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CHANGING LABOR FORCE CHARACTERISTICS AND  
THEIR IMPACT ON JAPANESE INDUSTRIAL RELATIONS

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To create a picture of what specific aspects of Japanese society and economy will look like in 1980, I judge it advisable to begin with an exposition of relatively firm data and then gradually move toward more speculative observations. This relatively cautious approach is not designed to produce predictions of discontinuous events, but it does have the virtue of being grounded in data in which we may place some confidence.

Specifically, this paper will begin with estimates of Japanese population for the year 1980, then consider the somewhat more speculative estimates of labor force size and composition, and finally turn to the most difficult task of predicting the impact of these changing population and labor force characteristics on the Japanese pattern of industrial relations. Those special aspects of Japanese industrial relations such as nenkō joretsu (age and length of service reward system), permanent employment, and the oft-reported harmony of Japanese industrial relations will come in for specific examination.

Most of the 1980 Japanese population had already been born by 1972, and most of the expected labor force of 1980 were already employed. These simple facts permit our placing a good deal of confidence in the following estimates and distinguish our efforts from a more spectacular if less valid futurology.

Generally speaking, demographers have paid less attention to population composition than to vital statistics such as fertility and mortality. However, Japanese researchers have increasingly turned their attention to investigating age composition because of the drastic changes in population composition which are now occurring

and will continue to occur for some time (e.g., Kuroda, 1971: 1-12; Okazaki, 1968). The changing age composition is primarily the result of the remarkable fertility decline in the postwar period; the gross reproduction rate declined from 2.20 in 1947 to unity by 1956.

The magnitude of this shift in fertility behavior with its consequences for shifting age composition is already beginning to have an unprecedented impact on the Japanese economy and society. Table 1 reports the percentage distribution of population by three broad age groups for almost fifty years with estimates until the year 2000. The percentage distribution for each age group is remarkably constant

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Table 1 about here  
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over time until marked shifts start occurring in 1955. At this point, rapid decline in the 0-14 year old group starts to take place with this decline being projected to continue well into the future. By 1980, the 0-14 age group will account for only 24.1 percent of the population. Meanwhile, the aged population (60 and above) which held steady at 7-8 percent of the population for some thirty years began to show a marked increase in 1955; it is expected to rise to 12.6 percent of the population by 1980. The rapid falloff in youth population combined with the slower rise of the aged population produced the lowest dependency rate in Japanese demographic history in the year 1970 (see column 4). That is, until 1947, for every 100 working age persons, there were approximately 80 children and old people that had to be supported, but in 1970 the number of dependents per 100 working age persons declined to 53. From this low point in 1970, the dependency ratio is expected to rise gradually in the future as the

Table 1

Age Composition of Japanese Population: Past and Future

Year	Percent of Total Population -Accounted for by Age Group			Dependency Index	Aging Index
	0-14 (1)	15-59 (2)	60+ (3)	$[(1+3) \div 2] \times 100$	$(3 \div 1) \times 100$
1920	36.5%	55.3%	8.2%	81	23
1925	36.7	55.6	7.7	80	21
1930	36.6	56.0	7.4	79	20
1935	36.9	55.7	7.4	80	20
1940	36.0	56.2	7.8	78	22
1947	35.3	57.2	7.5	80	21
1950	35.4	56.9	7.7	76	22
1955	33.4	58.5	8.1	71	24
1960	30.0	61.1	8.9	64	30
1965	25.6	64.7	9.7	55	38
1970	23.9	65.4	10.7	--	45
1975	24.6	64.3	11.8	56	49
1980	24.1	63.3	12.6	58	52
1985	23.4	62.8	13.9	59	59
1990	22.1	62.2	15.7	61	71
1995	21.0	61.4	17.6	63	84
2000	20.9	60.2	18.9	66	90

Source: Kuroda (1971:3)

aging of the Japanese population continues. The aging of the Japanese population is most notable when we construct an age index by dividing the number of those over age 60 by those age 0-14. This index (column 5) which registered in the low twenties until 1955, jumps sharply by 1960 to 30 and continues to rise thereafter. Finally, it should be noted that the working age population (column 2), as a percentage of total population, experiences moderate increases reaching a high point in 1970 or 65.4 after which it gradually starts to decline in response to the aging of the population.

To put the preceding discussion in perspective, it is instructive to compare the Japanese experience to that of other industrial nations. Table 2 provides this comparison. In the period from 1960 to 1969, Japan alone experiences a sharp shift in the percentage of population

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Table 2 about here  
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under 15 years old and the percentage in the 15-64 group. In 1960, Japan along with the United States had the highest proportion of the population in the less than 15 year old category. By 1969, however, the proportion of less than 15 year olds had fallen in Japan from 30.1 to 24.0 so that the Japanese situation became quite comparable to the profiles of western european nations. Similarly, the percentage of Japanese population in the 15-64 age category moved from 63.9 in 1960 to 69.1 in 1969. Looking at the proportion of the population over 65, Japan remained well below the western nations with a rate of 6.9 in 1969. But the aging process had already begun (compared to 6.1 in

Table 2.

International Comparisons of Population Composition,  
Dependence Rates and Average Age

	1960				1969					
	Population composition			Dependence rate per person in gainful work	Population composition			Dependence rate per person in gainful work	Average Age of working pop.	Average Age of Total pop.
	Less than 15 yrs. old	15-64 years old	65 yrs. old and more		Less than 15 yrs. old	15-64 years old	65 yrs. old and more			
%	%	%	person	%	%	%	person.	years old	years old	
U.S.	31.0	59.7	9.2	1.50	29.2	61.2	9.6	1.41	37.1	32.0
Britain	23.3	65.1	11.7	1.09	23.9	63.4	12.6	1.16	39.2	36.1
France	26.4	62.0	11.6	1.31	24.9	62.3	12.8	1.41	38.0	34.9
West Germany	21.3	67.8	10.8	1.09	23.2	63.9	12.9	1.25	39.2	36.0
Italy	23.4	67.6	9.0	1.31	23.2	66.4	10.3	1.68	38.0	34.1
Japan	30.1	63.9	6.1	1.10	24.0	69.1	6.9	1.03	35.5	31.4

Source: Economic Planning Agency (1971: 73)

- Notes:
1. Source for the population composition and the dependence rate per person in gainful work is OECD: *Labour Force Statistics* (1958-1969).
  2. Average age was estimated from U.N.: *Demographic Yearbook* and P.M.O.: *Total Population Classified by Age Groups*.
  3. For average age, that of 1968 was for France, while West Germany and Italy's age was that in 1967.
  4. Average age of working population = 15-64 years old.
  5. Dependence rate/person in gainful work = Total population ÷ No. persons in gainful work.

1960) and as shown in Table 1, it will accelerate in the coming years to reach the present levels of western nations.

In comparing the six nations in Table 2, in 1969 Japan still had the lowest dependency rate (1.03), the lowest average age of working population (35.5) and the lowest average age of total population (31.4). This can not have been anything but an important asset in the tremendous rate of economic growth achieved by Japan in the decade from 1960-1970. Yet, as compared to 1960, it is apparent that an aging trend process has already been set in motion which will continue in the future to move the nation toward an age composition similar to that of the western industrial nations. For example, the average age of employees in firms of more than 10 employees went from a low of 30.9 in 1958 to 33.1 in 1970 (Japan Productivity Center, 1972: 112). In short, the age structure which worked to favor rapid economic development in the recent past will increasingly turn to a neutral if not negative factor in the future. This is based on the assumption that young people are more flexible in adjusting to shifting occupational demands occasioned by a rapidly expanding economy.

The changing pattern of age composition of the Japanese population thus far discussed may be characterized as a process of population aging. The absolute and relative increase of old people in the total Japanese population is a pattern quite similar to that experienced in the west. In Japan, the aging process also proceeds in terms of the increase of higher age groups in the productive age population. Kuroda Toshio, upon whose work this section is based, dramatically depicts this dual process of aging in Table 3. In 1965, within the



productive age population, the 15-29 age group was by far the largest

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Table 3 about here  
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category with the 30-44 age group being only 66% as big while the 45-59 group was only 46% of the 15-29 age group. As a consequence of the large increases expected for the 30-44 and 45-59 age groups coupled with decreases in the 15-29 age group, the situation by 1980 will look quite different. The 30-44 age group will actually exceed the 15-29 age group while the 45-59 age group will have significantly closed the gap separating it from the other two age categories. Specifically, taking the total for the 15-29 age group as 100, the 30-44 age group will move from 66 in 1955 to 112 in 1980 while the 45-59 group will move from 46 to 83. In actual numbers, the period from 1970 to 1980 is expected to reduce the 15-29 age group by about 3.8 million while the 30-44 age group will increase by 3.9 million and the 45-59 age group will show an increase of 5.6 million. The trend toward convergence in size among the various age groups is expected to continue up through the year 2000.

## II

The thesis presented in this paper is that these unprecedented changes in age composition will have a major impact on Japanese social and economic organization. Before pursuing these relationships, I turn to an examination of actual labor force characteristics.

As presented in Table 4, the total Japanese population shows a fairly steady, though small, increase throughout the five year periods from 1955 to 1980. When we turn to the productive age population

Table 3

Observed and Estimated Trend in Population  
in Productive Ages<sup>1</sup>, 1955-2000

Year	15 - 29	30 - 44	45 - 59	Total	(in thousands)
1955	24,633 (100)	16,177 (66)	11,422 (46)	52,232	
1960	25,836 (100)	18,575 (72)	12,659 (49)	57,070	
1965	28,285 (100)	21,717 (77)	13,582 (48)	63,584	
1970	28,671 (100)	23,825 (83)	15,071 (53)	67,567	
1975	27,635 (100)	25,324 (91)	17,644 (64)	70,653	
1980	24,924 (100)	27,795 (112)	20,694 (83)	73,413	
1985	24,493 (100)	28,520 (116)	22,813 (93)	75,826	
1990	26,143 (100)	27,276 (104)	24,187 (93)	77,606	
1995	27,696 (100)	24,563 (89)	26,588 (96)	78,847	
2000	27,986 (100)	24,143 (86)	27,241 (97)	79,370	
Change During Interval					
1955-60	1,203	2,398	1,237	4,838	
1960-65	2,449	3,142	923	6,514	
1965-70	386	2,108	1,489	3,983	
1970-75	- 986	1,499	2,573	3,086	
1975-80	-2,761	2,471	3,050	2,760	
1980-85	- 431	725	2,119	2,413	
1985-90	1,650	-1,244	1,374	1,780	
1990-95	1,553	-2,713	2,401	1,241	
1995-2000	290	- 420	653	523	

Source: Kuroda (1971: 6)

Notes: 1. Ratio of each age group in parenthesis, taking age group 15-29 as base for a given year.

2. Recorded change for each age group:  $t_2 - t_1 = \text{recoded change}$

(column 2), however, we note that after a large increase in the 1960-1965 period of 2.3 percent, the increase rate is expected to fall off

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Table 4 about here  
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significantly to 1.1 in the period from 1970-1980. An examination of those actually in the labor force or expected to be in the labor force in the future (column 3) reveals an even lower increase rate than in the productive age population. In the period from 1970-75 and 1975-80, the increase of the labor force is expected to be only 0.8 percent respectively. In actual numbers, the total labor force is expected to grow only about four and one half million from 51,690,000 in 1970 to 56,150,000 by 1980.

The basic source of the lower increase rate in the labor force as compared to that for the productive age population lies in declining labor force participation rates. An examination of column 4 in Table 4 reveals that labor force participation fell from a high of 71 percent of the productive age population in 1955 to 65.4 percent in 1970 and is expected to fall further to 63.8 percent by 1980. Despite a sustained labor force demand resulting from continued economic growth, the labor force supply will decline because of the declining rate of population growth but also because of a declining labor force participation rate. Major sources of this decline in labor force participation are the extension of formal education and the achievement of an affluent society in which decisions to work particularly by family members are not made on the basis of economic necessity. In particular,

Table 4.

Total Population,  
Population in Productive Ages ( 15-60 ),  
and Population in the Labor Force

Year	Population <sup>1</sup> (1)	Population in Productive Ages <sup>1</sup> (2)	Population in Labor Force <sup>1</sup> (3)	Labor Force Participation Rate <sup>2</sup> (4)
1955	8,931	5,955	4,230	71.0%
1960	9,346	6,539	4,533	69.3
1965	9,828	7,324	4,816	65.3
1970	10,384	7,906	5,169	65.4
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1975	10,993	8,358	5,392	64.5
1980	11,597	8,806	5,615	63.8
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<b>% Increase:</b>				
1955-60	0.9%	1.9%	1.4%	
1960-65	1.0	2.3	1.2	
1965-70	1.1	1.5	1.4	
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1970-75	1.1	1.1	0.8	
1975-80	1.1	1.1	0.8	

Source: Economic Deliberation Committee (1972: 5)

Notes: 1. In ten thousands  
2. In percent

the agricultural sector is one which has high participation rates based both upon the need for all members of the family to engage in productive work and the relative ease with which family members can do so without disrupting child raising and other routine behavior.

The continuing shift of the Japanese population out of agriculture contributes to the declining participation rate. We can get a better picture of the content of the anticipated decline in labor force participation by examining the rates for females by age. The female labor force is of particular interest because Japanese management, scholars, and government officials have often viewed it as of the few remaining sources of untapped labor.

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Table 5 and 5a about here  
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Table 5 projects the female labor force by age to 1980 while table 5a shows the participation rates upon which these estimates are based. From 1970 to 1980, a relatively small increase in the female labor force is anticipated, from 20.3 million to 21.4 million. Apart from the lack of significant increases in females in the work productive ages, the failure to register larger increases in the labor force derives from the declining participation rates of females from 54.8 percent in 1960 to 49.8 percent in 1970 and an anticipated 47.6 percent in 1980.

By age, the increase in the female labor force from 1970 to 1980 is accounted for almost entirely by the marked increase in labor force in the 40-64 age category (from 7.8 to 10.3 million) and to a much

Table 5.

Population in Labor Force, Female, by Age  
(in ten thousands)

Age	1960	1965	1970	1975	1980
Total	1,851	1,916	2,027	2,068	2,143
15-19	220	198	150	102	92
20-24	280	322	381	319	280
25-29	215	205	205	235	192
30-39	417	432	435	431	472
40-64	624	686	783	909	1,033
65+	84	75	73	73	75

Source: Economic Deliberation Committee (1972: 30-31)

Table 5-a.

Labor Force Participation Rate, Female, by Age

Age	1960	1965	1970	1975	1980
Total	.548	.528	.498	.483	.476
15-19	.498	.365	.334	.266	.232
20-24	.709	.703	.706	.710	.730
25-29	.542	.492	.454	.439	.429
30-39	.578	.551	.526	.495	.480
40-64	.553	.558	.561	.579	.599
65+	.269	.214	.176	.153	.131

Source: Economic Deliberation Committee (1972: 30-31)

lesser extent by the 30-39 age category (from 4.4 to 4.7 million). Indeed, increases in the numbers of these two age groups will cover the absolute declines in labor force anticipated in the 15-29 age group.

The overall decline in female participation rates conceals marked differences by age group. The participation rate fell off most significantly for the 15-29 age group from 49.8 percent in 1960 to 33.4 percent in 1970 and an expected 23.2 percent by 1980. The basic factor here is, of course, the extension of school age. The participation rate also falls off in the 25-39 age groups as mothers can increasingly afford to stay home when they get married and begin to raise a family. In an urban setting, it is more difficult to combine such child raising functions with employment as compared to an agricultural setting. The participation rate also falls off for those over 65 as the new affluence makes it more possible for older females to actually retire when they reach the retirement ages of 55-60. Participation rates rise slightly for the 20-24 age group and more notably for the 40-64 age group. In the later case, Japanese management has been actively recruiting older females with a variety of part time employment arrangements to suit the needs of these potential employees. These part time employees generally experience shorter hours, inferior wages, fringe benefits and working conditions. In 1970, only 61 percent of the part time female employees were regular employees with 33.7 percent classified as temporary employees and 5.0 percent listed as casual workers (Economic Deliberation Committee, 1972: 71). One of the consequences of the above changes is that single females no longer constitute a

majority of employed females. In 1970, they constituted 48.3 percent of the female labor force; the continued aging of the labor force coupled with rising participation rates for the older age categories and declining rates for the younger insure a continuation of these trends in the future (Economic Deliberation Committee, 1972: 27).

An examination of female employment over time by occupational category holds little encouragement for womens' liberation. In 1960, females constituted 35.4 percent of all those employed as professionals and engineers, 4.3 percent of all managerial personnel, 36.9 percent of all clerical employees, 41.7 percent of all sales personnel, and 27.3 percent of all production process and lower level technical workers. The relatively high percentage of females among those employed as professionals and engineers should not be interpreted to mean that Japanese females have attained some of the most desired occupational positions. Some 40 percent of female professionals alone are accounted for by low paid primary school teachers and nurses. Compared to the 1960 figures just cited, by 1970, the only category in which the percentage of females registered significant changes was in clerical employees where they went from 36.9 percent to 49.3 percent. This compares to about 75 percent in the United States. This shift in Japanese female clerical employment, however, hardly represents substantial upgrading. Rather, the historically low percentage of females in clerical employment in Japan as compared to other industrial nations suggests that in the labor surplus economy that characterized Japan's past, a shortage of jobs for males led males to preempt many clerical jobs. Now that Japan is shifting toward a labor shortage



economy, males are being pulled out of clerical jobs into more responsible positions with females filling the vacuum.

Notwithstanding this situation, several indicators point toward a raising of female employment and occupational status in the future. The impetus behind this improvement does not come, however, from an enlightened management responding to the pressures from a militant feminist movement. Rather, the continuing labor shortage forces management to make more effective use of female "manpower." Some recent developments pointing in this direction include the upgrading of female part time labor to regular employee status. Although it was reported above that only 61 percent of part time female employees had regular employee status in 1970, this is up from 43.7 percent in 1965. A second indicator of improving female employment status is that the system of early retirement for females is rapidly being abolished.

An examination of the age composition of the labor force as a whole through 1980 reveals many features similar to those discussed for females. In Table 6, we see a falloff in both absolute and relative terms in the numbers of 15-24 year olds in the labor force. The other most notable change is the increased role in both relative

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Table 6 about here  
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and absolute terms that the 40-64 age groups will come to play in the economy.

Table 6.

Age Composition of the Labor Force<sup>1</sup>

Year	1960	1965	1970	1975	1980
Age Categories					
15-24	23.4%	23.3%	21.6%	16.0%	13.1%
25-39	36.2	37.1	36.3	37.5	36.8
40-44	8.5	9.5	11.4	12.1	11.9
45-64	26.8	25.4	26.2	29.5	33.2
65+	5.1	4.8	4.4	4.8	5.1
Total	100.0%	100.0%	100.0%	100.0%	100.0%
Base Population <sup>2</sup>	4,533	4,816	5,169	5,392	5,615

Source: Economic Deliberation Committee (1972: 12)

Notes: 1. The overall totals as well as totals for given age categories depend on the kinds of assumptions one makes about labor force participation rates for each age category. The overall totals here are based on the participation rates reported in Table IV. The estimates in Table VI represent a middle ground between the higher and lower estimates that have been constructed (c.f., Kōseishō, 1967: 1-49).

2. In ten thousands

Just as residential areas in cities do not age equally, the aging process does not fall equally on all industrial sectors. Generally speaking, those industrial sectors that show the highest rate of growth are the ones that most successfully resist the aging process; productive units in these sectors are able to hire large numbers of young employees. Differences in the aging process by industry become apparent when we compare sectors over time on an index of aging as measured by the percentage of total employed in a given sector accounted for by those from age 45-64 (Economic Deliberation Committee, 1972: 8-9). Agriculture as an industry of low growth and productivity went from 32.7 on this index in 1960 to 41.7 in 1970. The aging process was more retarded in the secondary sector where manufacturing went from 16.9 in 1960 to 21.2 in 1970. The tertiary sector experienced the smallest increase on our aging index going from 22.7 in 1960 to 23.7 in 1970.

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Table 7 about here  
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The selective nature of the aging process is nowhere more evident than in an examination of age structure by size of firm. Table 7 provides dramatic evidence that although the aging trend is occurring in both large and small manufacturing firms, it is most pronounced in small firms. For example, those employees under age 20 declined from 18.9 percent in 1960 to 14.2 percent in 1970 in firms over 1,000 employees, but the decline was much more marked in firms of 10-99 employees where those under 20 went from 23.8 to 8.5 percent.

Table 7

Age Composition of Regular Employees in Manufacturing, by Firm Size

Age	Firm Size					
	100 or more employees			10-99 employees		
	1960	1965	1970	1960	1965	1970
Below 20	18.9%	18.1%	14.2%	23.8%	15.4%	8.5%
20-29	37.1	41.0	40.9	36.5	33.8	29.6
30-39	23.2	21.3	23.0	18.1	22.6	25.5
40-49	15.6	14.0	15.4	12.3	15.2	19.5
50+	5.2	5.9	6.6	9.3	13.0	16.8
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Economic Deliberation Committee (1972: 36)

Similarly, those from ages 40-49 actually declined as a percentage of the labor force in large firms from 1960-1970 (from 15.6 to 15.4 percent), but in smaller firms the percentage increased from 12.3 to 19.5 percent. The social dumping apparent in these figures is particularly pronounced in the case of females (Okazaki, 1968: 88). In short, although the dual economy may be breaking down with respect to such things as wage differentials, the increasingly discrepant age structure will continue to have profound consequences on productivity, life styles, political orientation, etc. Although large firms will not be able to avoid the aging of their employees in the future, their superior strength will most likely result in the aging trend being felt more strongly in the smaller firms.

Implicit in the preceding discussion is a rapidly expanding education structure which both delays entrance into the labor force and produces a labor force with rapidly changing skills. In Table 8, the Economic Deliberation Committee has compiled figures on the quickly changing supply of new school graduates at different school levels with projections until 1980. The total number of graduates in 1980 of slightly over 1 million represents a falloff from the high of almost 1.5 million in 1966. The raw figures from 1960 to 1980 show a drastic falloff of middle school graduates from 684,000 to 99,000 a moderate growth of high school graduates from 477,000 to 722,000 and a marked increase of university graduates from 119,000 to 361,000. Middle school graduates as a percentage of total graduates decline from 53.4 percent in 1960 to a low of 8.4 percent in 1980; high school graduates rise from 37.4 percent of the total to 61.1, and university

graduates register over a three fold increase from 9.3 to 30.5 percent. It would be hard to exaggerate the importance of these changing

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Table 8 about here  
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educational statistics. In introducing new skills to the population, changing people's aspirations and delaying entry into the labor force, they have a profound impact on social, economic, and political behavior.

Will the industrial structure of 1980 be capable of absorbing and effectively utilizing the upgraded educational skills projected in Table 8? The Japanese seem to have little doubt on this matter. Indeed, they see upgraded educational skills as basic to the solution of their problems. Because of the persistent labor shortage, their concern of policy makers is with increasing capital intensive investment to replace labor intensive operations. The new skills necessary to bring about this transformation lead Japanese experts to concentrate on upgrading labor force quality rather than concerning themselves with how to increase quantity which was the major policy orientation in the decade of the 1960's.<sup>1</sup> These Japanese see improved educational skills as answering the problem of how to insure that the relatively stabilized labor inputs of the future will be able to maintain past increase rates in labor productivity.

The emergent industrial structure is expected to provide the framework within which these expectations can be achieved. Table 9, prepared by the Economic Deliberation Committee presents the ongoing transformations of the employed population by industrial sector from

Table 8.

Observed and Estimated Trend for Newly  
Graduated Employees, by Level of Education<sup>1</sup>

Year	Bases for Percentages <sup>2</sup>	Composition in Percentage		
		Middle School	High School	University
1960	1,282	53.4%	37.4%	9.3%
1965	1,407	44.4	44.8	10.7
1966	1,495	34.9	54.6	10.5
1967	1,464	30.5	57.4	12.2
1968	1,434	26.9	58.9	14.2
1969	1,340	24.2	58.5	17.3
1970	1,255	21.6	58.1	20.3
1971	1,186	18.6	57.4	23.9
1972	1,199	16.6	57.6	25.8
1973	1,188	14.3	58.3	27.4
1974	1,174	13.4	58.7	27.9
1975	1,142	11.8	59.1	29.1
1976	1,128	10.6	59.2	30.1
1977	1,194	9.2	61.8	29.0
1978	1,176	8.8	61.3	29.8
1979	1,171	8.8	60.7	30.5
1980	1,182	8.4	61.1	30.5

Source: Economic Deliberation Committee (1972: 16)

Notes: 1. The category high school includes students in the comprehensive system. University students are day-time students, junior college students, students in advanced specialty schools and those in the process of securing a Master's degree.

2. In thousands

1955 to 1968 with projections through 1975. Notable is the rapid decline of the agricultural sector which accounted for 37.6 percent of the employed population in 1955 (15,360,000), but is anticipated to account for no more than 11.7 percent in 1975 (6,350,000).<sup>2</sup>

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Table 9 about here  
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Although the rate of decline for agricultural employment is projected to accelerate for 1968-1975, there are some obvious limitations to a continuation of this acceleration. Continued marked declines in agricultural employment would require persistent opportunities and inducement in non-agricultural employment, modernization of the agricultural sector and continued retirements by an aging labor force. It is questionable whether all these conditions can be met.

As presented in Table 9, the secondary sector is expected to account for 46.1 percent of all employment by 1975, up from 40.6 percent in 1968. The tertiary sector is also expected to gain going from 39.5 percent in 1968 to 42.2 percent in 1975. Table 9 shows the secondary sector surpassing the tertiary sector in total employment for the first time in 1968.

Professor Okazaki Yoichi constructed a more detailed estimate of employment structure by industry for 1985 based on a different set of assumptions.<sup>3</sup> These estimates appear in Table 10. Column 3 presents the change rate anticipated from 1965 to 1985, taking the 1960 figures as one hundred. Notable are the declines in agriculture where employment falls almost 50 percent from 11,176,000 to 5,889,000.



Table 9

Composition of Employed by Industrial Sector

Year	Primary <sup>1</sup>	Secondary <sup>2</sup>	Tertiary <sup>3</sup>	Base for Percentages <sup>4</sup>
1955	37.6%	29.1%	33.3%	4,090
1960	30.2	33.4	36.4	4,436
1965	23.5	38.1	38.4	4,730
1968	19.8	40.6	39.5	5,002 <sup>5</sup>
1975	11.7	46.1	42.2	5,408

Source: Economic Deliberation Committee (1969: 22).

- Notes:
1. Includes agriculture, forestry and marine products.
  2. Includes mining, construction, manufacturing, transportation and communication, electricity, gas, and water.
  3. Includes wholesale and retail trade, finance, insurance and real estate, service industries as well as public employment
  4. In ten thousands
  5. Figures for 1968 include some ambiguous classifications.

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Table 10 about here  
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Expressed as a total of all employment, agriculture falls from 25 percent of the labor force in 1965 to 12.2 percent by 1985. This is a more conservative estimate than the one presented in Table 9.

Notable among Okazaki's estimates are the absolute declines projected for family employees in the non-agricultural sector (from 2,170,000 in 1965 to 1,973,000 in 1985) and the small absolute increase of self-employed from 4,950,000 to 5,497,000. In percentage terms, employees increase from 78.5 percent of total employed in the non-agricultural sector in 1965 to 82.4 percent while family employees drop from 6.5 to 4.6 percent and self-employed drop from 14.7 to 12.9 percent. This decline in the share of the labor force accounted for by those in agriculture together with the decline of family employees and self-employed will result in a weakening of the dual economic structure in the sense that a smaller proportion of Japanese will be employed in the low productivity sectors of the economy by 1985.

Among employees, the most notable increases in Table 10 register for manufacturing, service and commerce. It is interesting that government employment is projected to show a very small increase which in effect means a relative decline in percentage of employees in government service. Here, the projections may be misleading. The period 1960-65 was one in which manufacturing employment grew most rapidly with growth in the service sector (including commerce) in second place.

Table 10.

Number of Employed by Industrial Sector  
(in thousands)

Industrial Sector	Year		Change Ratio <sup>a</sup> $\left(\frac{1985}{1965} \times 100\right)$
	1965	1985	
Total	44,779	48,407	108.1%
Agriculture, Forestry	11,176	5,889	52.7
Non-Agricultural	33,603	42,518	126.5
Self-Employed	4,950	5,497	111.1
Family Employees	2,170	1,973	90.9
Employees	26,370	35,028	132.8
Fishing	242	232	95.8
Mining	350	248	70.9
Construction	2,156	2,294	106.4
Manufacturing	9,801	14,312	146.0
Commerce	5,388	7,189	133.4
Transportation	2,917	3,607	123.7
Service	4,023	5,556	138.1
Public	1,493	1,590	106.5
Not Classifiable	113	20	17.7

Notes: a. In percent

Source: Okazaki (1968: 76)

In the period from 1965-1970, however, the growth in the service sector accelerated actually surpassing the growth of the manufacturing sector (Emi, 1971: 145); thus, if the Okazaki projection had been based on the period 1965-1970, it would have shown greater relative expansion of the service sector. Secondly, the immense growth of manufacturing in the 1960's reflected the relative neglect of government investment in public services. This policy is under increasing attack as concern grows with the environmental impact of a single-minded concentration on expanding the GNP through concentrating investment in the private sector. In response to these issues, the Japanese government has indicated that in the future it will increase public investment. Should this policy become reality, public employment will likely increase at a faster rate than projected in Table 10. In Japan, since the beginning of industrialization, the tertiary sector has exceeded the secondary sector in employment. This is contrary to the stage model suggested by Colin Clark where the secondary sector is expected to exceed the tertiary sector until a mature stage of industrialization is reached. The situation in Japan results from a historic labor surplus economy with an abundance of people being forced to eke out an existence in the low productivity sectors of urban areas.

Even today, compared to the United States, for example, the weight of the wholesale-retail trade and other miscellaneous services is quite high in the Japanese employment structure; interestingly enough, the weight of government employees is quite low and has shown no tendency to rise as has been the case in the United States (Emi, 1971: 140). In the past, employment in the tertiary sector served

to maintain or increase employment in times of business slowdowns. The sharp increase of the service sector in the period from 1965-1968 suggests a new situation in which tertiary sector employment increases even in periods of rapid expansion. What seems to be emerging is what V. R. Fuchs in his analysis of employment trends in the postwar United States called the service economy, an economy in which more than half of the employed population is not involved in the production of food, clothing, houses, cars, or other tangible goods (Fuchs, 1968). The Japanese often refer to the growth of the information society or leisure industries to refer to these same trends (Tominaga, 1971: 69).

An interesting indicator of future employment structure by industry is the shifting composition of employment composition of new school graduates. Table 11 reports this distribution for three successive five year intervals beginning in 1960. As expected, the percentage of new school graduates entering the primary sector declines sharply from 1960 to 1970 at each educational level. In 1970, for the first time, the total number of new school graduates entering the tertiary sector (50.2 percent) exceeded the number entering the secondary sector (46.5 percent). It has been the

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Table 11 about here.  
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middle school graduates that supplied the bulk of their numbers to manufacturing rather than the tertiary sector. Concomitant with the decline of middle school graduates and the increase in high school and university graduates, the majority of new school graduates are now entering the tertiary sector. This incidentally suggests lowered productivity gains for

Table 11.

Distribution of New School Graduates by Industrial Sector

	Bases for Percentages <sup>1</sup>	Primary Sector <sup>2</sup>	Secondary Sector <sup>3</sup>	Tertiary Sector <sup>4</sup>
<u>Education</u>				
<u>Total</u>				
1960	1,282	10.0%	50.4%	39.6%
1965	1,407	4.8	51.1	44.0
1970	1,255	3.4	46.5	50.2
<u>Middle School</u>				
1960	684	13.8	61.5	24.7
1965	625	7.4	66.3	26.3
1970	271	5.2	69.0	25.8
<u>High School</u>				
1960	479	6.8	38.2	54.9
1965	631	3.5	39.0	57.6
1970	729	3.6	40.2	56.2
<u>College</u>				
1960	119	0.9	35.5	63.5
1965	151	0.5	39.2	60.3
1970	255	0.7	40.3	59.0

Notes: 1. In thousands

2. Includes agriculture, forestry, and fisheries.

3. Includes mining, construction, and manufacturing.

4. Includes wholesale and retail trade, finance, insurance, real estate, transportation and communication, public utilities, service, public employment, etc.

Source: Adapted from Economic Deliberation Committee (1972: 16, 18).

the Japanese economy in the future based on the assumption that rapid gains in productivity are more difficult to achieve in the tertiary sector (with its emphasis on labor intensive services).

The drastic shifts in industrial structure envisioned in the preceding pages will have a major impact on residential patterns. Urbanization and shifting industrial structure generally proceed hand in hand. Japan's high level of economic development, combined with the nation's narrow geographical confines, has produced one of the highest ratios of urban population to total population among the major industrial nations of the world. By 1970, 72.2 percent of the population (75 million) were concentrated in 579 cities. Despite government attempts at decentralization, the projected shifts in industrial structure will in all likelihood increase the ratio of urbanization. In an era where the ills of urban life seem to become more and more apparent, it can be anticipated that this increased urbanization will heighten social tensions and increase conflicts between consumer groups and management.

Paralleling shifts in industrial structure is the redistribution of occupational skills required by a more advanced industrial economy. Because it is difficult to anticipate the nature of technological innovation, the precise character of the occupational structure in the 1980's can not be made clear. However, some general characteristics are apparent.

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Table 12 about here  
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From Table 12, we see that significant shifts in occupational

Table 12.

Transition of Employment by Major Occupational Categories

	1955	1965	1970
Professional	4.9%	5.6%	6.7%
Managerial	2.3	3.0	3.9
Clerical	10.4	13.0	14.0
Sales	10.6	11.7	12.0
Agriculture, Forestry, and Fishing	32.6	24.5	19.2
Mining	0.8	0.5	0.3
Transportation and Communication	3.3	4.4	4.5
Production Processes	28.6	30.1	31.7
Protective Service	1.1	1.2	1.3
Service	5.4	6.0	6.5
Total	100.0%	100.0%	100.1%
Bases for Percentages <sup>1</sup>	436,793 <sup>2</sup>	476,099 <sup>2</sup>	520,263 <sup>2</sup>

Notes: 1. In hundreds.

2. Numbers are for both sexes combined.

Source: Adapted from Economic Deliberation Committee (1972:24-25)



structure took place in the period from 1960 to 1970. Especially notable are the increases in the percentage of employment accounted for by the professional category (4.9 to 6.7 percent), the clerical category (10.4 to 14.0 percent), and production process workers (28.6 to 31.7 percent) coupled with the sharp decline in agricultural occupations (32.6 to 19.2 percent).

Somewhat concealed in Table 12 are the relative distributions of white-collar and blue-collar occupations. Table 13 shows the changing distributions of white-collar, blue-collar, sales and services,

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Table 13 about here: -  
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and agricultural occupations from 1965 to 1968 with estimates to 1975. Coupled with the predictable decline in agricultural occupations are the increases in the share of the labor force accounted for by all other categories. In this time period, the white collar group shows the highest rate of increase; in 1955 they accounted for 15.9 percent of the labor force whereas by 1975 they are expected to total 26.8 percent. Blue-collar occupations also increase their share of the labor force moving from 28.7 percent in 1955 to an anticipated 41.0 percent in 1975. The rapid growth of white-collar occupations even at the expense of blue-collar occupations can be seen most clearly in an analysis of the changing distribution of occupations of new school graduates. In 1960, 41 percent of new school graduates went into blue-collar occupations while only 26.8 percent went into white-collar occupations, but by 1970, 38.9 percent were entering white-collar

Table 13.

Number of Employed by Occupation

Year	White Collar <sup>1</sup>	Blue Collar <sup>2</sup>	Sales and Service	Agriculture Fishing	Bases for Percentages <sup>3</sup>
1955	15.9%	28.7%	18.7%	36.8%	4,090
1960	18.3	31.8	20.1	29.8	4,436
1965	21.3	35.1	20.5	23.1	4,730
1968	22.1	37.5	20.8	19.6	5,002
1975 <sup>4</sup>	26.8	41.0	20.4	11.7	5,408

- Notes:
1. Includes professional, technical, managerial and clerical.
  2. Includes skilled workers, production process workers, transportation and communications workers, and miners.
  3. In ten thousands.
  4. The estimate to 1975 is based on a linear projection of employment trends from 1955 to 1965.

Source: Economic Deliberation Committee (1969: 23).

occupations and only 35.9 percent entered blue-collar occupations (Economic Deliberation Committee, 1972: 19).<sup>4</sup>

These trends in occupational structure can be expected to continue through the 1980's with particularly high rates of increase for professional and clerical categories.<sup>5</sup> For example, in 1972 there were some 50,000 computer experts in Japan. The Data Processing Education Council established by the Ministry of Education estimates that by 1980 Japan will need some 500,000 computer experts, ten times the present number. It is the growth of such occupational categories that will move Japan into the "information age."

### III

We now turn to the final and most difficult part of this paper, that of speculating on the impact of these changing demographic, employment, industrial, and occupational structures upon the Japanese form of industrial relations. In trying to make this speculative leap, two problems come immediately to mind. Industrial relations are played out at the level of the individual firm, yet changes in labor force characteristics are aggregate measures. Sometimes these aggregate measures are results of different and conflicting trends; therefore, these summary measures may have little or no relevance to behavior at the individual firm. One example that comes quickly to mind is that although there may be a persistent national labor shortage reaching into the 1980's, this is not incompatible with many individual firms experiencing labor redundancy. Similarly, the extent of labor shortage will vary with industry, enterprise, occupation and nature and scope of technological innovation. In a different vein, although the

aging of the labor force may occur over a wide range of individual firms, variance in age composition in different industries and size of firms make generalizations on the impact of aging quite difficult. This brief discussion is intended to call these difficulties to the reader's attention and make clear the tentativeness of the subsequent discussion.

Secondly, although the changes in demographic, employment, industrial and occupational structures may act as powerful variables influencing the system of industrial relations, clearly they are not the only relevant variables. Consequently, the following discussion can only be regarded as tentative with full recognition of the possibility that other variables will produce effects that both strengthen and counter-balance the ones we discuss.

One such variable that lies outside previous discussion yet is of vital importance in determining employment, industrial, and occupational structures as well as directly influencing the industrial relations system is rate of economic growth. The assumptions one makes about the rate of future economic growth so conditions ones' conclusions that the subject requires a separate discussion.

Students of Japanese social conditions often have pointed out the large impact that a slowdown in Japan's high economic growth rate would have. Throughout the 1960's, the Japanese themselves became accustomed to look at any growth rates in real GNP below 10 percent as recessions. Usually, discussions of a long-term slowdown in economic growth have been limited to such generalities as it would produce an aggravation of social and political tensions (e.g., Brzezinski, 1971: 57). Recently, the possibility of such a slowdown has come to appear as a

quite likely outcome; Japanese analysts themselves have begun to take a more serious look at the question.

My own judgement based on a sampling of the discussion leads me to conclude that a real growth rate of 6-7 percent seems a likely stabilizing point for Japan by 1980, though undoubtedly there will be fluctuations throughout the 1970's.<sup>6</sup> This is not the place for an extended discussion of the economic growth potential of the Japanese economy, nor is this author qualified to undertake the task. Nevertheless, a few words on the subject are in order. The rapid expansion of the GNP in recent decades has been based on the priority given to private equipment investment focused on the heavy and chemical industries as well as the priority given to exports and acquisition of foreign exchange. The whole financial and administrative structure is arranged to give preferential treatment to equipment investment and exports (see Nagasu, 1972: 143). These policy decisions have had serious negative domestic and international repercussions in recent years, arising to a great extent out of their success in the past. On the domestic scene, the resource allocations implicit in these policies have become increasingly untenable in the face of environmental destruction and "livelihood destruction" resulting partially from low social capital investment. Internationally, these policies have come under foreign criticism with strong hostility being directed toward Japan's export policies.

Zbigniew Brzezinski has listed 20 domestic and international factors which contributed to rapid economic growth in postwar Japan (Brzezinski, 1972: 35-57). He concludes that during the decade of the seventies only four have a high probability of remaining operative;

he sees ten of the factors as having a 50 percent chance of turning negative while six factors can be assumed to be negative. Although these twenty factors are hardly of equal weight and substitutions will be possible for some of the negative factors (such as capital for labor), the shift to a more unfavorable economic environment seems unmistakable. Of the factors Brzezinski discusses that relate to our discussion, he lists available labor and low wages as previously positive factors that will turn negative. He further cites high work motivation and social stability as positive factors in the past that are doubtful for the future. These are issues to which I shall return in the following sections.

For now, it is important to emphasize the importance of the 6-7 percent prediction of future growth rates, however precarious such a prediction may be. For example, with a growth rate of 6-7 percent, labor shortage will remain a serious problem. Should the Japanese growth rate drop well below this figure, the labor shortage would be a much more minor issue with far less impact than proposed in this article.

The sociological axiom that underlies expectations that a slowdown from the 12 percent growth rates of the 1960's will have important social and political consequences is as follows: under conditions of a rapidly increasing GNP pie, both the advantaged and disadvantaged sectors of the population can anticipate increased material prosperity. Looked at in terms of the distribution of material rewards in a society, constant expansion of the pie permits the relative gap between the advantaged and the disadvantaged groups in the population to be closed

without causing a decline in absolute rewards for the advantaged. The consequence is that such a rapid expansion allows rapid social change with a minimum of social conflict.

The above description provides a fairly accurate picture of Japan in the postwar period. A remarkable transformation has been achieved in productive capacity and in the nature and degree of urbanization of the Japanese population. The dramatic reforms of the immediate postwar period combined with an annual rate of increase in real income of 6-7 percent, the highest in the world, have led to a significant narrowing of the income gaps between various social groupings. This levelling of income distribution has involved: closing the gap in wage level between blue-collar and white-collar employees, increase in farmers' earnings and the wages of construction workers relative to the earnings of urban workers, reduction of the gap between younger and older workers, reduction of differentials in wages in large and small firms especially among the younger age categories, decline of wage differentials by educational level and the closing of the gap between earnings in the civil service and private sector with more rapid increases in the latter.<sup>7</sup> Significant here is that these gaps have been closed with a minimum of social conflict as a consequence of the advantaged group in each case being able to increase its absolute share (as measured in standard of living) even while its relative share was declining.<sup>8</sup>

The importance of a decline in the rate of economic growth lies in the possibility that the distribution of social rewards in the future will be transformed into operating more as a zero-sum game. That is to say, the possibility is increased that with more stabilized resources,

the gains for one social group will come at the expense of other social groups not only in a relative but in an absolute sense as well. It is this principle that is the basis for the heightening of social and political tensions that scholars associate with a declining rate of economic growth.

Assuming this decline in economic growth, some key questions we would like answered are: will the advantaged groups continue to allow a decline in their relative advantages when they can only anticipate modest absolute gains and in some cases declines in their absolute share of rewards? In cases where market factors are operative in producing a levelling, how will previously advantaged groups respond? Similarly, will disadvantaged groups that have become accustomed to large annual improvements in their economic position tolerate reductions in their increase rate? If such reductions occur, how will they respond? Will there be a political response, a heightening of workshop tensions and consequent loss of motivation to work, or will employees turn to a more privatized consumption of leisure time. These are some of the questions to be treated in the following sections.

The lines are drawn on these above issues most clearly in the case of wage increases. The relationships between wage increases and labor productivity are extremely complicated ones. On the surface, they might seem to be fairly straightforward if we look at recent Japanese economic indicators. In three recent five year periods, nominal employee per capita income rose 6.8 percent between 1956-1960, 12.8 percent between 1961-1965 and 14.0 percent between 1966-1970. Adjusting for inflation, the real income increases work out to 5.0, 6.1, 8.0, respectively. These



gradually rising percentage increases in income are roughly matched by rising per capita increases in real productivity (Japan Productivity Center, 1972: 27, 29). However, more careful examination of the past cyclical movements in the Japanese economy show that there is a time lag between movements of business activity and wages. In economic downturns, the strong upward pressure on wages lingers while in upward swings, the wage increases lag behind. Events in 1972 support this interpretation. Despite the uncertainty and confusion resulting from yen revaluation and the fact that the economy was in a marked downswing, the average monthly wage increases in the unions' "spring offensive" showed a surprisingly high increase rate of 14.8 to 15 percent over the previous year (about ¥9,800-9,900). These wage boosts exceeded those of 1971 in absolute terms and were only slightly lower in percentage terms. At the conclusion of the 1972 spring offensive, widespread concern was voiced in the business community to the effect that enterprises now appeared to be compelled to pay high wages independent of labor productivity.

Insofar as we anticipate a downward movement in economic growth rates to about 6.7 percent by the 1980's, we would expect that wage rates would follow this decline though with considerable time lags and then not completely. The continuing labor shortage, militant union demands as expressed in the established role the unions' spring offensive has come to play in wage determination, and the significant impact of previously established expectations by both management and labor forestall a convergence between the two. It may be that the annual increases of 10,000 Yen a month will be maintained for some time, though

it will gradually produce smaller percentage increases, with annual wage increases becoming stabilized at around 10 percent. The Japan Economic Research Center estimates, incidentally, by 1980, that the average wage of Japanese employees will reach about 80 percent of U.S. wages.

The maintenance of a high level of wage increases under conditions of declining economic performance can be expected to put considerable pressure on corporate earning capacity. In such a situation, management will likely respond with strong pressure on labor to hold down wage increases and with higher investment in labor saving equipment in existing facilities to the extent that they are not successful. Even in the business decline of 1970, in which the rate of new business investment fell off drastically and wage increases held firm, labor saving investment in existing facilities remained strong (Economic Planning Agency, 1971: 29). An additional long-run response to the continued high wage increases is a shift in industrial structure toward producing goods and services that have a high added value, i.e., the "information related industries."

Employees have not only become accustomed to high annual wage increases but to rising rates of increase. The above discussion suggests that although there will be time lags and the correspondence will not be complete, wage increases will gradually moderate as they come into line with national economic performance and respond to the continued strength of Japanese management and government. How will employees respond to resistance to their efforts to achieve wage increases consonant with past performance? If we assume that the Japanese have inter-

nalized a traditional work ethic and are totally unable to resist management authority because of their need for dependency and the persistence of traditional values; then a slowdown in wage increases should bring no significant changes in work behavior; no marked increases in labor discontent should occur. Although this interpretation may appeal to those western observers who are obsessed with notions of an unchanging Japan, almost no serious Japanese scholar in the industrial relations field takes this view seriously.

An alternative interpretation with a good deal of intuitive appeal is that significant worker frustration has piled up over the period of rapid economic growth since 1955 over work conditions and urban living conditions but that this frustration has been held in check by rapidly rising real income. In short, large wage increases have served to mute overt expression of dissatisfaction. In this period, the moderate Dōmei union federation explicitly bought the new management policy of higher wages for increased productivity. Sōhyō, the largest union federation, resisted this formula at the national level with left-wing ideology and "anti-rationalization" movements, but at the enterprise level, its member unions bought the policy just as did the Dōmei unions.

The significance of this past history is that should an economic slowdown restrict the increase rate of wages as seem likely over time, economic rewards will be less able in the future to compensate for the lack of non-economic rewards as has been the case over the last 20 years.

If we consider how such dissatisfaction might get expressed, a number of alternatives come to mind. Some though not all of these alternatives are compatible with one another. Of great interest is

whether worker dissatisfaction manifests itself in greater involvement in political activity. The likelihood of workers achieving satisfaction in this area seems small. The continued reduction of LDP vote pluralities does seem to be quite probable. The non-LDP parties are increasingly successful in focusing on the wake of social problems that have been created by the high economic growth policies of the LDP. Destruction of livelihood (seikatsu hakai), public nuisances (kogai) and the housing problem (jūtaku mondai) are all increasingly effective slogans for the non-LDP parties. If the LDP really were to make a major shift in building a welfare state, they could turn these issues to their own political advantage. In the last decade, however, they have pretty much used the slogans as rhetoric without making a major policy commitment to realizing them. Barring such a commitment in the future and barring drastic shifts in the international situation which would permit the LDP to rally national support, a continued weakening of the LDP seems probable.

Notwithstanding this likelihood, the ability of the opposition parties to build a viable ruling coalition seems slight. Cooperation between Shakaitō, Komeitō, Minshatō and Kyosantō seems possible on limited issues such as has been the case on changing Japan's position toward China. The kind of united front necessary to build a lasting government majority, however, seems outside the grasp of the opposition parties given their ideological differences.

A coalition between LDP and one of the opposition parties, especially Minshato and possibly Komeito seems a more likely alternative for the 1980's. At the present time, there is little evidence to suggest that Minshato has the will to demand the kinds of major con-

cessions from the LDP that would be necessary to satisfy worker demands. Consequently, although increased worker and union political activity and pressure on the government seem a probable response over the next 10 years, they don't seem to promise much concrete satisfaction in the form of a government committed to the public interest.

A second mode of expressing their dissatisfaction is for employees to turn inward to leisure time consumption and "my homism." This individual solution is suggestive of increased alienation from work with consequent lowered will to work. It may well be that different segments of the labor force will opt for the political versus the individual solutions. Management spokesmen already see a lowered will to work as a major problem to be combated in the coming decade. Current slogans such as "making every man a manager" and the spread of quality control circles reflect management's deep concern with this issue.

A third alternative for expressing worker dissatisfaction would lie in increased opposition to management at the shop level. Without large wage increases to offset the expected stepped-up labor intensification (rōdō kyōka) policies of management, employees are likely to put more pressure on union leaders to defend their interests in the shop. Thus far, unions have largely given management a free hand in the shop as part of their cooperation to raise productivity in exchange for higher wages. An economic slowdown which led to lowered wage increases and increased efforts to raise productivity levels in existing facilities through labor intensification practices would make this bargain appear most onesided. Consequently, the unions, whatever their ideology, might well be forced to make greater efforts at protecting worker interests

in the shop on such matters as job transfers, speedups, occupational health standards, environmental issues, leisure time consumption and the like. There are signs that the unions are already moving to confront some of these issues, issues on which they have been notably silent in the past. How well and seriously they tackle these issues may well have a major impact on the future significance of unions in Japanese society. On the other hand, management should not be underestimated for its ability to handle workers and keep unions from getting involved unless it is in a role directly supportive of management policy.

The combination of a slowdown in the rise of wage increases combined with a continuing labor shortage seems guaranteed to fuel the growing conflict between younger and older employees as older employees greatest pressure producing changes in the nenkō wage system was the growing labor shortage, primarily of younger workers. This forced up the wages of young employees at a much more rapid rate than for older employees resulting in a de facto weakening of nenkō. Although an economic growth rate of 6-7 percent will reduce labor demands relative to the period of the 1960's with its higher growth rates, the supply of young employees, as discussed earlier in this paper, will decline still more drastically in the coming decade. As a consequence, there will be continued shortage with sustained pressure to raise the wages of young employees.

What is notably different about the coming decade is that older employees will be less assured of rising absolute gains as their relative advantages decline. Because of predictable management efforts to hold down the size of their total wage bill under conditions of declining

economic growth rates, older employees will be even more hard pressed to achieve wage hikes commensurate with that of younger employees. Moreover, management is faced with the prospect of a rapidly rising wage bill as a result of the aging labor force. This will put severe pressure on the nenkō wage system with management attempting to hold down the wages of older workers. One appealing way to legitimate this holding the lid on wage increases for older employees is to publicly shift toward a wage system more exclusively based on merit. This is a shift that appears already underway. In summary, significant modification of the nenkō wage system is already occurring and will be accelerated by a combination of an aging labor force, continuing labor shortage and declining economic growth rates. This is not to say that age and length of service will disappear as wage determinants. I have discussed elsewhere the source of their persistence (Cole, 1971). Briefly put, rewarding seniority represents the value of accumulated experience (specific training) at a given employer.<sup>9</sup>

The weakening of the nenkō wage system will not affect all occupational categories equally. Those categories of employees that are in the greatest need, such as blue-collar workers and technicians, seem likely to experience the most marked changes. Although some differential based on age seems likely to be retained, the substance will be quite different than in the past. Among many white-collar employees and management personnel, nenkō will undoubtedly persist in a form quite comparable to present practices. The increased number of college graduates (an anticipated 361,000 in 1980 as compared to 309,000 in 1972) will result in the labor shortage being felt less strongly for management personnel;

consequently, the pressure to raise the wages of young employees will be less marked.

As a consequence of sharp modifications of the nenkō wage system among large numbers of employees, generational conflict among employees and between older employees and management seems likely to grow. A good deal of the generational conflict is likely to be fought out in employee struggles over union policy. The recent rejection of established union leaders such as the Postal Workers' Takaragi and the Japan Seamen's Nabasama suggest growing internal struggles with age differences as a key focal point. Young employees, although receiving higher wages are conscious of their limited means to experience the leisure life trumpeted in the mass media and are conscious of the way union policy is oriented toward the needs of older workers on the one hand and management on the other.<sup>10</sup> Young employees have become accustomed to the rising curve of wage increases; dissatisfaction will grow with management's strong to cut back on these increases. The settled union leadership of the last 15 years seems likely to become a thing of the past as young employees attack union leaders for being too cooperative with management policies. From the other side, older employees are increasingly upset at seeing wage and other advantages disappear. Again, these dissatisfactions by both young and old seem sure to be intensified by the aging of the labor force, continuing labor shortage and declining economic growth rates.

It is not only the nenkō wage system that is under attack from the above forces. The system of promotion according to age and length of service is also vulnerable. Ansley Coale (1968: 471), the noted demographer, expressed the issue in general terms as follows:<sup>11</sup>



The most conspicuous disadvantage (of zero population growth) is the age composition implied by a stationary population, especially at the low mortality that has been achieved in advanced countries. A stationary population with an expectation of life of 70 years has as many people over 60 as under 15. This distribution is essentially vertical up to age 50 or 55. The median age is about 37 years. . . In a stationary population, as Myrdal pointed out years ago, there is no longer the consonance between the pyramid of responsibility and the age pyramid that there is in a growing population. When the population is stationary, there is no longer a reasonable expectation of advancement in authority with age, since the number of 50-year olds is little different from the number of 20-year olds.

Although Japan is still far from the stationary population envisioned by Coale, it has moved rapidly in that direction. The aging index (those over 60 divided by those 14 and below) reported in Table 1 moved from 24 in 1955 to 45 in 1970 and is estimated to rise to 90 by the year 2000. Although Coale's statements on the implications of increasingly discrepant authority and age structures must be regarded as hypotheses, the scanty data available on changes in the nenkō promotion structure provide some support for his conclusions.

In the late 1950's and 1960's, rapidly expanding industrial facilities lead to the creation of large numbers of new supervisory and managerial positions. It was just those industries that were rapidly expanding that also had labor forces marked by extreme youthfulness. Thus, management was not faced with large numbers of middle-aged employees with expectations of promotion according to age and length of service. Instead, the relatively small number of older employees came to the promotion age at just that time that supervisory and managerial positions were undergoing rapid expansion. This meant that those employees over age 35 with "normal" abilities

and qualifications had every reason to look forward to promotion at least to the first steps on the ladder.<sup>12</sup> Indeed, it is reported that rapid expansion in many companies led to a reduction of the promotion age from the early 40's to the early 30's as management sought to meet its supervisory needs (Rohlen, 1971: Chapter 6).

The above situation is now beginning to change quite rapidly. On the supply side, with the aging of the labor force beginning to take on significant dimensions, management is faced with the prospect of ever larger numbers of older employees with expectations of nenkō promotion. It is already clear that many will be disappointed. The squeeze on nenkō promotion becomes even tighter if we look at the demand side as compared to the 1960's. Demand (vacancies) arises from retirements, reorganization, and expansion; with the curtailment of the economic growth rate, there will be a corresponding decline in the rate of increase of supervisory and managerial positions. The pressure to hold down the total wage bill discussed earlier will provide further incentives for management to scrutinize supervisory positions with an eye to cutting out those that are not economically justified. Moreover, those companies that experienced rapid growth in the 1960's and responded with lowered ages at promotion will be saddled longer with existing incumbents and consequently can not rely on attrition through retirement to open up large numbers of vacancies in the decade of the 1970's.<sup>13</sup>

In summary, at many companies the coming decade will be characterized by an increasing number of aspirants eligible for nenkō promotion who will scramble for a more stabilized number of available vacancies. Judging by the past pragmatism of Japanese management,

their course of action will be toward deemphasizing nenkō promotion and instituting merit criteria as a basis for selection. This has the virtue not only of rewarding able employees but also of serving as ideology to legitimate the failure of many employees to be promoted. A similar attempt to cool out those who would otherwise fail to be promoted is the growing managerial practice of providing some symbolic mark of promotion for older employees as exemplified by the status-ranking system (shikaku seido). This is a system which tries to provide recognition of long-term service with a ranking that has a small economic payoff; this is an alternative to giving employees line authority with a large economic payoff (see Cole, 1971). Both of these shifts are already underway (e.g., Yoshino, 1968; Whitehill and Takezawa, 1968)

How employees will respond to this changing situation is unclear. A good deal may depend on how committed they are to nenkō promotion and whether they will be bought off by symbolic positions. It may be that the criteria for promotion are less important than the simple fact that smaller proportions of those in the eligible age grades will experience promotion to line authority; this alone should give rise to considerable dissatisfaction.

A current situation which perhaps provides some clues to the future is that found in the National Railways Corporation (Kokutetsu). The Corporation represents an industrial sector that is already experiencing a rapidly aging labor force arising primarily from the industry's lack of economic growth. The average age of Kokutetsu employees has risen gradually from a low of 32.5 in 1954 to 36.2 in 1960 and 38.6 in 1971. Management has responded to the resultant rapid rise in labor

and other costs with an intensive rationalization program using the slogan of marusei (full productivity).<sup>14</sup> In seeking the active cooperation of employees, management made behind the scenes efforts to sponsor a second union that would be more sympathetic to its productivity goals than the current Kokurō (National Railways Workers' Union) and Dōryokusha (National Railways Locomotive Engineers' Union). An important issue in the dispute has been the alleged discrimination by management against opposition union leaders who were allegedly not promoted to lower supervisory positions. The issue came before the Public Corporation and National Enterprise Labor Relations Commission in December, 1971, with the Commission ordering the Kokutetsu management to refrain from intervening in union activities through their promotion policy. At the same time, the Locomotive Engineers' Union carried out a fairly successful action to win control over the promotion system for engineers. In summary, the features of this situation are an aging labor force, low rate of economic growth, management advancement of cost-cutting rationalization programs, increased numbers of employees arriving at the age ranks which make them eligible for promotion to a stable or declining number of positions, increased tension between management and labor, and increased union activity in the area of promotion policy.

One must be careful in generalizing from the Kokutetsu situation to all of Japanese industry in the future. The Kokutetsu unions are particularly militant, and the situation in the government sector is quite different from the private sector. Nevertheless, it is of some interest to examine the consequences of a rapidly aging labor force

employed in a sector experiencing a minimum of economic growth. In summary, although the nenkō promotion system may not disappear, it appears to be quite vulnerable to the forces described above.

There is another dimension to generational conflict which accentuates the competition between employees of different ages and between younger employees and both company and union officials. This dimension is the impact of the shifting age structure in conjunction with the dramatic value and behavioral changes generated by recent Japanese history.<sup>15</sup> Those of the postwar generation are gradually becoming a majority of the labor force with sufficient numbers both to make their values and behavior dominant as well as to challenge existing leadership in companies and unions. If we take those born after 1940 as representing the postwar generation, two characteristics are apparent. First, they do not have the "depression mentality" that has dominated the thinking of older employees who vividly experienced the immediate postwar chaos in Japan. Instead, this postwar generation came to maturity in an era of rapid industrial expansion, an era in which ideas of consumption rather than production begin to dominate. They are the children of an emergent affluence, and as a consequence we would expect them to adopt quite different attitudes toward work and leisure.

A second characteristic of the postwar generation is that they have been exposed to a revamped educational curricula in which ideas of civil rights and democracy have come to the fore. Moreover, as apparent from Tables 6 and 8, the spreading educational revolution is unprecedented in-keeping larger and larger proportions of youth in school for larger periods of time. This process

of youth segregation is not new to Japan but dates back to before the Meiji Restoration. However, the rapid expansion of education in the postwar period in which graduating high school has replaced middle school as the norm and a college education has become a realistic goal for large numbers of the population results in an unprecedented segregation of youth from their elders. Moreover, this segregation gets associated with a geographic concentration of youth at high educational levels. In 1970, over 50 percent of all university students were located in either the Tokyo metropolitan area or in Osaka prefecture (Economic Planning Agency, 1971: 125). The significance of the accelerated process of youth segregation and concentration is that youth come to be influenced more by peer groups than the values and behavior of their elders; a common overarching set of symbols and attitudes come to be formed which we characterize as youth culture. This contributes to a weakening of that continuity in behavior and values that has been so notable a feature of Japanese industrialization. As with growing up in an emergent age of affluence, the impact of these developments is that the postwar generation may think and act in ways quite different from their elders. We shall turn to that subject shortly, but first it is important to get a sense of the scope of the challenge and its temporal location.

The postwar generation began entering the labor force from high school around 1958 and from the universities in 1962. At this time, they still constituted a small minority of the labor force and could easily be molded by the dominant majority into existing values and behavior. Indeed, observers often noted the strength of the Japanese

social order by pointing with delight to the quick socialization of radical school youth into dominant values and behavior. The labor shortage had not yet made a major impact on worker behavior at that time; jobs were still scarce and corresponding loyalty to one's firm high. In 1965, the oldest of the postwar generation were 25 and altogether they totalled over 10 million constituting about 23 percent of the labor force (estimates based on Table 6). By 1980, however, the oldest of the postwar generation will have reached the age of 40, total some 28 million and make up about 50 percent of the labor force; they will also be arriving at the age at which Japanese generally begin to assume leadership positions. Until now, it is no exaggeration to say that the postwar leadership of Japan in almost all spheres has come from the prewar educated age groups.

Many studies have shown the different attitudes and behavior of young employees as compared to older employees regarding work and leisure, for example, a 1968 survey by the Citizens Livelihood Research Center (Ministry of Labor, 1971: 284) asked respondents for their attitudes on the relation between work and leisure. The percentage distributions to their close-ended questions are reported by age in Table 14. The gap separating older and younger employees seems especially pronounced above and below age 40 for the first two choices (i.e., "work is an obligation" and "work is work, recreation is recreation"). Although only 8.0 percent of the 20-29 year old category and

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Table 14 about here

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8.9 percent of the 30-39 year old category view work as an obligation, over 22.7 percent of those between 40-49 do, while 27.5 percent of those between 50-69 do. A similar sharp break is apparent in the second choice of viewing work and recreation as two separate spheres. Young respondents strongly support this view while only a quarter of the older respondents do.

Studies such as these are deficient for purposes of predicting future behavior because they do not compare the responses of contemporary young employees with those of young employees in the past. Consequently, we can not be sure that young employees will not "see the light" and adopt the views of their elders as they themselves age. The data discussed below permit greater confidence in the view that the contemporary workers more casual attitude toward work and greater commitment toward leisure will have a lasting impact on the future industrial relations of Japan as well as the renowned high work motivation of Japanese employees.

The Research Committee on the Study of Japanese National Character has carried out four nation-wide surveys with 3,000 to 4,000 Japanese age 20 and over at five year intervals starting in 1953. One of the question items which has appeared four time bears on the subject of general work attitudes.<sup>16</sup> Table 15 reports the question item and the percentage distribution of responses for the four surveys. The most notable changes over the 15 year period are

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Table 15 about here  
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the gradual increases in response c ("live a life that suits your



Table 14.

Attitudes Toward the Relationship Between Work and Leisure

Age	Total	Work is an Obligation	Work is work; Recreation is pleasure	Work is a need rest in order to work	Other	
Total	100.0%	14.5%	40.3%	10.2%	24.0%	11.1%
20-29	100.0	8.0	54.0	5.9	22.5	9.6
30-39	100.0	8.0	43.1	10.5	26.5	11.1
40-49	100.0	22.7	25.3	12.6	28.8	10.6
50-69	100.0	27.5	25.0	15.5	18.0	14.0

Source: Ministry of Labor (1971a).

Table 15.

Life Orientation

Question: "There are all sorts of attitudes toward life. Of those listed here, which one would you say comes closest to your feeling?"

	1953	1958	1963	1968
A. Work hard and get rich	15%	17%	17%	17%
B. Study earnestly and make a name for yourself	6	3	4	3
C. Don't think about money or fame; just live a life that suits your own tastes (Non-traditional)	21	27	30	32
D. Live each day as it comes, cheerfully and without worrying	11	18	19	20
E. Resist all evils in the world and live a pure and just life (Traditional)	29	23	18	17
F. Never think of yourself, give everything in service of society	10	6	6	6
Other & Don't know	8	6	6	5
	100%	100%	100%	100%

Source: Suzuki (1970: 12)

Table 16.

Estimates of Labor Force Supply  
(in ten thousands)

Time Period	Total Employment Beginning of Each Period	New Labor Force Supply		
		Total	New School Graduates	Others
1965-70	4,730	1,248	701	547
1970-75	5,094	1,190	596	594
1975-80	5,306	1,248	585	663

Source: Adapted from Japan Productivity Center (1972: 111).

taste") from 21 percent in 1953 to 32 percent in 1968 and the increase in response d ("live a life without worrying") from 11 percent in 1953 to 20 percent in 1968.<sup>17</sup> Almost all of these increases are accounted for by declines in the traditional choices e and f. By 1968, the rather easy going approach to life symbolized by responses c and d garnered over half the respondents.

With the introduction to this question complete, we may now compare responses by age. Figure 1 plots the percentage selecting response c, "live a life that suits your own taste" for each of the four surveys at five-year intervals by birth cohort. This permits us to compare youth over time as well as to make some observations about sources and consequences of differences and similarities.

The first thing to be noted is that there is a strong age effect in each survey. Younger members of the population consistently show higher support for the statement than do older people. An aging effect can arise from one of two factors. It can result from individual life cycle experiences whereby an individual becomes more "conservative." In the case of this question, for example, one might expect that as young people got committed to their work and developed family responsibilities, they would lessen their support for response c and develop more serious work oriented attitudes. A second source of an aging effect is that the historical experiences of the birth cohorts is quite different. In this case, the argument would be that the more recent birth cohorts especially the postwar generation (1940 + cohorts) have had unique historical experiences that led them to adopt more favorable views to response c. This

is clearly the argument that has been set out in the preceding pages. Figure 1 permits us to discriminate between these two "hypotheses" at least for the question at hand.

Because the four curves more or less overlapped each other, the influence of individual life cycle effects were slight. Those born within a given time period have not appreciably changed their views during the 15 years covered by the surveys. This shows also that the influence of current social circumstances at the time of the survey had little impact on responses. The overall increase in the percentage selecting response c shown in Table 15 is caused almost entirely by the new entrants into the population. If individual life cycle effects had been operative, there would be four parallel curves with successive surveys at lower levels showing reduced support for the statement as already surveyed birth cohorts aged. In terms of our earlier discussion of the postwar generation, it is useful to emphasize that the 1940 + cohorts show the highest support for the statement, registering over 40 percent support in the 1963 survey and over 50 percent support in the 1968 survey. This compares, for example, to a little over 20 percent support for the 1915 cohort (48 years old in 1963) in all of the four surveys).

In summary, significant social change is taking place reflecting the unique historical experiences of different birth cohorts. This seems likely to have a lasting impact on Japanese industrial relations and work motivation.<sup>18</sup>

One further piece of evidence is reported by Eiji Mizutani (1972); he notes the results of an annual attitude survey of 100,000

employees in more than 1,000 companies. The Morale Survey Center which conducted the survey reports that the most dramatic change in the 14 attitudinal variables investigated over the last 16 years is that of loyalty to ones employer. Specifically, there has been a drastic decline in this value over the last 16 years. Here, it is not simply a matter of the postwar generation having different ideas because of educational background; the growing labor shortage makes it much more in the interests of employees to reject lifetime loyalty with ones employer.

In summary, the generational conflict that has so fascinated the Japanese public and scholars is likely to grow in the coming decade. It will grow because the postwar generation are bearers of new values and experiences not shared by the older generation. It will grow because the era of consumption is rapidly replacing the era of production which shaped the values and behavior of the older generation. The continuing rapid rate of technological innovation insures a persistent conflict between a younger generation ready to grasp the new and an older generation more committed to the old. Furthermore, the continuing labor shortage and a growing material affluence work to weaken just those values of loyalty, harmony and high work motivation that constitute the human backbone of past rapid economic growth. The members of the postwar generation are just beginning to arrive at the age which make them eligible for leadership positions. Many of their ideas will surely conflict with those of the current leadership, thus contributing to generational conflict in the coming decade.

Much of the preceding discussion has implications for labor mobility. The kinds of shifts and transformations envisioned in the earlier discussion of industrial and occupational structures suggest that significant increases in labor mobility will be necessary. Indeed, the changes presume that such increases will be forthcoming; the Japanese Ministry of Labor has long advocated policies that would increase labor mobility.

The shifts discussed above conflict with the image of permanent employment held by westerners.<sup>19</sup> This reflects perhaps more the distorted image of the Japanese labor market held by westerners than the magnitude of change involved. The labor mobility of Japanese males has, however, been low relative to the United States, and, although it is unlikely that it will approach the levels of the United States in the 1980's, it will increase perhaps to a level comparable to that in Western European nations.

In the 1960's, an era of rapidly expanding industrial facilities, management could fairly easily absorb redundant labor. Thus, the inflexibility that economists would expect to be associated with permanent employment was not a major problem for the Japanese. But in an era of declining growth rates in which new factories and expansion are no longer the order of the day, management at specific enterprises will be increasingly faced with the problem of what to do with labor made redundant by technological advance. Furthermore, as discussed earlier, management will be under great pressure to cut costs via labor saving equipment. The growing emphasis on rationalizing operations within existing facilities will further intensify the problem of redundancy in given firms.

Some clue to future developments may perhaps be found in the response of Japanese employers to the economic slowdown in 1971.<sup>20</sup> Personnel adjustments were considerably higher at this time than the past previous slump in 1965. In accounting for this difference, a number of factors are relevant. First, the Ministry of Labor notes that in 1965 Japan was in the middle of an extremely rapid business expansion which management anticipated would resume after the slump; consequently, they were reluctant to give up any of their labor force that they would soon need. In 1971, however, business circles were in agreement that future economic growth in Japan would be more moderate and, therefore, they were concerned about becoming saddled with redundant labor. Secondly, the wage hikes in 1971, notwithstanding the slump, were quite high compared with the previous year; this was not the case in 1965. As a consequence, management was under strong pressure to cut costs. The Ministry of Labor conducted a survey of 700 major firms in 1971 to find out how they carried out their labor adjustment programs. They found that management action included five steps with a given company taking the subsequent step when the prior ones failed to solve the problem.<sup>21</sup> The steps were as follows:

1. Reduction in overtime while maintaining existing labor force,
2. Cancellation of hiring of recent school graduates,
3. Reduction or cancellation in the number of employees hired with previous work experience (chutōsaiyōsha),
4. Sending members of existing labor force to different parts of company and related firms,
5. Temporary lay-offs (at 60-90 percent of regular wage level),

6. Recruitment of "voluntary retirements" with special retirement incentives,
7. And, outright discharge.

In the 1960's most companies were able to solve their over-staffing problems by taking measures at the top of this list. What is significant about the early 1970's is the tendency for firms to be forced down the list toward more drastic measures. Although there is no reason to think that the practice of outright discharges will become dominant by the 1980's, it does seem likely that pressures will intensify which force more and more employers to move lower and lower down the list toward severer measures than are currently common.

In the past, one major source of adaptation to shifting industrial and occupational structures has been the key role played by new school graduates. This is to be expected in the light of the low inter-firm mobility rates for males. The predominant role played by new school graduates in adjustment of employment was by definition the essence of the permanent employment practice. In the 1960's the bulk of the new school graduates were hired in the expanding industrial sectors of the economy.

However, the rapid expansion of educational attainment and the impact of declining birth rates, led the number of new school graduates to decline in absolute terms from a high of 1,495,000 in 1966 to 1,186,000 in 1971. Moreover, this decline is expected to continue (with fluctuations) through 1980 at which time there will be a projected 1,182,000 new school graduates at all levels available for employment (see Table 8). Table 14 presents a breakdown of new labor force supply by five year periods. Notable is not only the absolute decline but also the relative decline in the dominance of



new school graduates as suppliers of employment replacements and pure employment increases. In the period from 1965-1970, new

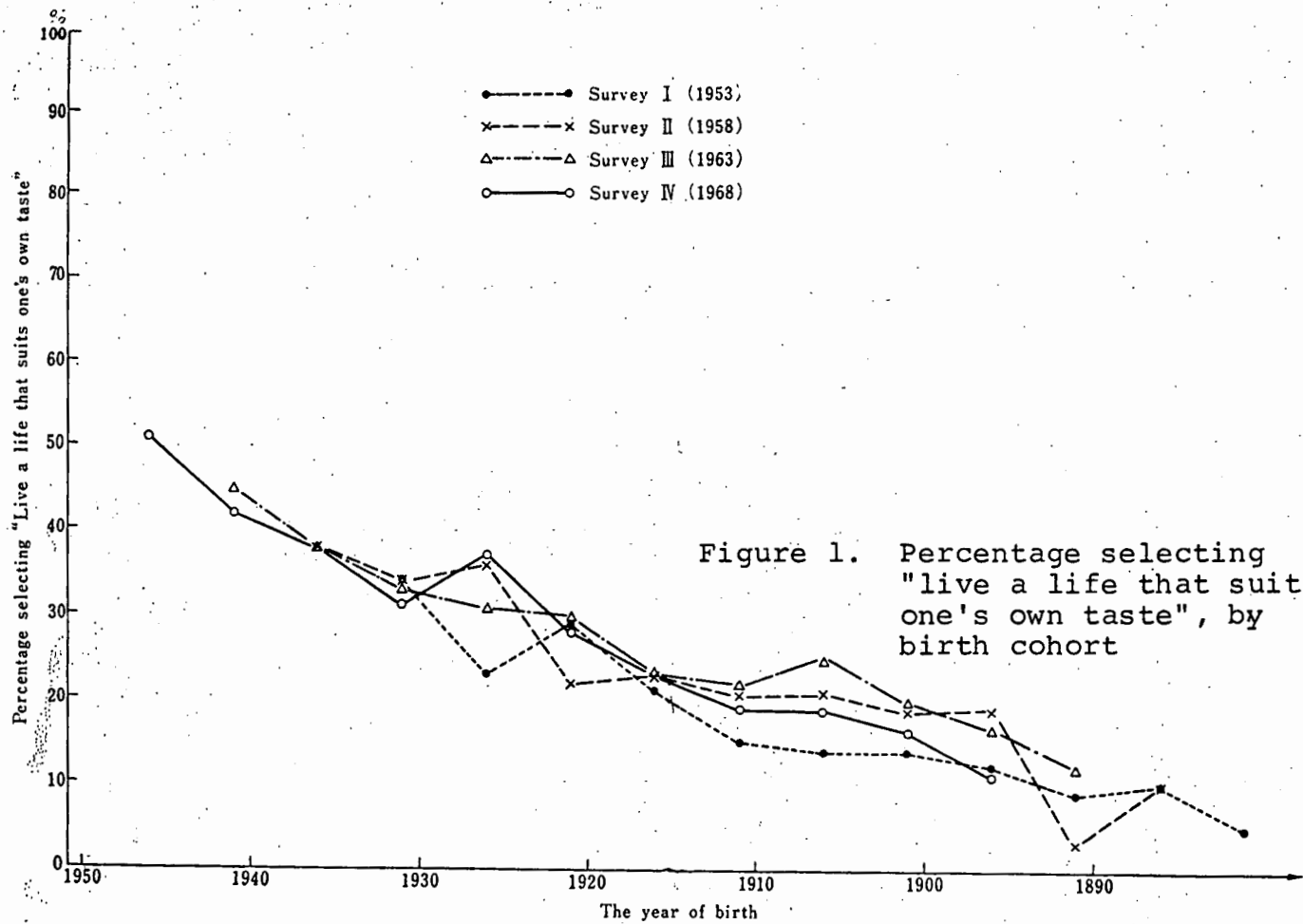
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Table 16 about here

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school graduates accounted for 56 percent of new labor force supply with the remainder coming from job changes and older non-labor force recruits. In the period 1970-1975, the balance between the two types of labor is expected to be roughly equal and in the period 1975-1980, the balance is expected to clearly shift to non-new school graduates. Were a more detailed breakdown than Table 14 provided, it would show that new school graduates have been a minority for some time in the supply of new labor to the tertiary sector. The shifts reported in Table 14 represent a process by which new school graduates are becoming a minority in the supply of new labor in the primary and secondary sectors as well (Economic Deliberation Committee, 1969: 25).

In addition to the important role of new school graduates in adapting to the shifting industrial and occupational structure, the bulk of job changing and adaptation to new technology in Japan as in other industrial societies is carried out by young employees. The aging of the Japanese labor force, however, will make it less possible for youth to carry out this role of manpower reallocation in the future. Insofar as the mobility of the middle and older age stratum is not increased, an important restraint will be placed on Japanese economic growth. Judging by the volume of literature that the Ministry of Labor produces on the subject, they expect considerable



Source: Suzuki, 1970:31.

difficulty in raising the rates of mobility of older employees to compensate for the decline of younger more mobile workers (see Tachi and Okazaki, 1969: 178).

In summary, two of the major sources of adaptability of the Japanese industrial structure in the past will not be able to play as large a role in the future. One of them has worked to perpetuate permanent employment (the role of new school graduates) and the other has worked against permanent employment (the high inter-firm mobility rates of younger employees). With a decline in the numbers of new school graduates, the role of job changers in the economy will be increased. Furthermore, if continued transformations of industrial and occupational structure are to be achieved, it is apparent that older members of the labor force must participate more in job changing.

As in the past, though to a lesser extent, a good deal of the necessary labor mobility will come from the exodus out of agriculture.<sup>22</sup> Table 15 presents the actual numbers leaving and outflow ratio from agriculture to non-agricultural employment. In the period from 1968-1975, some 260,000 individuals are expected to leave agriculture

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Table 17 and 18 about here  
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annually for non-agricultural employment. This is a marked decline from the 290,000 annually in the period 1960-1965, but as a ratio of all agricultural employment it represents a rise from 2.3 to 2.9. Table 16 shows the movement between the secondary and tertiary sectors

Table 17.

Frequency and Rate of Outflow from Primary Sector to Non-Primary Sectors (Yearly Average)

Time Period	Outflow (in ten thousands)	Outflow Rate
1955-60	23	1.5%
1960-65	29	2.3%
<u>1965-68</u>	<u>21</u>	<u>1.9%</u>
1968-75	26	2.9%

Source: Economic Deliberation Committee (1969: 29).

Table 18.

Labor Mobility Between the Secondary and Tertiary Sectors  
(in ten thousands)

Time Period	Mobility from Secondary to Tertiary Sector		Mobility from Tertiary to Secondary Sector		Pure Inflow From Tertiary to Secondary Sector	
	Total	Yearly Average	Total	Yearly Average	Total	Yearly Average
1955-60	66	13	120	24	54	11
1960-65	82	16	117	23	35	7
<u>1965-68</u>	<u>80</u>	<u>27</u>	<u>80</u>	<u>27</u>	<u>0</u>	<u>0</u>
1968-75	243	35	214	31	-29	-4

Source: Economic Deliberation Committee (1969: 30).

from 1955-1968 with projections to 1975. Marked increases are expected in movements in both directions. The annual movement from secondary to tertiary sector is expected to increase over 2 1/2 times in the period from 1968-1975 as compared to 1955-1960 (from 130,000 to 350,000 annually. The corresponding annual movement from the tertiary to secondary sector is also expected to grow some two times in the period 1968-1975 as compared to 1955-1960. The larger anticipated movement from secondary to tertiary sector represents a change from the past (see 1955-1965) in which movement from the tertiary to secondary sector was the larger of the two. This is consistent with the earlier discussed shift from the tertiary sector being a receptacle for labor that could not be absorbed elsewhere in the economy to a situation in which the new service economy is being established. Estimates for mobility within industrial sectors are more difficult to create than between sectors, but increases in mobility should occur there also.

The above discussion should not be interpreted to mean that the permanent employment system is in the process of total dissolution. Permanent employment has always been a selective practice established primarily in the elite manufacturing firms and government employment. It will undoubtedly persist in some form, but clearly the differences between Japan and other industrial nations in the matter of inter-firm movement will be narrowed.<sup>23</sup> One cornerstone of the permanent employment practice is the dominant role played by new school graduates in supplying new labor with these individuals remaining at the same firm until retirement.

However, new school graduates are gradually declining in importance as a source of new labor. This cannot help but lead to the establishment of new norms of behavior for both management and employees, norms which significantly undermine the permanent employment practice.

#### Conclusion

In trying to anticipate the impact of changing labor force components upon industrial relations practices considered characteristic to Japan, I have proposed some rather sweeping generalizations about impending changes. In noting earlier that all the important variables influencing these practices would not be discussed, I have pointed to an important limitation in this paper. It is therefore appropriate in this final section to point out one of the most unpredictable sets of variables that could drastically alter the predictions put forward in this paper.

This is the set of factors relating to Japan's position in the world and the rising tide of nationalism in Japan. Should Japan remain cut off from the Communist nations and increasingly interpret western policies as hostile to its interests, this tide could turn into a mighty wave. This would lead to a powerful national effort to seek internal unity in the face of external enemies as occurred in the 1930's. In response to these powerful forces, we would expect that the eroding loyalty to the business firm would be arrested and possibly restored, labor-management conflict and internal employee conflict reduced, mobility between firms held to a minimum, and nenkō wage and promotion practices might be given a new lease on life. Under conditions of rising nationalism, Japanese employers and govern-

ment would turn inward and encourage a search for uniquely Japanese solutions to their problems. Although we can not calculate the probabilities associated with this outcome, it is a sobering fact that some Japanese industrial relations experts foresee a move in these directions.

In summary, we can speculate with some degree of assurance on changing labor force characteristics and their likely impact on Japanese style industrial relations practices. However, we have a much more difficult time predicting the actual shape of these practices in 1980 because of the difficulty of measuring the impact of the large number of outside influences.

## FOOTNOTES

1. A 1972 Labor Ministry Publication entitled A Long-Range Outlook on Labor Force Supply and Demand (Rōdōryoku Jukyū no Chōki teki Tenbō) takes this position.
2. For purposes of comparison, the total for West Germany in 1967 is 10 percent and 5.0 percent for the United States.
3. This estimate is based on employment changes which occurred in the period from July 1964 to July 1965. Assuming that the growth rate is lower toward 1980 than it has been in the 1960's, it might be thought that this projection overestimates the changes likely to occur. However, 1964-1965 was a period of business readjustment. More significantly, Okazaki compared the above estimate with one made from changes in 1962 (a year of high economic growth). Although there were differences in the absolute size of the labor force, the differences in the distribution of employment by industry were relatively small. Okazaki suggests that long-term shifts in economic structure are producing these employment changes which are not reflected in annual measures of economic growth. Nevertheless, Okazaki cautions that these estimates should not be thought of as accurate within a small margin of error but rather as indicative of general trends. (Okazaki, 1968: 76-79).
4. The percentages do not add to 100 because totals include new school graduates entering sales and service occupations as well as agricultural occupations.
5. There is reason to think that the failure of the professional category to grow even faster than it has lies in the classification of certain occupational functions into clerical and administrative categories; such functions would be classified as professional in the United States.
6. Kenneth Kurihara, who seems to take a more optimistic position than this author, provides a summary of many of the relevant arguments (Kurihara, 1971).
7. Overall conclusions derived from Economic Planning Agency (1971: 74-76): Wages of employees in the age group 50-59 in major corporations were three times as much as wages for workers aged 20-24 in 1955. By 1970, they were earning only twice as much (Economic Planning Agency, 1971: 105). In the period from 1964 to 1970, the average monthly contractual earnings (bonus not included) of male blue-collar middle school graduates in manufacturing went from 66 to 75 percent that of the average monthly contractual earnings of male university graduates in manufacturing (Ministry of Labor, 1965: 129; 1971: 137).
8. Gerhard Lenski argues that this situation is characteristic to industrial societies which, contrary to agricultural societies,



reveal a growing equality in their distribution of rewards (Lenski, 1966: 314-315).

9. In a recent study of the Chicago labor market, Albert Rees and George Shultz found that seniority was the best predictor (the highest value of all independent variables) of their dependent variable, wages per hour at work (Rees and Shultz, 1970: 147-154).
10. For an extended discussion of the generation gap in labor unions, see Okamoto Hideaki (1971: 14-29).
11. I am indebted to James Cramer in his working paper, Demographic Models of Bureaucracy for pointing out this line of thinking by Coale. The Cramer paper was also useful in sensitizing me to the dangers of applying conclusions from aggregate data to the individual firm level.
12. The above analysis is intended as a broad generalization with full recognition that there are significant variations in age structure and rate of expansion of different industries and firms. The discussion applies most fully to the new industries such as auto and electronics. Even here, promotion was hardly assured, although expectations might have been justifiably high. Rohlen's (1971: Chapter 6) examination of cross-sectional data on male promotion in a fairly rapidly growing Japanese bank in the late 1960's provides unusually detailed data on promotion practices among white collar employees. He reports that by age 32, 71 percent of all male ordinary employees achieved the first rank on the promotion ladder of regular employees. By age 38, some 80% of the regulars had reached the next step on the promotion ladder of deputy with the remaining 20% having much reduced chances of ever making the rank. By age 39, 30% of the 39 year olds were promoted further to deputy chief; declining percentages were promoted to chief and the still higher position of director. Generally speaking, the more talented members of each age cohort were promoted earlier to each step, an occurrence which marked them for still further promotion later in their career.
13. The traditional retirement age of 55 in large companies is commonly legitimated in Japan in terms of the need to make place for young employees. In the labor shortage of the 1960's, many firms extended the age to 58 and 60.
14. This rationalization program dates back to the first National Railway Modernization Plan in 1956, which included efforts to curtail personnel costs.
15. For a parallel analysis focusing on management see Mizutani Eiji (1972).

16. The following discussion draws upon the analysis of Suzuki Tatsuzo (1969).
17. The 32 percent who choose "live a life that suits your own taste" in 1968 is reported to be far in excess of this response in prewar surveys. Suzuki (1969) reports that in a 1931 Ministry of Education survey only 10 percent of the respondents choose this response. Similarly, in prewar days, some 30-40 percent of respondents chose the traditional response e ("resist all evils...") as compared to 17 percent in 1968, and 20-30 percent choose the self-sacrifice represented by response f ("never think of yourself") as compared to 6 percent in 1968.
18. One would still have to establish the relationship between attitudes and behavior to have confidence in this statement. The establishment of this relationship is outside the scope of the surveys.
19. Permanent employment means that an employee enters a large firm after school graduation--whether it be middle school, high school, or university--received in-company training, and remains an employee of that same firm until the retirement age of fifty-five. It is a pattern limited primarily to male employees.
20. The following discussion derives from the labor section of the Oriental Economist (April, 1972).
21. C. F. Whitehill and Takezawa (1968: 149-150).
22. As a percentage of all employed who changed industrial sector (primary, secondary, and tertiary) in a given year, those leaving agriculture accounted for 27.8 percent of all industrial sector changes in 1962 but only 8.2 percent in 1968 (Economic Deliberation Committee, 1969: 100).
23. For a discussion of the sources of strength of permanent employment, see Cole (1972).

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