

# Educational Aspirations and the Warming-up/Cooling-down Process: A Comparative Study between Japan and South Korea

NAKAMURA Takayasu\*

Stereotypical views of education in Japan have traditionally included an 'examination hell' among the key features of the system. However, two major modifications need to be made to that view. First, although competition for leading universities remains intense, overall entrance exams in Japan are not as competitive now as they used to be. This is because the declining birth rate is already feeding through to reduced numbers of candidates, while there has also been a marked increase in the number of higher education institutions and places for students. Secondly, the 'examination hell' is not only a feature of Japan, but may also be found in other East Asian countries, such as South Korea, China, Taiwan and Singapore. This paper focuses on Japan and South Korea and examines how the two systems go about 'warming-up' students' educational aspirations, and then 'cooling-down' those aspirations for those students who are unlikely to fulfil them. Some great differences emerge between these two 'diploma disease' societies of East Asia, and between the present-day Japanese educational system and its traditional image.

## I. Introduction

An obsession with education, or 'education fever', is a common phenomenon in late-developing societies, as Dore (1976) has already pointed out. However, one would naturally expect to find some degree of variation in the characteristics and intensity of that obsession. Therefore, if we want to understand the features of the Japanese educational system more accurately, it is important to ask just how Japan's education fever compares with similar phenomena in other societies. With that in mind, I propose to compare education fever in Japan and the Republic of Korea (hereafter 'South Korea'), with special emphasis on how educational aspirations are first heightened among students, to encourage academic effort and then lowered in order to soften the sense of disappointment among the majority who will not in fact achieve elite educational careers. Borrowing from the 'fever' metaphor, some scholars have called this process 'warming-up' and 'cooling-down' or 'cooling out'.<sup>1</sup>

Broadly speaking, there have been two forms of sociological approach to this issue. One has treated the warming-up and cooling-down of education aspirations as a special feature of modern society; the other has looked at it in the context of status attainment research.

NAKAMURA Takayasu is Associate Professor of Sociology of Education at Gunma University. He specializes in social change and the educational system in post-war Japan, especially selection systems. He is co-editor of *Gakureki, Senbatsu, Gakkō no Hikaku Shakaigaku* (Comparative Sociology of Educational Career, Selection, and Schools) (2002). He can be contacted at the Department of Education, Gunma University, 4-2 Aramaki-machi, Maebashi-shi, Gunma 371-8510, Japan, or by e-mail at tnaka@edu.gunma-u.ac.jp

\*I thank Fujita Takeshi, Arita Shin, Kumagai Shinji, Watanabe Tatsuo, and Kim Meeran, my colleagues in the Comparative Educational Sociology Study Group, for their comments and permission to use the data. I am grateful to Hiroshi Ishida, Tom Gill and three anonymous referees for comments and suggestions on earlier drafts of this article.

1. The term 'cooling out' has generally been used since Clark (1960) popularized the term. However, in this paper I propose to use the term 'cooling-down' (with exactly the same meaning) to emphasize the oppositional relation between this process and 'warming-up'.

The concept of the warming-up and cooling-down of educational aspirations has often been used by Japanese educational sociologists trying to understand the ‘diploma-disease’ society (Amano 1982; Takeuchi 1995 etc.), who have made frequent reference to Clark’s pioneering study (1960). Discussing the cooling-down part of the process, Clark says: ‘Its effect, at the best, is to let down hopes gently and unexplosively. Through it students who are failing or barely passing find their occupational and academic future being redefined’ (Clark 1960: 574). Perhaps because of Japan’s reputation for educational fever, studies of education in this country have tended to focus on the opposite process of warming-up as well as on cooling-down. One leading Japanese educational sociologist, Amano Ikuo, said, ‘industrial society, unlike previous societies, needs a social mechanism for motivating, selecting and distributing persons to each status, and the educational system has to play this role’ (Amano 1982: 12).<sup>2</sup> He added, however: ‘In order to enable the mechanism of selection and distribution to function appropriately, it is necessary to warm up the people’s aspirations so that more of them will participate in competition—but it is also necessary to reduce the number of people to a suitable level that matches the number of the status positions or roles available, and to do so without leaving any lingering sense of “*ressentiment*”’ (*ibid.*: 13). That is, the educational system of modern industrial society is understood to connote ‘the dilemma of warming up and cooling down’ (Takeuchi 1995: 68).

Viewed in these terms, the warming-up and cooling-down of aspirations emerges as a vital issue, affecting the fundamental nature of modern industrial society. Dore’s classic study, *The Diploma Disease* (1976), can in fact be read as a valuable source of hints on this theme. His hypothesis of the ‘late development effect’ argues that, the later a society starts out on the process of industrialization and modernization, the more inflated will the significance of academic credentials become: in short the ‘diploma disease’ may be diagnosed as a condition where academic aspirations are warmed up to excess and are never properly cooled down—a condition associated by Dore with late-developer industrialization. Perhaps we may follow this hint of Dore’s and look for patterns of change in aspiration as tools to deepen understanding of the broader features of different societies.

A similar approach may be observed in Ralph Turner’s seminal research in educational sociology (Turner 1960) comparing America, which he saw as a society where many school students had unrealistic career ambitions, with Britain, where the 11-plus examination then in use reduced the aspirations of many school students at an early age. But although these classics of the literature attached due importance to warming-up and cooling-down, since then we have seen few serious attempts to extrapolate broader social features from warming-up/cooling-down patterns.

The second approach that I mentioned seeks to understand educational aspirations in quantitative terms and measure its effect on status attainment. Here too, the significance of educational aspirations was recognized at an early stage (Sewell, Haller and Portes 1969). In Japan, this kind of research has been carried out extensively since the Social Stratification & Social Mobility (SSM) survey of 1975. Results of that survey indicated that educational aspiration was a very significant variable mediating between class origin and educational achievement (Naoi and Fujita 1978; Nakayama and Kojima 1979; Fujita 1979). If status attainment researchers were to pursue this theme further, the issue of how variations in socio-economic background affect changes in individual aspirations would doubtless take on great importance; certainly, there is great potential for research on the warming/cooling process using the status attainment paradigm. However, to date there have been

---

2. All quotations from Japanese-language works are translated by the author.

only a few attempts to take up this challenge, mostly in the area of minority studies (Hanson 1994; Kao and Tienda 1998; Farmer 2001; etc.).

For example, Hanson's concept of 'Lost Talent' uses an approach very close to that of warming/cooling studies. Hanson wrote: 'The almost universal high aspirations and eventual cooling out of these aspirations for some is the basis for the notion of lost talent used here' (Hanson 1994: 179). Likewise Kao and Tienda, discussing research on American minority groups, remark: 'Understanding how aspirations are formed and how they change over time is crucial for clarifying why educational aspirations eventuate in highly diverse educational outcomes along race, ethnic, and gender lines' (Kao and Tienda 1998: 350). As this comment suggests, Kao and Tienda have concerns very similar to my own: this kind of research has already identified linkage between socio-economic background and patterns of aspirational change as an important theme.

A reading of the above literature suggests two issues that require further research. First, there is the question of whether the framework in which students' aspirations are first warmed up and then gradually cooled down is universal. Might one not find differences in the warming/cooling process between different societies? Perhaps a good place to start trying to verify this would be East Asian countries, where warming/cooling is typically associated with an intense entrance exam race. In this paper, I shall demonstrate that there are patterns peculiar to Japan and South Korea. I want to show especially that Japanese educational aspirations are not as 'hot' as might be expected at the beginning of the educational process, but that warming-up develops gradually as students make their way through the Japanese educational system. Furthermore, we shall find that great differences exist between these two 'diploma-disease' societies.

A second question that needs answering is *who* is cooled down. Minority studies often argue that children of minority groups are more likely than others to have their aspirations cooled down. Naturally, one could apply this approach to other individual characteristics and socio-economic factors, such as gender, class origin, and the type of school attended. In this paper, I hope to look at all these elements, but with national educational systems as the main theoretical frame. I hope to show how the linkage between changes in educational aspiration and the socio-economic factors just mentioned is noticeably different between Japan and South Korea, although both are societies closely associated with 'education fever'.

I am particularly concerned with class, and here I have in mind reproduction theories such as the British studies of Willis (1977), which see schools as places fostering the reproduction of class identity. A functionally important aspect of educational selection in a rigid class society is to prevent working-class people from warming-up their aspirations on their way through the educational system. Accordingly, I shall use socio-economic factors such as father's occupation etc., as key variables to expose inter-societal variations in the relationship between social class and warming/cooling. I believe that careful analysis reveals that Japanese education works in a way subtly different from the usual picture of a particular social class being cooled off in the school system—and that this finding may have some quite novel theoretical implications.

## 2. Some Features of Japanese and Korean Education

The educational systems of Japan and South Korea are basically very similar. Almost all children go to elementary school for six years, progressing to junior high school for three years, and then to senior high school for another three years. As for higher education, both countries have two-year junior colleges (South Korea also has three-year junior colleges), four-year universities, and graduate schools.

Table 1 compares destinations of junior high school graduates in the two countries. Compulsory education ends with junior high school graduation in both countries, but in Japan and South Korea alike, almost all students continue to senior high school. Table 2 looks at destinations of senior high school graduates, and again both countries show a high proportion of students continuing to higher education. Here there are some interesting differences, however. A substantial minority of Japanese senior high school graduates go on to ‘special training school’ (*senmon gakkō*), vocationally oriented institutes of higher education established under an educational reform of 1975, and junior colleges (*tanki daigaku*) cater almost entirely for female students. In South Korea, a considerably higher percentage of senior high school leavers go on to four-year universities, and there is a well-established pattern of progress from vocational senior high schools to junior colleges (*chonmundehak*), which also specialize in vocational training.

Although the tables do not extend to post-graduate education, it is important to note another major difference here. In Japan, only about 10% of university graduates continue to post-graduate studies, whereas close to a third of all South Korean graduates do so—an extremely high proportion by global standards. Hence, there are significant differences between the two systems. However, in terms of the basic structure of the system and the high rate of progress from lower to higher levels of education, Japan and South Korea can be described as having basically similar school systems.

An important factor influencing educational aspirations and outcomes is the degree to which students are differentiated during secondary education and the manner of that differentiation. Sometimes students are differentiated within the same school, as in the tracking system used in American general high schools. Alternatively, they may be placed in different kinds of school, as in the old British tripartite system of secondary education with its grammar schools, technical schools and secondary modern schools, or the German dual system combining general education with vocational apprenticeships.

On this point too, Japan and South Korea display similar characteristics, with both countries dividing secondary education at senior high school level between academic schools and vocational schools. In Japan, the former are described as ‘ordinary’ (*futsūka*) and the latter as ‘specialized’ (*senmongakka*); in Korea the corresponding terms are ‘general’ (*ilbange*) and ‘vocational’ (*silopke*). Table 1 indicates that the breakdown in the student population between the two types of school is broadly similar in both countries. Table 2 shows that, when it comes to going on to university, the gap between vocational and academic senior high schools is considerably wider in South Korea than in Japan. Even so, it is fair to say that in both countries graduates of academic high schools are substantially more likely to go on to university than those of vocational high schools.

**Table 1.** Percentage of Junior High School Graduates Progressing to Senior High School in Japan and South Korea by Gender and Type of Senior High School

Country	Gender	% progressing to senior high	Academic:vocational
Japan	Male	96.5	2.5:1
	Female	97.5	3.5:1
South Korea	Male	98.5	2.6:1
	Female	98.3	2.6:1

*Sources:* For Japan, Ministry of Education, Culture, Sports, Science and Technology, *Basic Statistics of Schools*, 2002 edition. For South Korea, Korean Educational Development Institute, *Statistical Yearbook of Education*, 2002.



Another point on which Japan and South Korea are broadly similar, and which differentiates both countries from those of Europe and North America, is the great social importance attached to university entrance examinations. This is a striking feature of both societies, and constitutes the analytical foundation for treating them in the same category. It is also the major reason why I have chosen to compare these two particular countries in this paper.

That said, however, there is a significant difference between the two countries at the previous stage of differentiation: transition from junior to senior high school. In the case of Japan, there is a strong element of selection, with the individual school as the competitive unit. Some senior high schools are much harder to get into than others, and there is a hierarchical structure reflecting relative degree of competitiveness (Kariya and Rosenbaum 1999). Much care and thought is consequently devoted to choosing which senior high schools each candidate should apply for. Junior high school students will consider their school grade average, undergo placement counselling from teachers at their junior high school, and consider the results of numerous tests and mock entrance examinations taken at *juku*—the private cram schools that many of them attend outside regular school hours—before deciding where to try their luck.<sup>3</sup>

Academic senior high schools that send nearly all their students on to university are located at the summit of the hierarchy, while vocational senior high schools whose students do not generally go on to university (or at any rate not to prestigious universities) are positioned at the bottom. In big cities, there is also a significant amount of competition over admission to the more reputable private junior high schools, and even to some extent over admission to élite kindergartens and elementary schools. Hence in Japan, university entrance examinations form just one of a series of hurdles in the educational selection process, with the second-biggest hurdle coming three years earlier.

In contrast, South Korean academic senior high schools in big cities do not select their own students. If a student passes a general examination, he is placed in one or another of the academic senior high schools according to non-academic factors such as convenience of location. This system is applied to academic senior high schools in the private as well as the public sector. Consequently, there is little difference between academic high schools in terms of academic standards or social reputation. This means that South Korean students who succeed in getting into academic high schools tend to gain in confidence that they will subsequently gain admission to university. On the other hand, those who go to a vocational high school will find themselves stigmatized as ‘losers’. So where the Japanese high school system has a *hierarchical* structure, South Korea has a *two-layer* structure. In South Korea, about 70% of students go to academic high schools, and for them the university entrance examination is by far the most important and challenging hurdle in the educational selection. It is thought that this point brings about a great difference between the Japanese and Korean strains of ‘education fever’ (Arita *et al.* 2002).

In comparing these two countries, a number of other social factors must be taken into consideration. First, although both are latecomers to industrialization, Japan became an economic superpower long before South Korea and still has a GNP about ten times the size of South Korea’s. The two countries happen to confirm Dore’s hypothesis neatly—for South Korea, which industrialized later than Japan, has also developed what is generally reckoned to be an even more intense ‘exam hell’.

Another factor that cannot be ignored is supply and demand. In Japan, the population of 18-year-olds declined from 2.05 million in 1992 to 1.5 million in 2002, and is expected to decline further in the coming years (MEXT 2003). Add to that the extra university places resulting from a deliberate

---

3. For more detail on the Japanese system of education and examination, see Rohlen (1983), LeTendre (1996), etc.

government policy to expand higher education in recent years, and the competition to get into university has become considerably less intense than it used to be. Here, too, a similar trend may be observed in South Korea, albeit to a lesser extent. Since the mid-1980s South Korea's total fertility rate has fluctuated between 1.5 and 1.8, below the replacement rate of 2.1 (National Statistical Office 1999). According to the *Chosun Ilbo*, a leading South Korean daily (17 June 2002), the declining birth rate has led to some provincial universities' failing to fill their student body quotas. In both societies, there is still an intense struggle for places at the top universities but a noticeable easing of competition among less prestigious institutions. However, the Confucian tradition is stronger in Korea than in Japan, and it is a tradition that places heavy stress on scholarship as a means of achieving social advancement.<sup>4</sup>

To sum up, there are subtle but significant differences between Japan and South Korea, in terms of level of economic development, supply and demand for education, and cultural tradition. All these factors may be expected to impact on the patterns of change in educational aspirations in the two countries.

### 3. Four Patterns of Aspirational Warming and Cooling and a Hypothesis for Japan and South Korea

Theoretically there could be any number of patterns to the ways in which educational aspirations change, but my objective here is to attempt a simple theoretical taxonomy based on the timing and criteria of aspirational differentiation. Timing is a very important aspect of differentiation, as Turner showed when he characterized the old British system of early-age selection as 'sponsored mobility' (Turner 1960).

The first pattern one might envisage (Figure 1, pattern A) is one where differentiation arises before school education even starts. In such a case, schools are thought to merely maintain those pre-existing aspirational differences. The US 'Head Start' programme was based on a recognition of this fact of life, and represented an attempt to level out those pre-existing inequalities.

Secondly, aspirational differentiation may occur within school education. This would generate pattern B, where there is little difference in aspirations at the elementary school level, but differentiation proceeds gradually and has made substantial progress by the time students approach high-school graduation. Pattern C also shows aspirational differentiation developing in the school system, but this time, rather than gradual differentiation, we see a sudden sharp change at the time of a particular event, such as the senior high school entrance examinations. We may expect the situation in East Asian countries with well-developed entrance exam systems to fall somewhere between patterns B and C.

Finally, we could imagine pattern D, in which there is relatively little differentiation of educational aspirations in primary and secondary education, with the process being postponed until university entrance exams or beyond. In such societies, students are generally encouraged to maintain high aspirations during pre-university education, with little or no cooling-down taking place in schools. It is rather hard to imagine such a situation in real life, but it could arise in societies where just about everybody gets a university education and where one's college track record starts to count for something when one gets to graduate school or engages in lifelong study.

---

4. For example, the pre-modern Chinese system of civil service examinations spread to various other Asia countries, including Korea, where a similar system has been maintained for some 900 years. However, this particular institution of Chinese Confucianism never took root in Japan.



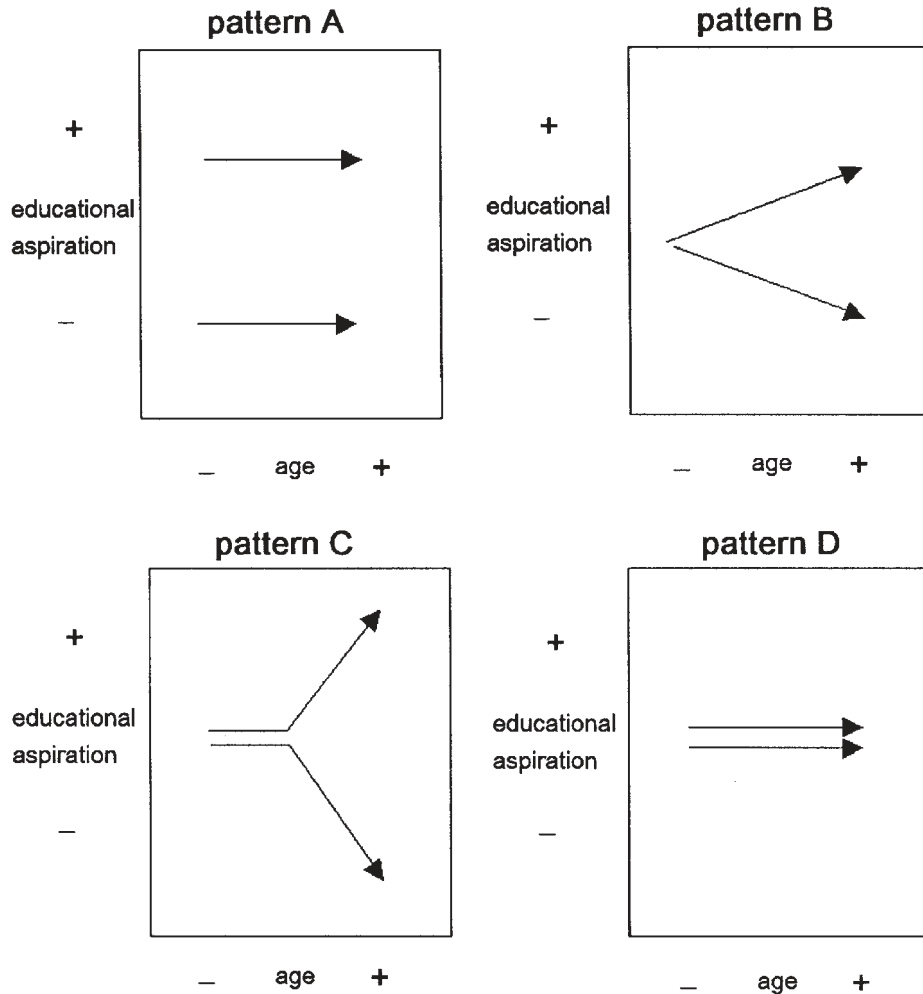


Figure 1. Hypothesis model.

It is also possible to see a connection between class and changes in educational aspiration. In cases where class diversification has occurred before the onset of school education, we should expect to see pattern A. Indeed, Kao and Tienda's US research finds no narrowing of the gap in educational aspirations between different ethnic groups on the way from 8th grade to 12th grade, producing a profile close to pattern A (Kao and Tienda 1998). In contrast, where class diversification develops in the course of school education, we should expect to see pattern B or pattern C. Pattern D would emerge in a society where class diversification did not occur during school education or occurred mainly from university onwards.

Studies of Japanese educational selection often used to state that students' fortunes depended entirely on university entrance exams (e.g. OECD 1971). More recently, however, the importance of selection at the senior high school level has been pointed out by a number of scholars writing in English (Rohlen 1983; Takeuchi 1991; LeTendre 1996; Kariya and Rosenbaum 1987, 1999; Ono



2001, etc.). These contributions to the literature seem to imply that the main phase of aspirational differentiation may be expected to occur during the period just before and after senior high school entrance. In particular, LeTendre's (1996) emphasis on placement counselling (*shinrō shidō*) and Kariya and Rosenbaum's work (1987) on self-selection both indicate the presence of sophisticated aspirational cooling devices at work in the school system, leading us to expect to find Japanese education characterized by pattern B.

In comparison, these studies that emphasize educational career divergence at the stage of senior high entrance exams have almost nothing to say about the pattern of educational career divergence *before* that stage. Consequently, they suffer from a certain vagueness regarding to what degree divergence occurs at senior high school and to what degree it has already kicked in before the pupils arrive at that level. This vagueness is especially noticeable in regard to the consciousness of school students, of which aspirations form one aspect. Some Japanese-language studies conducted back in the 1980s indicated that senior high entrance might not, after all, be the watershed moment in the development of educational aspirations (Kudomi 1985; Mimizuka 1986). Rather, these studies pointed to the possibility of aspirational divergence at a much earlier stage, resulting in a profile closer to pattern A.

As for South Korea, especially at academic senior high schools, the characteristics of the selection system would lead one to expect a much lower level of aspirational diversification than in Japan at the senior high entrance exam stage, with selection being deferred to the university entrance stage, resulting in something close to pattern D. However, as noted earlier, South Korean senior high schools are divided into academic and vocational types, and one would expect to find an extremely pronounced differentiation between the two, leading to a profile closer to pattern C. However, self-selection mechanisms are not entirely absent from the South Korean system, indicating the alternative possibility of pattern B, with differentiation occurring before senior high entrance. In this paper, I shall examine these various hypotheses in an attempt to establish which is closest to the truth. At the same time, I hope to analyse the key factors determining patterns of aspirational change in these two societies.

## 4. Data and Methods

### 4.1 Data and Variables

The data used here come from the 'Survey on Lives and Careers of High School Students', which I conducted with some colleagues of the Comparative Educational Sociology Study Group (*Hikaku Kyōiku Shakaigaku Kenkyūkai*) between March and June 2000 on high school seniors. The university candidates among them were due to take entrance examinations the following spring. Sample size was 2,793, made up of 1,354 students from 12 senior high schools in South Korea (835 male, 519 female),<sup>5</sup> and 1,439 students from 12 senior high schools in Japan (733 male, 706 female).<sup>6</sup> Admittedly, the data were not randomly sampled. However, effort was made to select schools with due consideration for such factors as academic level, male–female ratio, curriculum, etc. We contacted the schools

- 
5. Out of the 12 South Korean schools, nine, with 1,004 students surveyed, were academic high schools, and three, with 345 students surveyed, were vocational schools.
  6. Out of the 12 Japanese schools, seven, with 949 students surveyed, were academic high schools, and five (490 students) were vocational schools. Two of the academic high schools were highly rated in the Japanese system of high school tracking, while four schools were mid-ranking and one was in a low position.

directly and asked them to administer the survey for us. We have already analysed the data in various ways (Nakamura, Takeshi and Shin 2002), and on a number of basic items our results have broadly confirmed those of previous statistical studies. This is the first serious attempt ever made to compare educational aspirations between Japan and Korea, and we are confident that the results make a significant contribution to the research on education and society in East Asia. However, I must mention that analysis of the results is still continuing and our conclusions remain somewhat tentative at this point.

The main variables used in the following analyses are as follows:

- (i) *Educational aspiration.* In this high school student survey, we asked students to state the level of their educational aspirations ('To which school stage do/did you want to go?') at five stages in their educational career: while at elementary school, on junior high school enrolment, on senior high school enrolment, in the summer of their second year at senior high school, and at present. In the Japanese sample, many students (male: 37.7%, female: 52.8%) selected 'Undecided' regarding the aspirations they recalled having while at elementary school. There is thus a considerable degree of uncertainty on this point. However, since this paper is concerned with tracking aspirational change, the state of students' aspirations at this initial stage is an important factor. Accordingly, I have included data for this item with the caveat that it cannot be regarded as more than suggestive. In most of the following analyses, statements about educational aspirations are converted into years of schooling. Thus for example a student stating that s/he hoped to go to the end of senior high school would register  $6+3+3=12$  years, and one hoping to graduate from a four-year university would register  $6+3+3+4=16$  years.<sup>7</sup>
- (ii) *School tracks.* Both Japan and South Korea—especially Japan—exhibit differences in standards among academic high schools. However, we deliberately overlooked those variations, restricting our classification to just two categories: academic high schools and vocational high schools. We saw the analytical advantages of this simplified classification as outweighing the admitted disadvantage of being unable to allow for variations among Japanese high schools in the analysis. Our prime objective was to indicate clearly the similarities and differences between South Korea and Japan, and such an international comparison has no chance of generating meaningful results unless the two countries are analysed in the same framework. Hence, our use of the simplified academic/vocational categories. We hope to address the impact on aspirations of the hierarchical structure of Japan's senior high school system in a future work.
- (iii) *Father's occupation.* We asked students to classify their father's occupations in a number of categories, which we then recoded into the following three: 'White-collar', meaning professionals, managers, and office workers; 'merchandising, etc.', meaning employment in merchandising,

---

7. There are certain intractable problems with using this kind of retrospective data: one cannot be entirely sure whether respondents can accurately recall their feelings of several years before. However, we did attempt to check the results by administering an almost identical survey to groups of junior high school students approaching graduation, and then comparing these students' statements of their aspirations with those of senior high school students approaching graduation talking retrospectively about the aspirations they had had when they entered junior high school. The results were broadly similar. For Japanese boys, the mean aspiration was 14.9 years in both the junior high and senior high sample; for Japanese girls, the corresponding figures were 14.7 years and 14.8 years; for Korean boys the figures were 15.8 years and 16.3 years; and for Korean girls, 16.1 year and 16.2 years. These results are not wholly reliable, since the sample groups are made up of different members; still, we felt that the figures for actual aspirations of junior high students and retrospective aspirations of senior high students recalling their junior high days were close enough to justify using the retrospective data in some of our analyses.

**Table 3.** Distributions of Current Educational Aspirations

	Senior high school (%)	Junior college and special training school <sup>a</sup> (%)	University (%)	Graduate school (%)	Undecided and others (%)	Total (%)	N
Japan	17.1	20.0	46.8	7.3	8.8	100.0	1438
South Korea	4.7	12.5	52.4	23.2	7.2	100.0	1353

<sup>a</sup>Junior College (in South Korea).

services and family businesses; and ‘blue-collar’, meaning manual and agricultural workers. We also asked about the father’s educational career, converting responses into years of schooling as with the aspiration data.

- (iv) *School grades*. We asked students to evaluate their own level of achievement at school, using a five-step evaluation (5–4–3–2–1), with 5 as the highest score and 1 the lowest.

## 4.2 Methods

I start by describing the picture that emerges from our data of the general distribution of students’ present-day educational aspirations in Japan and South Korea. Next, I illustrate diagrammatically the patterns of change in educational aspirations, seeking to grasp the general outlines of changing aspirations by using the *t*-test for non-independent samples to verify whether the changes are statistically significant.

I then look at patterns of changing aspirations in relation to school tracks, generating graphs using the average of educational aspiration at each point in time. I use a similar approach to examine the influence of father’s occupation by using an analysis of variance to verify significance.

Finally, I apply a multiple regression analysis whose dependent variable is change in educational aspiration (subtracting educational aspiration at the time of junior high school enrolment from educational aspiration at present) in order to identify the salient features of the warming-up/cooling-down process in Japan and South Korea.

## 4.3 Distribution of Current Educational Aspirations

Since the entrance exam races in both Japan and South Korea are known to be intense, we should expect to find high levels of educational aspiration in both countries. We checked this point, and also asked whether the image of South Korea as having even more intense entrance exam competition than Japan is reflected in even higher levels of educational aspiration.

Table 3<sup>8</sup> shows the distributions of current educational aspirations within the sample. In the case of Japan, 46.8% of the students answered that they wanted to go to university, and 7.3% of the students answered that they wanted to go to graduate school, for a total of 54.1% aiming at university or above. In contrast, in South Korea, 52.4% of the students were aiming for university, and 23.2% for graduate school so that, altogether, no fewer than 75.6% were aspiring to university or above. The big gap in aspirations at the graduate school level shows that South Korea is a society with distinctly higher educational aspirations than Japan.

8. Table 3 is a modified version of one compiled by Arita (2002: 55).

## 5. Different Patterns of Warming-up/Cooling-down Processes

### 5.1 General Trends

Next, we look at the general *trends* in educational aspirations in the two countries, tracking changes over time.

Figure 2 tries to do just that, plotting mean levels of educational aspiration among male and female students in both countries, converted into years of schooling, at various points in time, as recalled by the students at the time of their third year of senior high school. This figure shows consistent differences between Japan and South Korea from the earliest stages: educational aspirations are strikingly and consistently higher in South Korea than in Japan. This reflects the large number of graduate school candidates in South Korea, as seen before.

Narrowing the question down to how many students hoped to go to university at the time when they were in elementary school, our data (not tabulated here) found 48.4% of male South Korean students and 24.5% of male Japanese students aiming for university at this early stage in their educational career. For girls, the figure was 58.6% in South Korea and 29.5% in Japan. Clearly, aspirational averages are higher in South Korea than in Japan all the way from elementary school. Moreover, educational aspirations in South Korea start high and stay high, whereas in Japan aspirations start relatively low and then increase gradually—especially among the boys. In order to check this point statistically, we conducted the *t*-test for non-independent samples. We found statistically significant increases in aspirations

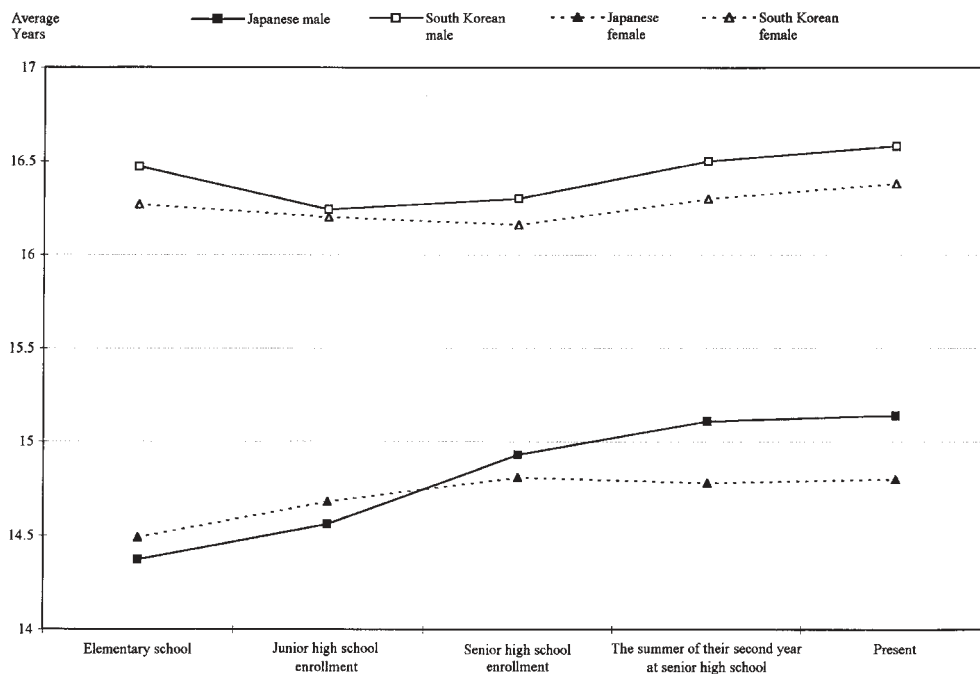


Figure 2. General Trends of Changes in Educational Aspirations.

among Japanese males and females between elementary school and the third year of senior high school but not in the South Korean sample.<sup>9</sup>

Broadly speaking, aspirational averages in South Korea seem to be maintained at high levels throughout primary and secondary education, whereas the educational system in Japan is an aspiration-raising system that gradually raises students' aspirations. However, a more detailed analysis is required. Note that there are considerable variations within the Japanese pattern of aspiration warming. Figure 2 reveals a striking gender gap: aspirations are warmed up with regard to both boys and girls up to high-school enrolment but, after that point, the girls start to be cooled down while the boys continue to warm up. Such patterns indicate the need for more detailed analysis.

## 5.2 Trends by School Tracks

It is considered advantageous to enter an academic rather than vocational high school in both Japan and South Korea, and students who manage to do that tend to warm up or at least maintain their aspirations toward higher education. In contrast, students at vocational high schools are expected to go straight onto the job market on graduation, making it easier to cool down their aspirations for higher education. Hence, we clearly need to consider how patterns of changing aspirations are reflected by differences in school tracks.

Figure 3 shows that, for Japanese males, there is an aspirational gap between students at academic high schools and those at vocational high schools, which goes all the way back to elementary school. Both groups show a pattern of gradually increasing aspirations, with the gap between them being maintained. Japanese females show smaller changes in aspirations as a whole, but for them too the aspirational gap between vocational and academic senior high schools appears to be maintained throughout the educational career. The parallel lines in Figure 3 indicate a situation close to pattern A in Figure 1: differences in educational aspiration exist prior to entering the school system, which functions to *maintain* those differences rather than *creating* them.<sup>10</sup>

In contrast, the corresponding graph for South Korea (Figure 4) shows almost no aspirational gap between school tracks at the time of elementary school. However, the gap does steadily widen as students proceed through the educational system. Students at academic high schools continue to warm up, whereas those going to vocational high schools rapidly cool down. Cooling-down in the period between junior high school and senior high school enrolment is especially rapid. This may be explained to some extent by South Korea's two-layer structure of high school education. In terms of Figure 1, we are looking at pattern B. In the case of South Korea, it would appear that, at any rate, the development of the gap between academic and vocational high schools accompanies a process of self-selection through the junior high school system.<sup>11</sup>

Thus, the Japanese educational system raises students' aspirations on both school tracks, while it maintains the gap between the original aspirations of students on the two tracks. In South Korea,

9. Japanese males:  $t=5.96$ ,  $d.f.=285$ ,  $p=0.000$ . Japanese females:  $t=3.42$ ,  $d.f.=300$ ,  $p=0.001$ . South Korean males:  $t=-0.74$ ,  $d.f.=485$ ,  $p=0.460$ , South Korean females:  $t=0.11$ ,  $d.f.=342$ ,  $p=0.911$ .

10. Analysis of aspirational differences among schools *within* the broad category of 'academic high schools' would of course help to clarify this pattern. As for the gender gap, it appears likely that, as in Figure 2, male students increasingly aspire to go to four-year universities, while females are more likely to aspire to go to junior college, resulting in a lower rate of aspirational increase. This also helps to explain the converse pattern in vocational high schools, where females consistently show higher levels of aspiration than males: many of them are hoping to go to junior colleges, whereas their male counterparts do not usually consider it an option.

11. In the case of South Korea, the gender gap is extremely small: the aspiration to high levels of education appears to have permeated society so thoroughly that the gender gap has been virtually eliminated.

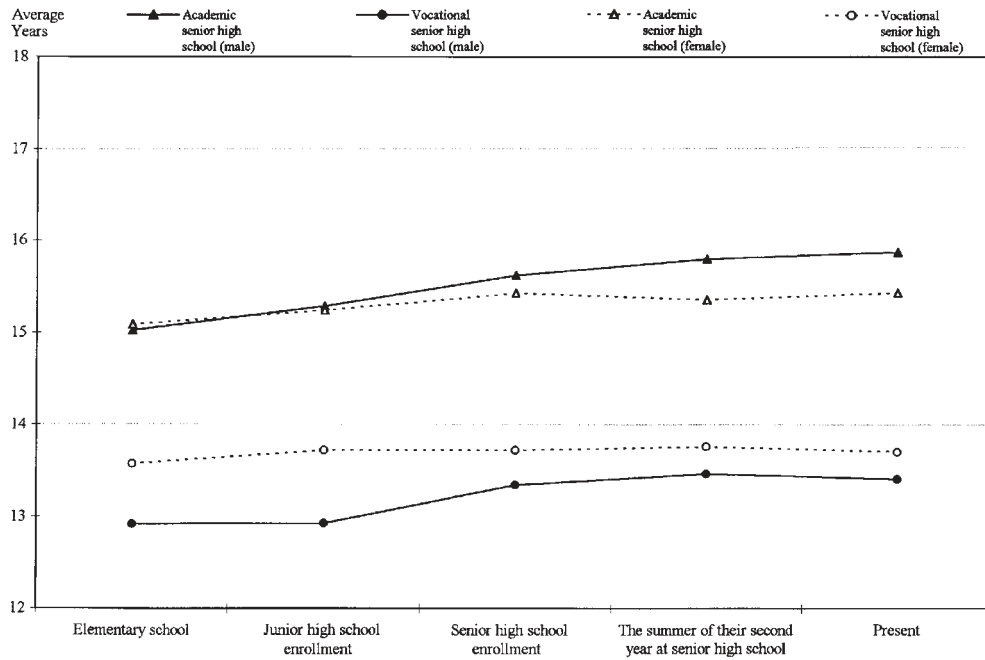


Figure 3. Trends of Changes in Educational Aspirations by School Tracks (Japan).

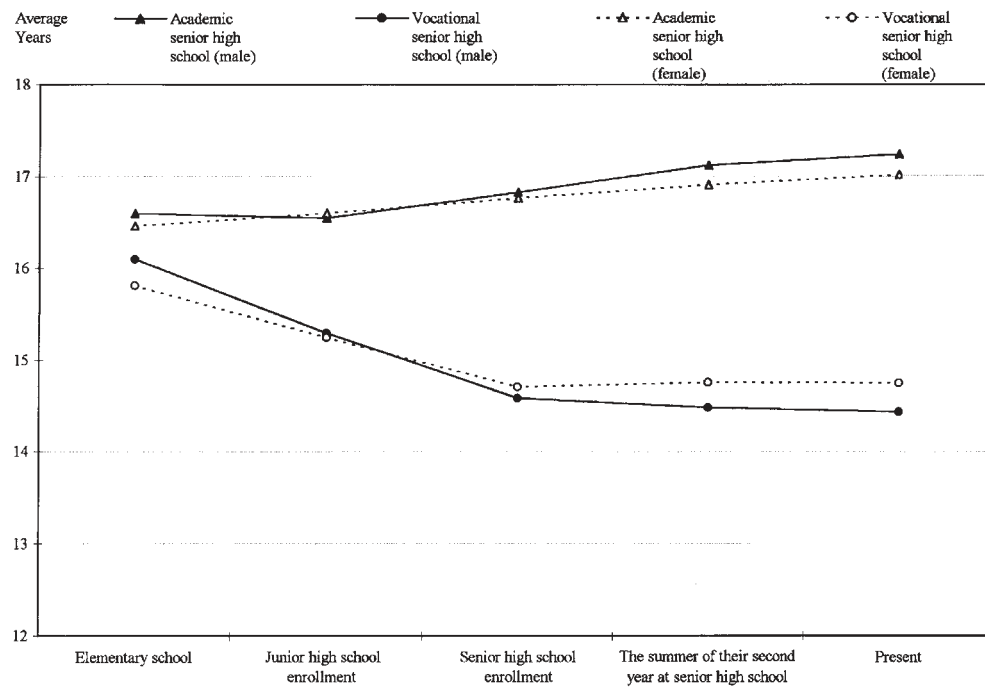


Figure 4. Trends of Changes in Educational Aspirations by School Tracks (South Korea).

aspirations start out largely uniform, with gaps rapidly opening up between students as they are channelled into vocational and academic tracks at senior high school. Although there has been much discussion of various cooling-down devices in Japan (Kariya and Rosenbaum 1987; LeTendre 1996), our data show a much more pronounced pattern of aspiration-cooling in South Korea. In Japan, entrance exam competition is far less intense than in the 1970s because of the demographic and policy factors discussed above. This appears to be producing new ways of thinking among Japanese high school students: they may not view themselves as university material at junior high, but once they get into senior high they notice how easy it is to get into university and revise their aspirations upward accordingly—a phenomenon that I shall label the ‘step-up effect’.

### 5.3 Trends by Class

Let us now consider the influence on aspirations of father’s occupation (Figures 5 and 6). In Japan, there are aspirational gaps among the three classes right from elementary school, and those gaps are generally maintained, while all three classes show gradually increasing aspirations.

In South Korea, there are almost no gaps between classes at elementary school, but gaps expand rapidly as students pass through the school system, creating a fan-like pattern. The students from white-collar strata raise their aspirations increasingly, and the students from blue-collar worker strata cool their aspirations. As with the academic/vocational distinction, so too in terms of class differentiation, Japan conforms to pattern A and South Korea to pattern B—though in the case of Japan the pattern is coloured by an overall rise in aspirations across sub-groups.

It would appear, then, that aspiration gaps reflecting father’s occupation are maintained in Japan, whereas they actually expand in South Korea. In order to check this point, the mean differences between the three categories were tested at the present and at the time of elementary school. Table 4 shows the result of the analysis of variance. Although the Japanese men’s differential among the three classes at the time of elementary school was not significant at the 5% level, the other results supported the above interpretation.

This suggests that it is South Korea, rather than Japan, that *advances* stratification through the educational system. Japanese educational system appears rather to *maintain* class differentials produced before the students go to school.

### 5.4 Multiple Regression Model

So far, we have looked at aspirational diversification in Japan and South Korea using the variables of gender, school tracking, and father’s occupation. When these factors are simultaneously taken into consideration, is there any general difference between Japan and South Korea? To check this point, we conducted multiple regression analysis in which the independent variables are father’s years of schooling (father’s education), father’s occupation (‘F white dummy’, i.e. white-collar father is the dummy case), gender (female dummy), and school track (academic-high-school dummy); and the dependent variable is changes in educational aspiration level (generated by subtracting educational aspiration at the time of junior high school enrolment from educational aspiration at present).<sup>12</sup> In addition, we controlled for academic achievement within schools.

Table 5 shows the result of the analysis. The academic-high-school dummy is effective for raising aspirations in both countries. Although a strict comparison is difficult, South Korea has a very large

---

12. We used junior high enrolment rather than elementary school as the starting line because so many students answered ‘undecided’ about their aspirations while at elementary school.



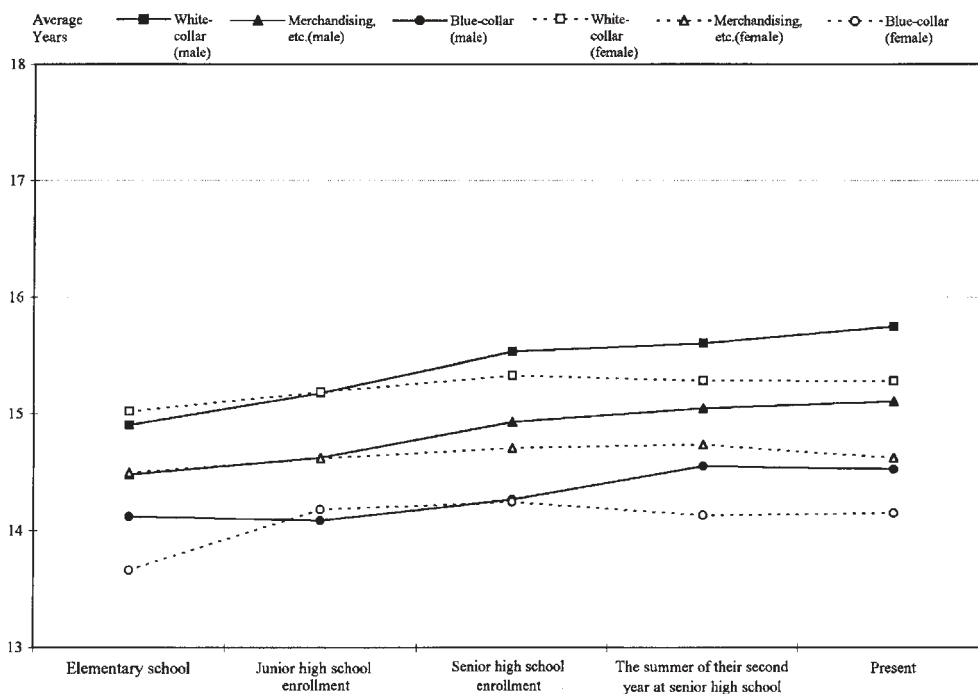


Figure 5. Trends of Changes in Educational Aspirations by Class Origin (Japan).

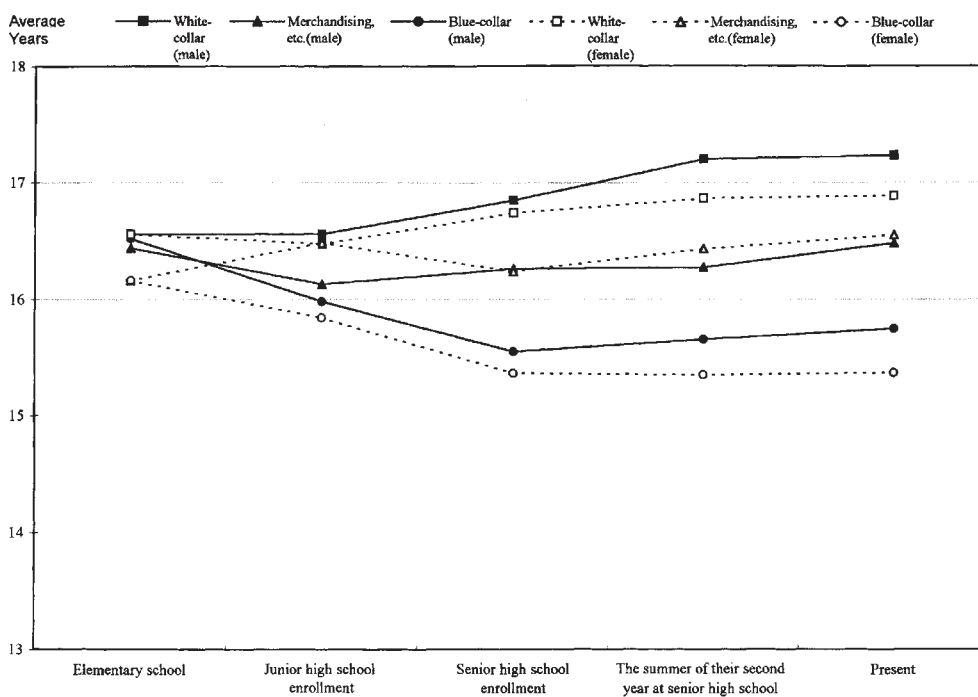


Figure 6. Trends of Changes in Educational Aspirations by Class Origin (South Korea).



**Table 5.** Regression Analysis: Changes in Educational Aspiration Level

	Regression coefficient	
	Japan	South Korea
Father's education	0.000	-0.002
F white dummy	-0.009	0.348*
Female dummy	-0.411**	-0.096
Academic-high-school dummy	0.340*	10.186***
School grades	0.021	0.248***
Constant	0.173	-10.605
$R^2$	0.021	0.081

Significance: \* $p < 0.05$ , \*\* $p < 0.01$  \*\*\* $p < 0.001$ .

partial regression coefficient. This chimes with the rapid depression of aspirations at vocational high school previously observed. Moreover, although gender comes across as affecting diversification of aspirations in Japan, no such effect is seen in South Korea. This shows that gender is a major factor depressing the aspirations of *Japanese* women.

Looking at class now, in South Korea the F white dummy has a significant statistical effect, but the variable does not appear to cause *diversification* of aspirations in Japan because members from every class may raise their aspirations equally. In the South Korean sample, results indicate that class stratification of aspirations arises through the educational system.

Overall, it seems fair to say that the characteristics seen from the variables we have been discussing remain apparent after controlling for other factors.

## 6. Conclusion

The findings in this paper may be summarized in the following three points.

In the first place, in South Korea, the level of early aspirations is consistently high, and, on the whole, it is maintained throughout the school career except for the marked decline among those channelled into vocational senior high schools as discussed in Section 2. In contrast, in Japan, although the average of early aspirations is relatively low, aspirations are raised as students go through the educational system.

Secondly, other trends appeared when we divided our samples into school-track groups. That is, a process of rapid differentiation is seen at senior-high enrolment in South Korea, with students at vocational high schools having their aspirations cooled while those at academic high schools raise their aspirations. In Japan, by contrast, students at academic and vocational high schools tend to raise their aspirations. Japan comes out looking like pattern A in Figure 1, while South Korea resembles pattern B, largely because of the element of self-selection at junior high school.

Thirdly, dividing our samples according to father's occupation exposed some trends that look completely different between Japan and South Korea. In South Korea, students from the white-collar group are warmed up and students from the blue-collar group are cooled down. In contrast, aspirational differences reflecting father's occupation show up at the early stages of education in Japan, and the gap is maintained throughout the system with every group raising its aspirations

more or less equally. Thus, South Korea's educational system is a 'class-differentiation' system (pattern B in Figure 1), and Japan's is a 'class-maintenance' system (pattern A).

These differences are related to differences in the mechanisms used to resolve the warming-up/cooling-down dilemma. In South Korea, all classes are uniformly warmed up before entering the school system. However, the selection/allocation function of education in modern society cannot allow all students to continue to warm their aspirations up. The South Korean educational system resolves the dilemma by pouring cold water on the aspirations of students at vocational high schools, and those from blue-collar families. In Japan, class differences exist in the early stages—a fact that sits uncomfortably with the myth of equal educational opportunity in modern Japanese society. The Japanese educational system resolves this contradiction by raising aspirations equally and giving all students a sense of opportunity.

To some extent, this difference between South Korea and Japan resembles that described by Turner (1960) between sponsored mobility and contest mobility. In the former case an élite is selected, and the others are 'cooled out' (in this paper, 'cooled down'); in the latter case, this does not happen, and there is a need to maintain the myth that 'everyone has a chance'. However, one of the basic principles of modern society is that gaps in outcomes *do* in fact develop, with some people doing better than others—to the extent that two kinds of mobility are the same. Looked at in these terms, South Korea looks like a sponsored mobility society and Japan like a contest mobility society. However, both systems also include elements of the other kind of mobility: in Japan, there are gaps in aspirations between élite and non-élite at an early stage, and those gaps are maintained. In this respect, Japan is a sponsored mobility society. In South Korea, the gaps develop later on, so that the Korean norm seems to be contest mobility. Thus, Turner's model is not very helpful to us: Japan and South Korea both display elements of contest mobility and sponsored mobility, making it difficult to identify the key underlying differences between the two systems. This suggests a need to distinguish between at least two varieties of diploma disease societies without resorting to existing models such as sponsored and contest mobility: the Korean model, where aspirations maintain high averages (except for vocational senior high school students) while class differentiation progresses, and the Japanese model, in which aspirations are heightened while class distinctions are maintained. Of course, this distinction is very simple compared with the elaborate typology developed by Hopper (1968), but this paper does support Hopper's criticism of Turner's dualistic model, namely that it places too much emphasis on the American and British systems. As Hopper points out, the most important element in the varying character of different societies' education system is the structure of selection. The present paper represents one possible approach to the challenge of empirically defining selection structure by experimentally applying a 'typology of aspirational change'.

This paper also demonstrates that there are several varieties of the 'Diploma Disease' discussed by Dore. In the case of the educational system in South Korea, we receive the impression that aspirations of students at vocational senior high school and with blue-collar parents are cooled rapidly rather than gradually. In contrast, this image hardly applies to the Japanese educational system, where aspirational gaps start early and are consistently maintained. Clearly, then, we are dealing with two different varieties of the diploma disease.

Important commonalities between Japan and South Korea also emerge from these data. In particular, they both look like class societies, with gaps between working-class students and other classes, just as in Willis' classic study of class in the British education system (1977). However, the *process* differs greatly among societies. In Japan, all students, including those from the working class, raise their aspirations. What we have here is a hidden mechanism for justifying inter-class inequality. It appears that working-class children in Japan develop higher aspirations as they go through the school system,

leaving senior high school without any sense that they have dropped out of the competition, yet still unable to close the gap between themselves and children of other social classes.

In this respect, they appear to show a striking contrast with the working-class 'lads' described by Willis in his classic study of class in the British school system (Willis 1977), who form their own counter-culture in resistance to the school culture and consciously remain in the working class. In South Korea too, working-class people share the extremely high educational aspirations of the general society, and there is no sign of school children resembling Willis' lads. Different societies have different ways of justifying class inequality, and I particularly feel that the Japanese mechanism for reproducing inequality while consistently raising working-class aspirations has not hitherto been properly identified.

Why, then, do these differences exist between Japan and South Korea? Concrete differences between the selection systems in the two countries naturally play a large part, while a number of other political, economic, and cultural factors also appear to exert influence.

Looking first at systemic differences, South Korea's system of admission to academic senior high schools tends to militate against gaps in educational standards opening up among them. Instead there is just one big gap, between academic and vocational senior high schools. This makes it easier to 'cool down' those students who are channelled into the latter. That academic/vocational split exists in Japan too, but there is also a complex hierarchy among the subtly differentiated academic senior high schools. Even if one's academic performance is not good enough to get into one's first-choice senior high school, one may still have a chance of admission to one's second- or third-choice school. Hence all students have some possibility of improving their educational career. Consequently, we do not see the kind of sudden and rapid cooling-down characteristic of the South Korean system: instead, aspirations appear to rise across the class spectrum.

Looking now at broader influencing factors, the higher degree of standardization among academic senior high schools in South Korea probably reflects the more centralized political power structure in that country, which makes it easier to impose uniform policies across the nation. South Korea has a presidential democracy where Japan's is parliamentary, and spent many years under military rule in the not-so-distant past. Indeed, the standardization of academic high schools is a policy that was commenced during the period of military rule and maintained after South Korea made the transition to democracy. Moreover, there has been a national consensus in South Korea about the need to catch up economically with developed countries and to raise educational standards to that end. Another factor is the system that has existed since pre-modern times of selecting élite bureaucrats by competitive examination from the ranks of men with Confucian learning. The cultural mindset that sees study as the road to social advancement thus has its roots deep in Korean tradition. Hence, initial aspirations are high right across the society, irrespective of gender, class, and type of school, and only a minority of the school-age population has its aspirations subsequently cooled down by being put into vocational senior high schools.

Japan is also a politically centralized state, but post-war democratization and the influence of trade unions have created a political climate in which it has always been difficult to carry out bold educational reforms. Economically, too, Japan's early achievement of prosperity produced a job market that could absorb school leavers far more effectively than those of later developing countries, and where wages were high enough for more or less any job to guarantee a minimal standard of living. The traditional emphasis on learning has not been as strong as in Korea, and in the near future the declining birth rate is expected to generate a situation where there are more university places than candidates. In these circumstances, children of blue-collar families, whose enthusiasm for education is weaker than that of white-collar children in the first place, tend to set out on their schooling without aspiring to high levels of education, a tendency revealed in the early appearance of class

differences in educational aspirations. Schools do not make any particular effort to encourage these students' aspirations for upward mobility; rather it appears probable that they are tending to go on to higher levels of education in growing numbers largely because universities are getting easier to get into—the so-called 'step-up effect'.

The research presented in this paper has some undeniable limitations in terms of sampling, the use of retrospective data, and simplified units of analysis; and many of the findings are suggestive rather than definitive. However, one thing that does seem clear is that the features of one society appear more clearly when we ask questions about *how* patterns develop rather than satisfying ourselves with merely asking *what* happens. This suggests the importance of pursuing further international comparative studies of the warming-up/cooling-down process in future.

## References

- Amano, Ikuo. 1982. *Kyōiku to Senbatsu* (Education and Selection). Tokyo: Dai-ichi Hōki.
- Arita, Shin, Nakamura Takayasu, Kumagai Shinji and Fujita Takeshi. 2002. 'Kankoku no Kyōiku Shisutemu' (The South Korean Educational System). In *Gakureki, Senbatsu, Gakkō no Hikaku Shakaigaku* (Comparative Sociology of Educational Career, Selection, and School), ed. Nakamura Takayasu, Fujita Takeshi and Arita Shin. Tokyo: Tōyōkan Shuppansha: 25–52.
- Arita, Shin. 2002. 'Kyōiku Asupirēshon to sono Kitei Kōzō' (Educational Aspirations and their Causal Structure). In *Gakureki, Senbatsu, Gakkō no Hikaku Shakaigaku* (Comparative Sociology of Educational Career, Selection, and School), ed. Nakamura Takayasu, Fujita Takeshi and Arita Shin. Tokyo: Tōyōkan Shuppansha: 53–72.
- Clark, Burton R. 1960. 'The "Cooling-out" Function in Higher Education'. *The American Journal of Sociology* 65: 569–576.
- Cummings, William K. 1980. *Education and Equality in Japan*. Princeton: Princeton University Press.
- Dore, Ronald P. 1976. *The Diploma Disease*. London: George Allen & Unwin.
- Farmer, G. Lawrence. 2001. 'Longitudinal Exploration of the Caste Theory of Educational Aspirations'. *Children & Schools* 23(3): 160–170.
- Fujita, Hidenori. 1979. 'Shakaiteki Chi'i Keisei Katei ni okeru Kyōiku no Yakuwari' (The Role of Education in the Formation of Social Status Attainment). In *Nihon no Kaisō Kōzō* (Japan's Class Structure), ed. Tominaga Ken'ichi. Tokyo: University of Tokyo Press.
- Hanson, Sandra L. 1994. 'Lost Talent: Unrealized Educational Aspirations and Expectations among U.S. Youths'. *Sociology of Education* 67: 159–183.
- Hopper, Earl I. 1968. 'A Typology for the Classification of Educational Systems'. *Sociology* 2: 29–46.
- Kao, Grace and Marta Tienda. 1998. 'Educational Aspirations of Minority Youth'. *American Journal of Education* 106: 349–384.
- Kariya, Takehiko and James E. Rosenbaum. 1987. 'Self-Selection in Japanese Junior High Schools'. *Sociology of Education* 60: 168–180.
- . 1999. 'Bright Flight: Unintended Consequences of Detracking Policy in Japan'. *American Journal of Education* 107: 210–230.
- Kudomi, Yoshiyuki. 1985. *Gendai Kyōiku no Shakai Katei Bunseki* (Analysis of Social Processes in Contemporary Education). Tokyo: Rōdō Junpō-sha.
- LeTendre, Gerald K. 1996. 'Constructed Aspirations: Decision-Making Processes in Japanese Educational Selection'. *Sociology of Education* 69: 193–216.
- MEXT (Ministry of Education, Culture, Sports, Science and Technology). 2003. *Monbukagaku Hakusho* (Education, Culture, Sports, Science and Technology White Paper). Tokyo: Zaimushō Insatsukyoku.
- Mimizuka, Hiro'aki. 1986. 'Chūgakkō ni okeru Kyōiku Senbatsu Katei' (The Educational Selection Process in Junior High School), *Kokuritsu Kyōiku Kenkyūjo Kenkyū Shūroku* (Research Report of the National Institute of Education) 13: 1–18.

- Nakamura, Takayasu, Fujita Takeshi and Arita Shin, eds. 2002. *Gakureki, Senbatsu, Gakkō no Hikaku Shakaigaku* (Comparative Sociology of Educational Career, Selection, and School). Tokyo: Tōyōkan Shuppansha.
- Nakayama, Keiko and Kojima Hideo. 1979. 'Kyōiku Asupirēshon to Shokugyō Asupirēshon' (Educational Aspiration and Occupational Aspiration). In *Nihon no Kaisō Kōzō* (Class Structure in Japan), ed. Tominaga Ken'ichi. Tokyo: University of Tokyo Press.
- Naoi, Masaru and Fujita, Hidenori. 1978. 'Kyōiku Tassei Katei to Sono Chi'i Keisei Kōka' (The Educational Attainment Process and its Status Formation Effect), *Kyōiku Shakaigaku Kenkyū* (The Journal of Educational Sociology) **33**: 91–105.
- National Statistical Office. 1999. *Social Indicators in Korea*. Daejeon: National Statistical Office.
- OECD. 1971. *Reviews of National Policies for Education: Japan*. Paris: OECD.
- Ono, Hiroshi. 2001. 'Who Goes to College? Features of Institutional Tracking in Japanese Higher Education'. *American Journal of Education* **109**(2): 161–195.
- Rohlen, Thomas P. 1983. *Japan's High Schools*. Berkeley: University of California Press.
- Sewell, William H., Archibald O. Haller, and Alejandro Portes. 1969. 'The Educational and Early Occupational Attainment Process'. *American Sociological Review* **34**(1): 82–92.
- Takeuchi, Yo. 1991. 'Myth and Reality in the Japanese Educational Selection System'. *Comparative Education* **27**(1): 101–112.
- . 1995. *Nihon no Meritokurashi* (Japan's Meritocracy). Tokyo: University of Tokyo Press.
- Turner, Ralph H. 1960. 'Sponsored and Contest Mobility and the School System'. *American Sociological Review* **25**(6): 855–867.
- Willis, Paul E. 1977. *Learning to Labour: How Working Class Kids Get Working Class Jobs*. Westmead: Saxon House.