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What has the Longevity in Europe and Japan to Teach India?

1. Introduction

IN addressing high-ranking colleagues in demography at the Jawharlal Nehru University New Delhi and distinguished members of the world's second largest Association for Population Studies, a European historical demographer could easily be tempted to "teach them a lesson". By making extensive use of his research results, he could without difficulty, for example, demonstrate how long it took for European societies to halve their infant or maternal mortalities in the 18th, 19th, or 20th century and why this was the case; why family planning and birth control were already successful in parts of Europe generations ago; or when and how we eradicated most of the infectious and parasitic diseases, and so on and so forth. At the end, listeners would probably have the impression that European societies, or, for that matter, other societies of the developed world as well, are living today in a paradise, Obviously, they no longer have any infant or maternal mortality worth mentioning. They no longer suffer from any of the traditional infectious and parasitic diseases which people in many developing countries are still fighting against as big killers. They can enjoy a quasi-guaranteed life expectancy at birth of seventy or eighty years, and they no longer have to cope with problems of an ever-increasing population size since family planning and an effective birth control are matters of course for everybody there. Isn't it the case that these societies have won all of the century-old battles and have reached those desirable goals which India and other developing countries are still struggling for and striving after?

However, it is not my intention to teach any such lesson. Instead, I will come back time and again to the fact that it is incorrect to assume that we, in the

developed world, have solved our population problems. We have only changed them. Instead of being confronted with a high infant mortality, we have a concentration of death and dying in old age with all the connected problems of a superannuated population distribution. In West-Berlin, e.g., 25.3% of the population was above the age of 60 in 1982, 9.9% was above the age of 75 *(Berliner Statistik* 37, 1983, 261). Instead of dying rather quickly from infectious and parasitic diseases, we often have to cope with long-lasting chronic incurable illnesses and are only released from endless pains, from dependency and senility after months or years of suffering. Instead of having too many children, we have too few and many of us no longer even know from personal experience what it means to have a brother or a sister, an uncle or an aunt. The population, in total, has already started to decrease steadily. In 1975, there were still 62,1 million people living in the Federal Republic of Germany, but in 19SO only 61.6 and in 1984 61.2 million *(Statistisches Jahrbuch* 1985, 52). Is all this what a paradise is supposed to look like? I doubt it!

This will be the lesson I'm going to offer here, pointing out our difficulties and then ask the listener to urgently contemplate these problems with regard to the future of his-own country. In doing so, I have, of course, no thoughts of undermining in the slightest the many on-going efforts in India to resolve today's population problems. But it seems to me that, even in India, the time has come to begin seriously regarding the other end of the spectrum, i.e., the problems of tomorrow as well as those of the day after tomorrow. Or, as a vigilant staff reporter of *The Statesman* lately put it, "to start preparing for the time when infectious and parasitic diseases arc eradicated, when the adoption of the small family norm ensures better living conditions for all and economic progress contributes to a more healthy life. For, that results in the creation of an'aging population', which in turn creates situations that can become a trifle problematic if not tackled effectively"; in short 'to prepare to meet the situation that will arise a few generation hence" *(The Statesman,* 13 March 1986, 3).

A glance at the reference at the end of this article shows at once that Indian demographers do not need our 'lessons' with regard to methodological skills and technical abilities. It is, however, a different matter to draw conclusions from numbers and statistics, to build solidly knitted theories and to present practicable ways for their implementation. Didn't the President of the Indian Association for the Study of Population exhort his fellow-demographers, when addressing them at the Tenth Annual Conference in Bangalore in May 1985, to "Look Beyond the Decimal Points! Of course, one must *begin* by looking at the decimal points but one should not get stuck forever in the decimal points"? (Bose 1985, 2).

This is percisely where 1 perceive my own responsibility to be. Thus, I, too, would like to prod the listener to 'look beyond the decimal points' and to

stimulate further reflection concerning the demographic problems and, closely linked to them, the individual, familial, and social problems of tomorrow. 1 will do this by sketching the developments in Europe during the last 300 years as well as the problems in Japan today which have arisen from the very rapid increase of life expectancy since the end of World War II.

Subsequently, it will then be the listeners task to draw the consequences as regards the possible development in India and to accept, reject, or modify my conclusions based on the European and Japanese experiences.

2. Europe : Increase in Life Expectancy during the Last Three Centuris, Resulting in Two New Problems

Figure 1 shows the increase in life expectancy in Germany from 1600 until 1980 as well as two crucial implications of this development : (1) the so-called 'post-parental partnership in the empty nest; (2) widowhood, which, viewed structurally, did not exist in earlier times.

At the top left, Graph A depicts life expectancy at birth. It's span for both sexes nearly tripled during the last four centuries, from around 25 years to around 70. Less spectacular was the increase for those who managed to survive both through infancy and childhood and who reached adult life (Graph B; top right). The age of 25 years is chosen here because it indicates the approximate age at first marriage in Western Europe over the centuries and thus the time of family formation and the onset of legitimate reproduction. For these adults, total life expectancy rose from about 60 to around 70-75 years. A substantial breakthrough, however, did not occur before the second half of the 19th and during the first decades of the 20th century. Furthermore, a steeper ascent is to be observed for women than is the case for men.

Concentrating on an average married couple's ideal-typical life course at selected time periods over the last three centuries (bottom; Graph C), we can state that there existed, over long historical periods, a homeostasis between parent and child generations. As we know from dozens of microstudies all over Europe, women in traditional peasant societies gave birth to their last child at the age of about 39, 40 years (Flinn 1981, 1984). If we add twenty years to that age for the breeding and socialisation of the next generation, the task was completed at an age of around sixty years, i.e. at the time when the average life course of an adult person, both male and female, came to a close. The older generation 'died away', when the younger was mature and could take over the farm or the craft.

Viewed structurally, there was thus, no such thing as 'postparental partnership in the empty nest', nor widowhood at that time. These two phases in a normal couple's life course came only into being from the middle of the 19th

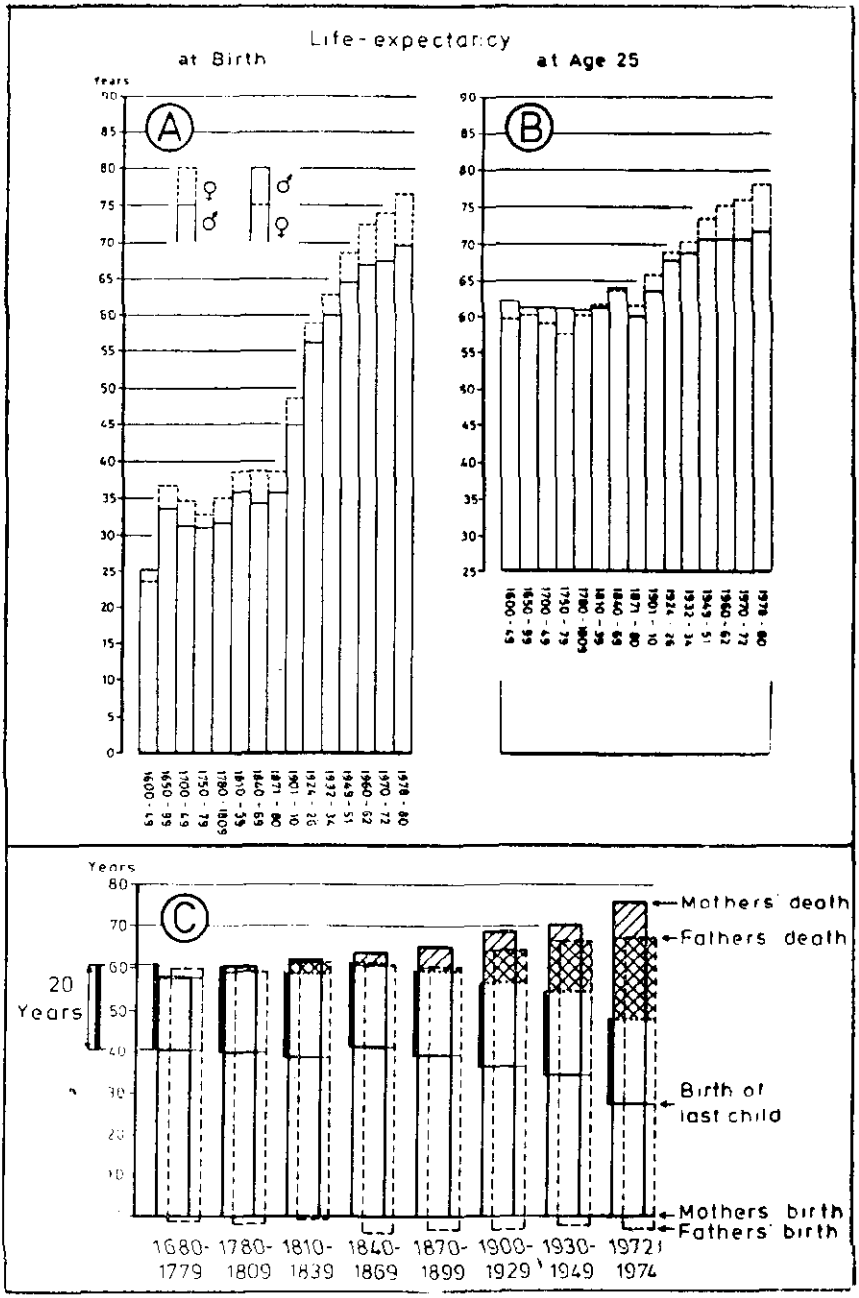

Fig. 1 : Life expectancy in years at birth (= A) and at age 25 (= B) from 1600-1949 to 1978-1980 as well as selected segments of married couples 'life-courses from 1680-1779 to 1972/1974 in Germany (= C), 1600-1869 : Schwalm region in Northern Hesse, Western Germany, consisting of eight adjacent neighbouring parishes, 1871-1934 : Imperial Germany, 1949-1980 : Federal Republic of Germany.

SOURCES : Data bank and ongoing research at the Friedrich-Meinecke-Institute Berlin.

century onward, when *(a)* the life expectancy of adults started to rise, (b) the life expectancy rose quicker for women than for men, and *(c)* the number of births per women decreased from between six to eight to one or two, and thus a woman's age at her last delivery sunk from 39, 40 to under 30 years.

In 1983, the total life expectancy at the age of 25 was, in Germany, 72.3 years for men and 78.4 years for women, and the average age at first marriage 26.9 years for bridegrooms and 24.1 for brides *(Statistisches Jahrbuch* 1985, 72, 78); thus, the 'postparental partnership in the empty nest' can nowadays easily last about twenty, and the widowhood around nine to ten years. **Here** again, readers from developing countries may start wondering if this state of affairs really is an enviable perspective, for parents, for women, for the couple's children, for the generations. Should they also strive to generate this development in their own countries as soon as possible, in view of the immanent psychological, individual, partner-related, familial, and social problems, not to mention the economic, medical, and socio-political ones.

As can be easily guessed from Figure 1, we in the developed countries apparently have not yet reached the end of this development. More and more problems are ahead, both with regard to the number of years in the empty nest and to the years of widowhood. What are all these elderly, and old, and very old ladies—and often very lonely ladies—doing? What can they do? What are families; what is the society allowing them to do in a meaningful way? More brutally asked : aren't these 'gained' years merely a burden for everybody, for the longer living persons as well as for their surroundings? What a threatening outlook! It seems to me that it is high time for us to renew our reflections on the meaning of life against this background which is also new to us here in the developed countries. We need to think about the planning of a full-length, lifelong career of seventy, eighty years, which must start at a very early age. It's all too late at the age of retirement or when the last child has left home or the husband has died. Life careers are no longer only job resumes for men or careers as mothers and spouses for women!

As I was investigating the increase in life expectancy and the correlated decrease in infant mortality in Switzerland from 1880 to 1980 (Figure 2), hereby searching for the underlying reasons, I soon detected that I had to take into consideration a whole series of interrelated causes, forming a veritable chain. There we find of course, the epidemiologic transition from infectious and parasitic diseases to chronic incurable illnesses of cancer type and cardiovascular diseases; at the same time, however, there were changes in the water supply and the sewerage system; in private hygiene as well as public health; in housing conditions; with regard to a more diversified and healthy nourishment; in the transportation and communication system; in the working conditions with fewer hours a week and more leisure time; in the private and public economic situation towards more affluence; in the family structure and household composition resulting from birth control and family limitation; in the

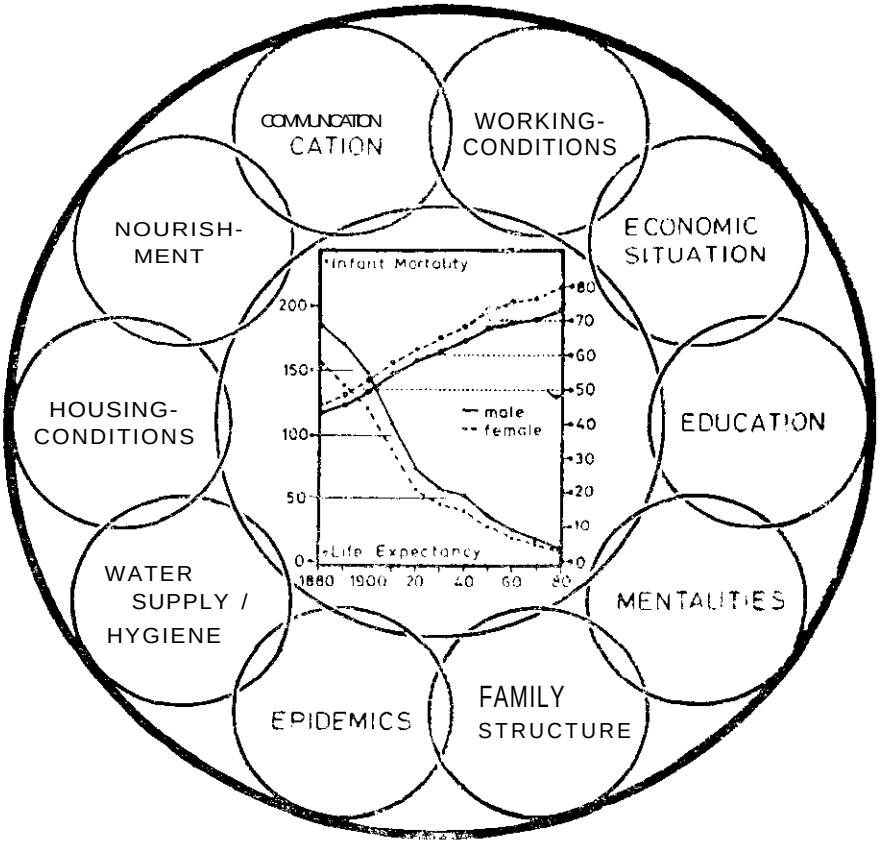

Fig. 2. Decrease of infant mortality rales as well as increase of life expectancy as consequences of simultaneous changes within a comprehensive system, i.e. a shift from a "traditional world" to a "modern world".—In the center : Development of infant mortality rates per thousand male and female live births, and life expectancy in years at birth for men and women in Switzerland 1880-1980.—Information kindly provided by the Swiss Central Bureau of Statistics, Berne.

SOURCE : This figure, which is published as the final figure 7 in the article "Can India learn Lessons from Europe's Demographic and Epidenrologic Transitions?", in : The Indian Journal for Community Medicine . ., 1986,. . , should be regarded as the link between the author's two related investigations.

attitudes and mentalities, e.g., towards children, towards an ever-increasing number of elderly people, towards life and limb; and last but not the least, *in education,*

I am not the first to detect that it is exactly here that we find *the key element* of the break-up and the on-set of a radical shift from an older world view of a traditional illiterate society to a 'modern' one. (For greater detail "Can India learn Lessons from Europe's Demographic and Epidemiologic Transitions?",

Indian Journal for Community Medicine . . ., 1986, ...).

In addition, a rather unexpected result of this fundamental shift in the developed countries can be seen in Figure 3. A series of indicators all point

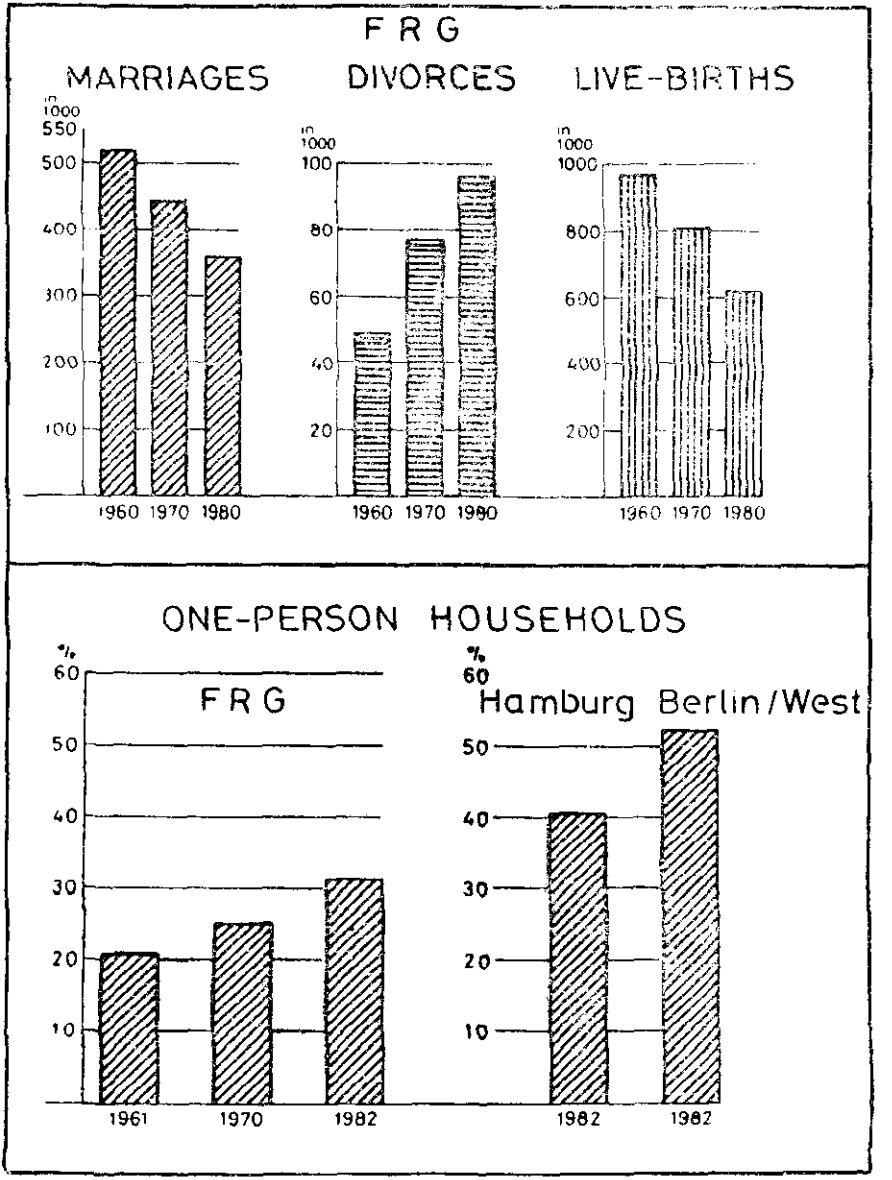

Fig. 3. Increasing reluctance to be involved in long-lasting relationships and commitments, in the Federal Republic of Germany, 1960-1982, resulting in a decrease in the number of marriages and live births, and in increase in divorces and one-person households.

SOURCE : Statistiches Jahrbuch 1985, 66, 71, 76, 80.

in the same direction, as demonstrated here for the Federal Republic of Germany during the last two, three decades. An increasing reluctance for long-lasting personal engagements and responsibilities is simultaneously expressed by a decrease in the number of legal marriages (and an increase in more consensual and easily dissolved co-habitations), by a drastic increase in the divorce rates (and fewer re-marriages of the divorced), by a likewise drastic fall in the number of births (not only the average per women., but also childless couples), and most .strikingly, by a steady increase in the number of one-person households. In 1961, in the Federal Republic one out of five households consisted of one single person only; in 1970 one out of four, in 1982 one out of three. In the big cities, as, e.g., in Hamburg, there are already more than 40% single-person households (40.6%), in West-Berlin even more than half of all (52.3%). Of course, one has to be careful in interpreting these figures, since they do *not* mean that more than 50% of all *inhabitants* of Berlin live as singles. But the *trend is* clear-cut, and it repeats itself in many other parts of Europe (of. e.g. most recently the detailed figures published for Switzerland, in Buscher, 1986).

In our context. I would like to concentrate on two crucial facts. First : our lives—and this means and is very much felt so in our societies—*everybody's life* has become more secure. Together with our birth attest, we get, so to speak a guarantee for a life span of about 70 years. This was never before the case in historical times, and is still not the case in many developing countries. Up until a few generations ago, every individual's life course was continuously endangered by premature death. One person lived until the age of ten, another until thirty, or fifty, or, in exceptional cases, until eighty, or already died two weeks after birth. To compensate for this omnipresent uncertainty, our ancestors developed different kinds of survival strategies, all resembling in the fact that not the continuously endangered *ego* played a central role but the communities in which these ancestors lived and had to live, in *Gemeinschaften* as the German sociologist Ferdinand Tocnnies (1955-1936) called it for the first time in his work *Gemeinschaft and Gesellschaft* in 1887. It was only *after* the radical change in our mortality patterns, after having eradicated most infectious and parasitic diseases and thus having successfully delayed premature death; in short, after the standardisation of everybody's life expectancy at a high level, that we were able to abandon—and indeed hastily did so—the century-old traditional *Gemeinschaften* with all their constraints. Instead, we increasingly placed our *egos* in the center of our world and world view, and live more and more in those impersonal associations of the type *Gesellschaften,* as predicted by Toennies a century ago.

Second: Since the shift can be traced back, in the first place, to a change in *female education,* it is not surprising that the spectacular outcome (drop in infant mortality, rise in life expectancy) resulted, at the same time, in an increase of female self-esteem, self-consciousness, and self-confideuce. After all, women were involved in a much more concrete way than men were with all these

partial shifts at the bottom level, i.e. concerning housing conditions, a more balanced nourishment, increased personal hygiene of every family member. They were the ones who came in closer contact with the bodies of the ill, with infants and children, and they had the final say as to an efficient birth control. It was the dissemination of reading abilities which opened up for the women a new world in all these aspects, which changed their attitudes, increased their knowledge, their motivation.

What holds true for historical times in Europe, has been more recently stated by many field researches in different developing countries in Latin America, in Africa, and in Asia. They all have come to the conclusion that there exists "a negative relationship between the extent of maternal education and the level of child mortality" (Ware 1984, 191). "Very different levels of child survivorship result from different levels of maternal education in an otherwise similar socio-economic context and when there is equal access to the use of medical facilities. Indeed, maternal education appears to be the single most powerful determinant of the level of child mortality" (Caldwell 1979, 391). Or in similar words: "The impact of parental education is probably greater than both income factors and access to health facilities combined. Paternal education is also important, though not as influential as maternal education" (Caldwell-McDonald 1981, 92-93). Even the line of reasoning which explains why this is the case is practically the same in all of the studies: "An illiterate woman remains part of traditional culture, accepting its theories of illness and its attitudes to cure. A young mother with education is allowed to sei7.e a greater share of personal initiative in treating sick children by non-traditional methods", and as the quintessence above all: "She can better manipulate the modern world" (Caldwell-McDonald 1981, 80).

Thus it is no cause for astonishment that the drastic decrease in infant and child mortality as well as the simultaneous increase in life expectancy, as documented in Figure 2 for Switzerland, 1880-1980, above all signifies an enormous *success for women.* It was the women who greatly contributed to this situation, namely because of their becoming better educated. This success simultaneously increased their independence and raised their consciousness, both of which, in my opinion, were very decisive co-factors in the developments recorded in figure 3: fewer marriages, more divorces, fewer children, more one-person households. For women today, going through life alone is a practicable and apparently an increasingly attractive alternative to the earlier roles of being solely a housewife and mother.

3 Japan : Unexpected Impacts of Today's World's Highest Life Expectancy

Until recently, the Japanese society was considered to be an expressly collectivistic one. Some of the prevailing notions characterizing them were: "Japanese people always travel in groups"; "Japanese youngsters all will marry and raise

a family"; "In Japan, members of a work place behave like one single big family". In short, Japanese were thought to live in "communities", according to Toennics in *Gemeinschaften,*

During the past decades, however, things apparently changed, and with such a speed that *many* Japanese are themselves surprised. For the developed countries of the West, a close look at this development and its underlying causes is worthwhile since many of the factors obviously are relevant to us as well. However, even developing countries will benefit from a consideration of the Japanese experience since it may very well be the case that they are presently repeating that development with a time lag of a few generations; thus, in some decades hence, they will arrive at the same point where the Japanese are at now.

Let us first consider the facts and then ask for an interpretation. Figure 4 shows, at the top, the number of persons per household in Japan from 1955 to 1980, and, in comparison, in the Federal Republic of Germany from 1950 to 1982. At the bottom, we find the number of one-person households expressed as a per cent of all households, again for the same time periods and for both countries. It is striking to observe that the Japanese society apparently is following the German, or for that matter, most societies of the western World. Japan seems to be reproducing the fundamental shift from an older, traditional society of the type *Genieiiuchaft* to a modern one of the type *Gesellschaft,* which at its extreme end would eventually lead to an association of singles. At the moment, the time lag is somewhat more than thirty years. In 1955, Japan had an average of 5.0 persons per household and 3 5 percent one-person households; in 1930 3.3 persons and 15.*8* percent. Japan has thus reached a point at which Germany had already arrived in 1950.

One has, of course, to be careful with the extrapolation of historical findings into the future, even the near future. But if the development continues in the same steady manner as it did during the past decades, Japan will have about 2.7 persons per household in the year 2000, and 25 percent one-person households, i.e. the same numbers as Germany had in 1970.

It would be easy enough to introduce a whole series of statistics as further evidence pointing in the same direction. Professor Fumie Kumagai from the International University of Japan in Niigata has recently dedicated several of her studies to this topic and has also published in English on the subject (Kumagai 1983, 1984). Another obvious indicator is the drop in the birth rate from 34.3 per thousand after the Second World War (1947) to about half of that in I960 (17.2‰), to 13.6 in 1980 and to 12.7 in 1983, or that people now wait longer before making long-term commitments. In 1970 Japanese men married at an average age of 26.9 years and women at 24.2 years; in 1975 at 27.0 and 24.7 years; in 1980 at 27.8 and 25.2, and in 1983 at 28.0 and 25.4 years *(Health and Welfare Statistics* 1985, 43, 55).

One of the leading Japanese family sociologists, Professor Kiyomi Morioka

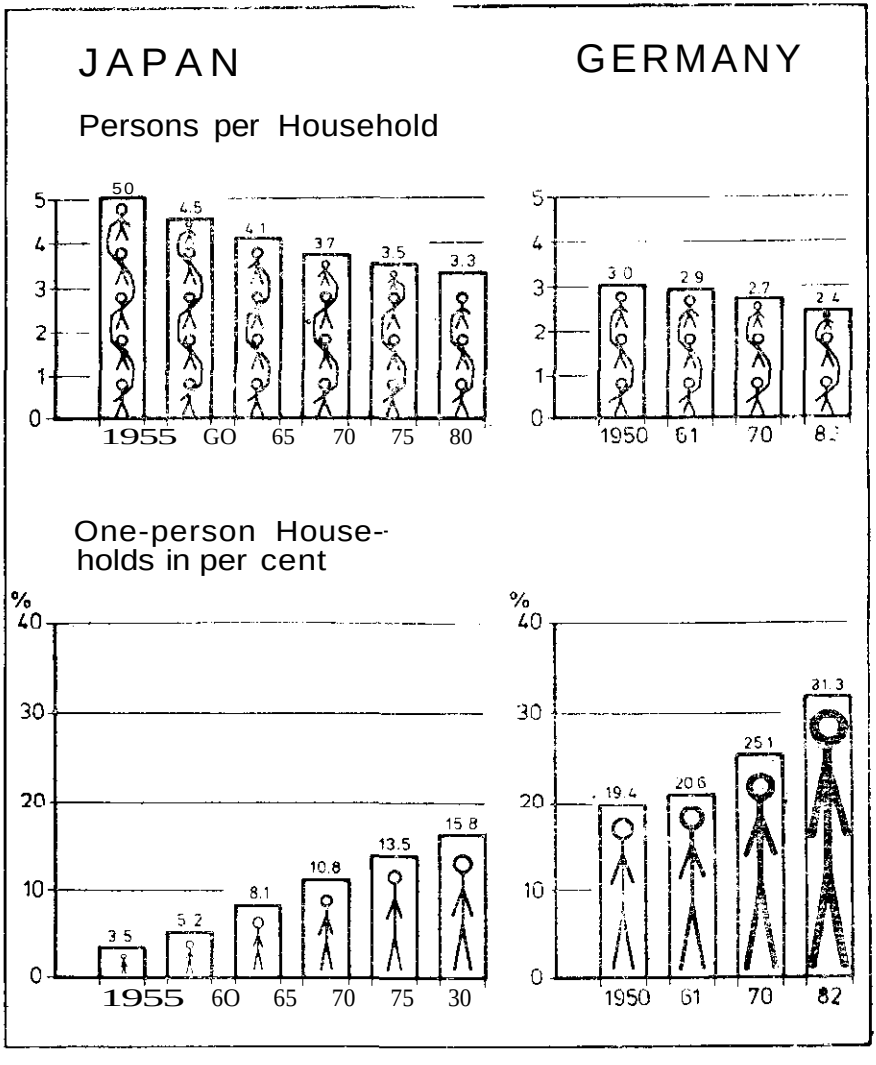

Fig. 4. Japan follows Germany, with a time lag of about thirty years, in the direction **towards an "association of** singles"expressed in a decrease of the mean household **size, and** an increase **in one-person** households in percents of all households.
SOURCES : Japan Statistical Yearbook 1985, 47-48; **Statistisches** Jahrbuch 1985, **66.**

from the Seijo-University, Tokyo, summarized the situation very pertinently in conference-paper in 1985 and in an updated discussion in 1986: "During two two decades from 1960 to 1980, Japan accomplished an unusually high economic growth and the Japanese experienced a large-scale change in various sectors of life. Among major changes are the modernization of family structure as seen in the sudden shrinkage of an average household size and the increased

prevalence of nuclear forms, the remarkable improvement of quality of life as examplified by a greater size of housing per person and a widespread use of durable consumer goods, the changing conjugal relations as seen in the predominance of love matches vis-a-vis arranged marriages and an increasing divorce rate. . . The recently rising ratio of non-family population in the old-age brackets suggests an increasing decay of the pattern of family setting career under the (traditional so-called) ie-system, and also of the ie-system itself . . . My analyses of family setting career of the Japanese reveal that in the prewar period people followed the line with the ie-system and that in contemporary Japan, though still in minority, a new life course pattern has emerged which ends in an extrafamilial existence" (Morioka 1985/1986, 7, 9, 16).

Of course, Professor Morioka is an expert on things Japanese, and I accepted his explanations. But as a European historical demographer, I still detected some other things and correlated the findings—as depicted in Figure 5—with my own theory.

When tracing the life expectancy bars for Japanese men"(top left) and Japanese women (middle left) from 1899/1903 to 1983, we easily discern a *concave* pattern (see the schematized shape of the curve at the bottom left). Repeating the process with the bars for German man and women from one period to the next (top and middle right) reveals a *convex* pattern (bottom right). In Germany, life expectancy at birth increased rapidly in the first half of this century and has only slowly gained ground since the Second World War. In Japan, exactly the opposite happened with the big jump taking place between 1947 and 1960. For men this meant an increase from 50 1 to 65.3 years and for women from 54.0 to 70.2 years, or for both sexes a yearly increase of one additional year of life.' In Germany, by contrast, the big jump in life expectancy had taken place more than a generation earlier with the break-through coming between 1901/10 and 1924/26. In that period, the life expectancy for men increased from 44.8 to 56.0 years and for women from 48.3 to 58.8 years *(Japan Statistical Yearbook* 1985, 55; *Statistisches Jahrbuch* 1985, 78).

This means that the aging process of German society started **at** least one generation earlier than that of the Japanese. For at least the last fifty years the proportion of people over sixty has been substantially higher in Germany than it has traditionally been—or yet is—in Japan. In short, in Germany and many other European countries, we have had more time to get accustomed to a large proportion of old people, its impacts, implications, consequences for the individual, for the family, and for society, to erect many homes for the elderly, to develop an adequate pension scheme to economically secure the life standard of our old people, and also to train university students of medicine or psychology in the fields of geriatrics and gerontology.

In Japan, the more recent and highly spectacular increase in the life expectancy during the 1950s, '60s, and '70s, and the ensuring old age boom came merely as a shock, and many Japanese still seem to be living and behaving

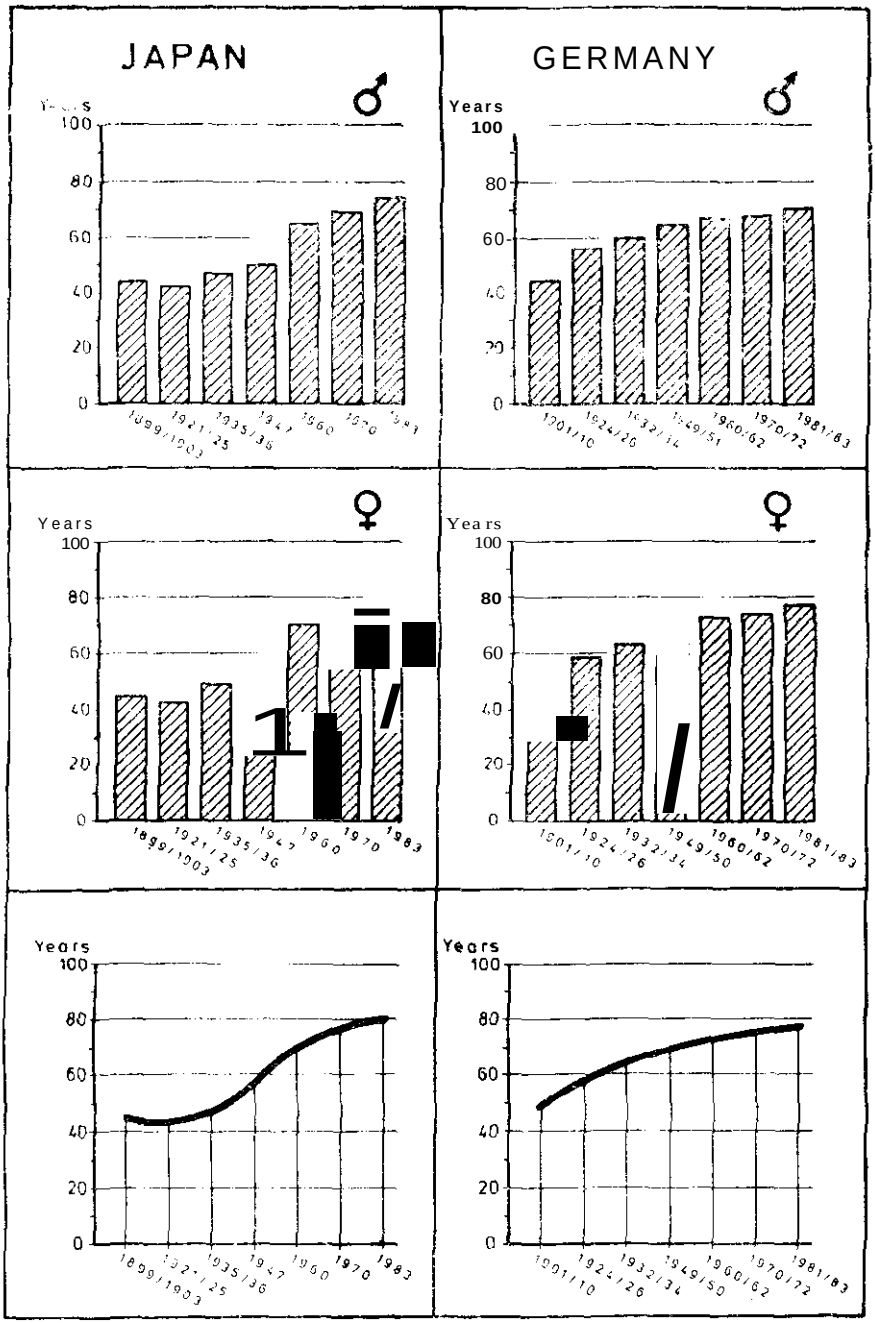

Fig. 5. Life expectancy at birth in years for men and women in Japan 1899/1903—1983 (left) and in Germany 1901,1910-1981/1983 (until 1934 German Empire, from 1949 Federal Republic of Germany; right).—In Japan, the increase of the bars from period to period_shows a concave shape; in Germany, it is convex.

SOURCES : Japan Statistical Yearbook 1985, 55; Statistisches Jahrbuch 1985, 78.

under that shock. Japan has, in the mean time, superseded all other countries, even the Scandinavians which topped the ranking list for many years. Since 1984, it has the *highest* life expectancy in the world! According to the Japanese Ministry of Health and Welfare, Japanese women in that year passed for the first time the threshold of eighty years (80.14 years for Japanese women, and 74.54 years for men; *Japan 1985,* 8).

My theory, derived from historical observations of European peasant societies, is as follows ; The uncertainty of any life course at the time of the old mortality pattern *forced* our ancestors to develop survival strategies where not any single ego was placed in the center of their thoughts and actions but rather more durable values such as e g, the enduring prestige of a prosperous farm. Only after the change to the new mortality pattern which brought about a far more certain, more reliable, and far longer life-span and a quasiguaranted duration of any single *ego,* a non-egocentered world could be, and in fact rather quickly was, abandoned and replaced by an ego-centered one, as has been so predominant in the Western World for many years now.

In Japan, on the other hand, where the old mortality pattern lasted several decades longer and where the break-through in the increase in life expectancy occurred only after the Second World War, the *non-ego* centered *Weltanschauung* lasted correspondingly longer and the shift towards a more ego-centered world and more individualistic and egotistic behaviour could start only in the second half of this century. But then, the change came about very rapidly. Japan *was* a collectivistic society of the type *Gemeinschaft,* but it is no longer so. The ongoing shift from a *Gemeinschaft* to a *Gesellschaft* seems clear —cut and straight-forward,

In such a situation, it seems to me to be more realistic and more appropriate for overcoming present" as well as future problems to consider the course of the development in the most unbiased manner possible and to think about how we can make the best of the situation, rather than to wish away out of nostalgia, the social systems (type *Gemeinschaft,* e.g., the old family or household formations) which previously were suitable for the insecure living situation of past generations. For these social systems have become outdated with the occurrence of the basic demographic change sketched above and have thus been abandoned or are in the process of being abandoned.

4. India : Will the Subcontinent Soon be Following Europe and Japan in their Shift from Old Population Problems to New ones?

Just a few years ago, not many persons, not even in Japan itself, could have possibly foreseen that the centuries-old traditional pattern of social life in existence there *Gemeinschaft* type "family) would break up so rapidly and that a new pattern (type *Gesellschaft)* would establish itself. The previous section referred the underlying causes which could have caused this rapid change in

Japan. **It** concentrated especially on an analysis of the demographic aspects, above all of the change in the spectrum of death causes and, in conjunction with that, the increase and standardization of life expectancy at a high level never before attained.

Our purpose now is to pose the same question with regard to India. If one does not wish to be taken by surprise us were the Japanese, then one has to start thinking now about the expected future developments, even if the latter do not occur precisely in the same manner as they did in Japan. Expressed concretely, this means that one should reflect here and now about the possibility of similar things occurring on the subcontinent, even if the development most likely starts off with an even great time lag and pursues its course at a more moderate tempo and with great regional differences.

I seek to present the question to my Indian colleagues against the background of my own experiences gathered in Europe and Japan. In doing so, there is a whole series of indicators which, give me much food for thought. Figure 6 shows *the survival curves for the female populations in India 1976 and in* Germany 1901/1910, 1932/1934, and 1981/1983 (top). The shapes for India 1976 and for Germany 1901/1910 are nearly coincident. Now does this indicate that the further development in India is following the historical development in Germany, namely with a time lag of about 70 years? If yes, then the Indian survival curve would, around the year 2000, show the Germany shape of 1932/1934, and around the middle of the 21st century, that of 1981/1983 for Germany.

Assuming that these prognoses come true, we can rather easily predict two other future developments (of figure 6, bottom). In a first phase encompassing twenty to thirty years, when above all the infant and child mortality is effectively checked there appears a rapid population expansion among children and young adults (= phase I; in Germany, this happened between 1901/1910 and 1932/1934). In a second subsequent phase which would encompass mainly the first half of the 21st century, the number of older adults as well as of the elderly and the very old would increase (= phase II; in Germany from 1932/1934 to 1981/1983). This would then place India precisely in the situation sketched out above for Europe and Japan, which does not have paradisic character but has rather led to a transference of old problems to new, unaccustomed problems, which have not yet been solved.

The complicated mechanisms which brought about a complete system shift from 'traditional' to 'modern' and which resulted, very prominently, in a drastic decrease in infant mortality and a steep increase in life expectancy has already been sketched. The key element within the interrelated underlying causes forming a chain was most probably to be found in *female* education, in women's, mothers' reading abilities. The countdown for a similar system change in India has obviously already started and, in some regions, some time ago. Where the change is well under way, as it especially is in the southernmost States, especially Kerala, there is much that indicates that the further

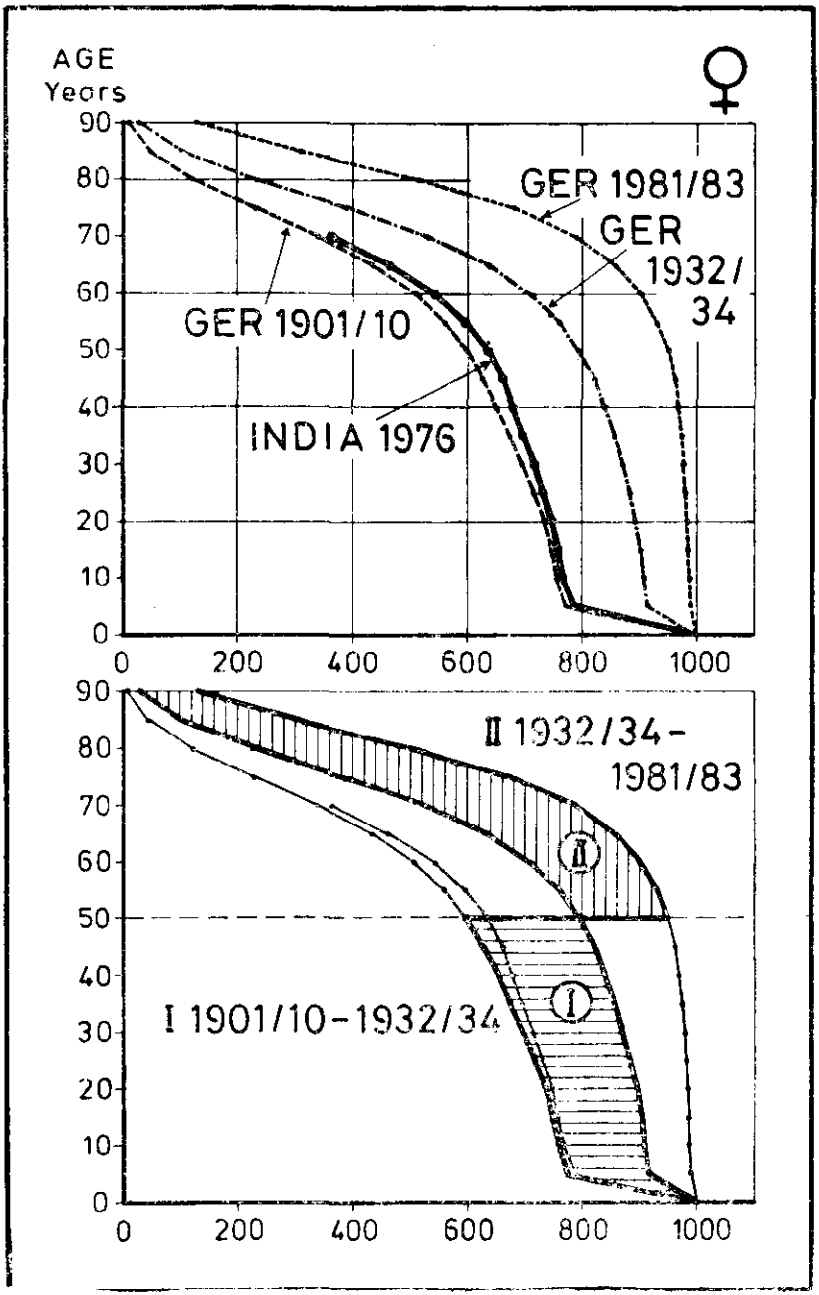

Fig. 6. Survival curves for the female populations in India 1976, and in the German Empire 1901/1910 and 1932/1934, finally in the Federal Republic of German 1981/1983.—In Germany, during Phase I (1901/1910—1932/1934), the increase in the population size was especially high in younger age groups, during Phase II (1932/1934—1981/1983) in older ones.

SOURCES : Bhat *et al.* 1984, 72-73; Statistisches Jahrbuch 1985, 78.

development there will also take the same course as did the European and Japanese development.

There are, in the Indian case three indicators which far-sighted Indian experts have already called 'indicators of hope'(Bose 1985, 16). They nil refer to the younger generation and thus may very well stand for the future development. They are : "(0 The proportion of girls in the age group 10 14 going to school. The future belongs to them, (2) the proportion of girl;, married in the age group 15-19 years. If *this* figure *comes down to zero* or near *zero, there is hope for* woman, (3) the average number of children born per woman by the age group 20-24 years. If this group takes to family panning, there is hone for the future" (Bose 1985, 16).

There are, however, enormous but interrelated regional differences. In 1981, 84.0% of all 10-14 year-old girls in Kerala went to school, but in Rajasthan only 18.7%. At the same time, only 14.0% of the 15-19 year-old women in Kerala were married, whereas in Rajasthan 64.3% were married. It is no wonder that in Rajasthan in 1981, 10 women of an age up to 24 had already brought on the average 13 children into the world, whereas in Kerala only 7 (Bose 1985, 15}. In 1983, the corresponding birth rates in Kerala were 24.9 per thousand of the population in contrast to 40.0 in Rajasthan (Registrar General 1985, 15-17).

The longer period of school attendance for girls in Kerala had already led *in 1971 to a.* rise *in* trie average marriage age (o 20.9 years, *the highest in all* Indian states; at the other end, in Rajasthan, Madhya PradeUi, Bihor and Uttar Pradesh, the average marriage age for women was 15.4, 15.2, and 15.6 respectively. But this was not the only result. It raised female literacy in Kerala to a level highest among the states. In 1981 65.7 percent of all women in Kerala were literate, in Madhya Pradesh 15.5%, in Uttar Pradesh 14.0%, in Bihar 13.6%, in Rajasthan 11.4% and for India as a whole, 24.8% (Bose 1985, 14).

After what has been said earlier about female education as a key factor for change, it is no longer astonishing that Kcrala is also the leader among the Indian states in other respects. Thus it shows by far the highest utilization rate of health facilities among all Indian States for which data are available. Around 1972/1973, the number of patients treated per 100,000 population was 210. At the other end, we find Bihar and Madhya Pradesh with 10 patients each (Ratcliffe *1983b, 70-71).* Furthermore, Kerala tops *the* ranking fist of life expectancy already in 1971, Kerala women had a life expectancy, of 57.61 years at birth. In Bihar, on the other hand, women's lives ended on the average at 41.84 years, in Uttar Pradesh at 37.26 years, that is to say two decades earlier than in Kerala (Bhat *et al.* 1984, 115).

These striking regional differentials easily explain why "Kerala is generally considered the 'demographic laboratory of India," and why "its demographic behaviour has attracted the attention of social scientists and population experts

the world over" (Nayar 1985a, 372). These regional differentials apparently have deeper historical roots than one might think. One needs only to take into account the well known different social policies of the Indian states of today. It was not first in 1981 that Kerala became the sole Indian states in which, for example, women outnumber men (thus *showing* the usual picture, whereas all other states have a lower life expectancy for women—an anomaly when viewed from a world perspective). Rather, the same observation can be made for 1961 and is even correct as for back as 1901 (Visaria and Visaria 1981, 13).

This fact could very well serve as a reminder to "social scientists and population experts the world over" who, concentrating on and restricting themselves to that, truly most attractive, Kerala-laboratory, burst out into delighted raptures such as: "Kerala provides clear evidence that nutritional levels are influenced by educational levels; female literacy in Kerala has increased enormously since the 1950s, the status and social mobility of women in Kerala appear to be increasing directly with education attainment, alternatives to child-bearing become a real choice to an educated female; fewer women in Kerala are marrying, evidently because of the attractive alternatives to marriage available to educated females" (Ratcliffe 1983b, 74-77).

Without wanting to remove the shine from these and other gleaming facts on Kerala in any way, we nevertheless should not just look in that Kerala-microscope and be so overwhelmed and fascinated by those findings that we lose sight of the rest of India. Rather, we should also consider where the laboratory is situated and where the microscope stands, that is to say, to take the broader context into account as well. By all accounts Kerala is embedded in a larger framework than being just itself.

The regional differentials can in general be brought together into three regional clusters of states: the North (covering Gujarat, Rajasthan, Uttar Pradesh, Madhya Pradesh, Haryana, and sometimes an otherwise often deviant, because Sikh-dominated, Punjab; the East (Bihar, West Bengal, Orissa); and the South (Maharashtra, Andhra Pradesh, Karnataka, Tamil Nadu, *and Kerala).* Thus, regional variations in the birth rates e.g. exhibit much the same regional patterns as the sex ratios.

If we proceed even more liberally, we may even summarize the repeatedly occurring *relative* picture of the regional variations into one single dichotomy, as did e.g. Dyson and Moore in their recent study "On kinship structure, female autonomy, and demographic behavior in India" (Dyson-Moore 1983): "The country can be roughly divided in two by a line that approximates the contours of the Satpura hill range, extending eastward to join the Chota Nagpur hills of southern Bihar" (Dyson-Moore 1983, 38). North of this line, the marriage age of women is lower, the life span shorter, the birth rale higher, the infant and child mortality—especially for girls—higher, and, in conjunction with this the sex ratio less balanced than is the case for each of these indicators south of the line for the same time period. As other scholars did before, the two

authors observed "areas of low female autonomy and unfavourable demographic performance (high birth and death rates), on the one hand, (the north), and comparatively high female autonomy and relatively favorable demographic performance, on the other (the south)" (Dyson-Moore 1983; 35). But whereas others argued "that the ultimate historical 'cause' of differences between north and south may lie in agrarian ecology: in particular, in the far greater value of female labor in the rice-based agrarian systems of the south" *(ibid* , 47), Dyson and Moore try to explain the two basic demographic regimes by a socio-anthropological approach. Since, according to them, the different patterns have "existed for several decades and possibly for much longer," they are looking for "a socio-cultural variation deeply rooted in Indian society" and *find it in "the* northern and southern kinship systems" (Dyson-Moore 1983, 43).

The most important of their characterisations for the northern system read, in an ideal-typical form, as follows: "Marriage rules are exogamic; women have no choice in the matter; sexuality of females is very rigidly controlled; women are subjected to relatively strong pronatalist pressures; females are socialized to believe that their own wishes and interests are subordinate to those of the family group; they are therefore more likely to sacrifice their own health in repeated childbearing; they receive relatively little education; parents consider the education of sons a better investment; they are less prepared and able to innovate, since they have less access to new information, e.g. regarding child care, and they are more restricted in their ability to utilize health service, either for themselves or for their children; the main reason for the relatively high sex ratios in the north is higher female mortality; age-old practices of discrimination against females in access to food and medical care, and female infanticide refer to northwestern India" (Dyson-Moore 1983, 43-51; as to the practice of female infanticide in Gujarat in the 19th century cf. as well Pakrasi 1970, and as to "Early Sex Differences in West Bengal" Graves 1978).

Looking at the south, on the other hand, these researchers find quite a contrast: "The ideal marriage is between crosscousins; the descent group is endogamous; female chastity is less rigidly controlled; there is less social restriction on female occupational choice, and greater freedom for women in society; female autonomy indicates the ability—technical, social, and psychological—to obtain information and to use it as the basis for making decisions about one's private concerns and those of one's intimates" (Dyson-Moore 1983, 43-47).

Let me stress once more that these 'explanations' arc all too sketchy and superficial, to be capable of satisfying Indian specialists in the least. Dozens of aspects, from cultural to economic and urban'rural, from religious to climatological and geographical etc. are not included. Furthermore, there exists a large amount of technical literature for this or that special field. The only thing that I have attempted here is to *modify* in some degree the highly praised uniqueness of Kerala. Besides, it might be useful here to remember the simple fact that

long-lasting traditions and geographically *wide*-ranging customs or religious behaviours or cultural attitudes have to be taken into account when plans for the future are made by authorities and successful changes are strived for.

In this context it is interesting to note that Indian colleagues are often more careful in their judgment. They make use of phrases with a more qualifying tone, such as education has contributed to. . . . , e g. : "Education has contributed to the higher age at marriage for women in Kerala; education has also contributed to lowering the birth rate which has improved the chances of infant and child survival; the better status of Kerala women permits them to travel to hospitals/health centres without a male escort; it enables women to take independent decision regarding family planning and to better appreciate the need for, and utility of, the government's health and family welfare programmes; the control of infant mortality in Kerala was achieved through widespread education programmes which increased the level oflitentcy among women and raised their health consciousness" (Nayar 1985a, 375-378).

What is more important is that one does not overlook the negative aspects which are clearly present there as the other side of the coin. For example, one of the leading Indian demographers comes to a rather pessimistic judgment after having weighed all the pros and cons: "The conclusion that emerges is that from the demographic *point* of view, Kerala is the *most* modern state in India, but I do not see much future for Kerala considering the low level of per capita income . . . Demographic modernisation without money power can only lead to frustration" (Bose 19S5, 17). Indeed, in 1981-1982, the per capita net domestic product was, in Kerala, Rs. 1,447, whereas the average for India was Rs. 1,758 and for Punjab, at the top Rs. 3,164 (Bose 1985, 15). Here, there is much food for thought, when we, in the West, so exclusively talk about Kerala as *the* exemplary Indian State.

Furthermore, social scientists from Universities in Kerala as, well as from others States of the southern demographic system (i.e. from Andhra Pradesh, Karnataki[1]., and Tamil Nadu) started to observe, apparently with growing uneasinses, the first 'negative' implications of the on-going fundamental demographic change in their region. Not only was, in 1979, the life expectancy *in* Kerala, the highest in India, but as a result "the proportion of those aged 60 and over in the population is also higher" (Nayar 1985a, 372). Far-sighted scholars began to extrapolate : "In absolute numbers, India's aged population will be nearly quadrupled in 2025, if the growth of the general population is controlled and medical facilities are developed at presently planned rates. India will then have the second largest population of the old in the world". But the researchers didn't stop there. Rather, they went on to urge that one draw's conclusions from this, too, and that starting *now :* "It is clear that higher proportions and growing numbers of the aging will necessitate fundamental adjustments in economy, in social-psychology, in the field of education for work and leisure, health and medical care of the aged, etc. These adjustments requir-

ing decades to implement must be initiated now" (Nayar 1985c, 1-2. 8-14)

Alarmed as these scientists were, they acted. In 1981, a Centre for Gerontotogical Studies was founded in Trivandrum, Kerala, as a collaborative venture, and on February 3-7, 1985, they organized an International Seminar on Population Aging in India (International Seminar 1985, 60). In the meantime, a special Asian Forum for Development and Population Studies has been formed on the recommendation of this Seminar in order to discuss aging and related demographic and developmental problems (Nayar 1985c, 54).

The Seminar's broad objectives in 1985 were "(0) to promote understanding of population aging in India-including the trends, determinants and consequences of population aging and their implications in the demographic, health care, economic, social-psychological and welfare fields; (2) to create policy-oriented national information base on the different aspects and consequences of population aging in India; (3) to sort out and identify important issues in population aging in India and stimulate studies, discussions, research and action programmes; and (4) to examine the scope and relevance of the study of aging at the University level in India" *(International Seminar* 1985, 60). At the end of the conference, some of the major recommendations were summarized as follows : "In view of the utter paucity of data on the old in India, the Government of India should immediately initiate a comprehensive study on the problems and needs of the old in cooperation with universities and research organisations in the country and on multi-disciplinary basis. The strategy for the health care of the old should be preventive and early diagnosis of diseases. Hospitals should be provided with geriatric ward:; and geriatric medicines and services; medical curriculum should incorporate syllabi on gerontology and geriatric medicines and services; use of Ayurvedic and other indigenous medicines should be popularised in geriatric care" *{International Seminar* 19S5, 86).

I described these initiatives and deliberations at some length and made extensive quotations to demonstrate that our Indian colleagues are fully aware of the emerging problems in their country, resulting from the onset of an aging population. They know very well about the coming change e.g. in the relations between young and old people, and they even foresee the inherent economic, *medical,* socio-psychological *problems* etc. which are *arising. I*n this regard, they need no lessons at all from us, who went through this stage already some generations ago.

Nevertheless, when it comes to the point of going "beyond decimal points" and to the necessity to "abandon the number game and move from population to people" (Bose 1985, 2, 18), the situation may be somewhat different. To be sure, the members of the Seminar tried to follow Base's just cited exhortations, and it has to be appreciated that not only numbers were looked at, but that efforts were made to discuss the related individual, familial, social implications as well (Nayar 1985c, 8-14). But perhaps the European and Japanese experience could further help in more emphatically taking completely unforeseen develop-

ments into consideration so that an unwelcome surprise similar to the one that the Japanese had experienced can be prevented.

The main recommendations of the convention for tackling these future problems are : "The family should be the first and most important institution for the care of the old. Appropriate financial and other incentives should be given to the family for keeping and caring for their old members. The problems of old women need to be specially attended to as they suffer from the double disadvantage of their sex and age. Development programmes should incorporate rehabilitation of the old through appropriate employment and participation programmes. The old should be given meaningful social roles to reduce part of their tension and anxiety on account of status loss. The young should be educated to respect the old through appropriate curriculum aids" *(International Seminar* 1985, 60). These demands could all too easily turn out to be merely the pipe dreams of those suffering from nostalgia, with its illusions and may be even with some reactionary leanings. If India actually does follow Europe and Japan, then the development would run precisely in the opposite direction: not towards a better standing of the older people in the eyes of the rest of society, but rather towards an increasing dissociation and disregard of them at all levels, and, above all. not towards a familial (re-) integration of the old but conversely towards a situation where the old are the outsiders, where there is a decrease in the average number of persons per household, a growing percentage of one-person households, and more two—-(and not three—or four—) generational nuclear families—when there are families, i.e. families with a child/children at all.

Some generations ago; we didn't believe that this development would come about in Europe nor did the Japanese "collectivistic" society believed it only two or three decades ago. But in both these parts of the developed world, it did occur exactly as described, and it is now a reality! Nobody in India, family-bound, family-fond, family-oriented as its society for the most part still is, should thus feel too sure that exactly the same could not happen on the subcontinent as well. This is *not* to predict that it *must* be the case. But if there are any lessons to be learned from the recent increase in longevity in Europe and Japan with its resulting standardisation and safeguarding of everybody's life expectancy at a high level, then they would point in this direction.

Therefore, as a realistic consequence of this, I would emphatically place the paragraph taken up among the recommendations of the seminar in the center of all further reflection and underline it twice: "The old should be given training in earlier years on how to provide for the problems of old age" *International Seminar* 1985, 60)—or as the Japanese novelist Sawako Ariyoshi put it so lucidly in her very realistic two-million-copy bestseller on the aging problem, *The Twilight Years,* time and again : "Growing old should not be someone else's problem" (Ariyoshi 1984, 185). We will some day not just be ready for pension but—yes—older; we have a postparental partnership in the empty nest

for many years and a widowhood or widowerhood lasting over a number of years, and we have a large and ever-increasing number of single persons of all ages and of both sexes. Life is no longer just a job resume, it is no longer solely restricted to a career as mother and housewife. What is urgently needed is thus the planning and consequent fulfilment of a life-long career, and that means of a life of full measure, embracing all phases of a complete life-course: from infancy and childhood to youth, adulthood, and maturity, and covering all possible stages, may it be as a life-long single, or as a partner in a partnership, or as a parent, a divorced person, a widow or widower. This way of planning life and learning roles has to start at the very beginning, at an early age; it is too late to start planning when one is arriving at the thresholds and entering the stages.

Precisely because the state of Kerala is, in demographic respects, the most progressive, the most 'European, and the most 'Japanese', it is worthwhile for those there to start very intensively dealing with these approaching problems today. For *if* the initiated development further progresses in a *similar manner*, Kerala will also be the first to get hit with these new problems to the fullest extent.

As far as the discussion spanning the countries and continents is concerned, there has arisen a new focal point around which developing and developed countries can converge in an intensive dialogue. For us in the most developed regions, this means that it is high time that we spend more time discussing these *new* problems with partners from the developing areas, striving to present them with great clarity, instead of continuing to boast about not having the old problems any more.

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