

TREND ANALYSIS OF SOCIAL STRATIFICATION AND SOCIAL MOBILITY IN CONTEMPORARY JAPAN

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I. THE PROBLEM OF SOCIAL MOBILITY IN JAPANESE SOCIETY

In the years that followed the end of World War II, Japanese intellectual circles became preoccupied with the exposure of so-called "traditional," "pre-modern," or "feudal" elements said to be surviving in Japanese society. These years were marked by a rapid change of the value system of the Japanese people; that is, the refutation and negation of the prewar system of social thought, based on the Emperor and family system as fundamental sources of authority, was pictured as the principal ideological task confronting the nation. The overwhelming consensus at that time was that Japan had still not succeeded in modernizing herself, a conclusion which was perhaps belabored to the point of exaggeration.¹ Among the social scientists, the "semi-feudal" analysis of Japanese society promulgated by the *Kōza* School of Marxists in the early Shōwa years was revived and became the theoretical basis for a string of attacks on the "backwardness" of modern Japan.²

As long as this derogatory set of preconceptions dominated Japanese sociological thought, there was little opportunity for the development of empirical studies on social mobility. As is well known, the sudden flower-

¹ A comprehensive and objective summary of the various positions on this question is given by Kizaemon Ariga in his "Nihon no kindaika ni kansuru shakaigakuteki kenkyū" (The Sociological Study of Japan's Modernization), which also includes an excellent bibliographical appendix. See *Ariga Kizaemon chosaku-shū* (Collected Works of Kizaemon Ariga), Tokyo, Miraisha, 1967, Vol. 4, pp. 143-167.

² The "semi-feudal" analysis of Japan's modernization made popular by the *Kōza* School of Marxists in the 1920's and 1930's was based, originally, upon a specific understanding of the relationships of land ownership current in contemporary agriculture, in which sense the applicability of the theory would seem to be limited to a specific time and place. In the postwar period, however, the point of view first developed by the *Kōza* Marxists in the 1920's and 1930's began to influence theoretical research concerned not just with the agricultural sector of the economy, but with the economic and social structure of the country as a whole, with the result that the term "semi-feudal" has become a kind of universal key to the understanding of every aspect of modern Japan.

ing of occupational mobility studies in the United States—particularly since the 1940's—was occasioned by popular dismay at the transformation of America, chiefly as a result of the Great Depression, from an idealized “land of freedom and opportunity” into an increasingly rigid and stratified class society.³ The fundamental inspiration, in other words, of the rash of occupational mobility studies appearing in American sociological journals during recent years has been the vision of American society as an emancipated and highly mobile society.

In Japan, by contrast, such a vision has been entirely lacking; quite the contrary, in the popular imagination Japan is inevitably portrayed as a rigidly stratified and immobile “traditional” society. Nor has this stereotype been confined to Japanese intellectuals: Ruth Benedict, for instance, asserts without hesitation that “In all her national history Japan has been a strong class and caste society,” and that “In Japan caste had been the rule of life through all her recorded history.”⁴ Needless to say, if this analysis is accepted as an accurate description of Japanese society, not only during its feudal era, but since the Meiji Restoration as well, there will be a dearth of serious motivation for the study of social mobility; it will simply be assumed that the rate of mobility in Japanese society will be both constant and low.

For the above reasons, it was only natural that interest in the analysis of occupational intra-generational and inter-generational mobility began in Japan only with the introduction of the foreign works of such empirical investigators as Lipset, Bendix, Rogoff, Glass, and Carlsson.⁵ Up until that time, investigation of social mobility by Japanese sociologists had centered upon what Sorokin would categorize as “horizontal” rather than “vertical” mobility; we have, for example, numerous studies of the influx of peasants from the countryside into the cities, studies concerned primarily with demographic analysis, or with analysis of the labor market.⁶

³ For a good review of the course of sociological debate over recent years in the United States, see E. Chinoy, “Social Mobility Trends in the United States,” *American Sociological Review*, April, 1955, pp. 180-186.

⁴ Ruth Benedict, *The Chrysanthemum and the Sword*, London, Secker & Warburg, 1947, p. 57.

⁵ The first occupational mobility field work carried out under the influence of American sociology in the postwar period was performed in 1952 by a team of researchers consisting of Saburō Yasuda, Kōtarō Kido, Masataka Sugi, and Kōichi Hibi in Tokyo; the results of this survey appeared in an article “Daitoshi no shokugyōteki seisō to ido” (Occupational Stratification and Mobility in the Metropolis), *Shakaigaku hyōron* (Sociological Review), Vol. 4, No. 1-2, pp. 135-149.

⁶ For an example of this kind of demographic study, see Keikai Hayashi, *Nōka jinkō no kenkyū* (Studies on Rural Population), Tokyo, Nikkōshoin, 1940; Shigeo Nojiri, *Nōmin*

Until the mid-fifties, as these studies have shown, the size of the agricultural work force remained fairly constant at about 15 million persons, while the number of farming households was likewise constant at about 6 million. Almost without exception, the eldest son in the farming household remained on the farm and continued his father's occupation. Since the manpower requirement of the agricultural sector of the economy remained substantially unchanged, the population influx from the countryside to the cities represented little more than a gap between the reproduction rates of the urban and rural areas of the country. Consequently, studies of "mobility" from the countryside to the cities wound up merely reconfirming the already accepted picture of the surplus population of rural farming villages providing the cities with their manpower supply.

In 1955, however, a team of Japanese sociologists (including the author), sparked by the accomplishments of their colleagues in the United States, England, and Sweden, undertook the first nationwide survey of "vertical" occupational mobility in Japan, the results of the survey being subsequently published in two volumes of reports.⁷ This first survey has been followed up with successive surveys conducted at five-year intervals by an expanded version of the original group of sociologists and social statisticians; to date, this has provided the scholarly community with a set of surveys up to 1965.

The data gathered and published in our 1955 survey of mobility in Japan was employed by Lipset and Bendix in a sweeping comparative study of social mobility in the advanced industrial countries of the world; we were consequently able, for the first time, to answer definitively the question of the relative "rigidity" or "mobility" of Japanese society. In their study, Lipset and Bendix found that the rate of mobility across the dividing line of "manual" and "non-manual" occupations in terms of inter-generational (father-son) comparisons was substantially the same in the six countries of France, Sweden, Switzerland, England, Japan, and the United States; and that a generally high rate of mobility was observed in all industrialized countries, without exception.⁸

The American authors of this comparative study were, of course,

rison no jishhōteki kenkyū (An Empirical Study on Rural Exodus), Tokyo, Iwanami-shoten, 1942. The latter is a good example of a more descriptive approach to the problem, with emphasis on the labor market question.

⁷ Nihon shakaigakkai chōsaiinkai ed., *Nihon shakai no kaisō-teki kōzō* (The Class Composition of Japanese Society), Tokyo, Yūhikaku, 1958; Kunio Odaka, ed., *Shokugyō to kaisō* (Occupation and Social Class), Tokyo, Mainichi-shimbunsha, 1958.

⁸ S.M. Lipset and R. Bendix, *Social Mobility in Industrial Society*, Berkeley, University of California Press, 1959, Chapter 2.

chiefly interested in refuting the myth that opportunity for upward mobility was much greater in the United States than in the "stratified" and "rigid" societies of European nations. But the results of their study were equally important for Japanese sociology, which found its traditional representation of Japan as a "rigid" and "immobile" society shattered by the revelation that Japan ranked on a par with the United States and other advanced industrial countries in terms of opportunity for upward mobility—a revelation which becomes even more astonishing when it is realized that the findings of Lipset and Bendix were based on data pertaining to Japan in 1955, well *before* the impact of the series of technological innovation, "national income doubling" boom and rapid urbanization could have been reflected in the statistics. As the analysis in the subsequent section will show, the rate of social mobility was significantly increased with the onset of rapid economic growth in the mid-50's and the rapid social changes it engendered. The falseness of the "static" image of Japanese society is, however, all the more clearly exposed when we consider that, even in the period preceding the rapid growth boom of Japan's postwar economy, the rate of mobility in Japanese society was quite comparable to that of the most advanced industrial societies of the world.

But is the discovery of the relatively high position of Japan's inter-generational occupational mobility rate on the international scale truly such a paradox? I think not. In the first place, it must be recalled that Japan, within the hundred years since the Meiji Restoration, has succeeded in hoisting itself by its own bootstraps into a position of equality with the world's most advanced industrial countries, in spite of a relatively late start in economic modernization. The termination of feudal status privilege, development of an entrepreneurial class, generation of a supply of wage labor manpower, and formation of a new middle class—in sum, the preparation of the social foundation for a modern industrial economy—had to be and were accomplished with unusual speed. Such a rapid and drastic revolution of the social structure in turn could not have been accomplished without the engendering of social mobility. Yet, while the impressive degree of social mobility in Japanese society can perhaps be partially explained as a by-product of this revolution of the traditional social order, the relative ease and speed with which the modernization of the social structure was achieved can in turn be attributed to a high degree of flexibility and mobility *a priori* inherent in Japanese society. We are confronted, in other words, with something very much resembling the problem of the chicken and the egg. Neither the high degree of mobility in Japanese society nor the ease and speed with which the transformation

of the social order was accomplished is explainable as an isolated phenomenon; the question of which precedes in the chain of causality is fundamentally unanswerable.

Nor can it be overlooked, in the second place, that the value-orientations of the Japanese people has been instrumental in prompting the modernization of the society. Tokugawa Japan is customarily pictured as dominated by the Confucian conception of status, according to which society was arranged in a hierarchy of four classes: warriors, farmers, artisans and tradesmen. But by the end of the Tokugawa this ostensibly rigid status system had been very substantially weakened and undermined by the course of social developments. When, as a result, the feudal authority structure of the traditional society was toppled in the early Meiji, a new elite, composed of the most talented of the lower *samurai*, merchant, and upper peasant classes, was able to step immediately into positions of leadership in politics and industry. There can be little doubt that the tremendous zeal and optimism with which Meiji Japan was able to attack the problem of social development derived from the release of social energies occasioned by the surge in upward social mobility witnessed during these years. Of utmost importance was the inspiration and motivation to Meiji youth provided by tales of the triumph of hard work and patience over adversity—tales which in their day bore the stamp of full social approval and legitimacy (just how broad the social sanction for this theme was will be glimpsed from the frequency of “success stories” in the primary school textbooks and children’s literature of the day). Spencerian doctrines of evolutionary liberalism rapidly assumed an important position in the early Meiji social thought. But it was not swallowed whole: the Anglo-Saxon stress on individualism as the motivation for accomplishment became subordinated, in the Meiji orthodoxy, to a state- and family-centered legitimacy for success. Of course, the Meiji emphasis on the state and the family as sources of legitimacy was nothing but an updated version of the traditional Confucian stress on the values of loyalty (*chū*) and filiality (*kō*); and their subsumption of classical individualism as the motivation for achievement in fact reflects a tendency toward eclecticism and conservatism in the social thought of the Meiji era. In this sense, the type of success ideology current in Japan until World War II might be regarded as an illustration of the paradox of traditional Japanese values playing an important role in the encouragement of industrialization and modernization.

With the advent of the postwar era, however, these traditional sanctions for success were swept away at a blow, to be supplanted by a more

individual oriented incentives based on the desire for improved material living conditions and for personal honor and fame. Competition was much fiercer in the new society, but the prewar rationale for achievement played no part in inspiring it.

Finally, we must acknowledge the role of education in furthering and accelerating social mobility. For the new entrepreneurial class of the early Meiji, education was by and large not a necessary condition for the accession to positions of power and influence within the society. But such a state of affairs could not outlive the early days of industrialization. By the beginning of Taishō (1912), the inaugural era of industrialization had been left behind, and positions of authority within the industrial world were occupied by men who had worked their way up a formalized and bureaucratic ladder of success. In place of the naked economic competition of the early days of industrialization, Taishō executives fought their way to the top by successfully weathering the tests of academic competition and rivalry along the path of promotion; from this period on, education came to play an increasingly decisive role as arbiter and delimitter of social mobility. In post-Meiji Japan we find no equivalent of the frozen class lines and tradition of the European aristocracy, nor anything like the notorious monopoly of first rate colleges by children of upper class families, as was prevalent in England for so long. Quite the contrary, in Japan a network of national universities and colleges has provided the youth of the nation with the opportunity for a virtually tuition-free college education, with the state picking up the tab; talented young men from every social stratum have thus been guaranteed the possibility of a first class higher education. In the postwar years, competition for positions of the universities of high prestige has been further intensified as a result of the rise in the standard of living of the working classes, which has served in turn to increase dramatically the number of those aspiring to higher education. It is clear, in sum, that a well-developed educational system has served to promote inter-generational mobility in Japanese society.

At the same time, however, the preoccupation with academic qualification characteristic of modern Japanese society is often accused of serving to curtail the possibilities of intra-generational mobility; for the unfortunate Japanese who have not progressed beyond an elementary education, opportunities for advancement and upward mobility are said to be virtually non-existent. While there seems to be a certain degree of truth in this assertion, an analysis of the correlation between academic qualification and social position will show, as we shall see in Section IV below, that the

level of achievement of a significant portion of the current Japanese social elite cannot be explained simply as the direct effect of their academic accomplishment.

II. SOCIAL STRATIFICATION IN JAPAN, 1955-1965

Data for the analysis of social stratification in Japan of the postwar era derives from the 1955 and 1965 national surveys, previously mentioned, as well as from a 1952 survey of the six largest cities in Japan and a pair of surveys of Tokyo, carried out respectively in 1960 and 1967. In this section, I should like to confine myself to the national surveys⁹—reference to hereafter as the 1955 survey and 1965 survey—and the data collected therein; in section IV below the analysis will be based on the 1965 survey and the 1967 Tokyo survey.

The decade 1955-1965 possesses a significance for the student of modern Japanese society quite out of proportion to the actual time-span encompassed within its limits. In contrast to the previous decade, during which Japan's socio-economic structure crawled painfully toward regaining its prewar level of prosperity and integration, the years 1955-1965 saw a dramatic boost in the rate of industrial growth, paralleled by equally dramatic social changes. In 1955, the technological innovation boom was just making itself felt in certain major industries; by 1960, the Ikeda government was able to announce a plan for rapid economic growth that would double the national income; and by 1965, most Japanese economists agreed that the Japanese economy was entering a new "transition period."

Turning to the analysis of the data collected during these whirlwind years I shall adopt the generally accepted perspective of social stratification literatures, and take occupation as the significant and representative variable of the social status, assuming furthermore that education and income stand in direct relationship to occupational status. In making comparisons between the date of the 1955 and 1965 surveys, then, we shall concern

⁹ For the 1955 data, see footnote 7, above. The 1965 data has not yet been published in a form that permits its scholarly use. The author's article "Nihonshakai to rōdōido" (Labor Mobility in Japanese Society), in Kunio Odaka, ed., *Gijitsukakushin to ningen no mondai* (Technological Innovation and the Human Problem), Tokyo, Daiyamondosha, 1964, pp. 261-309, uses the materials gathered in the 1960 Tokyo survey, as does the author's "Social Mobility in Tokyo" in J. A. Kahl, ed., *Comparative Perspectives on Stratification*, Boston, Little Brown, 1968, pp. 180-194. The data assembled during the course of the 1967 survey of Tokyo forms the basis of my article "Shokugyō idō no katei bunseki" (Process Analysis of Occupational Mobility), which will appear in the author's forthcoming book, *Keizai kōzō no shakaigakuteki bunseki* (Sociological Analysis of Economic Behavior), Tokyo, Iwanamishoten.

ourselves with three variables: occupation, education, and income.

Though the occupational classification categories adopted by the two surveys are somewhat at variance, the following trends for the occupational pattern of the over-15 age group of the population become at once identifiable (see Table 1): (1) The most striking decline registered over this ten-year period is in the number of agricultural workers, which shows a net decrease of almost 10%. (2) In contrast to the decline in the agricultural work force, here is a sharp increase both in relative and absolute, in the non-mining industrial occupations, most obviously in the number of clerical and production-process workers. (3) Finally, we observe a noticeable swelling in the ranks of sales and transport-related workers.

Table 1. Occupational Structure, 1955-1965

Occupational Category	1955		1965		Increment	
	thousand	%	thousand	%	thousand	%
Professional & Technical Workers	2,172	5.0	2,490	5.2	318	0.2
Managerials & Official Workers	967	2.2	1,295	2.7	328	0.5
Clerical Workers	4,472	10.2	6,058	12.8	1,586	2.6
Sales Workers	4,704	10.8	5,706	12.0	1,002	1.2
Farmers, Lumbermen, Fishermen	14,169	32.4	11,654	24.5	-2,515	-7.9
Workers in Mining	362	0.8	206	0.4	-156	-0.4
Workers in Transport & Communications	1,499	3.4	2,051	4.3	552	0.9
Craftsmen, Production-process Workers, etc.	12,512	28.7	14,743	31.0	2,231	2.3
Service Workers	2,828	6.5	3,390	7.1	562	0.6
Not Classifiable	6	0.0	17	0.0	11	0.0
Total	43,691	100.0	47,610	100.0	3,919	—

Note: 1. The figures in this table represent all employed persons (both sexes) 15 years old and over, while all subsequent tables are based upon males of 20 years and over.

2. The occupational classification of this table is not identical with that of subsequent tables.

Source: Census.

Continuing with our analysis, we have gathered the result of a cohort analysis (by occupational breakdown) of the 1955 and 1965 surveys (based on adult males over 20 years of age) in Table 2. While certain ambiguities are introduced by sampling errors in these two surveys, the following conclusions seem more or less justified: (1) The 20-29 age group represents a new cohort, not covered in the 1955 survey. In 1965, only 7.2% of this age group are engaged in agricultural work; and there is a marked preference for sales, clerical, and semi-skilled occupations, rather than agricultural-related jobs, among the constituents of this age group

Table 2. Cohort Comparison of Occupational Structure, 1955-1965

Year of Birth	Age	Occupation										Total
		Professional & Technical	Managerials & Officials	Clerical	Sales	Skilled	Semi-skilled	Unskilled	Farmers & Fishermen			
1936-1945	{ 1955: 20-29	5.5	2.3	18.0	23.8	14.3	22.4	6.5	7.2	100.0		
	{ 1965: 20-29	9.2	0.9	17.2	9.7	13.5	11.5	6.6	31.4	100.0		
1926-1935	{ 1955: 30-39	6.2	8.5	18.0	13.6	18.0	13.9	6.2	15.6	100.0		
	{ 1965: 30-39	6.9	3.7	15.4	14.0	10.0	10.3	8.3	31.4	100.0		
1916-1925	{ 1955: 40-49	7.7	12.9	12.9	18.3	13.1	9.6	7.4	18.1	100.0		
	{ 1965: 40-49	7.4	8.3	9.3	12.2	15.5	4.8	5.5	37.0	100.0		
1906-1915	{ 1955: 50-59	2.9	11.4	6.4	16.4	17.6	8.5	7.6	29.2	100.0		
	{ 1965: 50-59	4.4	6.5	4.4	15.5	9.5	3.8	5.4	50.5	100.0		
-1906	{ 1955: 60 over	8.5	10.5	5.0	20.5	7.5	3.0	10.0	35.0	100.0		
	{ 1965: 60 over	7.1	4.6	11.7	12.7	12.1	7.7	6.4	37.7	100.0		
Total	{ 1955:	6.0	8.7	13.8	17.9	15.1	13.0	7.0	18.5	100.0		
	{ 1965:	7.1	4.6	11.7	12.7	12.1	7.7	6.4	37.7	100.0		

Source: 1955 & 1965 National Survey.

as they enter the job market. (2) A fairly large proportion of those engaged in agriculture in 1955 are no longer engaged in agriculture in 1965. Of those who were 20-29 in 1955, 31.4% were engaged in agriculture; but of this same cohort, only 15.6% are still engaged in agriculture by 1965. The ranks of agricultural workers inhabiting other cohorts were also significantly depleted during the ten years under consideration. (3) Within this same cohort (20-29 in 1955) we find a certain decrement in the number of those still engaged in clerical work by 1965, whereas the "managerial and official workers" category shows a definite increase. Thus young workers would be more likely to be in clerical work, while the same workers, ten years later, would be more likely to be in management. (4) The number of workers engaged in sales increased rapidly in each of the cohorts.

Table 3. Average Annual Income of Each Occupational Category, 1955-1965

Occupational Category	1955		1965	
	Mean Income	Standard Deviation	Mean Income	Standard Deviation
Professional	26.8	24.2	77.9	54.8
Managerial	49.6	33.8	116.7	61.8
Clerical	21.9	13.4	59.3	28.0
Sales	29.2	31.3	68.8	55.2
Skilled	17.2	10.1	54.5	39.5
Semi-skilled	17.5	10.6	46.2	23.8
Unskilled	12.9	9.0	46.0	37.0
Farmer	12.6	11.7	39.2	18.6

Note: The amount of income is shown by Gross Annual Income (in ten thousands of yen).

Source: 1955 & 1965 National Survey.

The rapid economic growth during this decade caused a precipitous rise in the income level. According to the monthly survey on wages conducted by the Ministry of Labor, the average monthly cash income of regular workers in establishments with over 30 employees more than doubled, rising from 18,300 yen in 1955 to 39,400 yen in 1965. Table 3 uses the results of the 1955 and 1965 surveys to present the average annual income of workers by occupation. The rise in income during these years is slightly exaggerated by the fact that the reported income in 1955 is perhaps a little lower than the real income. Nevertheless, the table shows that the income of managers was four times greater than that of the lowest workers, the agricultural workers, in 1955, and that by 1965 this difference was reduced to less than 3:1. Thus we can see that in addition to the trend toward rapid rise in income, there is also a trend toward

Table 4. Cohort Comparison of Average Annual Income, 1955-1965

Birth Cohort		Mean Income	Standard Deviation
Year of Birth	Age		
1936-1943	—	—	—
	{1965: 20-29	45.5	21.9
1926-1935	{1955: 20-29	14.7	11.1
	{1965: 30-39	62.1	37.6
1916-1925	{1955: 30-39	24.4	20.3
	{1965: 40-49	73.4	49.2
1906-1915	{1955: 40-49	27.8	25.2
	{1965: 50-59	70.3	54.1
-1905	{1955: 50 over	23.6	28.1
	{1965: 60 over	68.5	61.9

Note: The amount of income is shown by Gross Annual Income (in ten thousand of yen).

Source: 1955 & 1965 National Survey.

reduction of the extent of income differential.

Income varies greatly by age. The sharp hierarchy of income based on age and length of service, particularly in the large scale industries, means that the income of young workers, regardless of the type of work and educational level, is uniformly low. Table 4, which compares the average income of the respective cohorts, reveals the fact that each cohort, both because of the rapid economic growth and because of increase in age, enjoyed a rapid increase in income during this ten year period. In addition, the average wage differentials by age declined: in 1955 the highest income cohort, 40-49 years of age, had an average income of 278,000 yen, almost twice as much as the lowest income cohort, 20-29 years of age, which had an average annual income of 147,000 yen, but by 1965 the average income of the highest group, the 40-49 cohort, is 734,000 yen, only 1.6 times as much as the income of the lowest cohort, the 20-29 age group, which has an annual income of 455,000 yen. However, the basic trend toward consistent rise in income of all workers from younger to older cohorts is found in both surveys. The decline in income after age 50 is supposed to be the result of the fact that this is the normal retirement age.

Finally, turning to education, we see from Table 5 that the number of college graduates (graduates from colleges under the new system) increased from 12.6% in 1955 to 14.0% in 1965, and that the number of people with secondary education (the old middle schools or the new high schools) increased from 19.2% to 25.5% in the same period. This increase

Table 5. Cohort Comparison of Education, 1955-1965

Birth Cohort		Primary School	(Old) Upper Primary (New) Lower Secondary	(Old) Secondary (New) Upper Sec.	College	Total
Year of Birth	Age					
1936-1945	—	—	—	—	—	—
	{ 1965: 20-29	1.4	39.9	36.2	22.5	100.0
1926-1935	{ 1955: 20-29	6.9	46.5	29.8	16.8	100.0
	{ 1965: 30-39	5.7	50.9	29.6	13.8	100.0
1916-1925	{ 1955: 30-39	12.7	53.5	19.9	13.9	100.0
	{ 1965: 40-49	9.8	56.3	20.5	13.5	100.0
1906-1915	{ 1955: 40-49	23.0	49.5	14.9	12.6	100.0
	{ 1965: 50-59	20.1	56.9	17.6	5.4	100.0
-1905	{ 1955: 50 over	43.0	39.8	10.3	6.9	100.0
	{ 1965: 60 over	37.9	37.2	13.8	11.1	100.0
Total	{ 1955: —	21.5	46.7	19.2	12.6	100.0
	{ 1965: —	11.7	48.8	25.5	14.0	100.0

Source: 1955 & 1965 National Survey.

in the amount of education is reflected most strongly in the case of the younger workers, since virtually no older people returned to continue their education. The extent of the increase is seen in Table 5, where in 1965 22.5% of the 20-29 year old cohort are college graduates and 59.0% have received college and/or high school education. Sampling errors, unfortunately, preclude perfect consistency in the data after the second row in Table 5.

Education is regarded as an important variable in social stratification and social mobility research specifically because it plays an intermediary role between ascribed family status and present achieved occupational status. Were there no modern educational system, the family alone would provide the training which implanted knowledge and skill, and this in turn would be determined and restricted by the parents' education, occupation, socio-economic status and the like. Education makes it possible for a person to overcome his family background and achieve his own status.

However, education would not be able to play this intermediary role between ascribed family status and present achieved occupational status if present status were achieved by education, and actual educational opportunities were determined entirely by the status of a person's father. Section IV presents a detailed analysis of this problem, i. e., to what extent does family status determine educational level and to what extent does educational level determine occupational status, by using "path model." In this section we shall examine briefly the relationships between father's status and son's education and son's education and his present income.

Table 6. Son's Average Level of Education by Father's Occupation

Father's Occ. Category	Son's Mean Educational Level	Standard Deviation	Rank Order
Professional	22.1	5.0	1
Managerial	22.0	4.8	2
Clerical	19.4	5.2	3
Sales	18.9	4.7	4
Skilled	16.9	4.3	5
Semi-skilled	16.2	3.4	6
Unskilled	14.4	2.8	8
Farmer	15.9	4.0	7

Note: Quantification of educational level is as follows. For each 6 years of schooling, the score is 10. Thus, primary school graduate (6 yrs.) is 10; lower secondary school graduate under new system (9 yrs.) is 15; college graduate under new system (16 yrs.) is 27, etc.

Source: 1965 National Survey.

Table 7. Average Annual Income by Level of Education

Level of Education	Mean Income	Standard Deviation
(Old and New) Primary School	46.7	48.1
(Old) Upper Primary } (New) Lower Secondary }	51.4	37.7
(Old) Secondary } (New) Upper Secondary }	68.3	46.9
(Old and New) College	76.2	60.5

Note: The amount of income is shown by Gross Annual Income (in ten thousands of yen).

Source: 1965 National Survey.

The 1965 data presented in Table 6 reveals a consistent relationship between father's occupation and son's education. The highest educational level belongs to the son of a professional or managerial, whereas the lowest educational level is achieved by the son of a farmer or an unskilled laborer. Table 7 shows that there are consistent differences in income according to educational level. Although it is clear from these two tables that the son inherits his father's status through educational attainment, nevertheless this will not greatly hinder his life chances since the amount of difference in educational attainment and average annual income is relatively small.

III. SOCIAL MOBILITY IN JAPAN, 1955-1965

Let us begin with a comparison of the amount of mobility between 1955 and 1965 by a conventional inflow and outflow analysis of the

mobility tables. Let us suppose that the horizontal and vertical axes are, respectively, the respondent's present occupation and the father's occupation, following the conventional method of inter-generational occupational mobility. We then have the matrix of inter-generational occupational mobility as a two-way frequency table. Figures on the main diagonal line of this matrix represent frequencies of occupational succession between fathers and sons, while figures not on the main diagonal line represent frequencies of occupational mobility between fathers and sons. Next we define *inflow rate* and *outflow rate*: inflow rate refers to the rate of the respondents in a certain occupational category whose fathers belong to categories other than theirs; outflow rate refers to the rate of the respondents whose fathers belong to a certain occupational category and who belong to categories other than their fathers'. Putting it in symbols, letting the matrix A_{ij} be the table of inter-generational occupational mobility, of which the first suffix stands for father's occupation and the second suffix for son's occupation, we get:

$$\text{Inflow Rate} = \frac{a_{.i} - a_{ii}}{a_{.i}} \times 100$$

$$\text{Outflow Rate} = \frac{a_{i.} - a_{ii}}{a_{i.}} \times 100.$$

Table 8 compares the inflow rate and outflow rate of each occupational category between 1955 and 1965. By definition, if the inflow rate is high in a certain occupational category, inter-generational moving-in is frequent; if the outflow rate is high in a certain occupational category, inter-generational moving-out is frequent. Needless to say, these two rates coincide in the society as a whole because of the inflow-outflow balance. We can observe the following tendencies from Table 8:

Table 8. Inflow Rate and Outflow Rate (Inter-generational Occupational Mobility), 1955-1965

Occupational Category	Inflow Rate		Outflow Rate	
	1955	1965	1955	1965
Professional	72.9	77.5	56.1	62.5
Managerial	76.7	78.2	84.1	70.3
Clerical	89.4	88.1	72.3	71.3
Sales	66.3	61.0	61.1	54.2
Skilled	68.0	69.0	54.7	66.5
Semi-skilled	86.4	93.7	74.7	72.4
Unskilled	67.5	78.0	70.3	71.0
Farmer	13.4	11.0	38.9	64.0
Total	51.6	64.3	51.6	64.3

Source: 1955 & 1965 National Survey.

(1) The amount of mobility in Japanese society as a whole increased greatly during the ten years, growing from 51.6% in 1955 to 64.3% in 1965.

(2) The most striking change in these ten years occurred in the agricultural sector. With many sons of farmers now leaving the agricultural sector, the outflow rate of this occupational category reached 64.0% in 1965, which is almost equal to the outflow rate from non-agricultural occupations, whereas in 1955 farmers were the only occupational category whose outflow rate was less than 50%. On the other hand, the inflow rate of farmers decreased from 13.4% in 1955 to 11.0% in 1965.

(3) Inflow rate and outflow rate both decreased in the sales category, which is the only occupation which is becoming more closed both in inflow and outflow. Since farmers and sales personnel have been two typical cases in which self-employed workers are predominant, we can say, therefore, that not all of the self-employed occupations are declining.

(4) Semi-skilled workers already had a high inflow rate in 1955, and by 1965, as a result of the rapid industrialization during these years, they enjoyed the highest inflow rate of all the occupational categories.

(5) Although the professions have been regarded as relatively closed to outsiders, this is becoming less true as both the inflow and outflow rates of this occupation are increasing in this decade.

While inflow and outflow analysis tells us the extent of actual mobility, strictly speaking, this cannot be an index of the extent to which a particular occupational category is "open" or "closed." Actual mobility, represented by inflow rate and outflow rate, is composed of two parts: "forced mobility" (which is produced by an imbalance in the supply and demand in the labor force) and "pure mobility" (which occurs as spontaneous movement from one sector of the society to another, facilitated by the lack of barriers between these sectors).¹⁰ We must argue that the extent to which a particular occupation is "open" or "closed" can be measured by the amount of "pure mobility" which remains after the elimination of "forced mobility."

The index of association and the index of dissociation presented by Glass *et al.*, the coefficient of association or c-value presented by Carlsson, and the social distance mobility presented by Rogoff are common devices for measuring pure mobility irrespective of the difference of names.¹¹ In

¹⁰ Saburō Yasuda, "Shakaiidōron eno tōkeiteki josetsu," (A Statistical Prologue to the Theory of Social Mobility), in *Tokyo kyoiku daigaku bungakubu kiyō* (Bulletin of the Faculty of Letters of Tokyo Educational University), No. 9, 1962, pp. 1-57.

¹¹ D. V. Glass, *Social Mobility in Britain*, London, Kegan Paul, 1954; G. Carlsson, *Social Mobility and Class Structure*, Lund, CWK Gleerup, 1958; N. Rogoff, *Recent Trends in Occupational Mobility*, Glencoe, Free Press, 1953.

the inter-generational occupation mobility matrix A_{ij} , suppose that there is no relation at all between father's and son's occupation (we can call it "perfect mobility"). This means that in any cells of the matrix A_{ij} , a_{ij} is equal to $a_i \cdot a_j / N$ where $N = \sum_i \sum_j a_{ij}$. Thus, if we would like to get the index indicating the extent of pure mobility, we can take the extent of proximity to or distance from the value expected under the condition of "perfect mobility," which means that the actual frequency under the assumption of perfect mobility, that is: $Na_{ij}/a_i \cdot a_j$. This is called "index of association" when $i=j$ whereas it is called "index of dissociation" when $i \neq j$ by Glass *et al.*¹²

The major defect of this index of association (I.A.), however, according to Yasuda¹³ is that the upper limit of this index is unstable, depending upon the values of the two marginals, a_i and a_j . The maximum value of I.A. occurs when a_{ij} reaches the maximum value under the condition of: $\max(a_{ij}) = \min(a_i, a_j)$, where $\min(a_i, a_j)$ means the smaller element of either a_i or a_j . Therefore,

$$\begin{aligned} \text{Max (I.A.)} &= \min(a_i, a_j) N / a_i \cdot a_j \\ &= \min(N/a_j, N/a_i) \end{aligned}$$

In the actual comparison it is clear that $\max(\text{I.A.})$ takes a small value when both of the marginals are large and vice versa because N is constant. Thus, in 1955 national survey data, the I.A. of farmers was 1.7 and that of unskilled workers was 4.4, despite the fact that the mobility rate is low for farmers and high for unskilled workers.

Because of this difficulty I decided not to use the conventional index of association in our data analysis. Instead, I will use the "y-coefficient" or "coefficient of openness" which was worked out by Yasuda as follows.

$$y_{ii} = \frac{\min(a_i, a_i) - a_{ii}}{\min(a_i, a_i) - a_i \cdot a_i / N}$$

The line of reasoning included in this formula is such that the numerator stands for pure mobility, the remainder of factual mobility $a_i - a_{ii}$ minus forced mobility $a_i - \min(a_i, a_i)$ while the denominator stands for pure mobility under a situation of perfect mobility. Therefore, y_{ii} shows the extent to which the amount of pure mobility of a particular occupational category i (numerator) is proximate to or distant from the amount of pure mobility under a situation of perfect mobility (denominator). In contrast

¹² This index is also used in the recent works of Blau and Duncan, which have in other respects pioneered in developing a new methodology for the quantitative analysis of social mobility. See P.M. Blau and O.D. Duncan, *The American Occupational Structure*, New York, Wiley, 1967, pp. 35ff.

¹³ S. Yasuda, *op. cit.* Also, by the same author, "Methodological Inquiry into Social Mobility," *American Sociological Review*, 29 (February 1964), pp. 16-23.

to the index of association, we must note that the y -coefficient takes a value between 0 (no pure mobility) and 1 (perfect mobility) in most cases. Theoretically it can acquire a value greater than 1 but actually this is exceptional. Similarly, the y -coefficient of a society as a whole can be given by the following formula:

$$y = \frac{\sum_i \min(a_{i.}, a_{.i}) - \sum_i a_{ii}}{\sum_i \min(a_{i.}, a_{.i}) - \sum_i a_{i.} a_{.i} / N}$$

Table 9 shows the results of computation of the y -coefficient for each occupational category as well as for society as a whole in 1955 and 1965. We can summarize our observation from this table as follows:

(1) The coefficient of openness of the society as a whole increased from 0.583 in 1955 to 0.648 in 1965. This means that, as measured by the occupational structure, not only did the amount of actual mobility in Japanese society increase, as indicated by inflow-outflow analysis, but also that the extent of pure mobility, as indicated by y -coefficient, also climbed during the decade.

(2) The occupations which are the most proximate to perfect mobility in both 1955 and 1965 are clerical and semi-skilled workers, and in both, the extent of openness further increased during the decade.

(3) In the case of skilled workers the degree of openness increased from 0.622 in 1955 to 0.782 in 1965. Therefore, the differential in the degree of openness between skilled workers and semi-skilled workers has decreased by 1965.

(4) By contrast, the coefficients for managers and farmers decreased during the decade. The closed character of farming is especially striking.

Table 9. Coefficients of Openness (y -coefficients) for Inter-generational Occupational Mobility, 1955-1965

Occupational Category	1955	1965
Professional	0.604	0.666
Managerial	0.823	0.771
Clerical	0.818	0.830
Sales	0.701	0.658
Skilled	0.622	0.782
Semi-skilled	0.807	0.830
Unskilled	0.725	0.765
Farmer	0.290	0.207
Total	0.583	0.648

Source: 1955 & 1965 National Survey.

We may conclude that inter-generational mobility has tended to increase from 1955 to 1965, both in society as a whole as well as in many

occupational categories as factual mobility and as pure mobility.

In this section, I have dealt only with inter-generational mobility. This is because intra-generational mobility will be analyzed from a somewhat different perspective in the next section. Let us turn to this new perspective.

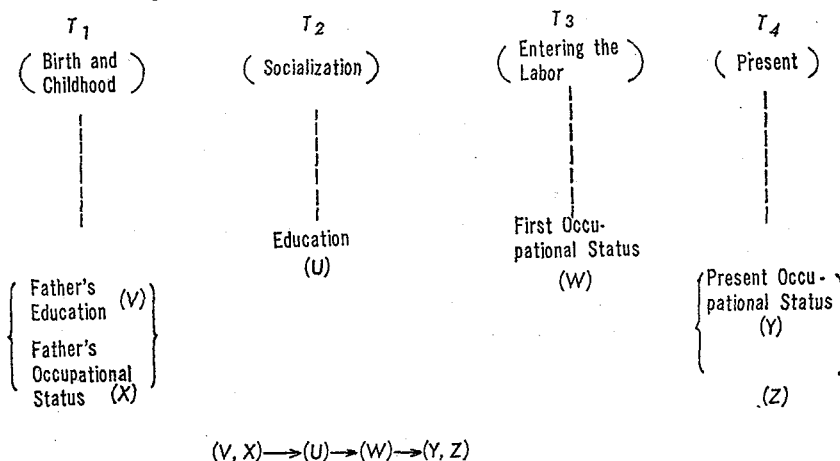
IV. PROCESS ANALYSIS OF SOCIAL MOBILITY

As mentioned in Section III, one conventional method of analysis of social mobility is to treat inter-generational and intra-generational mobility as separate but parallel. They can be considered parallel only to a certain extent, however, for in contrast to the analysis of inter-generational mobility which measures the mobility between two different persons, the father and the son, the analysis of intra-generational mobility measures the change in status of a single person. In addition, the concept of "perfect mobility" is appropriate to inter-generational mobility, but is not applicable to intra-generational mobility. Another weak point in this type of analysis is the fact that while the living generations can be taken as random samples, their fathers cannot be. For example, those fathers who had no sons are completely excluded, whereas those fathers who had two or more sons will be represented two or more times. The fathers measured in this sample also include a very wide range of cohorts because of the wide variation in their age at the time their sons were born. Thus the distribution of occupations of the fathers cannot be considered as the distribution of the definite range of cohorts, and the occupation of the father can only be considered as an attribute of the random sample of the son.

However, when we take the analysis of the occupation of the father as an attribute of his son one step further, we soon realize that the intra-generational mobility and inter-generational mobility are not completely distinct concepts. Furthermore, it is no longer necessary to distinguish between these concepts, because for each individual, education and occupation, whether it be the father's or the son's, can be seen as his own attributes in different stages of a career. It is thus possible to compare for that individual his status at different stages of his career. When a child is small, his status is completely determined by the status of his father; when he is a student, his social position is determined by his own level of education; after he enters the labor market, his social position is determined by his own occupation and income. At any one point, a person's past status becomes a point of ascription in determining his pre-

sent status, thus placing the two concepts of achievement and ascription in a relative position from a time perspective. For example, when he is a student, the level of education can be treated as his achieved status, while his father's status becomes his ascribed status. When he first takes a job in the labor market, his past educational achievement becomes a point of ascription. When he moves to a second job, his first job becomes a point of ascription.

Figure 1. The Process of Status Allocation in One's Life



For following these change of status over time in quantitative terms, "path analysis" as developed by O. D. Duncan¹⁴ presents an excellent analytical tool. I would, however, like to expand Duncan's analysis from five variables to six variables. At the outset it is necessary to make some introductory comments about the use of this model. A schematic outline of the process of change over one's lifetime is presented in Figure 1. This figure includes the five variables used in Duncan's model and an

¹⁴ Path analysis is a technique originally developed for biometrics as a statistical technique to be employed in cause-and-effect analysis. Blalock was the first to attempt to apply this technique in the realm of sociology, while O. D. Duncan went a step further and used this type of analysis in the computation of cause-and-effect probability in mobility studies. For the general theory of causal inference, see H. M. Blalock, *Causal Inferences in Nonexperimental Research*, North Carolina, University of North Carolina Press, 1961, pp. 42ff; O. D. Duncan "Path Analysis in Sociological Examples," *American Journal of Sociology*, 72, July, 1960, pp. 1-16 outlines the path model technique, and summarizes its application to sociological research. For an introduction to the systematic application of this model to social mobility data, see Blau and Duncan, *op. cit.*, chapter 5, *passim*. Saburō Yasuda, *Shakai tokeigaku* (Social Statistics), Tokyo, Maruzen, 1969, pp. 249-274 provides a systematic discussion of the problem of causal inference in multivariate analysis.

additional one, present income, which I have added. In order to simplify presentation, the following abbreviations will be used: father's education (V), father's occupational status (X), respondent's education (U), respondent's first occupational status (W), respondent's present occupational status (Y), and respondent's present income (Z). There are various ways to define the father's occupational status:¹⁵ his occupational status at the time of the son's birth (Mukherjee and Hall), his occupational status when the son was 16 years old (Blau and Duncan), his occupation at the time the son entered the labor market (Yasuda), and his major occupational position during his career (Nihon shakaigakkai chōsaiinkai). Father's occupation (X) can be placed in different time points from T_1 to T_3 of Figure 1, depending on how it is defined. In the following data we have defined it as his *major* occupation during his career. Therefore, the occupational status as used below covers a broad span of time, but when used for analysis of the son's status, it would be permissible to take it as a generalized representation of the status of the son at time T_1 . The distance between T_3 and T_4 represents the career from the first occupation until the present occupation. Because the age of our respondents is varied, the elapsed time between T_3 and T_4 in our sample varies from zero to as much as forty or fifty years. It is necessary, therefore, to introduce an age control in order to analyze the changes from initial occupation to present occupation.

The "path model" is a quantitative model, and therefore all the six variables must be represented in quantitative terms. Income, of course, is already a quantified variable. We have quantified educational achievement by assigning the value of 10 to each six years of education. Occupational rankings are based on Nishihira's¹⁶ research, which ranks 98 different occupations. We have reduced these 98 occupations to 94, excluding the peculiar positions held by a single person such as Prime Minister, Chairman of the Diet, Chief Justice, and President of the University of Tokyo. We have quantified occupation by computing the average occupational ranking score from Nishihira's occupational items according to our own broader categories. The 1965 national survey and the 1967 Tokyo survey used different occupational classifications, and we have therefore computed these classifications differently, making use of the

¹⁵ R. Mukherjee and J. R. Hall, "A Note on the Analysis of Data on Social Mobility," in D. V. Glass, ed., *op. cit.*; Blay and Duncan, *op. cit.*; Yasuda, *op. cit.*; Nihon shakaigakkai chōsaiinkai, ed., *op. cit.*

¹⁶ Shigeki Nishihira, "Shokugyō no shakaiteki hyōka: shokugyō rankingu" (The Social Evaluation of Occupations: Occupational Ranking), available only in mimeograph copy published by the Tōkei suri kenkyūjo (Institute of Statistical Mathematics), 1965.

specific occupational items from the Nishihira data. Tables 10-A and 10-B present the results of these computations. The analysis in the previous section was based on the 1965 data, whereas the 1967 Tokyo sample was gathered by Joseph Gusfield and myself specifically for comparison with Chicago data.¹⁷

Table 10. Prestige Scores of Occupational Categories

A. Eight Categories for 1965 National Survey

Occupational Category	Number of Occupational Items Evaluated	Mean Score
Professional	23	72
Managerial	11	71
Clerical	13	47
Sales	15	40
Skilled	12	46
Semi-skilled	8	38
Unskilled	6	27
Farmer	6	42

B. Nine Categories for 1967 Tokyo Survey

Occupational Category	Number of Occupational Items Evaluated	Mean Score
Professional	23	72
Managerial	11	71
Clerical Employee	5	50
Sales Employee	9	37
Small Owner and Self-employed	5	50
Skilled	11	46
Semi-skilled and Unskilled	10	32
Service	15	42
Farmer	5	38

Source: Calculated from the data on Occupational Prestige Ranking by Nishihira (1964 Tokyo Survey).

The basic idea of "path analysis" is that a person's location in the social hierarchy is dependent upon both his ascribed and achieved status. We use the term ascribed status to indicate the influence of a person's status at birth as well as his status in the past as it has a direct effect upon his present status. The problem is to define "direct influence." For example, it is usually thought that the correlation between father's occupational status (*X*) and the respondent's present occupational status (*Y*) is an indication of ascribed status. However, because the product-moment correlation does not necessarily indicate a direct cause and effect relation-

¹⁷ The Chicago survey mentioned here was conducted jointly by Gasfield and the author in 1969: the data therein gathered is not used in this paper because its statistical analysis is not yet complete.

ship, this is not a proper interpretation. In order to analyze the cause and effect relationship of X to Y , we must distinguish those elements which have a *direct* effect and those which have an *indirect* effect. The "path model" makes use of a system of multiple regression equations where b -coefficient (partial regression coefficient) excludes other indirect effects and may therefore be used as an indication of direct influence. The "path coefficient" is a standardized partial regression coefficient of this equation system. Among the six variables included in Figure 1, V and X belong under the same time point T_1 ; Y and Z belong under the same time point T_4 . Therefore, the relationship between V and X and between Y and Z is not one of cause and effect. V and X are dealt with as "exogenous variables," as econometricians might call them, since they do not have any preceding variables. Thus our model can be expressed by the following system of regression equations:

Table 11. Correlation Coefficients (Standardized Regression Coefficients) for Combinations of Six Variables

A. 1965 National Survey

	V	X	U	W	Y	Z
V	1.000					
X	0.349	1.000				
U	0.453	0.362	1.000			
W	0.204	0.299	0.412	1.000		
Y	0.195	0.311	0.395	0.571	1.000	
Z	0.081	0.157	0.212	0.178	0.359	1.000

B. 1967 Tokyo Survey

	V	X	U	W	Y	Z
V	1.000					
X	0.425	1.000				
U	0.400	0.370	1.000			
W	0.279	0.317	0.463	1.000		
Y	0.146	0.268	0.300	0.545	1.000	
Z	0.077	0.145	0.147	0.203	0.430	1.000

Note: Notation and Quantification of Six Variables:

V : father's education

X : father's occupational status

U : respondent's education

W : respondent's first occupational status

Y : respondent's present occupational status

Z : respondent's present income

V and U (education): length of years of schooling by score 10 for each 6 years.

X , W and Y (occupational status): occupational prestige score as presented in Table 10.

Z (income): annual gross income (in ten thousands of yen).

$$\begin{aligned}
 U &= a_U + p_{UV}V + p_{UX}X \\
 W &= a_W + p_{WV}V + p_{WX}X + p_{WU}U \\
 Y &= a_Y + p_{YV}V + p_{YX}X + p_{YU}U + p_{YW}W \\
 Z &= a_Z + p_{ZV}V + p_{ZX}X + p_{ZU}U + p_{ZW}W
 \end{aligned}$$

Table 12. Path Coefficients (Standardized Partial Regression Coefficients) for Specified Combinations of Six Variables

A. 1965 National Survey

Dependent (Effect) Variables	Independent (Causal) Variables				Coefficients of Determination R^2	Residual Effects $\sqrt{1-R^2}$
	V	X	U	W		
U	0.372	0.233			0.253	0.864
W	0.022	0.021	0.220		0.196	0.897
Y	-0.017	0.116	0.166	0.471	0.368	0.795
Z	-0.040	0.085	0.160	0.095	0.061	0.969

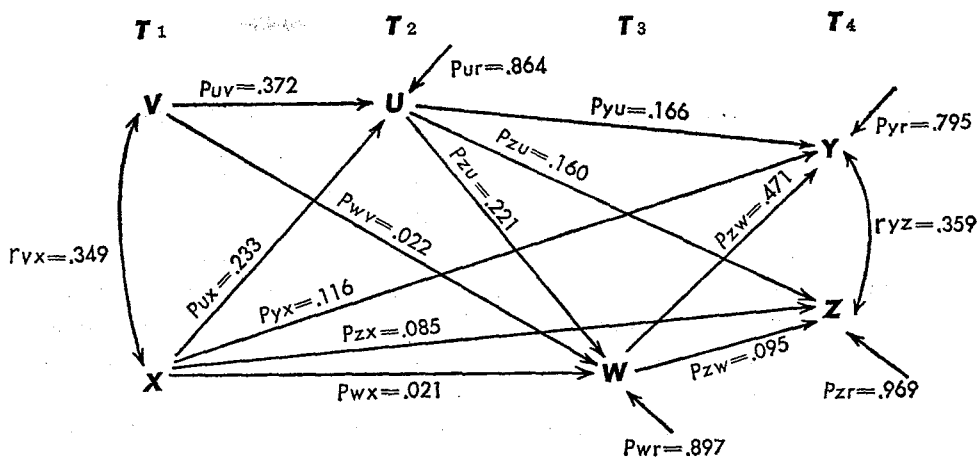
B. 1967 Tokyo Survey

Dependent (Effect) Variables	Independent (Causal) Variables				Coefficients of Determination R^2	Residual Effects $\sqrt{1-R^2}$
	V	X	U	W		
U	0.296	0.244			0.209	0.889
W	0.063	0.148	0.382		0.241	0.871
Y	-0.064	0.118	0.049	0.503	0.311	0.830
Z	-0.024	0.086	0.052	0.158	0.050	0.975

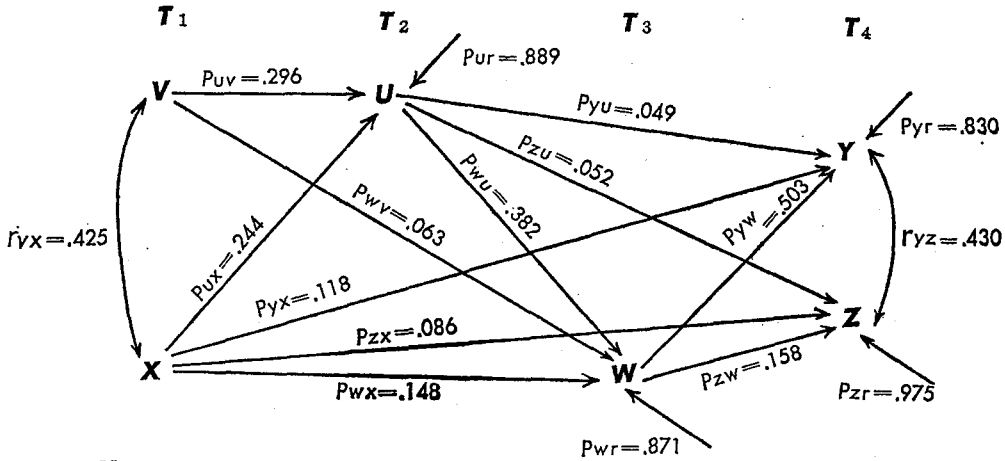
Note: 1. As for the quantification of six variables, see note 1 of Table 11.
 2. Path coefficients stand for causal relationship. Therefore, in each specified combination of six variables, the preceding variable in the time sequence is the "causal" variable, and the other the "effect" variable.

Figure 2. Schematic Representation of Path Coefficients

A. 1965 National Survey



B. 1967 Tokyo Survey



- Note: 1. Arrow lines stand for causal relationships. Curved lines stand for correlations.
 2. $V \rightarrow Y$ and $V \rightarrow Z$ are omitted in this figure because these path coefficients are very small minus values in both A and B.

The correlation coefficients of the combinations of the six variables derived from the data from the 1965 national survey and the 1967 Tokyo survey are presented in Table 11. The results of the standardized regression coefficients (path coefficients) computed from the above equations are shown in Table 12 and represented schematically in Figure 2. A comparison of Table 11-A with 11-B and Table 12-A with 12-B yields the following:

(1) Since it is clear that the pattern of relationship between variables is essentially the same in the 1965 national sample and the 1967 Tokyo sample, we may combine the data and analyze it in terms of "path model."

(2) The gross effect of *W* (first occupational status) on *Y* (present occupational status) is both very great (Table 11) and primarily direct (Table 12). In other words, the level of the original occupation has a direct causal effect on the level of the present occupation.

(3) Although *U* (respondent's education) has a fairly high gross effect on *Y* (respondent's present occupational status), this is not entirely a result of direct causal relationships. It is an extremely complicated relationship involving many factors, and although the respondent's education is quite clearly correlated with present occupational status, nevertheless the single factor of education does not account for much of the variance which must be explained in present occupational status.

(4) *X* (father's occupational status) has an effect on *Y* which, although small, cannot be neglected. Thus, in present day Japan a father's status

Table 13. Means and Standard Deviations of Six Variables by Four Cohorts

Variables	Cohort Groups	Means	Standard Deviations
V	A ₁	15.1	6.4
	A ₂	13.5	6.3
	A ₃	13.3	5.6
	A ₄	10.5	5.9
	Total	13.4	6.3
X	A ₁	50.1	15.8
	A ₂	53.1	14.6
	A ₃	51.4	16.3
	A ₄	49.1	14.3
	Total	52.4	12.9
U	A ₁	20.8	4.3
	A ₂	17.7	7.0
	A ₃	16.8	7.1
	A ₄	15.6	7.9
	Total	18.0	6.8
W	A ₁	44.6	10.8
	A ₂	44.9	11.8
	A ₃	45.1	11.6
	A ₄	46.3	13.3
	Total	45.1	12.0
Y	A ₁	45.7	11.2
	A ₂	50.5	14.2
	A ₃	54.5	13.5
	A ₄	52.7	13.5
	Total	50.4	13.5
Z	A ₁	50.6	26.5
	A ₂	83.5	39.1
	A ₃	109.7	63.7
	A ₄	80.7	76.3
	Total	80.7	56.5

Note: 1. Quantification of Six Variables:

V (father's education) } length of years of schooling by score 10
 U (respondent's education) } for each 6 yrs.

X (father's occupational status) }
 W (respondent's first occ. status) } occupation prestige score as pre-
 Y (respondent's present occ. status) } sented in Table 10-B.

Z (respondent's present income) annual gross income by ten thousand yen.

2. Cohort Groups:

Age at 1967	Sample Size
A ₁ (20—29)	237
A ₂ (30—39)	212
A ₃ (40—55)	192
A ₄ (56—)	152
T (Total)	793

Source: 1967 Tokyo Survey.

will have an effect on his son's status, but this effect will probably not be very great.

(5) It is particularly striking that V (father's education) and X (father's occupational status) have a relatively large influence on U (respondent's education); in other words, a son's opportunity to achieve a certain level of education depends to a large extent upon the father's level of education and occupational status. Although the father's social status does not directly determine the social status of the son, it is nevertheless true that at the very least the father's social status exerts an influence on the son's social status through the medium of the son's education.

(6) In considering Z (respondent's present income), we quickly see from Figure 2 that the "path coefficients" related to present income are generally very small. The respondent's present income is not closely related to father's social position, and even respondent's education is not closely related to his present income. However, as will be explained below, the major reason for the lack of relation between the respondent's education and his present income is that for the youngest cohort, ages

Table 14. Correlation Coefficients (Standardized Regression Coefficients) for Combinations of Six Variables by Four Cohorts

Variables	Cohort Groups	V	X	U	W	Y
X	A_1	0.356				
	A_2	0.390				
	A_3	0.328				
	A_4	0.352				
U	A_1	0.374	0.298			
	A_2	0.415	0.374			
	A_3	0.356	0.303			
	A_4	0.342	0.283			
W	A_1	0.225	0.059	0.404		
	A_2	0.358	0.357	0.512		
	A_3	0.335	0.234	0.483		
	A_4	0.324	0.249	0.540		
Y	A_1	0.109	0.145	0.306	0.669	
	A_2	0.243	0.250	0.373	0.520	
	A_3	0.322	0.273	0.420	0.430	
	A_4	0.138	0.060	0.480	0.560	
Z	A_1	0.034	0.120	-0.002	-0.015	0.060
	A_2	0.167	0.159	0.242	0.266	0.374
	A_3	0.244	0.227	0.337	0.156	0.434
	A_4	0.151	0.039	0.341	0.302	0.518

Note: As for six variables and cohort groups, see notes 1 and 2 of Table 13.

Source: 1967 Tokyo Survey.

Table 15. Path Coefficients (Standardized Partial Regression Coefficients) for Specified Combination of Six Variables by Four Cohorts

Dependent (Effect) Variables	Cohort Groups	Independent (Causal) Variables				Coefficients of Determination R^2	Residual Effects $\sqrt{1-R^2}$
		V	X	U	W		
U	A ₁	0.307	0.189			0.171	0.910
	A ₂	0.318	0.250			0.225	0.880
	A ₃	0.288	0.208			0.166	0.913
	A ₄	0.276	0.186			0.147	0.924
W	A ₁	0.114	-0.098	0.391		0.178	0.907
	A ₂	0.131	0.157	0.398		0.307	0.832
	A ₃	0.172	0.055	0.405		0.267	0.856
	A ₄	0.139	0.067	0.474		0.317	0.826
Y	A ₁	-0.101	0.132	0.033	0.670	0.467	0.730
	A ₂	0.019	0.040	0.128	0.434	0.288	0.844
	A ₃	0.123	0.106	0.220	0.258	0.272	0.853
	A ₄	-0.068	-0.111	0.290	0.453	0.377	0.789
Z	A ₁	0.004	0.130	-0.039	0.008	0.016	0.992
	A ₂	0.039	0.035	0.123	0.176	0.089	0.954
	A ₃	0.122	0.113	0.282	-0.048	0.143	0.926
	A ₄	0.039	-0.091	0.261	0.171	0.143	0.926

Note: The same as note 1 and 2 of Table 12.

Source: 1967 Tokyo Survey.

20-29, there is very little difference in income which can be related to education. In the older age groups the relation between education and present income is greater.

(7) The residual variables, as indicated by outside arrows in Figure 2, are generally large. This is particularly striking in the case of Z (respondent's present income), indicating that the role of ascription in determining one's social position, especially income, is extremely small.

Finally, let us examine the 1967 data with the introduction of an age control. In Table 13 we can see the mean and standard deviation while holding constant each of the four age groups. It is clear from this table that Y and Z increase with age through age 55, with the increase in Z being particularly rapid. The variation in income is much greater in the older groups. The higher level of education in the younger age group reflects the very rapid spread of higher education during the last decade.

Tables 14 and 15 present, with an age control, the correlation coefficients and the path coefficients derived from the combinations of the six variables. The following conclusions may be drawn from these two tables:

(1) The effect of W (first occupational status) on Y (present occu-

pational status), whether gross or direct, decreases sharply with age. By contrast, the effect of U (respondent's education) on Y (present occupational status), whether gross or direct, increases sharply with age. We see, therefore, that when the variable of age is not introduced into the analysis, U 's (respondent's education) small effect on Y (present occupational status) is a result of the fact that education has very little effect on occupational status among the younger age groups. Further, we can infer that the influence of educational level remains a latent force among the younger age groups; when we consider only the older age groups, the effect of education is much greater.

(2) The same conclusions may be drawn from an examination of the relationship between U (respondent's education) and Z (respondent's present income): respondent's education does not have a strong influence on present income when age is not held constant because among the younger age groups there is little variation in income on the basis of educational achievement; respondent's education remains a latent factor during his early years of employment, but among the older age groups education exerts a much stronger influence on income.

(3) There is a consistent increase up to age 55 in the effect of father's status (V : father's education, and X : father's occupational status) on the son's social status (Y : present occupational status, and Z : respondent's present income), though this increase is not as extreme as in the case of education. We can conclude that father's social status remains a latent influence during the early years of employment, increasing in importance only after approximately age 40.