TOWARDS LIFE CYCLE PLANNING FOR SOCIAL WELFARE IN POSTWAR JAPAN

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I. THE TRANSITION IN SOCIAL WELFARE POLICY

THE SHIFT to lower growth since the jolt to the economy caused by the 1973 OPEC oil price hike provides an opportunity to totally reexamine economic and public policy. Social welfare policy is of course included in this examination.

After World War II, Japan's social welfare policies were arranged in modern format, and beginning in the 1960s rapidly expanded during the high economic growth period. Within the welfare system there are numerous instances where prewar enterprise welfare systems were transformed, but this is also a major factor in the differences between systems in the overall welfare framework, in terms of the burden of cost and benefits. Moreover, it has also given rise to the present, disunified situation where various systems are separate, acting to divide employees, self-employed, and other groups along vertical lines; this in turn exaggerating existing differences. Viewed in the context of individual life cycle, a person is assigned to one system during the working lives and another in the not-working lives, resulting in assignment to a system with good provisions during the working lives when economic risk is relatively low; then to a system with poorer provisions during the not-working lives when economic risk is relatively high. This of course severely impairs the effectiveness of welfare policy.

During the high growth period, which made possible rapid increase in social welfare cost, the defect was not cause for social friction, but with low economic growth this becomes a problem from the viewpoint of efficient allocation of resources.

The second factor making necessary a reexamination of social welfare policy is the steady change in age structure of population. With a lowered birthrates and increasing life expectancy, the population is growing older. Once industrial modernization reaches a certain stage, the transition of age composition from younger one to older appears; but while this phenomenon is common to all industrial societies, Japan is unique in rapid *tempo* with which this is occurring. The aged generally have high economic risk from illness or diminished (possibly lost) earning potential. With the absolute and relative increase in the number of elderly people, an accelerating increase in welfare cost is unavoidable. Up to now social welfare policy has not given adequate attention to population age

shift, and the situation has not received the attention it deserves, a major reason that policy effectiveness is inhibited.[1]

Rapid demographic shift is increasingly creating difficulty in managing policy, under continuing lower economic growth. Both of these factors together create a situation which demands total reexamination of social welfare policy. A fair allocation of resources for social welfare must be made, in order to promote an effectiveness of policy, and to adjust the increased demand for social welfare arising from demographic change in relation to the limited supply of resources for welfare brought on by lower growth levels. In addition, it will be necessary to have new approaches based on new viewpoints so that resources will be adequately allocated to the various social welfare sectors.

The most outstanding characteristic of demographic shift is not that it results in a higher percentage of older people, but that it brings about fundamental change in the life cycle patterns of the individual, and in those of population as a whole. Change in age composition brings on rapid change in production, earning, and consumption patterns. This type of change in the life cycle patterns also has drastic effects on social welfare demand. As long as resources allocation does not adequately respond to change, policy effectiveness will not be enhanced even with increased social welfare outlay. Furthermore, for the limited resources in a low growth situation, there can be little improvement in social welfare, unless the resource allocation fails to respond to change in life cycle.

It is for these reasons that there has been increased demand in Japan during the past year or two to design policy based on life cycle planning. The concept of life cycle was originally used in studies such as home economics where analysis concerns itself with the micro planning oriented to the family. It is an extremely unfamiliar concept to macroeconomic analysis, however, and has only been used in the permanent income hypothesis of consumption function theory. The life cycle concept used for social welfare policy provides an adequate evaluation of social and economic impact of population shift and this perspective can add much more to the limited number of ideas underlying welfare policies. In this sense, the life cycle planning approach is in a transition period.

In an open proposal to Prime Minister Miki in 1975, an independent group of scholars gave their ideas of what life cycle planning should be [3]. Their plan caused a stir at the time, but it is representative of the change in life cycle conception belonging generally to the same school as the earlier report by the Japanese Confederation of Labor [2].

II. THE ADVENT OF THE AGING SOCIETY

Japanese demographic structure has gone through transition, from high to low birth and death rates, and is now becoming an older society. As Table I shows,

[1] In the sense that the impact of the aging population on social, economic, cultural, and other systems is not given sufficient attention or awareness, it constitutes an invisible revolutions. P. F. Drucker, *The Unseen Revolution—How Pension Fund Socialism Came to America* (New York: Harper & Row, 1976).

TABLE I

CHANGE IN THE POPULATION STRUCTURE BY AGE

Year	Percentage of Population			Elderly Population Index (%)
	0-14	15-64	65-	
1930	36.59	58.66	4.75	8.1
1940	36.08	59.19	4.73	8.0
1950	35.37	59.69	4.94	8.3
1960	30.04	64.23	5.73	8.9
1970	23.93	69.00	7.07	10.2
1975	24.58	67.50	7.87	11.6
1980	24.85	66.40	8.75	13.2
1990	22.16	67.04	10.80	16.1
2000	20.42	65.68	13.90	21.2
2005	20.73	64.27	15.00	23.3
2010	20.75	63.17	16.09	25.5
2020	19.63	62.38	18.00	28.8

Sources: (1) For data prior to 1975, Prime Minister's Office, Statistics Bureau, *Kokusei-chōsa hōkoku* [Census]; (2) for data after 1975, Ministry of Health and Welfare, Institute for Population Problems, *Nihon no shōrai suikei jinkō* [Estimates on Japan's future population] (Tokyo, 1975).

Note: The elderly population index is the ratio of the population over 65 to that in the 15–64 age group (=100).

the percentage of people over 65 has risen rapidly since around 1960 to reach 7.87 per cent in 1975, and is expected to rise to 8.75 per cent in 1980, 10.80 per cent in 1990, and 13.90 per cent in 2000, equivalent to what it is in the older populations of Western Europe. This is a combined effect of lower birth rates and greater average life expectancy. If the number of people surviving birth was 100, then 36.2 men and 43.6 women survived to age 65 in 1935. By 1975 these figures were 76.0 for men and 85.5 for women. If current percentages for those over 65 are compared, the Western European countries are higher than Japan, but the Japanese population is growing older at an unusually fast rate. The percentage of people over age 65, for example, will climb from 5 per cent to 12 per cent in less than 45 years, an extremely short compared to Sweden, which took 105 years, West Germany 75 years, and France 170 years to have the same increase. This alone, will make the impact on Japan's socioeconomic systems that much more serious.

The following problems are arising as a consequence of the population age shift.

A. Increased Assistance for the Elderly

With the population growing older, the relative percentage of those past retirement age is rising higher than that of the working population, shifting the burden of support on those of working age, with the speed of change making the effect even that much more serious. The ratio between people 15–64 and those over 65 is a useful index in showing what the burden of supporting an aging population will be. This percentage index of those over 65 was 8.9 per cent in 1960, which

then rapidly rose to 10.2 per cent in 1970 and to 11.6 per cent in 1975. This increase is expected to continue to 13.2 per cent in 1980, 16.1 per cent in 1990, 21.2 per cent in 2000, and will level off eventually at about 30.0 per cent when the population age trend reaches its peak. Yet considering that the educational level of young people is continuing to rise, meaning later entry into the labor force, the working population—as opposed to the working age population—will drop considerably, and this will greatly increase the relative burden on the non-senior citizen population. On the other hand, because the dependent population index does not take into account labor participation by women, if the number of working women increases in the future, then the burden on the under 65 population may assume a relative decline. Extension of the period of education for young people and increase in the female labor participation rate may thus influence the burden of support in the opposite direction. However, it cannot reverse the trend away from increased assistance.

B. *Change in Household Structure—Advance of the Nuclear Family*

The general increasing aging of the population in industrial society produces change in household structure, bringing on a reduction in household size with the eventual appearance of the nuclear family. This phenomenon is a part of the shift from agricultural to urban society, and is recognized as something that generally accompanies change in industrial and employment structure as society moves from a primary to a secondary and tertiary industry orientation. As Table II indicates, the rate of nuclear families in the total rose from 59.6 per cent to 63.4 per cent between 1955 and 1975. This trend is associated with declining birth rate and reduction in household size. For an extended period up to around 1955, the average household size remained at slightly less than 5 persons, but since then it has rapidly declined to 3.44 persons in 1975.[2] This declining trend is expected to continue and the average household size will probably be around 3 in 2000.

Two types of problems arise out of this change in household structure. The first is that because reduction of household size is usually accompanied by a reduction of members of earners, the function of the household as protection against economic risk is greatly affected. It is economically weakened to the extent measures taking this into account are not adopted making the entire life pattern unstable. This is one factor contributing to the incredibly high rate of savings in Japan; with the rapid decrease in household size and resulting instability, the individual households try to have a source protecting it against economic risk that they provide themselves. The second factor contributing to a reduction in household size is the rapid increase in households with only elderly couples or only one person. The intra-family redistribution has weakened. In the traditional family, life in old age was a matter of income transfer—from the

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[2] The rapid decline in average household size is associated with decline in the quasi-household. That is, among the younger age groups, trends toward choosing an apartment over dormitory life have grown stronger, with increases in the standard of living. Reduction in household size cannot be adequately explained only by the factors of increasing nuclearization and a decreasing birthrate.

TABLE II

AVERAGE HOUSEHOLD SIZE AND PER CENT OF NUCLEAR FAMILY HOUSEHOLDS

Year	Average Household Size (Persons)	Nuclear Families (%)
1920	4.89	54.0
1955	4.97	59.6
1960	4.54	60.2
1970	3.69	62.6
1975	3.44	63.4
1980	3.28	
1990	3.17	
2000	3.00	

Sources: (1) Ministry of Health and Welfare, Institute of Population Problems, *Wagakuni setai-sū no shōrai suikei* [Future estimates on Japanese households] (Tokyo, 1975); (2) Ministry of Health and Welfare, Population Problems Council, *Nihon jinkō no dōkō* [Trends in the Japanese population] (Tokyo, 1974).

parent to the child—and this provided the means of support. But with the increased predominance of the nuclear family, this type of transfer has diminished, and economic stability of the aged must be found by other methods. There is no doubt that such a serious situation has a heavy impact on life cycle patterns.

C. *Urbanization*

Rapid increases in urbanization are accompanied by change from a structure of mainly self-employment, to one of wage labor, bringing on major change in the overall life cycle pattern. This change also means work years are shortened in turn creating a major problem for life cycle planning: how to maintain financial stability after retirement—almost a quarter of the entire life span. In addition, it cannot be ignored that urbanization is usually accompanied by a weakening in the general support functions of traditional regional community-society, particularly when urbanization is rapid.

In any event, the rapid change in life cycle pattern caused by an aging population structure widens the imbalance between welfare supply and demand, and clearly creates instability for the general public.

III. THE CHANGING LIFE CYCLE

The change in the life cycle accompanying population age shift is clearly illustrated by the following two points. First, average life expectancy increases and the average life cycle is longer; second, the childbearing period is greatly shortened. Figure 1 compares life cycles for a married couple in 1940 and for one after World War II. During this period, average life expectancy increased 10.5 years for men, and 14.1 for women. Because the number of children declined, the childbearing period was shortened by 9.7 years, from a prewar average of 12.3 (with five children) to a postwar average of 2.6 years (with two children). As a result, the last child is now born an average 8.6 years earlier for men, and 7.6 years earlier for women.
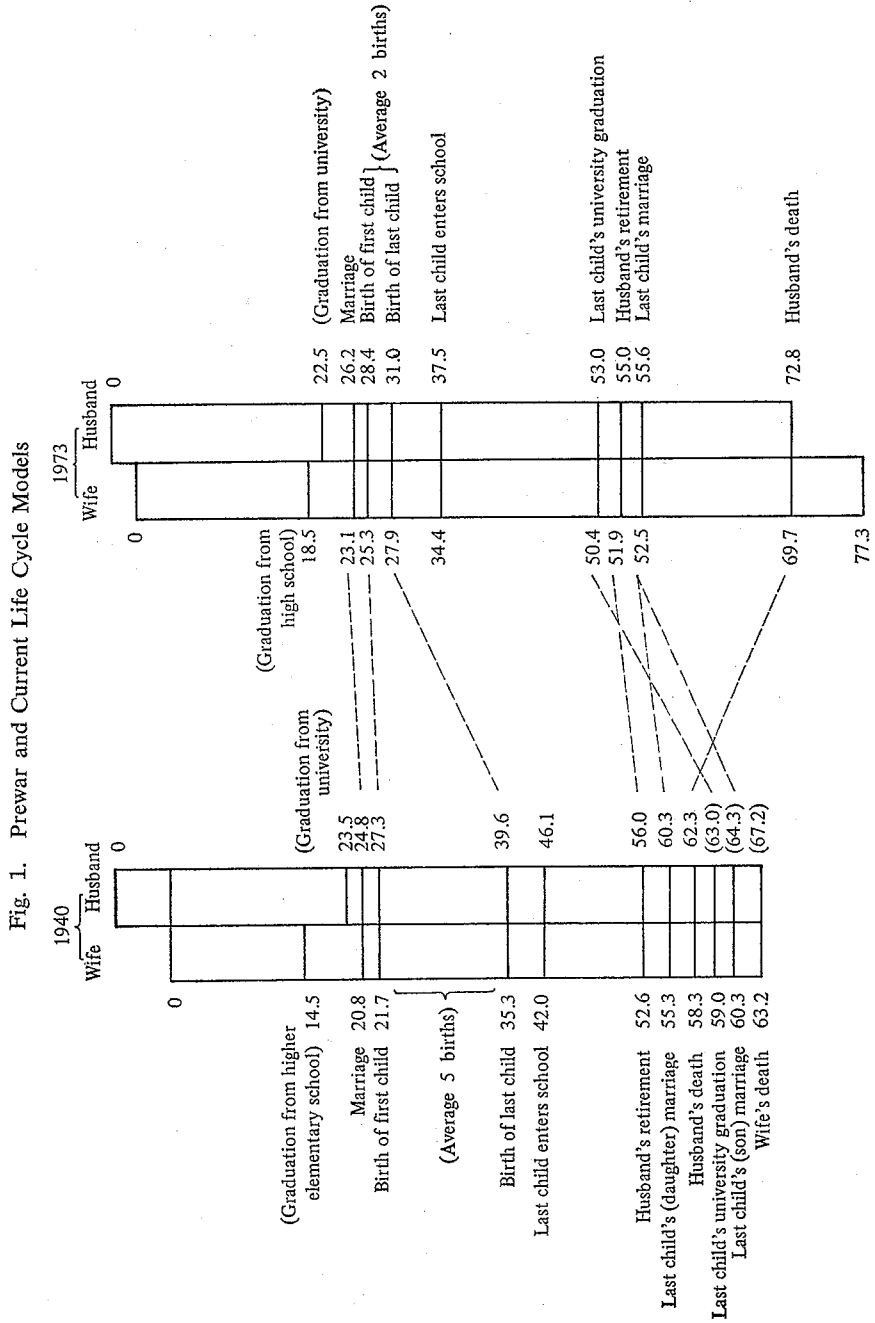
Fig. 1. Prewar and Current Life Cycle Models

Source: Ministry of Health and Welfare, Population Problems Council, *Nihon jinkō no dōkō* [Trends in the Japanese population] (Tokyo, 1974).

Note: Age of death calculated from life expectancy at 25 for men and 20 for women (1935).

These two factors changed Japanese life cycle patterns in the following ways. For men, the period of life after completing education and becoming an active member of society has lengthened considerably since World War II; for middle school graduates from 44.8 to 57.3, for high school graduates from 41.8 to 54.3, and for university graduates from 38.8 to 50.3, an average of 11–12 years. If the post-education life span lengthens, then there should be some change in thinking about the meaningfulness of work and the possibility of job change, as broader social and economic change takes place; surely there are quite a number of people who want to find better jobs and acquire new skills and knowledge. Answering these demands is the first issue for public policy.

Secondly, because of the widespread practice of setting the retirement age at 55, life expectancy after retirement is extremely long. Prior to World War II, post-retirement life expectancy was 6.3 years, and the allowance received after retirement may have been effective in providing stability during the remaining years. But at present post-retirement life expectancy is 17.8 years. This is too long to simply retire and enjoy a leisure existence. The distribution of work and leisure during this period is a problem that public policy cannot afford to ignore.

To respond to these changes in the life cycle, setting up a system of lifetime education is of first priority.

The second issue is to devise necessary policies which will allow the retirement age to adapt particularly in large firms—to change in the life cycle. And because of the long period of old age, the third issue is guaranteeing the necessary economic minimum in income maintenance so that stability in old age can be assured.

Now I would like to discuss the stages of the life cycle, dividing them into the following four periods.

The first stage is from birth to the end of schooling; in other words, the period of dependence on the parents.

The second stage is from the entry into the labor force until marriage, or until one reaches economic independence in the nuclear family.

The third stage is the period until retirement. For most self-employed people the parent's occupation or property will be inherited in this period.

The fourth stage is the period after retirement, i.e., life in old age.

Setting goals for life cycle planning is important to provide the basic conditions so that anyone can live with security through the life cycle. While presenting effective policies that can respond to the economic risks of each life stage, it is also necessary that they should be developed into a policy system that is consistent as a whole.

In first stage, the focus is on childcare and in-school education.

In second stage an important policy concern is housing supply, particularly for new families.

In third stage the main concerns of life cycle planning are improved property formation for workers, post-graduate education, and reevaluation of 55 as the age for retirement along with permanent employment.

In the fourth and final stage, employment programs for older workers, old

age security, and social welfare services are most necessary, with focus on their improvement and arrangement into a coherent system.

These various systems and policies do not, at the present, work together as a unified system covering the entire life span. That is, as long as school education and lifetime post-graduation education remain separate, it will be difficult to have the desired effect. Making sure that there is an integrated association between the childcare services of first stage, and the unemployment compensation and medical insurance of second and third stages will, for the first time, allow old age security to function adequately.

Considering this point, three items appear to be most important in terms of life cycle support. First, establishment of lifetime education system; second, developing an adequate system of property formation for workers; and third is improvement of the social security system. These are intimately connected, and if one is omitted, it will be impossible to design a stable life plan. However, the chief concern of this report is analyzing the social security problems associated with the aging process in the population, and thus focuses on the position of the issues in life cycle planning.

IV. COST OF THE AGE SHIFT

As previously stated, the impact of age shift on the life cycle is forcing a re-examination of social welfare policy presently in operation. The emergence of extended old age in the life cycle is the greatest challenge to social welfare policy, now and in the future.

There are several approaches that can be adopted to achieve security in old age. First is intra-family transfer, but with the increasing trend toward the nuclear family this function of the family, at least in its economic aspect, is expected to decline. The second channel is personal savings. According to the permanent income hypothesis put forth by M. Friedman and F. Modigliani, an individual's current consumption is a function of permanent income and lifetime income, not current income. The individual, in order to smooth out his lifetime consumption stream, saves during his active years and accumulates wealth, then draws on it during old age to maintain consumption.

Saving is not simply for financial stability in old age. There are other reasons, such as providing for future uncertainty and contingencies, an inheritance for the next generation, and putting aside capital in the form of housing. However, even if these are reflecting the changing individual life cycle patterns, they would not do much to alter the general trend completely. Therefore, as Figure 2 shows, hump saving would cause little inconvenience even if it were regarded as a model for lifetime income, consumption, and saving patterns.

If one decides to provide for consumption in old age through personal savings, what savings rate would be necessary for the economically productive year of life span and what of the possibility of realizing it?

The principal factors influencing this decision are: (1) a reasonable level of consumption in old age; (2) the length of economically active period; (3) the

Fig. 2.   Consumption, Saving, and Income in the Life Cycle
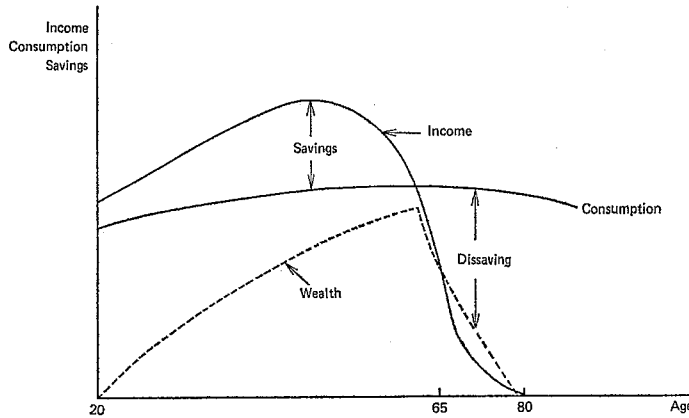
length of time after retirement; (4) the rate of price increases; (5) the rate of increase in real income; and (6) the rate of interest.

According to the Schulz-Carrin model [4], consumption levels in old age are related to average income during the five years prior to retirement. Assuming a sliding scale with change in prices and real income levels after retirement, necessary savings rates for the United States would be 28.7 per cent for a consumption level in old age at 80 per cent of average income, 23.3 per cent for a consumption level of 65 per cent, and 17.9 per cent for a consumption level of 50 per cent of average income. Such high rates of personal savings have not been attained in the post–World War II United States and trying to maintain a reasonable rate of consumption in old age on personal savings alone is close to impossible. But the personal saving rate in Japan is over 20 per cent. Considering that the rate of price increase and the rate of increase in real income is rather high compared to the United States, a rate of personal saving necessary to maintain reasonable levels of consumption in old age is around the 30 per cent level, according to the Schulz-Carrin model. In actuality, providing for old age entirely through individual savings is not realistic.

The third channel toward security in old age is assistance from groups to which one belongs, such as the company, or local community. The sense of belonging to the firm is strong among Japanese workers, and company systems with retirement lump-sum grants still play an important role in old age financial stability. There are, however, differences in intra-firm welfare systems depending on company size, for workers in small and medium-sized companies in particular, company provisions still far from ensure the level of financial stability sufficient for security in old age. For the average workers in big company, such measures are no more than supplements for maintaining livelihood. The role of local community in this regard has waned considerably under the pressure of urbanization, and at present, and for the near future, little can be expected from this sector.

The fourth channel toward stability in old age is through social security pro-

grams. There are two types of benefits; one is determined through investigation of the individual's or the household's ability to assume the financial burden—a means test. In the other system, benefits are paid according to fixed conditions, without a means test. Other social security programs include public assistance and free medical care for the aged. Those requiring a means test mainly receive both, and those requiring no means test find these programs a supplement to their efforts.

Ignoring the makeup of the old age security and other systems, and lumping together the various costs associated with aging, let us consider the burden assumed by the working population. Taking a fixed percentage (t per cent) of average per capita income (y) as a reasonable level of consumption, and a fixed percentage (r per cent) of average income levels as the cost assumed by the working population (L_1) to support the aged population (L_2), then

$$y \times t \times L_2 = y \times r \times L_1 ,$$ (1)

and

$$\frac{L_2}{L_1} = \frac{r}{t} .$$ (2)

A directly proportional relation exists between the relative ratio of the allocation rate (r) and the rate of payments (t) on the one hand, and the proportion of the aged population (L_2/L_1) on the other. Assuming that other conditions remain unchanged, the relationship between the two groups is as indicated in Table III.

TABLE III

(%)

L_1/L_2	t	
	$r=40\%$	$r=60\%$
10	4	6
20	8	12
30	12	18

L_1 represents the population aged 15–64, and L_2 those over age 65. However, if extension of the period of education and a lower retirement age are considered, L_2/L_1 should increase and, because of this, additional pressure will be put on the age groups carrying the cost for old age assistance.

In actuality, outlays for old age assistance are not completely covered by the total amount for social security. What, then, are the sources of income in old age? According to a "family expenditure survey" by the Prime Minister's Office in 1971, on sources of income for households headed by workers over 65, work-derived earnings accounted for 90.0 per cent of income, income from assets for 1.2 per cent, and income from social security plans for 3.8 per cent. Obviously work-derived earnings are the overwhelming proportion of income. However, this survey describes an income structure for households where the head is over

65 and still working, and does not examine the conditions for older people who are fully retired. Another survey which did focus on such people reported that, in 1974, the number who were able to live on pensions after full retirement was less than 50 per cent [1]. The level of dependence on public pensions is low, but with the greater numbers of elderly that are predicted for the future, a rapid rise in dependence is unavoidable. With household income dropping after full retirement and physical problems increasing in old age, the level of medical service use rises. Because of this, and also because of senility, the need for personal welfare services will also increase. Taken together, the level of dependence on social security programs will probably increase rapidly. As a result, the percentage of social security outlays for the elderly will increase, because of first, the absolute and relative increase in the aged population, and second, the average level of benefits for the elderly will surpass the average per capita level of benefits for the total population.

Table IV shows what social security costs for the elderly are, according to the Ministry of Health and Welfare. During the eight years covered by these figures, total social security expenditure rose rapidly, by a factor of 3.63, and in real terms by a factor of 2.35. The rate of increase in costs for the elderly is also high, the expenditure rising from 16.9 per cent to 24.9 per cent of the total. Change in population age structure and increase in age differentials for benefits account for this rapid increase. Two factors underlie the rate of increase in the proportion going to the elderly—the relative proportion of social security costs associated with the elderly and total outlays for social security programs—each contributing about 50 per cent to the rise.

Based on this survey, a simple forecast on future trends in social security can be made.

Combining these factors, the following equation can be set up:

$$\frac{S_{65-}}{S} = \frac{S_{65-}/P_{65-}}{S/P} \times \frac{P_{65-}}{P}, \tag{3}$$

where P = total population; P_{65-} = population over 65; S = total cost of social security; S_{65-} = social security expenditures on those over 65.

The left side of the equation is the proportion of social security expenditure for the elderly, while the first item on the right side is the age differential in average per capita social security cost; the comparative benefit cost proportion. The second item on the right side is the proportion of elderly in the population structure. Equation (3) shows that the proportion of social security expenditures for the elderly is equal to the product of comparative benefit cost proportion and the percentage of elderly in the population structure.

Results from 1964–72, as indicated in Table V, show that the comparative benefit cost proportion rose at an annual rate of 2.5 per cent for the elderly, and fell at an annual rate of 1.25 per cent for the population under age 65. However, because these rates are the result of rapid change in social security policies during the period, it is inappropriate to apply them as they stand to future forecasts. Considering the outlook for policy improvements, these rates are assumed to be

TABLE

SOCIAL SECURITY BENEFIT

		1964
Amounts paid in social security benefits for the elderly (million yen)	Income Maintenance	148,924
	Pensions	142,599
	Livelihood & housing assistance	6,325
	Medical Benefits	72,064
	Insurance	36,995
	Medical assistance benefits	10,763
	Old-age medical benefits	—
	Other publicly supported medical benefits	24,306
	Old-age welfare services	7,182
	Total (A)	228,170
	Index (for A)	(100.0)
Per cent of social security benefits going to the elderly	Income Maintenance	65.3
	Pensions	62.5
	Livelihood & housing assistance	2.8
	Medical Benefits	31.6
	Insurance	16.2
	Medical assistance benefits	4.7
	Old-age medical benefits	—
	Other publicly supported medical benefits	10.7
	Old-age welfare services	3.1
Total social security benefit expenditure	(B)	1,347,482
(A/B)	(%)	(16.9)
National income	(C)	23,375,100
(A/C)	(%)	(0.98)
Number of people over 65 (thousands)	(D)	6,016
Per capita social security benefit expenditure (A/D) (yen)		37,927

Source: Ministry of Health and Welfare estimates.
Notes: 1. Pensions is total of old-age pensions and aggregate old-age pensions.
  2. The portions of other annuities paid to those over 65 is included in the figures.
  3. Livelihood assistance and housing assistance figures are the number of people over 65 receiving such benefits multiplied by the amounts provided.

2 per cent and 1 per cent for forecasts after 1975. The projections for 1975–2005 in Table V indicate the results of preliminary calculations. According to these figures, the proportion of social security expenditures going to the elderly will rise steadily year by year, coming close to 40 per cent in 1985, and going over 50 per cent in 1995. In 2005, the aged—who will then be 14 per cent of the total population—will probably use up about two-thirds of all social security expenditure. There are of course a number of uncertain elements in these projections. Even now criticism are made that a large proportion is being expended on average social security outlays for the elderly, and it is questionable whether the comparative benefit cost proportion will be allowed to increase at the indicated rates. On the other hand, the increases themselves will be limiting factors on social security for the elderly, diminishing the available choices. And while the proportion of elderly in the population is an important index of the aging

IV

EXPENDITURES FOR THE ELDERLY

1965	1966	1967	1968	1969	1970	1971	1972
196,227	233,079	290,136	327,109	437,425	516,618	629,290	807,836
188,724	223,876	278,594	313,447	421,053	496,977	604,611	776,939
7,503	9,203	11,542	13,662	16,372	19,641	24,679	30,897
91,441	101,185	121,285	151,607	182,203	233,310	264,516	368,970
43,832	51,678	63,979	81,011	102,994	134,673	151,388	205,547
14,697	17,534	23,011	29,117	33,789	44,110	51,726	65,219
—	—	—	—	—	—	—	13,939
32,912	31,973	34,295	41,480	45,420	54,527	61,402	84,193
9,036	11,253	13,366	16,026	19,796	24,904	31,869	43,407
296,704	345,517	424,787	494,742	639,424	774,832	925,675	1,220,213
(130.1)	(151.5)	(186.2)	(216.8)	(280.8)	(339.6)	(405.8)	(534.8)
66.1	67.5	68.3	66.1	68.4	66.7	68.0	66.2
63.6	64.8	65.6	63.4	65.8	64.1	65.3	63.7
2.5	2.7	2.7	2.8	2.6	2.5	2.7	2.5
30.8	29.3	28.6	30.6	28.5	30.1	28.6	30.3
14.8	15.0	15.1	16.4	16.1	17.4	16.4	16.8
5.0	5.1	5.4	5.9	5.3	5.7	5.6	5.3
—	—	—	—	—	—	—	1.1
11.1	9.3	8.1	8.4	7.1	7.0	6.6	6.9
3.0	3.3	3.1	3.2	3.1	3.2	3.4	3.6
1,603,743	1,866.968	2,164,157	2,504,451	2,872,970	3,523,413	3,966,408	4,892,254
(18.5)	(18.5)	(19.6)	(19.8)	(22.3)	(22.0)	(23.3)	(24.9)
26,086,800	30,442,700	36,233,200	42,869,600	49,856,700	59,048,000	65,786,100	76,145,600
(1.14)	(1.13)	(1.17)	(1.15)	(1.28)	(1.31)	(1.41)	(1.60)
6,181	6,420	6,666	6,899	7,109	7,331	7,524	7,879
48,003	53,819	63,724	71,712	89,946	105,693	123,030	154,869

4. Other publicly supported medical benefits refers to medical and rehabilitation benefits paid under the welfare law for atomic bomb victims, the mentally ill, the physically handicapped, and those with tuberculosis or leprosy.

5. Old-age welfare service is the total amount paid for old-age welfare expenditures for old-age care (administrative costs for old-age welfare facilities).

trend, if a change in the configuration of work or housing in old age, or in local community systems were to take place, substantial change could occur in the expenditures associated with an older population. Such possibilities cannot be dismissed, yet on the opposite side of the coin, if rapid expansion of social services associated with aging trends has to be made, the above limitations offer little possibility for rapidly increasing social security expenditures or comparative benefit cost proportion.

In any event, as long as current social security policy moves on without substantial change, inflation of social security expenditures is unavoidable. The ratio of social security expenditures to national income is:

$$\frac{S}{Y} = \frac{S_{65-}}{Y} \Big/ \frac{S_{65-}}{S},$$

TABLE V

POPULATION AGING TRENDS AND SOCIAL SECURITY

(%)

		1964	1965	1970	1972	1975	1980	1985	1995	2005
Age structure (1)	Over 65	6.19	6.28	7.10	7.45	7.93	8.86	9.52	11.98	14.41
	Under 65	93.81	93.72	92.90	92.55	92.07	91.14	90.48	88.02	85.59
Comparative benefit expenditure ratio	$\dfrac{S_{65-}}{P_{-65}}\Big/\dfrac{S}{P}$	273.0	295.0	310.0	334.0	357.0	394.0	435.0	530.0	646.0
	$\dfrac{S_{-65}}{P_{-65}}\Big/\dfrac{S}{P}$	88.6	87.0	84.0	81.1	78.7	74.9	71.3	64.5	58.4
Ratio of social security benefit expenditures according to age group (2)	$\dfrac{S_{65-}}{S}$	16.9	18.5	22.0	24.9	28.1	33.8	39.1	52.8	65.0
	$\dfrac{S_{-65}}{S}$	83.1	81.5	78.0	75.1	71.9	66.2	60.9	47.2	35.0

Sources: (1) Institute of Population Problems estimates; (2) for 1964–72, Ministry of Health and Welfare, Kōsei hakusho [Welfare white paper] (Tokyo, 1974).
Note: P: total population; P_{65-}: population over 65; P_{-65}: population under 65. S: social security expenditures; S_{65-}: social security expenditures for those over 65; S_{-65}: social security expenditures for those under 65.

TABLE VI

ANTICIPATED RATIO OF SOCIAL SECURITY EXPENDITURES TO NATIONAL INCOME

(%)

	1975	1980	1985	1995	2005
S_{65-}/Y	1.85	2.52	3.36	6.17	11.07
S/Y	6.57	7.46	8.59	11.69	17.03

Y stands for national income. Figures for these estimates are in Table VI. In the thirty years between 1975–2005, the ratio of social security expenditures to national income will rise by a factor of 2.6, eventually reaching current Western European levels. Attention must be given to the predictions, even those based on moderate assumptions such as that improvements in services for the elderly—lagging far behind what they should be—will be made at roughly the same pace as they are. This includes items like pension systems and the change to a contributory pension from the noncontributory welfare pension which pays benefits to those over age 70. If these projections are disregarded, the ratio of social security expenditures to national income could easily climb to the 20 per cent level.

V. SOCIAL SECURITY PROGRAMS AND LIFE CYCLE PLANNING

With the population age shift, rapid change in the life cycle will bring on intensified instability in the future. The change to the nuclear family weakens the pattern of intra-familial transfer, and with the breakdown of regional communities and the change of company welfare scheme, we cannot expect full effect in mutual

assistance from these organizations. As a result, individuals may find a way out of the situation through their own effort, as indicated by the high savings rate, but this will not adequately maintain life in old age. Despite a high savings rate unparalleled for an advanced nation, the financial assets of households headed by working people are now less than 1.4 years' annual income, hardly enough to maintain an existence through old age. The raison d'être for social security programs is that they are supposed to allay economic instability, and assure a minimum living standard, as difficulties which may arise from dealing with the risks that can occur during the life span. With the period beyond retirement so dramatically extended, maintaining a minimum living standard for stable old age is indispensable to the life cycle of an aging society.

For these reasons it is necessary to aim for economic stability in old age by providing pensions that support a reasonable standard of living, respond to the needs of the elderly by providing access to medical attention, and improve other welfare services such as meeting the demand for convalescent care in later life. However, there are limits to social welfare expenditures for the elderly. If we make the population aging process an uncontrollable factor thus causing difficulty in program implementation and operation, then the elderly are in an adverse relationship with themselves in terms of limiting factors affecting the provision of a reasonable standard of living.

Let us return to equation (2). The ratio of L_2/L_1 stands for the dummy variable of the number of potential social security recipients against the number of payer. One way of cutting down on welfare expenditures is to have policy limit the number of recipients, or increase the number of those paying. Increasing the labor participation rate of older people and women, or raising the age for pension eligibility, are examples of policies that would work for these ends. The second choice involves retaining the level of t—the percentage of per capita income taken as a reasonable level of consumption for the elderly—and increasing r, the percentage of annual income levels, or some combination of the two. If benefits are raised, t, the rate providing for expenditures must also be raised. However, if the latter rate is greatly increased, it will probably be opposed by the working population.

At the root of the existing system is the idea that the assurance of a minimum standard of living for the entire population is not considered valid. There are many people who have to content themselves with standards below the minimum, but there are also those who are to a considerable degree receiving above the minimum standards of the welfare system, and as the system becomes more mature the people of the latter group will increase. The resulting increase in social welfare expenditures is indicated in Table VI.

The first option for raising the labor participation rate for older people is shown by performing a regression analysis of the labor participation rate of men over 65 (M) and the rate of social welfare expenditures (as indicated by real economic growth rate [G] and GNP). A significant interdependent relationship is then found.[3]

[3] Ministry of Labor, Employment Security Bureau estimates, 1975.

$$M = 10.1519 - 1.1598T + 3.7457G$$
$$R^2 = 0.9604$$

This estimate is made by using cross sectional data from France, West Germany, Italy, Sweden, Great Britain, United States, and Japan, but when the estimates use Japanese time-series data, a high relationship of interdependence is not necessarily evident. However, some very interesting results are obtained. One is that, as the real economic growth rate rises, and as social welfare expenditures increase, the labor participation rate for older workers drops, since pressure builds demanding that they retire early. The labor participation rate for older people, varies as movement of these two factors changes. However, in order to provide increased benefits for the aged population, it is clear that the current practice of retirement at age 55 cannot continue. Japan's labor participation rate for those over age 65, according to the 1975 census and as shown by Table VII, was 30.2 per cent, much higher than the 11.3 per cent in Great Britain in 1970, or the United States' 16.2 per cent. But in the future, with a declining economic growth rate, if the rate of national income to social welfare expenditure rises in response to the increased number of elderly people, in 1985 the labor participation rate of elderly men will fall to about the same as in the United States.

In any event, there is widespread hope for an increase in the labor participation rate of people over 65, in order to assure a reasonable level of benefits for an aging population.

In the overall context, life cycle planning for social welfare consists of the following goals.

(1) Establishment of a national minimum as the desired level of support, and its realization by means of planning.

TABLE VII

LABOR PARTICIPATION RATES FOR MIDDLE-AGED AND ELDERLY PEOPLE

(%)

		Over 45 Total	45–49	50–54	55–59	60–64	Over 65
Total:	1960	63.8	77.5	74.4	69.8	62.1	39.8
	1965	62.0	77.1	74.3	68.9	61.0	37.0
	1970	60.4	78.6	75.5	68.4	59.2	31.8
	1974	59.4	79.7	74.2	68.3	57.3	28.8
Males:	1960	83.1	95.9	94.9	88.9	81.4	56.9
	1965	82.7	96.8	95.0	90.0	82.8	56.3
	1970	80.5	97.1	96.0	91.4	81.4	49.4
	1974	79.9	97.2	95.8	92.0	80.6	45.6
Females:	1960	45.8	60.7	54.9	49.7	43.0	25.6
	1965	44.1	60.9	55.8	49.8	39.8	21.6
	1970	43.6	63.0	58.6	48.8	39.1	18.0
	1974	42.3	62.7	57.2	49.0	37.7	15.8

Source: Prime Minister's Office, Statistics Bureau, *Rōdōryoku chōsa* [Manpower survey].

TABLE VIII

ANTICIPATED SOCIAL SECURITY EXPENDITURES

(100 million yen)

| Year | Liveli-hood Assist-ance | Social Welfare | Public Health | Social Insur-ance | Social Insurance Items | | | Total | Percen-tage of Nation-al Income |
					Pensions	Medical Benefits	Unem-ployment Insurance, Accident Compen-sation		
1980	9,369	16,883	9,406	191,635	77,348	101,142	13,145	227,293	9.63
1985	16,511	37,667	21,524	402,873	175,227	203,431	24,215	478,575	10.98
1990	29.098	69,377	39,644	805,678	369,735	391,383	44,560	943,797	11.70
1995	51,281	127,799	73,028	1,648,095	778,867	787,071	82,157	1,900,203	12.91
2005	159,272	433,608	247,776	6,884,637	3,422,879	3,183,010	278,748	7,725,293	15.43

Note: Figures exclude benefits for children, special annuities (*onkyū*), and war-related benefits.

(2) In the distribution of benefits expenditures, the needs to be met according to level of urgency in social welfare must be set. This includes the setting of standards for the capacity to bear the burden.

(3) The response to risk should be preventive, anticipating them in advance, rather than after the fact.

(4) The responsibility for expenditures should be clarified, and should not simply depend on public finances.

These goals are not limited to social welfare policies, but are applicable to public policies in general. With steady change in the life cycle, however, these goals become minimal, unavoidable standards for social welfare policy.

Preliminary calculations of the social security expenditures necessary to achieve these goals, based on payments providing a national minimum and a fundamental reorganization of existing payment formulas, are listed in Table VIII. These figures were calculated using fixed assumptions for the economic growth rate and the rate of consumer price increase, and a sliding scale system responding to economic change was also assumed in estimating the payment amounts. According to the calculations, the rate of social security expenditure to national income is rather high at the beginning, compared to extending the current formula into the future, but the rate of increase will be low. In the early twenty-first century, when the population aging trend peaks, the rate is expected to be much lower than if the current system continues unchanged. Moreover, with this system, there will be change in the distribution of the financial burden for social security programs. In order to set social security payments according to minimum standards, the financial burden distributed through the existing formula—which has inclined somewhat toward income-proportionate payments—will be cut back relatively. This will be applied to the improvement of social services, and makes possible a reasonable combination of income maintenance and social services. Table IX gives the anticipated scale of the financial burden with a life cycle planning perspective. The financial burden in 1980 will be 39 per cent of total

TABLE IX

LEVEL OF PUBLIC FUNDING FOR SOCIAL SECURITY EXPENDITURES

Year	Amount of Public Funding (100 million yen)	Percentage of Social Security Expenditures	Percentage of National Income
1980	88,778	39.06	3.75
1985	182,984	38.24	4.20
1990	332,021	35.15	3.74
1995	613,784	32.30	4.15
2005	2,301,152	29.78	4.58

Source: Ministry of Health and Welfare, Population Problems Council. *Nihon jinkō no dōkō* [Trends in the Japanese population] (Tokyo, 1974).
Note: Age of death calculated from life expectancy at 25 for men and 20 for women (1935).

expenditures for social security, which might be fairly high compared to the 1973 rate of 22.4 per cent. However, the size of the burden will steadily rise as long as the current formula continues unchanged, but if a system based on life cycle planning is implemented, the rate will fall, dropping to 30 per cent when the population aging trend reaches its peak. Because of this, it will be possible to apportion funds to housing and lifetime education programs. It is difficult to set, a priori, a reasonable level of financial obligation for social security programs. In estimating the life cycle planning case, the procedures used were geared to explore the feasibility of the level of financial obligation set to the minimum standards, carefully scrutinizing its economic effectiveness.

VI. PROBLEMS OF LIFE CYCLE PLANNING

Life cycle planning is oriented toward the medium and long-term plan and its goal is the elimination of economic uncertainty caused by change in the life cycle within an aging society. But the realization of minimum standards at the same time is what contributes to equalization policies.

The present social security system has disparities among many schemes, to cite two frequent demands those such as medical and pension insurance. On one hand, the need to rectify these disparities grows, but on the other, attempts to rectify them bring on resistance from groups to which these differences are vested interests. These actions and reactions create a welfare spiral, with the fear that serious welfare inflation will be triggered.

Life cycle planning and the concern for assuring a minimum living standard are expected to act as a brake against the welfare spiral in an aging society.

Life cycle planning will not be realized, however, without problems.

First, there will be two dilemmas in the process of implementation. One is that attempts to lower the aging ratio L_2/L_1 may work to increase it. In order to lessen the burden on the working population, steps can be taken to lower the ratio by increasing the labor participation of older people and women. But by doing so the growth rate will rise, and with it the income levels of marginal labor.

If income is raised, choice of ways to use leisure time increase and the labor participation rates of these groups will reverse, driving the ratio up again. Moreover, if the labor participation rate for women rises, this will increase demand for childcare and other social services, causing cutbacks in expenditures for social security programs as one possibility.

Another dilemma lies in the relationship between expansion of welfare expenditures and the economic growth to sustain it. Life cycle planning accents particularly providing stability for currently unstable groups of people. If welfare expenditures are increased, the personal savings rates of these groups may decline, lowering economic growth to an equivalent extent, and making it difficult to procure expenditures for social needs. In addition to the necessity of maintaining reasonable economic growth rate for welfare funds, there are unavoidable limits to the growth of welfare policy. However, the effects of social security programs on personal savings rates are often unclear. For example, if social security programs increase the propensity to retire and decrease the labor supply, provision for an extended old age after retirement might instead result in raising the rate of personal saving. Despite such an uncertainty, the possibility of the problem occurring cannot be denied.

Secondly, one of the basic premises in life cycle planning is maintaining full employment. If unemployment develops, the rate L_2/L_1 that is the burden assumed by the working population will rise. Life cycle planning thus makes the maintenance of reasonable economic growth an implicit assumption. Because full employment cannot be maintained without a certain level of economic growth, economic growth is necessary. Without growth, ensuring employment for marginal labor is difficult, and unemployment in this area would increase the burden on the working population.

Third, life cycle planning anticipates change in current labor practices, including the *nenkō* ("seniority merit") wage system, and the present retirement system. An increase in employment among older people cannot be achieved without this change, but these practices are intimately related to Japan's industrial organization. If they cannot be changed in a simple manner, it is uncertain whether total change would be desirable. Even if change is accomplished smoothly, without policies to increase labor demand that would absorb the increased supply of older workers, the result would be unemployment.

Maintenance of a reasonable economic growth rate and full employment are basic premises in life cycle planning.

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