20-34 (educational attainment). The number of siblings, however, does not have a direct effect on educational attainment for young men aged 20-34 and women aged 50-69. It seems that the younger the individual, the less marked the effects of the number of siblings. In fact, such a presumption is only applicable to men aged 20-34. For the cohorts of women aged under 49, the number of siblings had negative direct effect on their cultural capital and educational attainment.¹⁴

7.2 Academic Performance and Educational Attainment Level

From Figures 2 and 3, it is clear that, for any cohort, the academic performance at the ninth grade is the definite determining factor in the ultimate educational attainment level. Particularly for women, the direct effect of academic performance on final educational attainment is higher for younger generations; the value increases from .165 (50-69-year-old women) to .282 (35-49-year-old women) and to .374 (20-34-year-old women). This indicates that women in Japan are increasingly being selected by merit with the passage of time. Academic performance became increasingly powerful in the educational selection system throughout the postwar period. Meritocracy progressed gradually in the process of women's educational attainment.

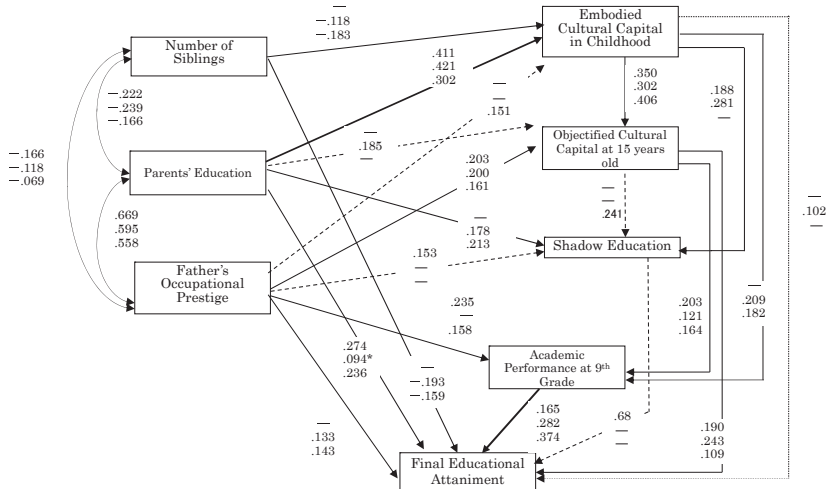
On the other hand, men's path value from academic performance at the ninth grade



Coefficients values in the upper line are for the 50-69-year-old cohort : df=10, $\chi^2=8.96$, GFI=.991 AGFI=.969
 Coefficients values in the middle line are for the 35-49-year-old cohort: df=9, $\chi^2=13.3$, GFI=.989 AGFI=.956
 Coefficients values in the bottom line are for the 20-34-year-old cohort: df=13, $\chi^2=9.94$, GFI=.987 AGFI=.963

Figure 2. Male Educational Attainment Process

- 1) — of coefficients means no significance in that birth cohort.
- 2) no mark p<.05, * p<.10
- 3) There are some significant coefficients not shown in this figure 2, i.e. are the path from number of siblings to shadow education in the 35-49-year-old cohort, and the path from embodied cultural capital to shadow education (.184) in the 20-34- year-old cohort.



Coefficients values in the upper line are for the 50-69-year-old cohort: $df=14$, $\chi^2=13.9$, $GFI=.984$ $AGFI=.960$
 Coefficients values in the middle line are for the 35-49-year-old cohort: $df=7$, $\chi^2=3.43$, $GFI=.998$ $AGFI=.987$
 Coefficients values in the bottom line are for the 20-34-year-old cohort: $df=10$, $\chi^2=8.66$, $GFI=.991$ $AGFI=.969$

Figure 3. Female Educational Attainment Process

- 1) — of coefficients means no significance in that birth cohort.
- 2) no mark $p < .05$, * $p < .10$
- 3) There is a significant coefficient not shown in this figure 3, i.e. the path from number of siblings to shadow education (-.143) in 35-49-year-old cohort.

to final educational attainment is strong and changed in the order of older to younger cohorts from .286 to .399 to .355. Meritocracy was already a factor in the educational process for the oldest (50-69) generation. The effect of academic performance on the final educational attainment became more powerful for the younger male generation. From this, it is possible to see that meritocratic selection through academic performance is becoming more important within the educational system.

7.3 Symbolic Meaning of Embodied Cultural Capital: From Cultural Inheritance to Cultural Investment

In Figures 2 and 3, it can be seen that parental social class, namely the father's occupational prestige or the parents' education, have a strong effect on embodied cultural capital in childhood and on objectified cultural capital. Embodied cultural

capital is measured as reading aloud by parents and the cultural experiences with the family, and objectified cultural capital is measured by a family's cultural assets when the respondent is 15 years old. These strong paths seem to be the cultural inheritance from the family or the cultural investment by the family. Fewer individuals aged 50-69 had particularly rich cultural experiences in childhood when compared with younger age cohorts (see Table 2). For the 50-69-year-old cohort, embodied cultural capital in childhood is solely determined by the parents' education for both men and women. Therefore, for men and women in this group, the richness of childhood cultural experience was the signifying symbol of people who came from a family with a high educational level (cultural capital). It is clear that families with parents who had a high level of education actively utilized the cultural inheritance strategy for their children directly embodying cultural capital. Therefore, during the time when the cultural inheritance was not yet a popular strategy, cultural reproduction might have been an important strategy for high status groups, rather than social reproduction by economic power as represented by the father's occupation.

As higher education became popularized, however, the mechanism of cultural inheritance for both men and women changed from the cohort of 30-49 years to the cohort of 20-34 years. The factors determining embodied cultural capital became more varied, encompassing not only parents' education, but also other factors such as the father's occupation and the number of siblings, and the determining power of each factor also changed.

First, comparing the direct effects of parents' education and father's occupation on embodied cultural capital among cohorts for men in Figure 2. As Figure 2 shows, only in the 20-34-year age cohort, the effect of the parents' education (.187) on embodied cultural capital has become less marked than those of the father's occupation (.262). Therefore, for the cohort of men aged 20-34, who spent their youth during the era of rapid economic growth, high cultural experiences in the family are the results of "symbolic imposition effects" (Bourdieu 1979), rather than the inheritance of cultural capital from their parents. This might mean cultural investment by the families who

have little cultural capital, but are of high economic status, and this is not a cultural reproduction process. For the 20-34-year cohort, those parents who had little cultural capital, but high economic status began cultural investments in their children as they believed it to be the most suitable way to raise their children to be able to attain high status in the future. Perhaps parents other than those with a high level of education began to adopt the cultural investment strategy because these changes occurred during the era when the economic standards of families generally increased in Japan. For men, I suggest the shift from cultural inheritance to cultural investment occurred in the 1960's and 70's.

On the contrary, the direct effects of parents' education on embodied cultural capital has been consistently strong for all of the women's cohorts. Therefore, for women, the index of embodied cultural capital, that is, rich cultural experiences during childhood, has long signified a girl who came from a family with high parental education regardless of the differences in era. Fewer families expose girls to cultural experiences only because their father is wealthy. In any era, high cultural experiences in childhood for girls have been a symbol of inherited cultural capital from parents. This means that "cultural reproduction" for women occurs continuously.

Why do the effects of cultural capital on educational outcomes differ between men and women?

8. Changes in How Cultural Capital Gains Rewards from Schools

If modernization promotes meritocratic selection, cultural capital should have gained fewer rewards from the educational system with the passage of time.

I set two variables as the indicators of academic returns each respondent gained at school: those are academic performance at the ninth grade and final educational attainment (years of education). What are the effects of cultural capital in childhood on these indicators? Figure 4 shows the total effects of embodied cultural capital in childhood on the final educational attainment for each birth cohort of men and women.

Embodied cultural capital had marked impacts on educational attainment for the cohort of men aged 50-69, but not on those who were 49 years old or younger, i.e., those born during the postwar era. In the postwar educational system, men's cultural capital did not function to gain much profit from schools. In contrast, the total effect of embodied cultural capital on final educational attainment is large for women, and embodied cultural capital gains considerable rewards in the school system. The effect of cultural capital is especially large for the cohort of women aged 35-49, and, among these women, those who inherited their parents' cultural capital managed to attain a high level of education. Cultural capital profits were slightly less for the cohort of women aged 20-34, but not as low as the profits gained for the cohort of women aged 50-69.

As shown in Figure 5, the total effects of embodied cultural capital in childhood on academic performance at the ninth grade were weak for men but strong for women. As previously shown in the regression analysis, embodied cultural capital in childhood and academic performance in middle school are strongly related for women.

Women have profited within the postwar education system through cultural capital inherited from their families, but for men, on the contrary, cultural capital did not translate into good academic performance or a high-level education; thus, men in Japan did not gain much academic rewards through cultural capital even if they had it. In the case of women, cultural capital is translated into good academic performance

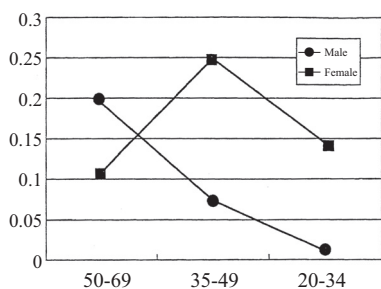


Figure 4.
Total Effect of Embodied Cultural Capital on Final Educational Attainment

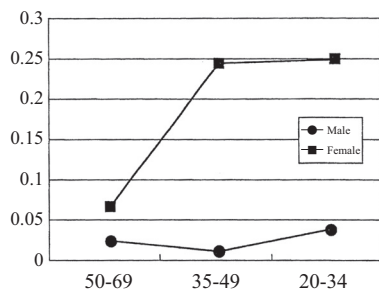


Figure 5.
Total Effect of Embodied Cultural Capital on Academic Performance

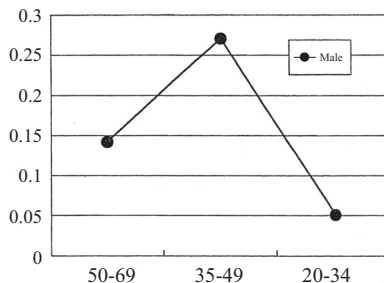
in the ninth grade, so this indicates the possibility that cultural selection is operating for women. Once a respondent shows good academic performance in the ninth grade, meritocratic selection operates automatically in the school system, and those who have high academic performance at the ninth grade ultimately attain a high level of final education. Why are the effects of cultural capital so different between men and women within the same educational system in Japan? This question will be analyzed in Section 11.

9. Changes in the Effects of Shadow Education and the Externalization of Family Educational Strategy

This section examines the total effect of investments in extra-curricular education (shadow education) on final educational attainment (see Figure 6). Since the direct effect of shadow education on final educational attainment was only seen for women aged 50-69 among all women cohorts. Considering that only a few of the women in that age group used shadow education, such as cram schools or exam-preparation schools, tutoring, and correspondence courses, the meaning of investing in extra-curricular education should have been different from today. There is no significant direct path from shadow education on academic performance and final educational attainment for women who are 49 years old or younger. It is interesting that experiences in shadow education do not improve women's academic performance nor lead to a higher level of education.

In contrast to women, men's shadow education increased their academic performance at the ninth grade as well as final educational attainment both directly and indirectly. It should be noted, however, that such shadow education effects are limited only to men who are 35 years old or older and have almost completely disappeared for those aged 20-34. This is because many of the 20-34-year cohort participate in the competition to raise their educational attainment level, and the majority of the men in that age group attend cram schools or exam-preparation schools; thus, the effects of

such activities no longer lead to sufficient educational attainment. Men's analytical results suggest that the investment in shadow education has been the effect of so-called "stealing a march on others" and is influenced by the number of people participating in the competition.



**Figure 6. Total Effect of Shadow Education on Final Educational Attainment
:Male Data**

Moreover, Figures 2 and 3 indicate that the experiences of shadow education are not predicted by father's occupation, but by the strategies adopted by parents with high levels of education. This suggests that the higher the parents' education, the more the parents tend to invest in shadow education to reproduce their educational attainment level in their children, and this strategy reflects high parental educational aspirations.¹⁵ As shown in the route of significant paths in Figures 2 and 3, a family's educational reproduction strategy is first to provide high cultural capital in childhood through the family environment. In other words, parents support children's educational and cultural development through various cultural experiences or cultural assets, and then make investments in shadow education. This possibly suggests that there is a mechanism by which the family strategy in educational attainment is linked with the embodied cultural capital strategy until the investments in shadow education during elementary school and middle school, thus externalizing the educational strategies as children get older.

10. Effects of Symbolic Imposition and the Cultural Reproduction Process Based on *Habitus*

Why do children who come from high socio-economic status tend to have cultural capital and attain a high level of education? The meaning of the effect of family social background on educational outcomes has not been argued sufficiently. How should we explain the direct effects of a father's occupational prestige on his children's educational attainment? I believe that this is what Bourdieu calls the "effect of symbolic imposition." A family whose father has high occupational prestige is likely to think that their children should attain high educational levels, and starts a cultural investment strategy of preparing appropriate cultural assets at home or exposing children to cultural experiences in order to help them attain the level of education suited to the prestige of the father's occupation. If parents have not embodied high culture, this symbolic imposition taken by the family is not often a cultural reproduction process, namely not reproduction of *habitus*. If the cultural practices like symbolic imposition are sustained for a long time, however, these cultural investments and practices will gradually turn into *habitus*.

In Figures 2 and 3, what paths of educational trajectories from parents' education to final educational attainment are showing cultural inheritance from parents, that is, cultural reproduction? Cultural reproduction processes are indicated in a series of paths linked from parents' educational backgrounds to embodied cultural capital or objectified cultural capital, which leads to academic performance at the ninth grade and to final educational attainment. This suggests that the cultural inheritance takes the shape of a process that family cultural capital, which is shown as parents' education, manifests itself as the parents' cultural practices and strategies toward their children, and that cultural capital in the family is inherited by the children. This process should be undertaken so that *habitus* is transmitted through the family and cultural capital reproduces itself through the family. The important finding here is that the cultural reproduction process is one of the major routes for women's educational attainment in Japan.

11. Why are Educational Attainment Mechanisms Different for Men and Women?

As seen so far, women's educational attainment is largely influenced by the family's cultural environment; by comparison, however, this is not the case for men. How should these differences be accounted for? Some possible hypotheses (Kataoka 1998b) are as follows;

(1) Gender differences between liberal arts and scientific courses: Embodied cultural capital, which is measured by parents' involvement of children in cultural experiences, comprises the fine arts culture, namely the artistic cultural capital, and reading cultural capital. It is hypothesized that women's cultural reproduction can be seen in this data because women's educational trajectories and choices in Japan are biased and tend to focus on liberal arts. I wonder if the reason why there is no effect of men's cultural capital on their educational outcomes is that men typically tend to select scientific courses in university and scientific cultural capital and scientific subject-related issues were not measured in the 1995 SSM survey.

(2) Different weights placed on cultural capital for Japanese men and women as a concept of status: As I suggested, cultural capital is important for women's social status because the meaning of high culture is different for men and women in Japan (Kataoka 1992, 2000), and more culturally sophisticated women (i.e., women possessing more cultural capital) have higher status. This could be a significant explanatory factor for the differences between men and women. For women, cultural capital can lead to profit in the social world because women with high culture are recognized as the partners of men with high status, and also because cultural capital is a part of their gender capital¹⁶ within the gender market where individuals compete for better marriage prospects. Being cultured increases one's life chances for women in Japan, but this does not apply to men (Kataoka ed. 1998, Kataoka 1998a, 1998b).

(3) Differences in the evaluation framework of acknowledging academic performance by career courses: When respondents describe their academic performance in the ninth

grade retrospectively, men's and women's evaluations may be different. This possibly suggests the relationship between a respondent's educational major career and his or her subject evaluations. It could be hypothesized that respondents who chose the liberal arts place weight on the scores of liberal arts subjects, whereas more science-oriented respondents might place weight on the scores of scientific subjects. In addition, in many cases, men tend to choose scientific courses and women tend to choose liberal arts courses. Because embodied cultural capital in my data is the indicator strongly related to liberal arts culture, embodied indexes of cultural capital might have led to better academic performance and better educational attainment for women than for men.¹⁷

12. Discussion and Conclusion

How has the mechanism of educational attainment changed over time, as people began to obtain higher levels of education and economic development was achieved after the postwar period? The process of educational attainment and academic achievement in Japan is largely characterized by gender differences and such gender differences are also found in all age cohorts. This article has suggested the important role of family strategy in the educational attainment process, and also suggested its significance, i.e., cultural capital's effect on academic achievement. The conclusions of this article are as follows.

First, with the passage of time, the effect of academic performance in the ninth grade on educational attainment has increased, and meritocratic selection has become more widespread. Men's academic performance at the ninth grade has been the strong determinant factor for educational attainment levels since the immediate postwar period. On the other hand, for women, the younger the woman, the more the impact of meritocracy, and the effect of the academic performance on educational attainment for the cohort of women aged 20-34 reached the same as that of men.

Second, the gender gap in the educational attainment mechanism appeared as

the differences in the effects of embodied cultural capital acquired in childhood. This suggests that women who were exposed to cultural experiences such as listening to classical music, visiting museums with their family, or parents reading books aloud when they were children, later succeeded at school (obtaining good academic performance and gaining a high level of education), thus making gains from the educational system. In contrast, although men grow up in a cultured family environment, such a background is not likely to lead to successes at school. Academic rewards of cultural capital in the educational system are significantly different between men and women in Japan.

Third, there is also a gender gap in the effects of the investments in extra-curricular education (shadow education). Investments in extra-curricular education became effective strategies for improving academic performance or attaining a higher level of education mainly for men. There were no effects on women. The participation of men in extra-curricular educational activities was particularly effective for men aged 35-49, but have diminished for men aged 20-34 because more than 50% of this group have engaged in such activities. This suggests that the effects of investing in shadow education are influenced by the number of people involved in the competition for educational attainment, and they may perhaps be called the effects of “stealing a march on others.” Furthermore, investment in shadow education has been the strategy of parents with higher educational attainment. Therefore, the utilization of shadow education has been determined not only by parental economic status, but also by parental educational expectations toward their children. This suggests that shadow education is a part of the educational reproduction mechanism.

Finally, the negative effects of the number of siblings have been found in many cohorts. The number of siblings has a strong effect on preventing the educational attainment of women in particular. For men aged 35-69, the number of siblings has a significant negative effect on academic performance, but not on final educational attainment. And as for 20-34-year-old men, for those in the youngest cohort, the number of siblings has no effect on any educational achievement. If the number of

siblings could be considered as a variable signifying a family's financial resources, such a financial factor continued to exert strong influences on the educational attainment of women for a long time. Despite the progress of meritocracy by placing emphasis on grades and children's academic performances, the family's financial factor remained influential. Accordingly, in Japan, class inequalities in educational opportunities have only been diminished marginally by modernization. Because the birthrate is also declining, it is not possible to determine whether this suggests that the economic factor is becoming less influential. The effects of the number of siblings support Becker's theory. These effects also relate to Yasuda's argument that upward social mobility is easier if the family size is smaller (1971).

As the implications of my research, this section clarifies how meritocratic selection and cultural selection (cultural reproduction process) have changed for men and women over time with the progression of modernization in Japan.

Embodied cultural capital is the family strategies adopted by parents with higher education, and their strategies are exposing children to the experiences of Western high culture and encouraging them to embody cultural capital from early ages. In other words, this strategy is a cultural reproduction process based on *habitus*, namely the process of increasing children's cultural capital, connecting the family culture and public education (or school culture). This means dynamics of the power to profit Murphy named operating by such a process because students who come from high-status families can easily obtain academic rewards from a de-stratified school culture.

This main findings of this article are that such a cultural reproduction mechanism based on *habitus* is not applicable to men, but it became clear that it was the central process for women's educational attainment. In every women's cohort, there is the transitional mechanism of: 1) having parents with a high level of educational attainment; 2) being situated in an affluent cultural environment of their family (embodied cultural capital or objectified cultural capital); 3) achieving good academic performance in the ninth grade; and 4) ultimately attaining a high level of education. This suggests that, for women, cultural selection is operating in the educational system

in the way that growing up in the cultural environment of an affluent family maximizes children's profit at school. Women who achieve good academic performance at the ninth grade can ensure that they attain a high level of education through meritocratic selection, which places emphasis on grades. This tendency is getting stronger for the younger cohorts of women. This suggests that cultural selection during an early educational career and meritocratic selection, using the school score principle, harmonize and link together, and, as a result, operate as the cultural reproduction process.

An entirely different educational attainment process operates for men, however. A process similar to that of women functions for men aged 50-69, but such a mechanism no longer operates for men 49 years old or younger. Within the cohort of men aged 35-49, investment in extra-curricular education became an effective strategy for attaining good academic performance and a high level of education. On the contrary, the effects of cultural capital diminished and profits gained at school declined. This tendency was also witnessed for current younger cohorts. The mechanism of men's educational attainment was characterized by the strong presence of meritocratic selection by academic performance from the past. The effects of family background that affects academic performance is still strong, but cultural capital is not the causal factor, and instead such a background is transferred to investment in extra-curricular education.

Cultural reproduction based on *habitus* that characterizes women's educational attainment revealed that Western culture gained popularity in Japan as the family culture, and became women's status culture. By connecting to school culture, cultural capital given by parents raises profits not only in the form of success at school, but also in the form of gaining higher status, because the cultural capital of women was transferred to the high economic capital of their spouse (Kataoka 1996b, 1997a, 1998a). This suggests that a family's strategies of cultural investment and cultural inheritance have been effective methods of maximizing profits in the market where individuals compete for educational attainment, because women's cultural capital has been playing the major role in their upward mobility in the social classes. On the contrary, for men

Western culture has not been a necessary condition for attaining status culture, and, as a result, family culture no longer gains profit from schools although such a culture connects with the school culture. This suggests that the hypothesis that the cultural reproduction theory or what the Neo-Weberians refer to as the continuity of the mismatch of family culture and school culture are the causes of success or failure at school has not been valid for men, but has been for women. Such a hypothesis should be revised as follows. Family cultural capital gains profit from schools only when culture forms an important component within the status culture. For women, cultural capital becomes the status culture because women have not been able to raise their status through the labor market and also because women's maintenance or increase of status has been achieved mainly through marriage. As this indicates, different meanings given to cultural capital for men and women are the explanatory factors for the gender differences in educational attainment mechanisms in Japan.

Over the passage of time, the methods that directly lead to attaining higher educational levels became more valuable for men, instead of being cultured, and the emphasis has been placed on "gaining a high-level education" through investments in extra-curricular education for that particular purpose. This suggests that the family strategy in educational attainment has gradually shifted to non-*habitus* means for men. In comparison, cultural reproduction processes based on *habitus* continue to play an important role for women despite progress through meritocracy. As these findings have revealed, gender gaps in the process of educational attainment persist in today's Japan, where more and more people participate in the competition for attaining higher education, and meritocratic selection has become an important mechanism.

Endnotes

- 1 See Kataoka (1997b) for a literature review on this subject.
- 2 Bourdieu developed his cultural reproduction theory by pointing out that generational transfer of cultural capital is important as the stratification principle embedded in the meritocratic selection through the educational system. In addition, DiMaggio proposed a cultural mobility model (DiMaggio 1982). De Graaf used the concept of cultural resources in order to measure the family's status culture and the effects of such

culture on educational attainment levels (De Graaf 1988).

- 3 The effects of participating in status group cultural activities on educational attainment level have been examined in a series of studies by Bourdieu, and research by scholars such as DiMaggio (1982), De Graaf (1986, 1988), Katsilliss & Robinson (1990), Fujita, Miyajima, Akinaga, Hashimoto and Shimizu (1988), and Kataoka (1992, 1998a, 1998b).
- 4 The causes of class differences in educational attainment have been categorized by Fujita(1987) into: 1) intelligence inheritance theory, 2) family environment theory, 3) school educational process theory, 4) cultural discontinuity theory, and 5) opportunity structure theory. The family factor contributing to the class differences in educational attainment corresponds to the second and fourth of these.
- 5 A strategy might seem to have the connotation that only intentional acts are included, but this is not the case. According to Bourdieu, the “act is not necessarily conscious or intentional,” and the actor is not a person who rationally calculates, nor is completely bound by social structure.
- 6 For LISREL’s covariance structure analysis, see literature such as Jöreskog and Sörborn (1979) and Shirakura (1991).
- 7 The SSM survey committee approved my using the 1995 SSM data and disclosing the research results.
- 8 “Prestigious high school” here means a high school that the respondent claimed to have attended from which almost all students enter universities or junior colleges after graduation. Of those who attended high school, 14.2% corresponded to the students of these high schools.
- 9 Academic performance is a categorized variable and turned into a scale in the order of higher (5) to lower grades (1) (see Figure B). Final educational attainment is measured as the years of final education in the analyses (see Figure A).

Figure A. Final Educational Attainment (%)

| Age | Educational Attainment after World War II | | | | | | Educational Attainment before World War II | | | | | |
|-------|---|-------------|-------------|----------------|------------|-----------------|--|---------------------|---------------|------------------|------------------|------------------|
| | N | Compul-sory | High School | Junior College | University | Graduate School | Elementary | Advanced Elementary | Middle School | Technical School | Teachers College | Higher Education |
| Total | 2,651 | 16.4 | 47.2 | 6.8 | 15.2 | 1.3 | 2.0 | 5.2 | 3.7 | 1.1 | 0.2 | 1.2 |
| 50-69 | 1,113 | 25.8 | 33.2 | 2.3 | 7.1 | 0.4 | 4.7 | 12.3 | 8.8 | 2.5 | 0.4 | 2.6 |
| 35-49 | 956 | 13.3 | 58.3 | 8.3 | 18.6 | 1.6 | — | — | — | — | — | — |
| 20-34 | 582 | 3.6 | 55.8 | 12.9 | 25.1 | 2.6 | — | — | — | — | — | — |

Figure B. Academic Performance in the Ninth Grade (%)

| Age | Higher | Little Higher | Middle | Little Lower | Lower |
|-------|--------|---------------|--------|--------------|-------|
| Total | 15.0 | 19.7 | 46.5 | 13.8 | 5.0 |
| 50-69 | 15.4 | 18.8 | 49.4 | 11.4 | 5.0 |
| 35-49 | 15.4 | 21.0 | 44.6 | 14.0 | 5.0 |
| 20-34 | 14.0 | 18.6 | 46.1 | 16.3 | 5.1 |

n.s.

- 10 “Cultural experiences at home” measures the childhood experiences of high culture at home, namely the embodied cultural capital during childhood mainly comprising items that are associated with Western culture. In other words, appreciation of classical music and art was imported starting in the Meiji era of the modernization of Japan, and it is compatible with school culture because it has been adopted as part of the school curriculum. In this sense, the indicators used here are cultural items that are more advantageous for

the neo-bourgeois. This paper focused on “cultural experiences at home,” an indicator of embodied cultural capital during childhood. Though cultural inheritance or cultural investment in the form of objectified cultural capital may be affected by economic factors, whereas cultural experiences are more likely to be based on the embodied cultural capital. In addition, it does not seem likely that culture is transferred to children merely by allocating cultural assets to them. For example, parents who dislike paintings or classical music are not likely to actively transfer cultural experiences to their children. In fact, the factors determining the cultural assets (objectified cultural capital) are the combined effects of parents’ educational attainment level and the prestige of the father’s occupation. Embodied cultural experiences, however, are not necessarily determined by these factors, and they are rather related to the parents’ education (which means institutionalized cultural capital). The following section treats “cultural experiences” as the “embodied cultural capital during childhood.”

- 11 Cultural assets in a family’s possession when the children were 15 years old (a piano, a literature collection or encyclopedia, art works or antiques) were counted. The regular presence of these cultural assets at home are the indicators of a rich cultural environment (Miyajima and Fujita 1991). To be familiar with experiences of being in touch with cultural assets is an effective means of promoting embodied cultural capital and its accumulation.
- 12 The total years of parents’ education are used as the indicator here.
- 13 For other than these, see Hida (1987).
- 14 It is interesting to compare this with the analysis in the Netherlands by De Graaf (1986). In the Netherlands, education became free in 1950. Thus, a family’s financial status does not have any significance in children’s educational attainment levels. Furthermore, according to West German data, the factors determining the entry into a gymnasium are cultural resources, not the level of a family’s revenue (De Graaf 1988).
- 15 The data from the Social Stratification and Mobility Survey (SSM) verify that, if parents who attained a high level of education invest in extra-curricular education because of their expectation of children’s educational attainment and the reproduction of their level of education, such expectations are not likely to be consistent with the “extra-curricular education hypothesis” (Seiyama and Noguchi 1984: 125). This theory hypothesizes that extra-curricular education or educational attainment can be “bought with money” because the process of 1) income inequality leads to 2) investments in extra-curricular education that lead to 3) improvements in children’s academic aptitude that in the end lead to 4) attainment of a high-level education.
- 16 For issues of gender capital and gender *habitus*, see Kataoka (1996a (2000 revised edition)).
- 17 This hypothesis is verified by the research of Yamashita and Murayama (1991), who compared university students in the liberal arts and science departments and found significant differences between their evaluation of subjects during and before high school. This suggests that there were tendencies that “liberal arts students place emphasis on social studies, science students place emphasis on maths (mathematics), and arts students place emphasis on arts.”

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