

# CHANGES IN EDUCATION IN POSTWAR JAPAN: A GRAPHIC EXPLANATION

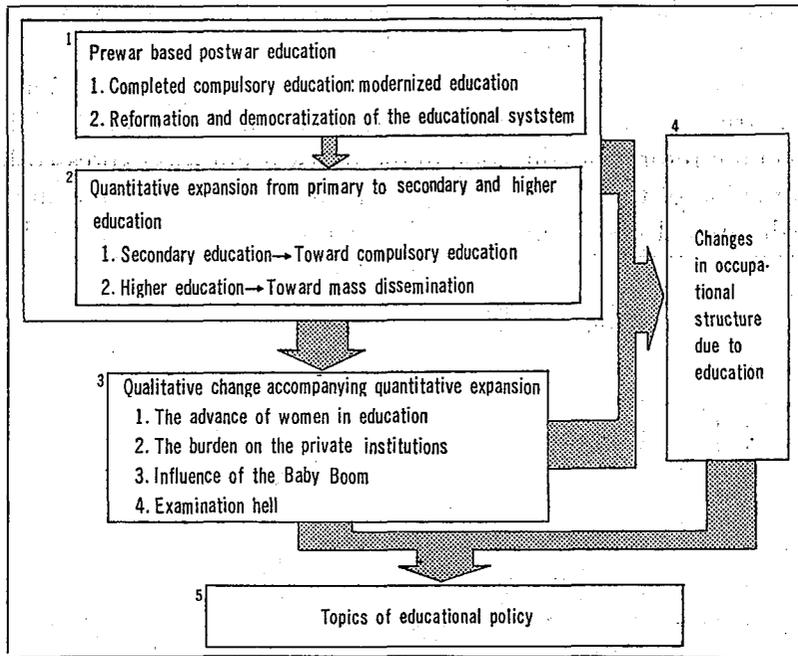
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Our efforts here are aimed at a thorough quantitative grasp of changes in education in postwar Japan, presented diagrammatically. There are naturally certain weaknesses in this kind of investigation. For example, one major characteristic of Japan's postwar education has been "democratization." Yet there are limitations to the extent to which this kind of qualitative change in education can be expressed, sufficiently and persuasively, in quantitative terms. However, even qualitative change can be expressed quantitatively to a certain extent. Thus, we have here treated the expansion of secondary and higher education and the increase in the number of women educators and girl students as aspects of the democratization of Japan's postwar education, and present these in our tables.

During the almost quarter of a century which has elapsed since the end of the war, education in Japan has changed not simply within the academic world; it has also had a complex interrelationship with the various political, economic and cultural aspects of society. It is not, however, the purpose of this article to consider these matters in their entirety, or to treat exhaustively the various major and minor problems.

We were forced to make rather bold selections in the data to be handled. The conceptual framework which we employed in our selection is shown in the chart below.

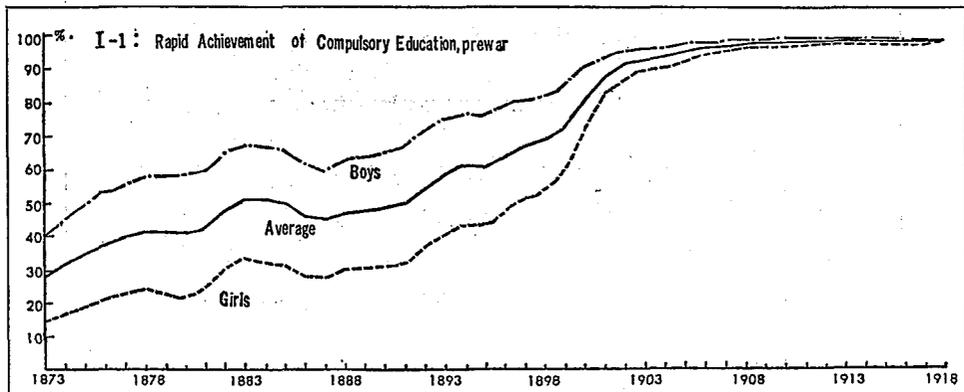
We deal first with the facts that Japan's postwar education is based on its prewar legacy and has been developed through a quantitative expansion of the secondary and higher levels. In this process of quantitative expansion, we may recognize any number of qualitative changes. But we have examined these in terms of four problems: women in education; private educational institutions; the influence of the baby boom; and entrance examinations. The aforementioned qualitative and quantitative changes in education have influenced the occupational structure of Japanese society (and, in turn, have themselves been influenced). The totality of the change in the academic world and in occupational structure has become a question of educational policy in contemporary Japan.



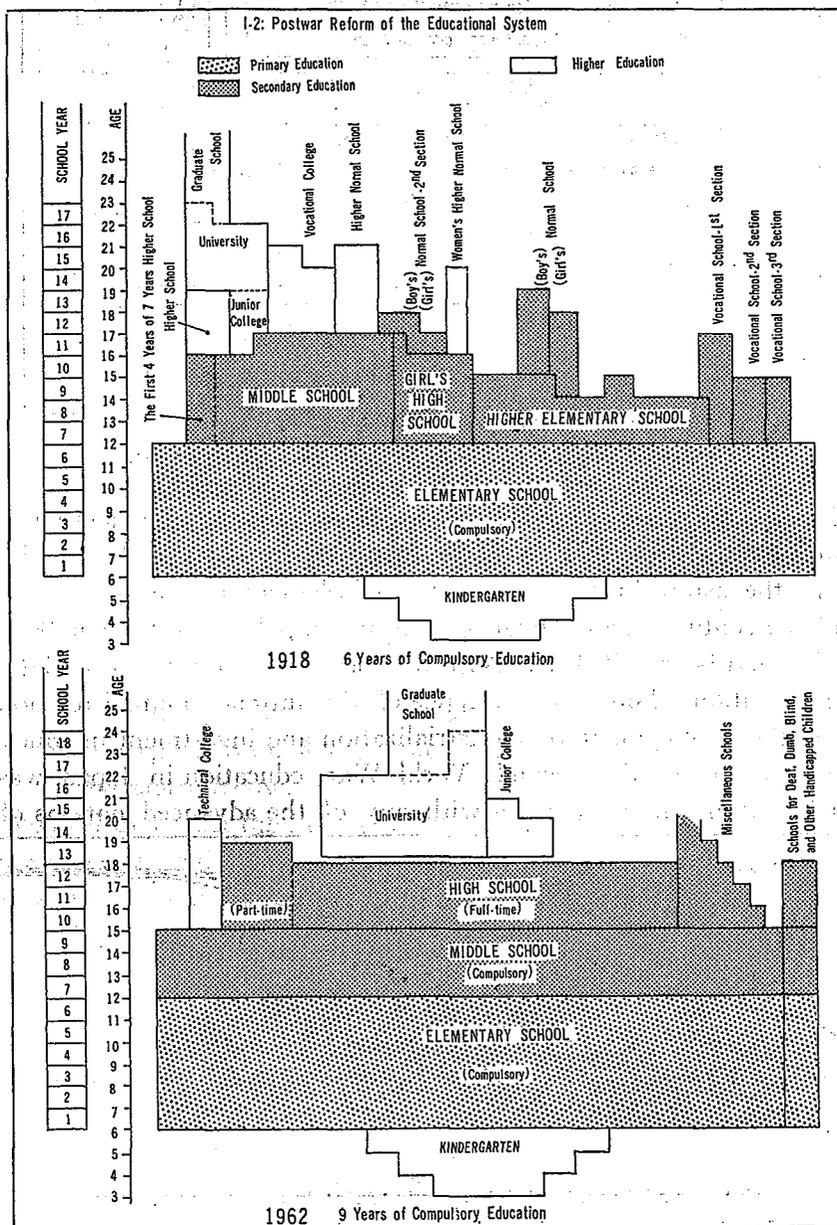
### I. PREWAR BASED POSTWAR EDUCATION

The most noteworthy legacy bestowed upon postwar education by the prewar system—which had undergone modernization from the Meiji era—has been the astonishing dissemination of elementary education. At the turn of the century, the attendance rate amounted to more than 90% for both girls and boys. (Cf. I-1.) With this came provision for secondary and higher education. This gives evidence of the intimate mutual relationship between the development of industrialization and investment in education.

At the end of the Second World War, education in Japan was not especially inferior in comparison with any of the advanced nations of the



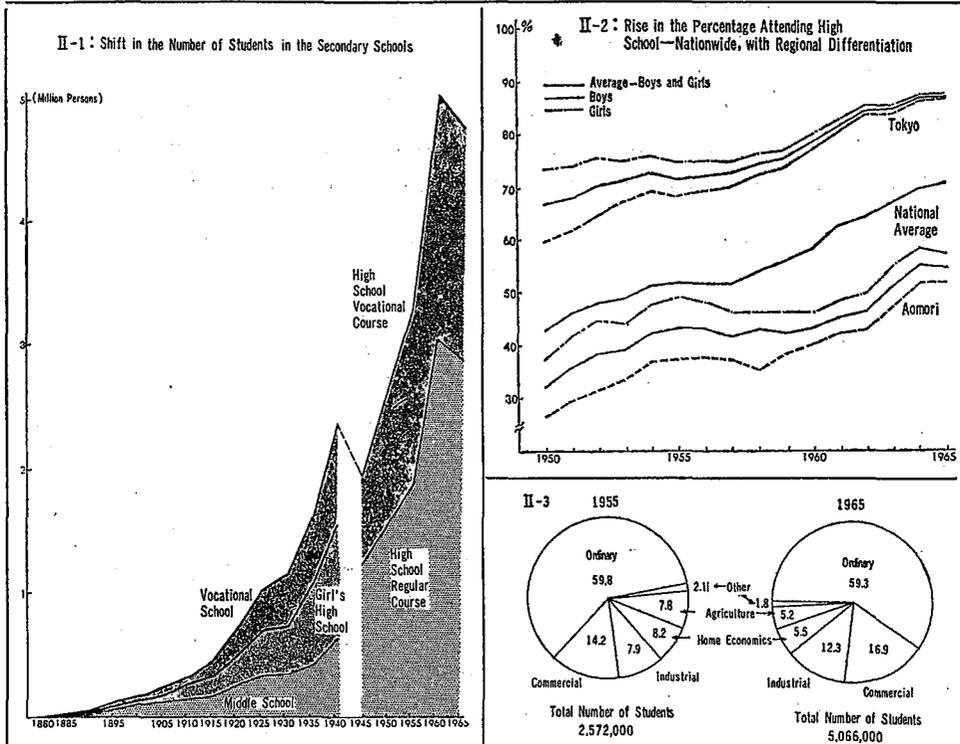
world, save for the reality of damage and destruction due to the war. However, the ladder from primary to higher education was discriminatory in structure, according to sex and vocation; the educational system was a complex structure of the so-called multi-track variety. (Cf. I-2.) The idea of democratic reform of education in the postwar era was expressed by first, the destruction of the discriminatory structure; and second, the unification of the educational system into a single track type of 6-3-3-4. (Cf. I-2.)



II. QUANTITATIVE EXPANSION FROM PRIMARY TO SECONDARY AND HIGHER EDUCATION

One conspicuous change in Japan's postwar education has been the expansion of secondary education, based upon the completed prewar system. A new educational system has been adopted and, along with this, the first three years of secondary education have become compulsory. The number of students who are advancing to high school has been increasing over the years (cf. II-1); the rate of advance has amounted to a nationwide average of 70%. However, a fair regional difference may be noted. In contrast with Aomori Prefecture on the extreme northern end of the island of Honshū, where only half of the middle school graduates go on to high school, in a metropolis like Tokyo, the rate of advance to high school is almost 90%. This indicates that the latter years of secondary education are virtually tantamount to compulsory education. (Cf. II-2.)

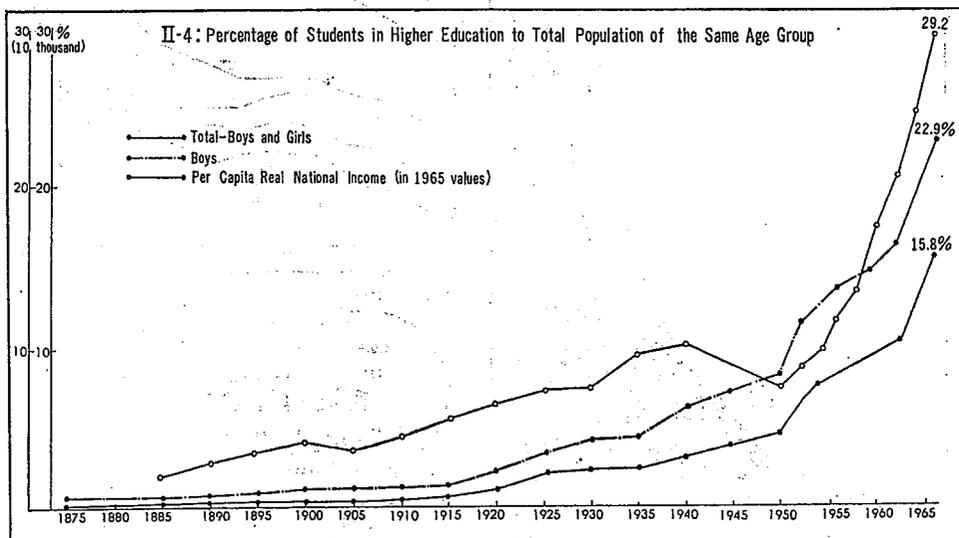
It is striking that the purpose of high school education is, at the present stage, terminal. But it cannot be denied that it is closely connected with advancement to college. It is well to note that despite the feeling that the high school curriculum should be more varied in accordance with the diversification of society which has come with industrialization, the specific



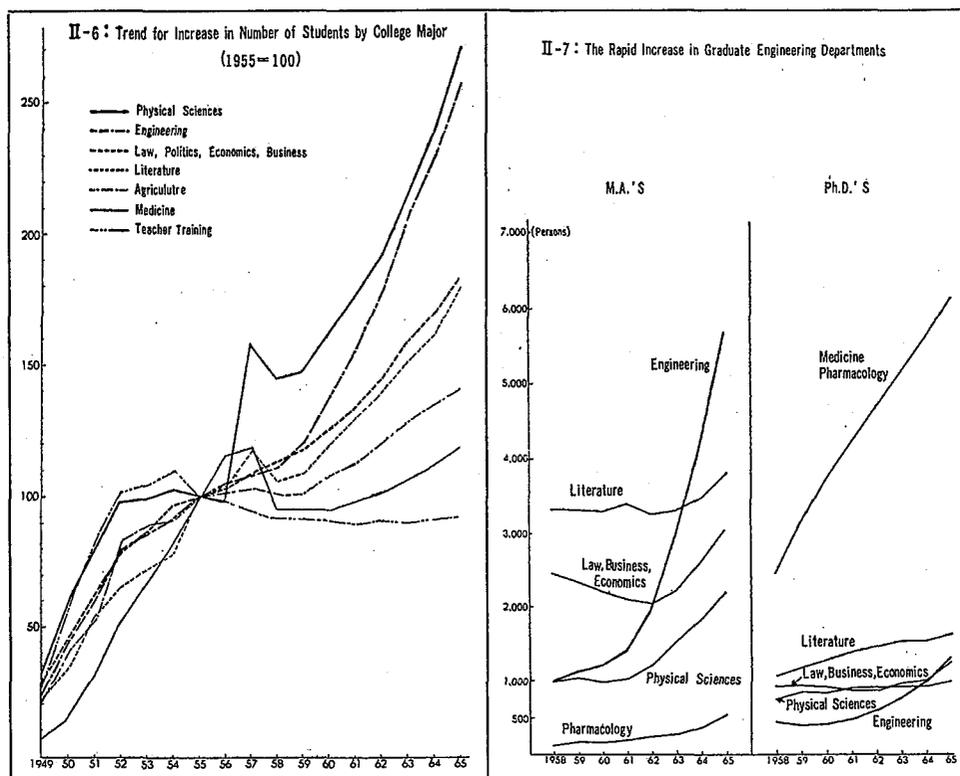
course which are basically oriented for going on to college accommodate 60% of high school students. (Cf. II-3.)

As in the case of high school education, there has been a dramatic increase in the number of students receiving higher education. The ratio of university students to the segment of the population of the same age was 5% in prewar years. In contrast, the ratio had already exceeded 20% in 1965 and had achieved virtually the same level as the same ratio for secondary schools students in the prewar years. (Cf. II-4.) As may be seen clearly in Figure II-5, which presents UNESCO data in 1964 in graph form, Japan certainly possesses a large number of students (990,000) in comparison with its total area and the size of its population. However, when we turn to a comparison according to field of specialization, students lean toward the social sciences, engineering, medicine and agriculture. If anything, the ratio exhibits the pattern of an industrializing rather than a full industrialized nation, in the latter of which there is a well-balanced ratio among the students' major fields. From this, too, it is clear that higher education in Japan parallels the tremendous economic growth since the war and particularly since 1950, as can also be seen from the fact that the increase in the number of students seen in Figure II-4 contrasts with the growth of per capita national income.

However, we have already noted the flaw that students in Japan concentrate chiefly on economics and law. And the idea that there should be a greater increase in the number of students in the physical sciences rather than in literature has received general support. This is testified to by the facts that since 1955 the increase in the number of students in the physical







sciences and engineering has exceeded the number in other major fields; and that during the seven years from 1958-65 there was a six-fold increase in the number of engineering students in M. A. programs in graduate schools. (Cf. II-6, II-7.)

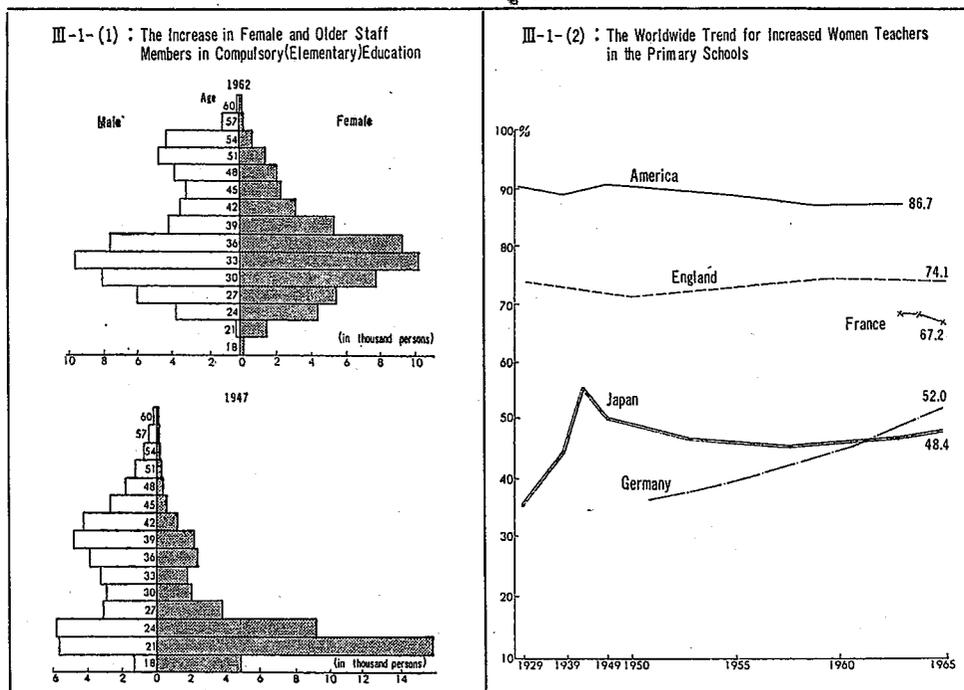
### III. QUALITATIVE CHANGE ACCOMPANYING QUANTITATIVE EXPANSION

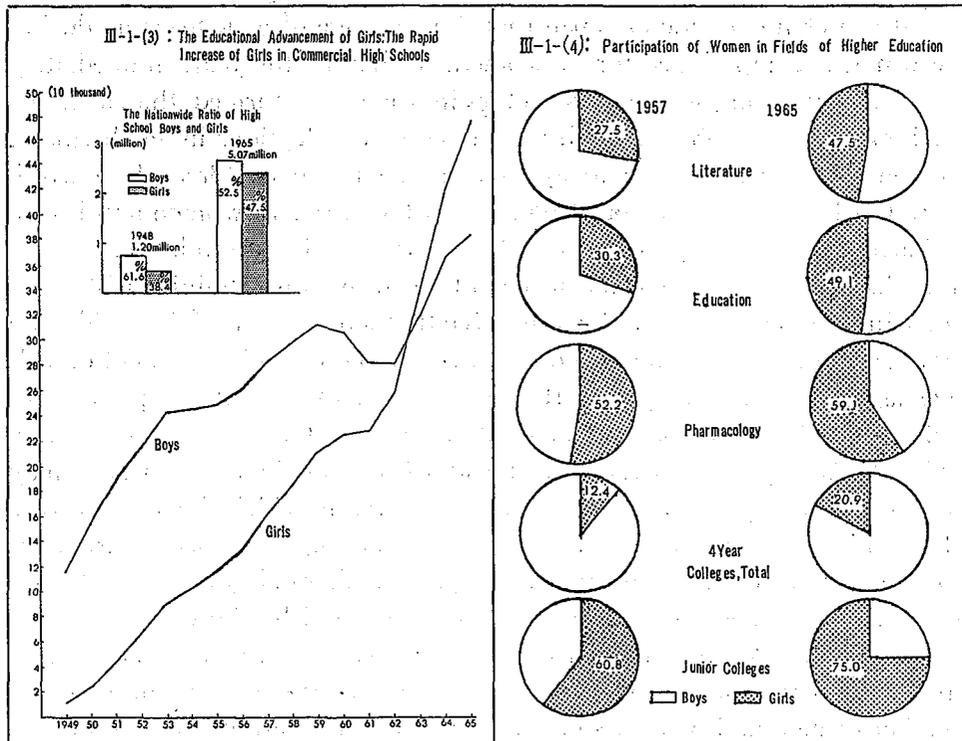
The tremendous quantitative expansion of secondary and higher education in postwar Japan naturally has given rise to a large number of problems, along with qualitative changes in each field of educational activity. Below, we would like to examine such problems.

#### III-1. *The Advancement of Women in Education*

It is generally acknowledged that with the progress of industrialization, there was an increase in the number of women teachers in elementary schools. If we look at the international comparison offered in Figure III-1-(2), Japan ranks—still at around 50%—on the low side among the various advanced nations. But the trend toward increase in the number of female elementary school instructors is gradually continuing to strengthen.

It is a characteristic of Japan that the shortage of male teachers during the war was compensated for by women, so that in the years immediately after the war young women instructors in their 20's formed the backbone teaching staff. In contrast, with the subsequent reductions in employment, women in their 30's have today come to be the main force. In a word, there has been a simultaneous trend toward increase in women and in age in Japan's elementary schools. (Cf. III-1-(1).) Under the influence of this trend has come the visible advancement of women to administrative positions in the schools. On the other hand, there is still a fairly wide gap between the number of men and women who go on to high school or college, as may be seen in Figures II-2 and II-4. However, this gap is continually narrowing. The percentage of high school students in 1965 showed 52.5% boys and 47.5% girls. The trend toward an increase in girls may be seen in a comparison with the ratio for 1948, in which the figures were 61.6% and 38.4% respectively. In the vocational high schools in particular, the number of girls has already exceeded the number of boys. (Cf. III-1-(3).) There is still a considerable limit to the number of girls who go on to higher education. In 1965 the number of coeds at four year institutions was still only 20% of the total. The departments in which there is an almost equal number of men and women students are limited to literature, education and



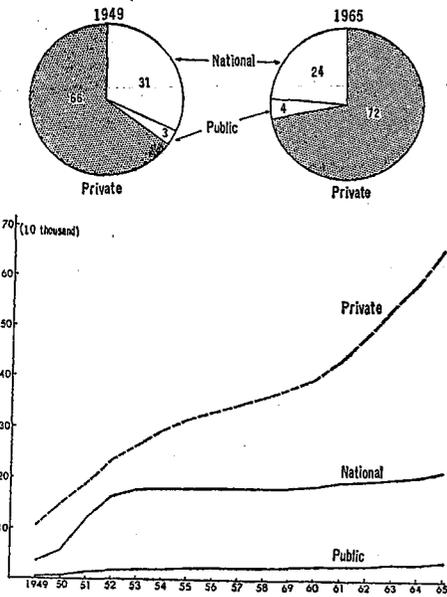


pharmacology. Even here, the rate of increase is remarkable when we compare the figures with those for seven years earlier, as may be seen in Figure III-1-(4). It is conceivable that higher education for women is undertaken chiefly at junior colleges.

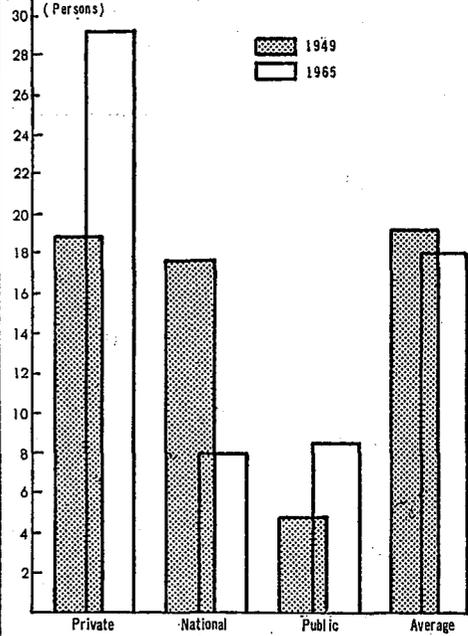
### III-2. The Burdens on the Private Colleges and Universities

As we have noted above, a characteristic of education in postwar Japan has been the conspicuous quantitative expansion of secondary and higher education. But we cannot overlook the fact that it has been the private institutions which have taken this tremendous change upon themselves. In 1965, there were approximately 650,000 students attending private colleges and universities in Japan, but they accounted for 72% of the total number of college students. However, since in 1949 there were only 100,000 students at private colleges and universities, this means an increase of 6.5 times in about 15 years. In the same interval, the national universities expanded by about four times; however, from 1953 there has been virtually no growth in the number of students at the national universities. (Cf. III-2-(1).) Since before the war, one of the characteristics of higher education in Japan has been that the top-ranking schools are more often national rather than private institutions. In 1949, however, there was virtually no difference

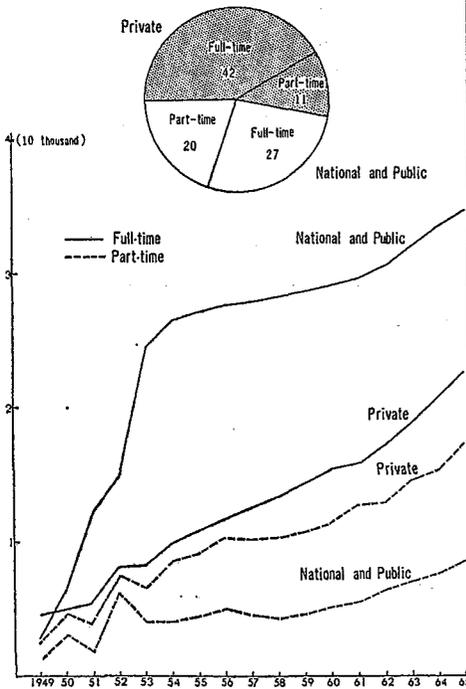
III-2-(1) : The Rapid Increase in Students at Private Colleges



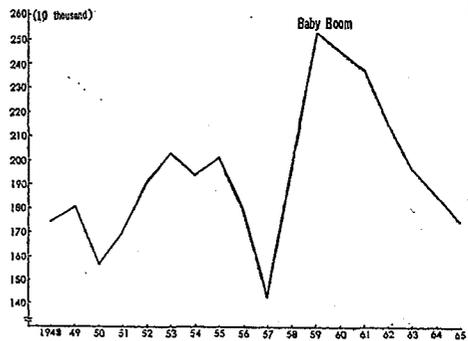
III-2-(2) : Number of Students in Higher Education per Full-time Instructor



III-2-(3) : The Weight of the Part-time Instructor on Private College Faculties



III-3-(1) : Shift in the Number of Sixth-graders



Shift in the Number of Primary School Students, Nationwide

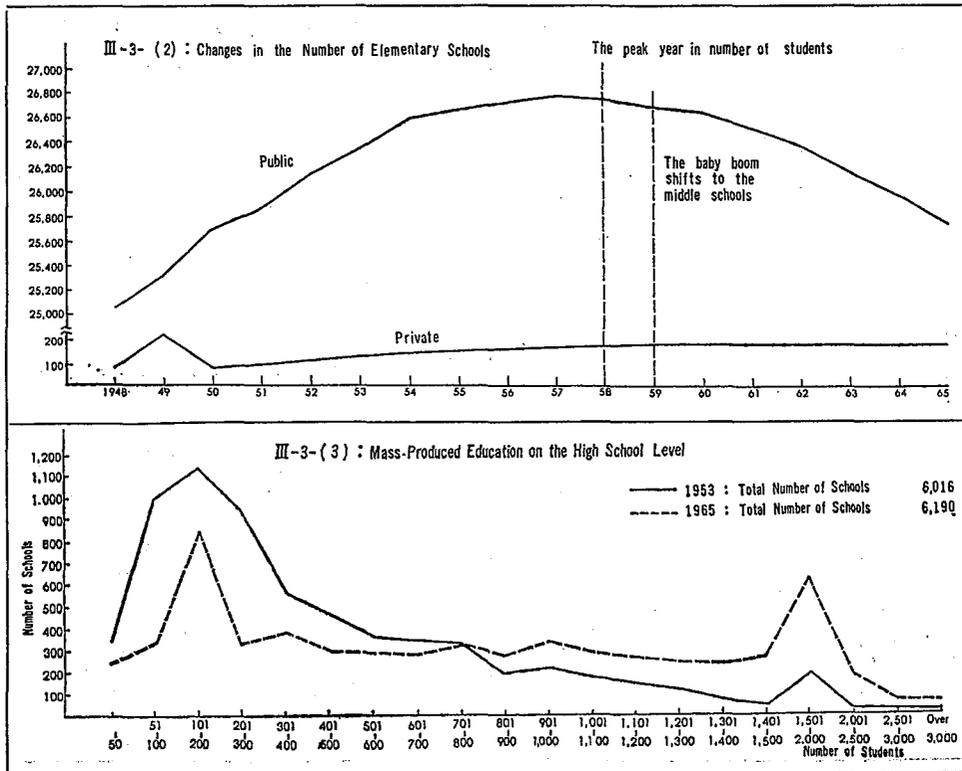
1955	12,270,000
1956	12,620,000
1957	12,960,000
1958	13,490,000 peak
1959	13,370,000
1960	12,590,000
1965	9,780,000

between the faculty-student ratios of the private and public schools. After the rapid growth in number of students, in contrast, the faculty-student ratio at national universities was 1 : 8 in 1965, in opposition to a 1 : 30 ratio at private schools. (Cf. III-2-(2).) In the private schools, this led to the appointment of many part-time instructors in order to mitigate the situation in the classrooms which, like the elementary schools were packed like a can of sardines. As a result, this meant that in 1965, 20% of the nationwide university teaching staff was composed of part-time instructors at private schools. (Cf. III-2-(3).) This can lead us to understand that the quantitative expansion of higher education in Japan was made possible through the lowering of the quality of the private institutions.

III-3. The Baby Boom

A rapid increase in the birth rate was seen in every country after World War II. How Japan coped with this temporary increase in population is a matter of some interest. (Cf. III-3-(2).)

During the ten year interval from 1945, Japan's birth rate showed dramatic variation. In 1945, the birth rate hit an extreme low point. From the following year came the era of the baby boom. A few years later, family

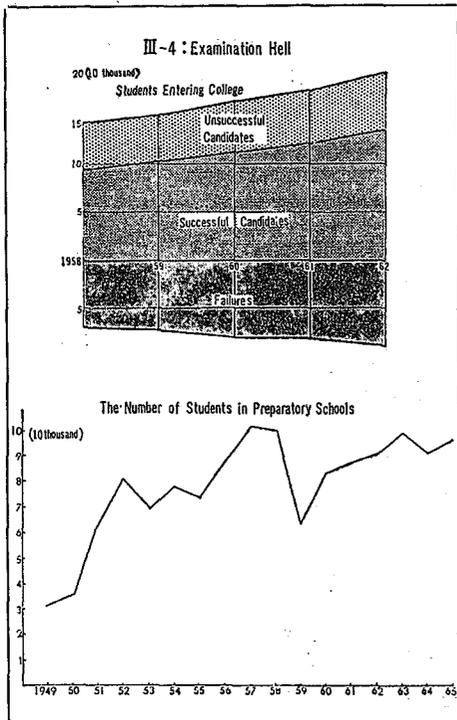


planning showed conspicuous success, and ten years later, the birth rate hit an extreme low. As a result, the temporary increase in the number of pupils passed through the school system from primary to secondary to higher schools, like an egg passing through a snake, and swept over each level like a whirlwind. (Cf. III-3-(1).) At present, the youth of this boom is in college, and constitutes one cause for today's student problems in higher education. The advent of this boom necessitated the enlargement of 1,800 elementary schools; after it had passed, the number of schools diminished (III-3-(2).) In the case of the high schools, however, the number of new schools was limited to 200; instead, an attempt was made to confront the increase by expanding the number of students accommodated at each school. (Cf. III-3-(4).) This led to the advance of mass production in secondary education.

III-4. Examination Hell

Severe competition in entrance examinations has been a feature of Japanese education since before the war. However, the rise in the number of students going on to college has made the severity of the entrance examinations all the more intense. Particularly severe competition may be seen in the case of university entrance examinations. The situation has developed so that children who have been unsuccessful in entering the college

of their choice spend the ensuing year until the next examination is given studying for the tests, even though they have completed high school. But those who are again unsuccessful despite their year's efforts must once more spend another year or even longer studying. Thus, every year roughly one-half of the students taking entrance examinations is comprised of previously unsuccessful candidates who have been studying for a year or more. So it can be said that the educational system in Japan is not 6-3-3-4, but 6-3-3-X-4. Many number of preparatory schools specializing in training for entrance examinations has been opened for those children who spend time preparing for the next year's tests. A hundred



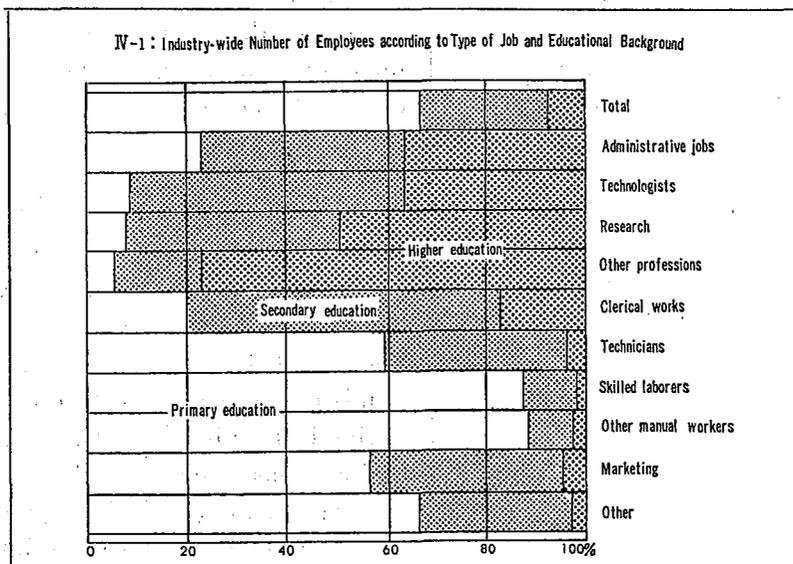
thousand students are accommodated in this kind preparatory schools; some have become successful business enterprises. (Cf. III-4.)

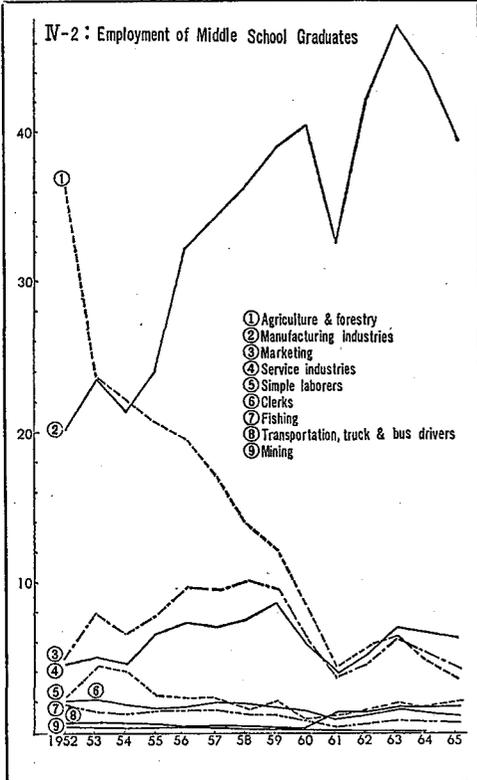
#### IV. CHANGES IN OCCUPATIONAL STRUCTURE

Japan's postwar economy has travelled a road to spectacular economic growth, proceeding via reconstruction from the ruins of the last war, and sustained by a social, technological revolution. As a result, there has been a steep decrease in the numbers employed in the primary sector, and an increase in employment in the secondary and tertiary sectors. This process has demanded a higher level of education among employees in all sectors. On the other hand, the quantitative expansion of secondary and higher education which has been described above, has responded to these changing demands with up-grading the quality of manpower. (Cf. IV-1.)

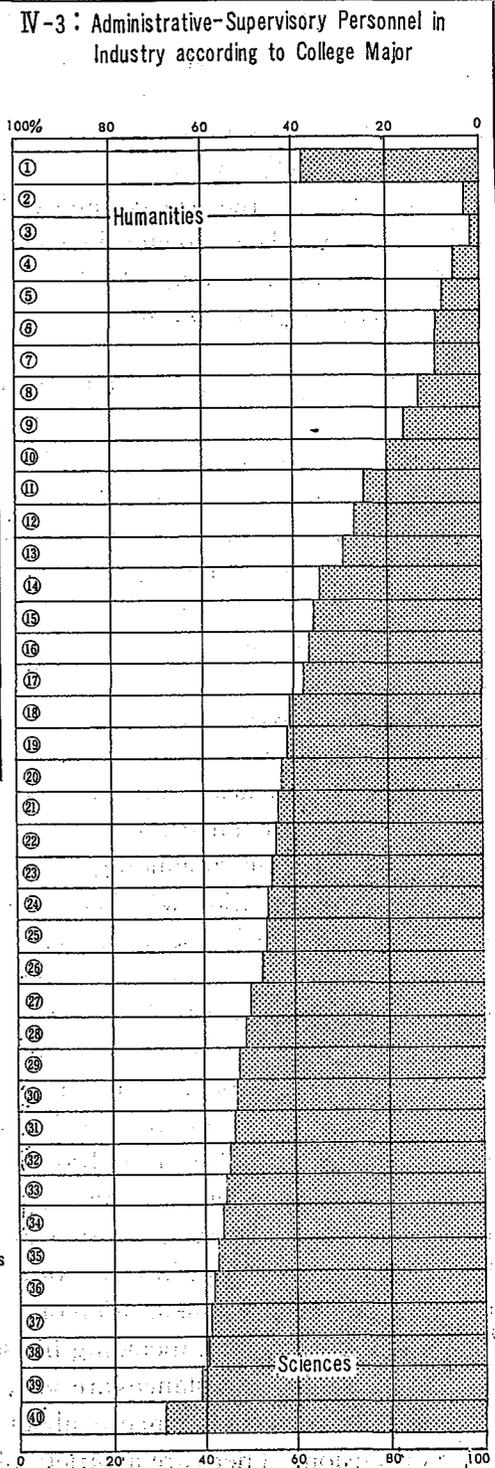
The process involved in this change has brought at least two problems to Japan's economy and education. One is a shortage of young workers. In 1965, the rise in the level of education resulted in fewer middle school graduates seeking employment (550,000) than high school graduates seeking jobs (690,000.) Hence, it has become difficult for many enterprises to employ only those who have completed just their compulsory education for simple production operations. However, the shortage of young workers in agriculture is particularly acute. In 1952, over one-third of those who had completed their compulsory education went into agriculture. In contrast, in 1965 only 5% did so. (Cf. IV-2.)

Another problem is the demand for high school graduates in administ-





- |                               |                                      |
|-------------------------------|--------------------------------------|
| ① All industry                | ②① Weaving                           |
| ② Brokers                     | ②② Processed foods                   |
| ③ Banks and trust co.'s       | ②③ Paper and pulp                    |
| ④ Insurance                   | ②④ Primary metals                    |
| ⑤ Trading co.'s               | ②⑤ Mining                            |
| ⑥ Printing and publishing     | ②⑥ Cement and glass                  |
| ⑦ Warehousing                 | ②⑦ Other chemical products           |
| ⑧ Real estate                 | ②⑧ Gas and electricity               |
| ⑨ Service industries          | ②⑨ Chemical fertilizers              |
| ⑩ Wholesale, retail           | ②⑩ Forestry                          |
| ⑪ Railroads, transport        | ②⑪ Rolling stock and automobiles     |
| ⑫ Communications              | ②⑫ Machinery                         |
| ⑬ Leather goods               | ②⑬ Instruments and optical goods     |
| ⑭ Other manufacturing         | ②⑭ Agriculture                       |
| ⑮ Fuels                       | ②⑮ Chemical fiber                    |
| ⑯ Rubber                      | ②⑯ Construction                      |
| ⑰ Shipping                    | ②⑰ Soda and related products         |
| ⑱ Lumbering and wood Products | ②⑱ Electric appliances and machinery |
| ⑲ Metal products              | ②⑳ Shipbuilding and aeronautics      |
| ⑳ Fishing                     | ③① Pharmaceuticals                   |



ration, technology and research. In this case, there is the problem of discrepancy between occupation and major field while in college. The material is somewhat outdated; however, a 1955 classification of employees in administrative positions in all industries, according to major field in college, showed that 60% had been in the humanities, and social sciences, while 40% had been in the sciences and technologies. As may be seen in Figure IV-3, there has been greater demand for graduates in the sciences in terms of the distribution of major fields according to industry, with the progress of the technological revolution.

#### V. TOPICS OF EDUCATIONAL POLICY

As has been seen above, there has been an intimate connection between quantitative expansion and qualitative change in education in postwar Japan on the one hand, and the economic development of the total society on the other. This swift change has brought great discordance between the educational "sector" and other sectors of society, as well as within education itself. Today, it has become necessary that there be rational, planned, comprehensive policies to cope with these problems.

One effort which has been based upon this viewpoint has been research on the effect of investment in education, conducted jointly by the government and certain academic institutions circa 1960. This research brought together scattered statistical data concerning education; and opened the way to a quantitative understanding of the process of the 100 years' development since modern education was introduced in Japan. The tables and figures used in this article frequently utilize this work.

However, the concerns of recent research may be seen in the reconsideration of perceiving education only from its economic point of view. This is due to the fact that although the effect and importance of education for economic development cannot be denied, interest in the social distortions effected by economic development has called for the necessity of understanding education in its broad social and cultural aspects. With this concern there has been a continuing shift in stress in education from economics to culture, from production to consumption, from the acquisition of knowledge to creativity, in terms of education to develop the individual and to foster originality; re-education of the labor force including professionals; and life-long education, including housewives.

The actual circumstances are such that the recognition of the economic effect of education and concern about its cultural significance coexist in a state of tension. There are a variety of devices which deserve attention as

a means for realizing both of these. We have come to believe that education aided by radio, television, film and computers can enable individualized education even with the context of mass education. Of course, there are still strong opponents—both individuals and groups—of this kind of “mechanized education.” But despite this, there is no disagreement over the fact that something must be done to support high quality education in the face of an increasing student body.

## SOURCES OF FIGURES

- I-1 Mombu-shō (Ministry of Education), *Nihon no seichō to kyōiku* (Japan's Development and Education), Tokyo, 1962.
- I-2 *Ibid.*
- II-1 Chūō kyōiku shingikai shiryō (Material prepared for the Central Council for Education).
- II-2 Mombu-shō, *op. cit.*
- II-3 *Ibid.*
- II-4 Chūō kyōiku shingikai shiryō.
- II-5 *Energy*, Esso Standard, Japan, VI-1 (1969).
- II-6 Mombu-shō, *op. cit.*
- II-7 *Ibid.*
- III-1-(1) *Ibid.*
- III-1-(2) Chūō kyōiku shingikai shiryō.
- III-1-(3) Mombu-shō, *op. cit.*
- III-1-(4) *Ibid.*
- III-2-(1) *Ibid.*
- III-2-(2) *Ibid.*
- III-2-(3) *Ibid.*
- III-3-(1) *Ibid.*
- III-3-(2) *Ibid.*
- III-3-(3) *Ibid.*
- III-4 Hiroaki Mizumura & Akira Okamoto, *Zusetsu Nihon no kyōiku* (Illustrated Explanation of Education in Japan), Tokyo, San'ichi-shobō, 1963.
- IV-1 Mombu-shō *Shokuba no gakureki to shokushu kōsei* (Workers' Composition as Classified by School Career and by Industry), Tokyo, 1967.
- IV-2 Mombu-shō, *Nihon no seishō to kyōiku*.
- IV-3 Mombu-shō, *Shokuba no gakureki to shokushu kōsei*.