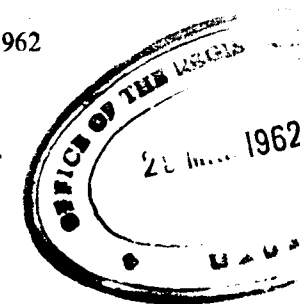


POPULATION REVIEW ⁴²⁵

Vol. 6. No. 1. January 1962



Editor
S. CHANDRASEKHAR

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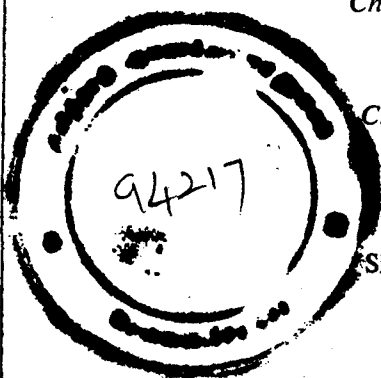
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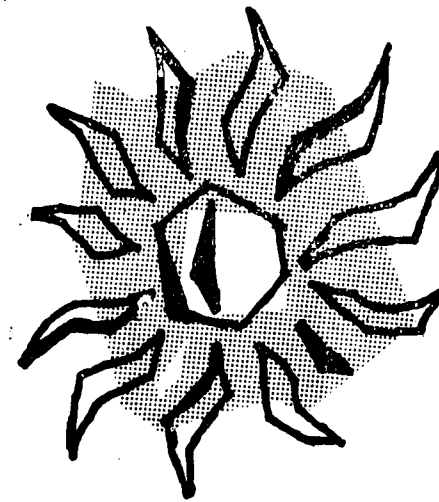
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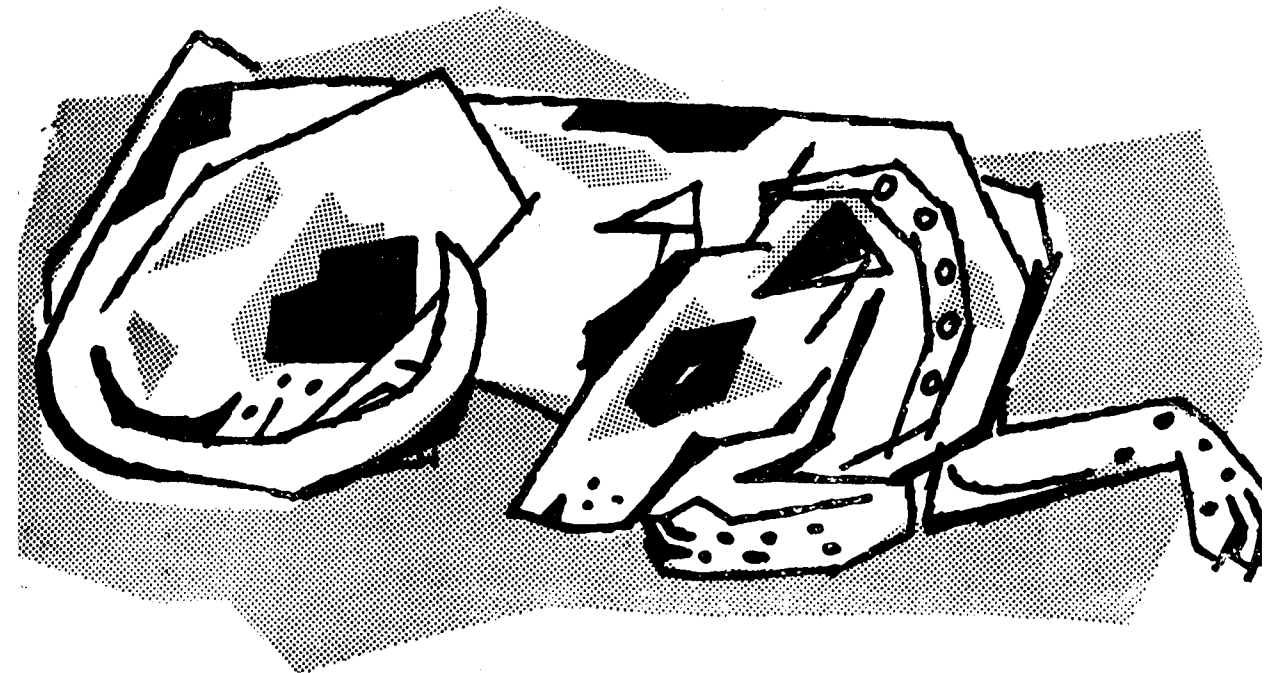
NOR a show dog perhaps. But Moti doesn't worry about that. Nor about anything else, as long as he has enough to eat and the sun to bask in. Certainly he neither knows nor cares that he lives in Jamshedpur—a city devoted to producing one of today's most precious metals...steel.

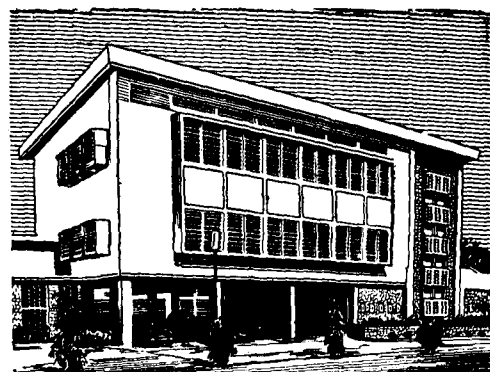
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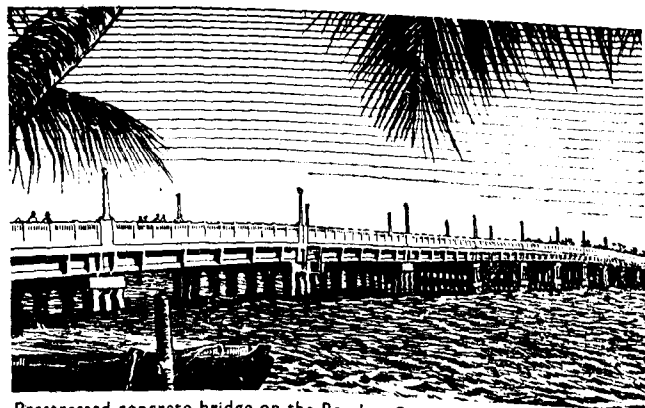


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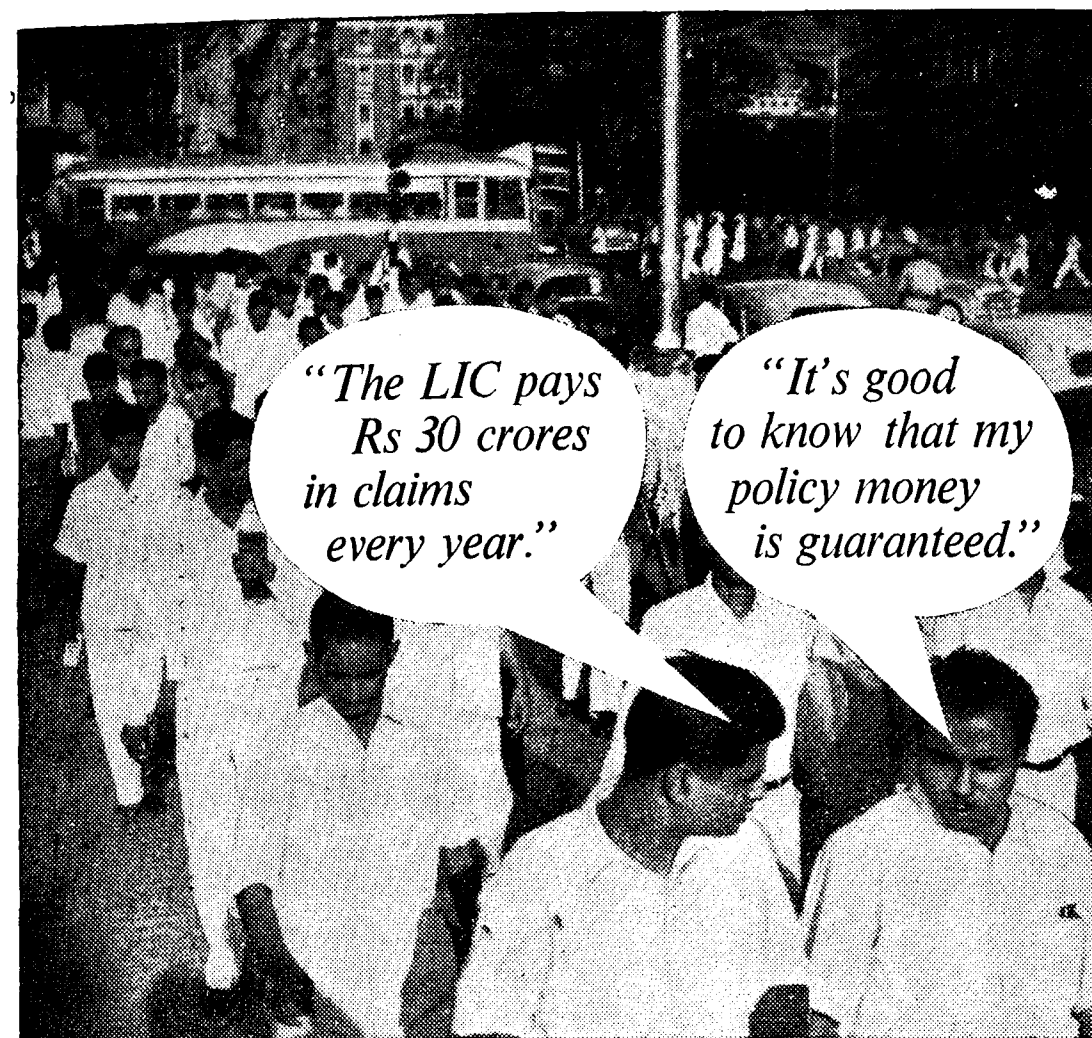


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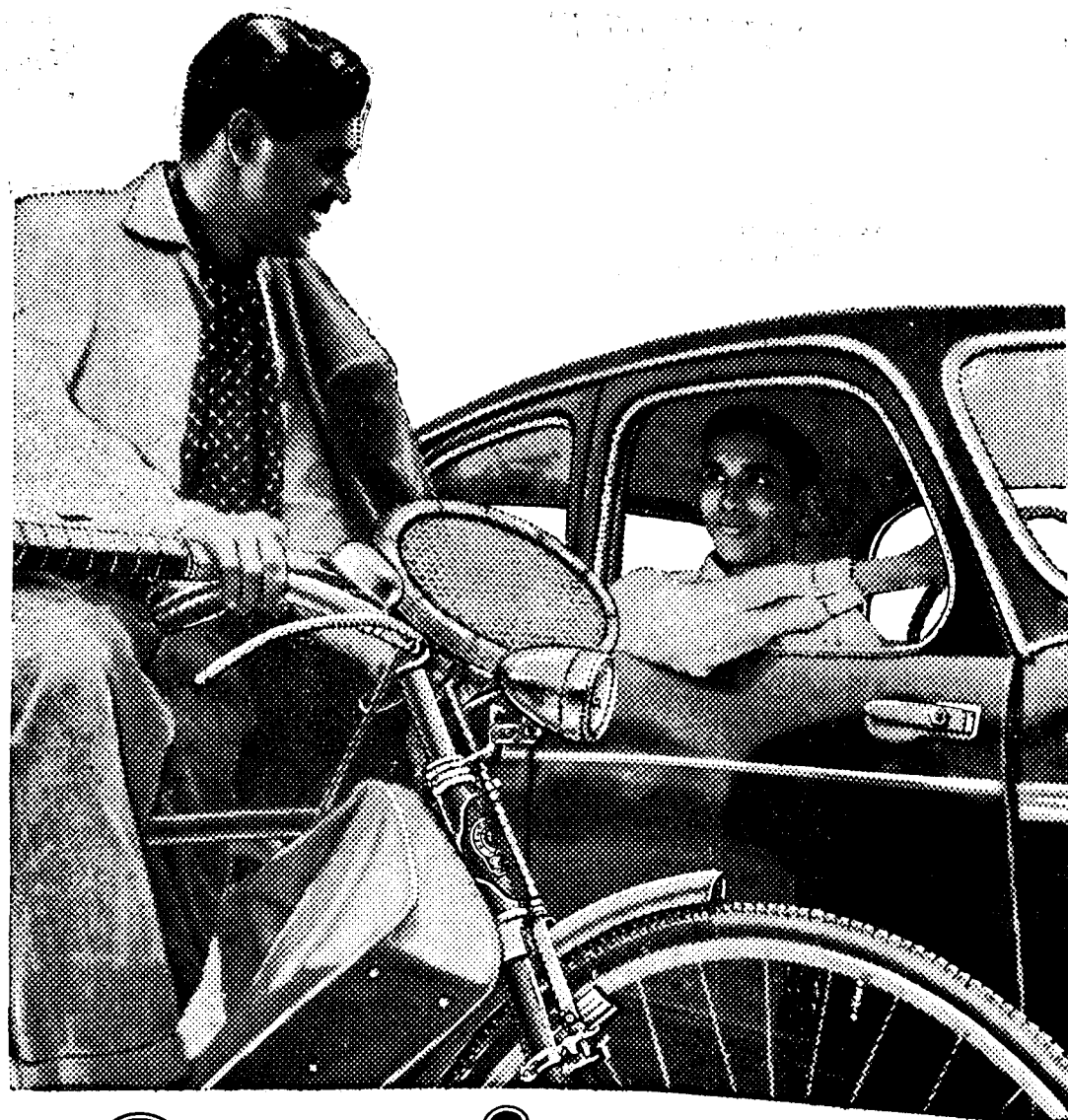
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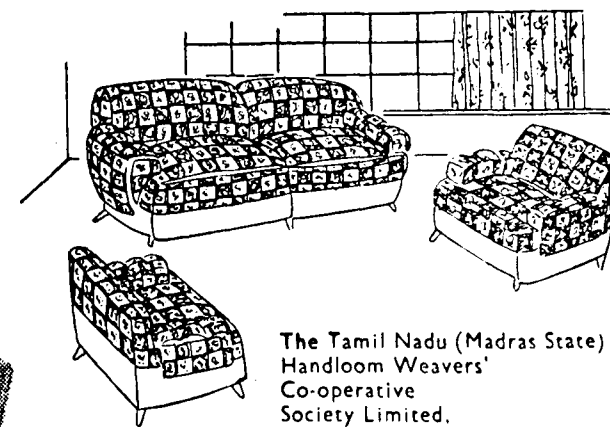
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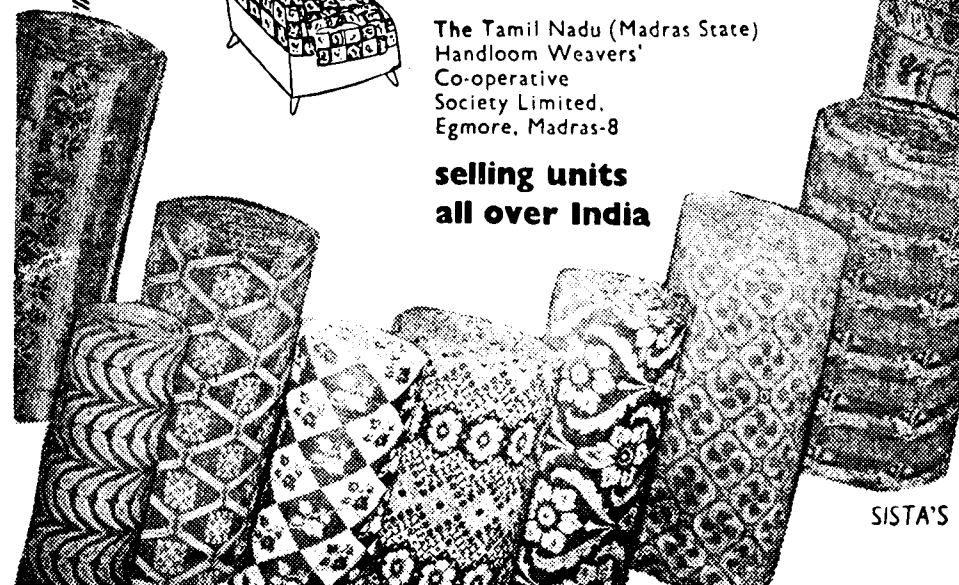
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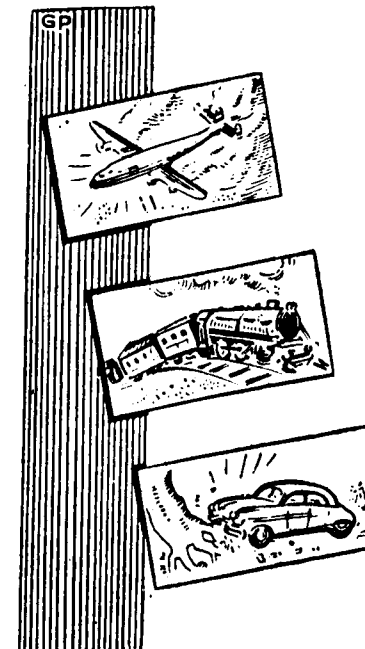
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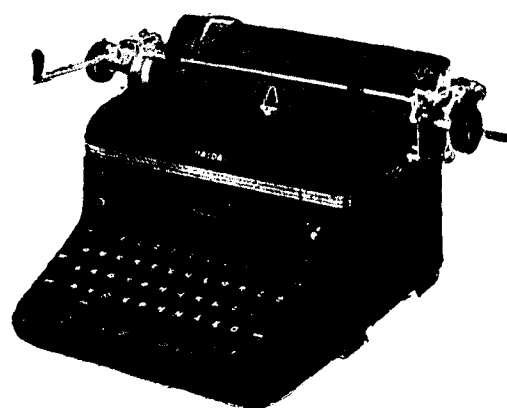


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POPULATION REVIEW

A JOURNAL OF ASIAN DEMOGRAPHY

January 1962

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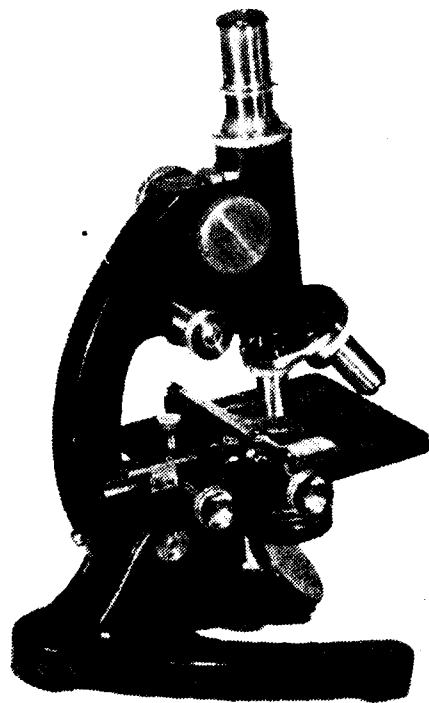
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Population and Welfare in Industrial Societies*

By KINGSLEY DAVIS, Ph.D.,

Professor of Sociology and Social Institutions, University of California, Berkeley, U.S.A.

In choosing a topic for the Dorothy B. Nyswander Lecture of 1960, I sought one that would explore the basic relationships between demography and public health, and the best way to do this seemed to be to discuss the population problems of the most advanced industrial societies. It is in such societies that medical science has brought the greatest improvements in death control, and where consequently the ultimate demographic implications are more clearly foreshadowed. Further, by turning our attention to the demographic problems peculiar to the industrial nations, we can avoid the unconscious assumption that it is only in the poorer and less developed countries that welfare is affected by population trends. The truth is that each type of society has its characteristic populations structure—hence its own kind of problems and its own policy issues.

The industrial societies, as yet embracing less than a third of the world, are still so new, particularly the recent arrivals like Japan and the Soviet Union, that their demographic potentials have not fully evolved. It is clear, however, that among their most distinctive population traits are (1) their high proportion of aged persons, (2) their high degree of urbanization, and (3) their moderately low birth rates. Two other traits that once distinguished them—their long life-expectancy and their rapid population growth—are no longer theirs alone. The underdeveloped countries are rapidly coming

abreast of the industrial nations in life-expectancy and have for some time surpassed them in population growth.

Whatever they are, the demographic features of industrial societies are mutually interconnected and dependent in their causation and in their consequences upon the defining trait of industrialism itself—high per capita output. This does not mean that the relationships are obvious at first glance, for indeed they are not. It means, rather, that none of the demographic traits is alterable without affecting other such traits or the bases of industrialism itself. By definition, the problem of an industrial society is not poverty. There is no question of populations lacking the means of subsistence. The problem, rather, is how to distribute rights and obligations in such a way as to guarantee the continued progress of industrial civilization. It is in terms of this problem that I wish to discuss the distinctive population trends of advanced countries.

THE STRUCTURE AND CAUSES OF AGING POPULATIONS

The problem of an aged population is usually phrased as how to achieve the welfare of older persons despite their rising population. Another way of phrasing it is how to deal with older persons in such a way as to maximize the welfare of all members of society. With this in mind let us first look at the changing dimensions of the aged population.

Perhaps the best single index of the entire age distribution is the median age. In the United States the median age rose consistently with each census, from 1800 to 1950, but the most marked rise was from 1900 to 1950.

* This is the Fourth Annual Dorothy Nyswander Lecture. It was delivered in Berkeley, April 6, 1960. The lectureship was established in honor of Dr. Nyswander upon her retirement as Professor of Health Education at the University of California.

	White Population Median Age*	Population Years Added in Prior Period
1800	16.0	—
1850	19.1	3.1
1900	23.4	4.3
1950	30.8	7.4
1959	30.2	-0.6

The slight reduction in 1959 is insignificant compared to the enormous rise that preceded it.

The median age of course tells us nothing about the relation between specific age groups. Interesting from an economic point of view is the relation of those in the dependency-prone ages to those in the productive ages. If we take the dependency-prone to consist of those under 20 and those 60 or over, we find (as seen in the last column of Table 1) that there were, in the United States in 1900, about 104 of them for each hundred persons aged 20 through 59. By

1950, interestingly enough, the ratio had sunk to 85. This was an exceptionally favorable ratio, but note that the dependency-prone group was now much more heavily composed of older people. In 1900 the latter made up less than an eighth of the dependency-prone class, whereas in 1950 they constituted more than one-fourth of it. In fact, from 1900 to 1950 the child-adult ratio declined by a third, while the elderly ratio rose by three-fourths. Between 1950 and 1959, however, both dependency-prone groups rose in ratio to persons in productive ages. As a consequence, the total ratio of the dependency-prone to those in the productive ages returned to where it was in 1900, substantially higher than it had been nine years before. Further, among those in the 60-plus category, the proportion in the upper ages, where dependency is more likely, showed a steady rise (Table 2). The age groups 60-65, in which most people are still vigorous declined from 37 to 32 per cent, whereas those 75 and over rose from 18 to 24 per cent.

TABLE 1

Dependency-prone Age-groups in United States Population, 1900, 1950, 1959

	Ages 20-59 (000's)	Ages Under 20 Number (000's)	Per 100 Age 20-59	Ages 60 and Over Number (000's)	Per 100 Age 20-59	Under 20 and 60+ Number (000's)	Per 100 Age 20-59
1900	37,340	33,771	90.4	4,884	13.1	38,655	103.5
1950	81,269	51,099	62.9	18,329	22.6	69,428	85.4
1959	86,708	67,883	78.3	22,512	26.0	90,395	104.2

The position of the industrial countries in relation to the non-industrial ones can be seen from Table 3. The industrial countries have fewer proportions of children and youth, but greater proportions in the older ages. The contrast is particularly marked for the older industrial nations of north-western Europe.

* For 1800 through 1950, from Henry D. Sheldon, *The Older Population of the United States* (New York: John Wiley, 1958), p. 138; for 1959, from U.S. Census Bureau, *Current Population Reports—Population Estimates* (Series P-25, No. 212, Jan. 26, 1960), "Estimates of the Population of the United States, by Age, Color, and Sex, July 1, 1957 to 1959," p. 5.

As the researches of Valoaras proved some years ago,¹ the overwhelming factor in the aging of populations in the industrial countries is the long secular decline in the birth rate. This is shown clearly by the United

¹ Vasilios G. Valoaras, "Patterns of Aging of Human Populations" in *Eastern States Health Education Conference Proceedings, The Social and Biological Challenge of Our Aging Population* (New York: Columbia University Press, 1950) pp. 67-85; "Young and Aged Populations," *Annals of the American Academy of Political and Social Science*, Vol. 316 (March 1958), pp. 69-83. See also U.N. *Population Bulletin*, No. 1 (Dec. 1951), pp. 42-57, and U.N. *The Aging of Populations and Its Economic and Social Implications* (New York: United Nations, 1956), Ch. 2.

TABLE 2

Age Distribution of persons aged 60 or over, United States, 1900, 1950, 1959

	Total 60+	Aged 60-64	Aged 65-70	Aged 70-74	Aged 75-79	Aged 80+
1900	100.0	36.8	26.7	18.1	10.7	7.7
1950	100.0	33.1	27.3	18.6	11.7	9.3
1959	100.0	31.7	25.5	19.0	13.2	10.6

TABLE 3

Dependency Indices of the Age Structure in selected countries

	Child-Dependency Ratio (Children under 15 per 100 adults 20-59)	Youth Adult Ratio (Youths 15-19 per 100 adults 20-59)	Old Age Dependency Ratio (Oldsters 60-plus per 100 adults 20-59)	Total Dependency Ratio (Under 20 and 60 and over adults 20-59)
UNDERDEVELOPED COUNTRIES				
Libya, 1954	87	20	22	129
Algeria (Moslems), 1954	101	24	12	137
Ceylon, 1956	90	19	12	121
Costa Rica, 1957	105	25	11	141
India, 1931	85	19	9	113
India, 1951	80	21	12	113
INDUSTRIAL COUNTRIES				
<i>Old World</i>				
Belgium, 1956	41	11	31	83
Denmark, 1956	51	14	28	93
France, 1957	47	12	33	92
<i>New World</i>				
U.S.A., 1958	62	15	26	103
N. Zealand, 1956	65	15	26	106
LIFE-TABLE POPULATIONS				
U.S.A. White- Female, 1957, with life-expect- ancy of 73.5	39	13	43	95
Hypothetical future U.S.A. with life- expectancy of 83	38	13	60	111
PROJECTED POPULATION				
Great Britain 2017*	30	11	57	98

* Mortality decline between 1947 and 1977 at same rate as in prior 50 years, then stable. Fertility decline 20% between 1947 and 1967 and then remain fixed.

States data. In 1960 the proportion of children and youth was reduced because of the long decline in the birth rate during the first fifty years of this century. Those under 20 were the survivors from the relatively few births of the 1930's and 1940's, whereas those aged 20 to 59 were survivors from the more prolific decades of 1890 to 1930. The rebound of the birth rate in the 1940's and particularly in the 1950's swelled the number of persons under 20, whereas by then the depression trough had moved up to the 20-59 group. In 1950 the elderly were numerous because they were the survivors of births in the prolific years of 1860-1890, and by 1959 they had grown proportionately more numerous because the 20-59 group had been drastically affected by past lower fertility.

Popularly, the cause of the aging population is still often thought to be declining mortality. It has been shown experimentally, however, by letting mortality decline while fertility is held constant and *vice versa*, that the rising proportion of elderly persons in the population of industrial countries is due almost entirely to the secular decline in fertility.² Since the reduction of mortality has been greater for younger than for older ages, it has tended to make the population more youthful in most cases. The postwar boom in births, a phenomenon common to all the industrial nations, lowered the median age of the population. It will eventually reduce the proportion of the aged, but not until birth cohorts of 1920 to 1940 have reached the elderly status, which will be after 1980.

² Valoaras, "Patterns of Aging," *loc. cit.*, showed that if the U.S. population of 1900 had been constantly subject to the same fertility as in 1900-1914 but experienced the declining mortality that it actually did experience, the result would be to make the population more youthful by 1940. If the 1900 population had been constantly subject to the same mortality as in 1900-1914, but experienced the declines in fertility that it actually did experience after 1900, the result would be to enhance the proportion of older persons. Using stable populations, the U.N. study, *Aging of Population and Its Economic and Social Implications*, found "that reductions of mortality such as have occurred in the past led to an increase in the proportion of young people from 0-14 years, a decrease in the proportion of adults from fifteen to fifty-nine years and a very slight increase in the number of persons of sixty years and over." (p. 28).

OLD-AGE POLICIES IN AGING SOCIETIES

Changes in the sheer age-structure of the population, impressive as they may be, do not automatically bring any particular consequence. The progressive aging just described constitutes a major factor in the further evolution of industrial societies, but its actual consequences depend upon medical and economic development as well as welfare policies. If, for example, the aging is accompanied by an extension of the average period of health and vigor, so that organic decline is postponed on the chronological scale, then an aging population will represent less cost to society than it seems to imply. Again, if the economic and social role of the elderly is re-defined and reorganized in such a way as to increase their productive performance, this will make an aging population less costly than it would otherwise be. Indeed, to see the flexible possibilities, one has simply to remember that an individual's chronological age affords no sure judgment as to either his organic condition or his social and economic capacity. A healthy man of sixty-five is likely to have more capacity for work than a sick man of forty. An outstanding man of science, though he may not be at his best at 70, may still be better than the run of the mill younger men in his field. To adopt a position of hopeless demographic determinism in this matter of aging populations would therefore be scientifically erroneous.³ But it would be equally erroneous to ignore the new demographic situation, for it requires great effort and

³ For an exhaustive account of the changes in intellectual and artistic achievement with age, see Harvey C. Lehman, *Age and Achievement* (Princeton: Princeton University Press, 1953). For a brief summary of evidence that organic aging proceeds at some compound rate, see Har- din B. Jones, "Some Notes on Aging" in *Symposium on Information Theory in Biology* (New York: Pergamon Press, 1958), pp. 314-346; and his "Relation of Human Health to Age, Place, and Time" in James E. Birren (ed.), *Aging and the Individual* (Chicago: University of Chicago Press, 1960), Ch. 11. A thoughtful analysis of an aging population from a mental health point of view is contained in Torsten Sjögren and Tage Larsson, "The Changing Age-Structure in Sweden and Its Impact on Mental Illness," *Bulletin of the World Health Organization*, Vol. 21 (1959), pp. 569-582.

ingenuity of its potentially unhappy consequences are to be evaded or mitigated.

Since an aged population is brought about by demographic factors—specifically up to now, by a low birth rate—one obvious solution is to eliminate the demographic cause. As a matter of fact, this is sometimes proposed in an oblique way, by condemning birth control because it creates the evil of an aging population. We shall later deal with the paradoxes of a demographic solution, but first let us analyze the social mechanisms either used or proposed for dealing with the swollen ranks of the elderly in industrial societies.

The Question of Labor-Force Participation

As with any other major social problem, so in the case of the aged there are several problems rolled into one. A given policy may be addressed to one of the sub-problems as if this were the sole consideration, or there may be ambiguity as to just what is being attempted. A conflict exists in modern industrial societies between providing a comfortable and dignified old age for increased numbers of people and keeping the rising load of taxes within bounds. Since there is no question but that the needs of the elderly must be met, even if more meagerly than some would desire, the further problem arises of how the financial responsibility is to be allocated.

The ideal solution—and one that gets immediately to the crux of the problem—is to reduce the main source of both economic drain and social hazard in an aging population: namely, the higher risk of disemployment as age advances. In the United States, according to 1959 data, the proportion of males aged 65 and over who are either unemployed or not in the labor force is 65 per cent. The figure rises rapidly with age:

	Percentage of Males Not employed, Not in School, Not in the Labour Force, 1959*
20-59	6.4
60-64	20.4
65-69	52.2
70+	72.8

* Based on estimated populations in Census Bureau, Current Population Reports, Series P-25, No. 212, p. 9, and on labor force data in *Ibid.*, Series P-57, No. 204, p. 12.

The number of disemployed at ages 60 and over is greater than the entire number either employed or in school in the age group 25-29. Obviously, if the disemployment ratio could be reduced, say, to 10 per cent for those 60-64, 15 per cent for those 65-69, and 25 per cent for those 70 or over, and if the increased employment in these ages was efficient, the net gain to national production would be substantial—probably substantial enough to meet the cost of keeping unemployed elderly population in decent circumstances. When we add that to continue in active work would save the morale of many an older person, the argument in favor of a policy of increased employment in the upper age brackets seems irrefutable.

Yet, if this is the most favored policy, it shows a singular lack of success. As is well known, the trend is the other way. As industrialization proceeds, fewer and fewer of the aged are working. A tabulation of male activity rates in three classes of countries about 1950 shows the following:

Type of Country	Percent Males Age 65 or Over Who are Active*
Under-developed	78.5
Semi-developed	62.5
Developed	40.6

* United Nations, *Aging of Population and Its Economic and Social Implications*, p. 52.

Today in the United States, the proportion of aged persons in the labor force—34 per cent for males, 8 per cent for females—is the lowest on record, as Table 4 shows. A survey covering 1958 finds that 43 per cent of the men aged 65 or more and 14 per cent of the women had work experience during some or all of the year; but, even among those who did work, less than two-thirds of the men and less than half of the women had full-time jobs. Furthermore, among those who worked either full-or part-time, 26 per cent of the men and 29 per cent of the women worked only half the year or less.⁴ It is also of interest that despite the

⁴ U.S. Census Bureau, *Current Population Reports—Labor Force*, Series P. 50, No. 91 (June 30, 1959), p. 12.

great rise in the labor-force participation of women during the last half century, the proportion of participation among those aged 60 and over has not risen at all.

TABLE 4

Proportion of persons aged 65 or more who were in the Labor Force, United States, 1890-1958

		Per Cent in Labor Force	
		Males	Females
1890	..	68.2	7.6
1900	..	63.2	8.3
1910	..	n.a.	n.a.
1920	..	55.6	7.3
1930	..	54.0	7.3
1940	..	42.2	6.0
1950	..	44.4	7.0
1959	..	34.0	8.0

Source: For 1890 to 1940, from John D. Durand, *The Labor Force in the United States* (New York: Social Science Research Council, 1948), p. 208. For 1950, from Henry D. Sheldon, *The Older Population of the United States*, p. 166. For 1959, derived from U.S. Census Bureau, Current Population Reports — Population Estimates, Series P-25, No. 212 (Jan. 26, 1960), p. 9, and Current Population Reports — Labor Force, Series P-57, No. 204 (June 30, 1959), p. 12.

Unless the causes of this long downward trend in employment are understood, there can be no intelligent policy with respect to the aged. For instance, one common interpretation is that the employers are to blame, since they often refuse to employ people in the upper age brackets. Although surveys indicate that preference is in fact given to younger workers,⁵ this cannot automatically be laid to "prejudice," nor can it be easily

⁵ In seven labor market areas in 1956 the Federal Bureau of Employment Security found that 20 per cent of the job orders filed with public employment offices specified workers under 35 years of age; 41 per cent called for workers under 45 years; and 52 per cent for recruits under 55. U.S. Bureau of Employment Security, BES No. E152 (1956), p. 28. Cited by Margaret S. Gordon, "The Older Worker and Hiring Practices," *Monthly Labor Review*, Vol. 82 (Nov. 1959), p. 1199.

demonstrated that "prejudice" has been on the increase. If careful investigation should prove that preference for younger workers is mainly a matter of irrational prejudice, then state laws barring discrimination against elderly workers on the basis of their age would be the answer. Such measures, however, assume falsely that there are no economically important differences associated with age. Yet we know that if an employer pays no attention whatever to age, but hires people solely on the basis of their proficiency in the work he wants them to do, he will wind up by taking some older person, to be sure, but not an equal share of them. To force him by law to take an equal share particularly at ages above 65, would be to lower the efficiency of his business.

Fortunately, the factors tending to lower the efficiency of elderly workers are not irremediable. Even the slowing down and worsening health that generally come with advanced years may in the future be postponed far beyond the usual age when they appear now. The obsolescence of skills that comes with age is known to be remediable, because re-education is possible in many cases. The employer, however, cannot base his hiring policies on the wonders of science in the future or on the maintenance of a costly re-education system. He can hardly be expected to bear the entire burden of reversing the downward trend of labor force participation among the elderly, especially at a time when the proportion of the elderly in the population has reached an all-time high. Before trying to force the employer to take the entire responsibility, one would be wise to explore other possible causes of disemployment than prejudice and other possible remedies than legal restraint.

To see what improved health could accomplish, we have to realize that a sizable fraction of the elderly are now disabled. Approximately 35 per cent of American men aged 65 or more are either in institutions or ill or disabled. Among those not in institutions and not working during 1958, 30 per cent gave "illness or disability" as their reason, and fewer than 2 per cent cited "inability to find work." The proportion with obsolete skills is harder to estimate, but expert opinion suggests that it is sub-

stantial and that re-education therefore has an important place in gerontological policy.

During the last decade, and particularly in the last 3 or 4 years, the most rapid expansion of employment has been occurring in professional and technical occupations especially inaccessible to an individual who does not have the appropriate education and training and in which the proportion of persons aged 45 and over is relatively low. Meanwhile, the supply of younger workers is increasing, as the teenagers born in the high birth rate period of the early 1940's reach the labor market age.⁶

Important as organic disability and obsolescence may be, they do not explain, any more than prejudice does, the long association between a declining rate of labor-force participation by the elderly and an advancing trend of economic development. A more likely explanation can be glimpsed by recalling that work is not the whole of life, or production the whole of society. Although from many points of view it is desirable to keep the elderly engaged in productive activity, there are weighty reasons for excusing them from work too. Some people view the release from the necessity of working as a boon rather than a catastrophe: a just reward for a life of useful activity, something to look forward to and prepare for. Business firms and other employers do not view retirement schemes as just a means of protecting themselves from aged employees, but also as a part of the incentive, or "fringe benefit," system. It is not so much that the elderly wish to shirk, but rather that they want the option of working or not working according to their own individual circumstances.⁷ Those who are not in the labor force today are in numerous instances better off than those of the same age in previous decades who were occupied.

⁶ Gordon, *op. cit.*, p. 1198.

⁷ How many do not wish to work is hard to say, because everyone is supposed to want to work and therefore gives some other reason for an inactive status than disinterest. In the University of California supplement to the Current Population Survey of April 1952, only 12.4 per cent of the 65+ men claimed they were able to work and yet not in the labor force. Of these, two-thirds were either not interested in working or wanted to work just occasionally. (Cited by Sheldon, *op. cit.*, p. 167).

A high proportion of the latter worked in spite of serious handicaps because they had to. Today the productivity of industrial societies is such that they can afford to relieve the aged of the necessity of working, just as they can relieve children and adolescents.

It therefore seems hard to escape the conclusion that the shrinkage in the labor-force participation of the elderly is due fundamentally to economic development itself.⁸ Earlier retirement, plus some increase in life-expectancy even at advanced ages, has given a long holiday to huge numbers of older people. Although there can be no doubt that for many this has been involuntary and disorganizing, there can equally be no doubt that for many it has been welcome.

The Allocation of Costs for Old-Age Support

If one of the potential gains of modern society is more opportunity for older persons to retire or work as they desire, then the question remains as to how the costs of those who elect to retire or who cannot work are to be met. In the oldest system, which still prevails more or less intact in much of the world, the aged continue to work if able and, if not able, receive support by kinsmen, usually their own children. This system has a certain symmetry; parents support their dependent offspring but put them to work as early as possible; and, in turn, the offspring (when mature) support their aged parents but keep them at work as long as possible. The immemorial tenacity of the system is explained by several factors. First, the prospect of being supported in old age encourages young adults to get married and reproduce. Second, the close and constant personal contact between those giving and those receiving support tends to minimize rigidity, neglect, fraud, etc. Third, in static primitive or agrarian societies, the old are more useful than in industrial societies, for they are valuable

⁸ Sheldon, *op. cit.*, pp. 53-60, examines several explanations of the downward trend in labor-force participation: changing occupational structure, declining self-employment, altered age structure among the aged. Rejecting these on empirical grounds, he leans to the view that the rising level of living with retirement schemes etc., has been responsible.

storehouses of culture and their skills, if retained, are not obsolescent.⁹ Fourth, in such societies the birth rate is high and consequently the aged form a small portion of the population. In 1931, for example, India had 11.5 persons aged 20-59 for each one aged 60 or more, whereas the United States in 1958 had less than 4 to one and France in 1957 had only 3 to one.

It is only in industrial societies that the family-support system becomes superseded, and then only haltingly, partially, and with misgivings. Curiously, the system tends to persist so far as the support of children is concerned. Although public schools, family allowances, tax reductions, and other measures universally help in the support of children in developed countries, the main burden still rests on the parents. On the other hand, the aged are increasingly being supported in some other way than through reliance on their mature offspring. The reason for this difference is doubtless partly due to the fact that children are as a whole more attractive and enjoyable than old people; consequently, the industrial society can penalize parents by placing upon them most of the burden of child support and yet escape major difficulties of enforcement, whereas the reverse cannot be accomplished with respect to the aged. But there is a demographic factor as well. In an industrial society, due to the low birth rate, parents are more numerous in relation to young children than in an agrarian society. For identically the same reason, as we have seen, the aged are more numerous in relation to the younger adults. The effect of the demographic changes accompanying industrialization is therefore to reduce the burden per parent of supporting young children and to maximize the burden per young adult of supporting aged parents. This is demonstrated in three model populations, each representing a different combination of fertility and mortality. The ratio of elderly parents to adult children, as exhibited in Table 5, is twice as high in industrial societies (column 3) as in transitional ones, and more than twice as high

as in societies that have not started on the demographic transition (column 1). Although all of the models are made on the basis of certain formal assumptions, they illustrate clearly the *purely demographic* source of resistance to supporting the aged by having their children bear the burden.

TABLE 5

Ratios of aged parents to children in three model populations

	Population I: High Fertility High Mortality	Population II: High Fertility Low Mortality	Population III: Low Fertility Low Mortality
Parents Surviving to Age 60 for Each Surviving Child	.289	.301	.601
Average Number of Years a Parent Lives Beyond Age 60 for Each Year Lived by Child between Ages 30 and 60	.14	.18	.36

Source: United Nations, *Aging of Population and Its Economic and Social Implications* (1956), p. 75.

The demographic elements do not, however, solely determine the support situation. For instance, the burden on the parents of young children is enormously increased in industrial societies by the ever longer postponement of the child's entry into the labor force. However necessary this may be for education adequate to run a complex economy, there can be no question about its direct and indirect costs to parents. It follows, then, that parents do not receive the full benefit provided by the low birth rate of industrial countries. This means in turn, that they are not in a good position to support their aged parents, especially since this burden has increased both from the aging population and from some factors leading to involuntary disemployment of the aged. As a consequence, the support of

⁹ See Kingsley Davis and Jerry W. Combs, Jr., "The Sociology of an Aging Population" in *Social and Biological Challenge of Our Aging Population*, pp. 147-159.

the aged, if left entirely in the hands of sons and daughters, would be not only onerous but unequal and inadequate; it would force the elderly into the labor market in maximum numbers and on bad terms. Instead, individuals have sought to make provisions for their old age in their own right, independently of their children. Since however, only a minority can accomplish this, the society at large has come to their rescue, and to the rescue of their adult children, by collective systems of old age security. In this way the erstwhile symmetry has been destroyed. Although many people still contribute to the support of aged parents, the trend is the other way. The parent-child bond, at least economically, is broken when the child becomes independent; the economic sacrifice of the parent for the young child is not rewarded by a return sacrifice by the adult child. The family structure is such that emphasis is placed on the married pair and their dependent offspring, with few ties remaining between them and their four elderly parents. Geographical and social mobility add to this break between the generations, a break between persons who were once close.

Collective systems of support for the aged tend to diffuse the cost to all of the producers. They are equitable—from each according to his capacity and to each according to his need; but they are also impersonal. There is "no personal link between the aged persons who receive retirement pensions and the workers who pay the contributions."¹⁰ Consequently, the rule of *caveat emptor* applies to a greater extent. The aging generation tends to be bilked of its expectations by heartless inflation and in return it sometimes turns to political pressure to wring from the active population all that it can. It has been stated that persons over 60 receive 20 per cent of the national income and compose 23 per cent of the electorate in France.¹¹ In the United States, although the average income of the elderly is below that of younger groups, the

senior citizen lobbies have had considerable success in liberalizing state and federal legislation in their behalf.¹² There are more voters age 65 or over in the United States than there are Negro voters, farm voters or foreign-born voters. It would be a major tragedy if their situation became such that they would vote as a solid bloc.

THE FUTURE AGE DISTRIBUTION

Although the aging of industrial populations in the past has been due to declining and low fertility, an added influence may arise in the future. As was mentioned earlier, the past declines in mortality were greater at the younger than at the older ages. So great have been the reductions at ages under 35 that little room for improvement is left. If *nobody* died before reaching age 35, it would increase the number who do reach that age by only 6.4 per cent. At higher ages, however, there is great room for improvement.¹³ It follows that if continued improvement in mortality is to be made, it will have to be in the advanced ages, and this will contribute to a further aging of the population. In Table 3 it can be seen that the projected population for Great Britain, made on the assumption that mortality would decline for 30 years as it did in the previous fifty and that fertility would be at a low level, yields an extremely high proportion of persons over 60.¹⁴ Actually, the projected decline of mortality was conservative, for the highest expectation of life at birth that would be reached would be 69.0 for males and 76.2 for females. If a more drastic drop in mortality is assumed, a greater rise in the proportion of

¹² See John J. Corson and John W. McConnell, *Economic Needs of Older People* (New York: Twentieth Century Fund, 1956), Ch. 5; and Frank A. Pinner, Paul Jacobs, and Philip Selznick, *Old Age and Political Behavior* (Berkeley: University of California Press, 1960).

¹³ The life table for the United States shows that, under the mortality conditions of 1957, 94 per cent of those born reach age 35. If nobody died, this would amount to only 6.4% more survivors. Since, however, only 78% of those born survive to age 60 under 1957 conditions, an increase in the survivors say up to 92% would represent an 18% rise.

¹⁴ Royal Commission on Population, *Papers*, Vol. II (London: His Majesty's Stationery Office, 1950), p. 281.

¹⁰ United Nations, *Aging of Population and Its Economic and Social Implications* (1956), p. 78.

¹¹ Alfred Sauvy, "Social and Economic Consequences of the Aging of Western European Populations," *Population Studies*, Vol. 2 (June 1948), p. 117.

the aged takes place regardless of the level of fertility assumed.¹⁵

There is no reason to believe that the pace of death control will not continue. The resources of scientific talent now being poured into medical research may soon bring a major breakthrough in precisely those diseases which, being degenerative, are associated with age—such as cancer and cardiovascular-renal disorders. Having saved people from infectious disease, we now let them die from the chronic maladies; but we shall be increasingly postponing these too. One can visualize a time when most people will die of accident, homicide, suicide, and warfare. Civilizations are mirrored in their causes of death. One of the most vital questions facing industrial civilization is whether the prolonging of life to ever more advanced ages will be an extension of senility or an extension of vigor.

FERTILITY, PROSPERITY, AND POPULATION GROWTH

I stated at the beginning that contemporary industrial societies exhibit moderate birth rates. Although these rates are approximately only half as high as those in non-industrial countries, they nevertheless are sufficient, with low mortality, to yield substantial population growth (Table 6).

TABLE 6

Population growth, 1920 to 1960 Developed and Underdeveloped regions

	Population (Million)		Per Cent Gain
	1920	1960	
Underdeveloped	1,245	2,109	69
Developed	565	801	42
New/a	338	521	54
Old/b	227	280	23

(a) Australia-New Zealand, Canada, Japan, U.S.S.R., U.S.A.

(b) North-west and Central Europe.

¹⁵ United Nations, *Aging of Populations*, pp. 28-30. The breaking point seems to be the life-expectation of 70 years, the point now approximated by most advanced countries. Beyond that point further declines in mortality tend to age the population at an accelerating rate.

Between 1950 and 1960 the industrial regions as a whole added 14 per cent to their population—a rate sufficient, if continued, to double the number every 60 years.

The problem of rapid population growth in industrial countries is not scarcity of basic necessities.¹⁶ Just the opposite. It is the glut of goods as well as people. The explosive combination of multiplying possessions and multiplying people is causing an ever larger portion of our high level of living to be used to escape from the consequences of congestion.

This circumstance is exacerbated by another feature of industrial societies—their urbanization. More than half of the American population now lives in urbanized areas of more than 50,000 inhabitants, including some giants such as the New York area with about 15 million. As a consequence, more than half are living at an average density in the neighborhood of 6000 per square mile, which is nearly four times the average density of the settled parts of Egypt. Yet, while an ever greater proportion of people in industrial countries are concentrating in urban areas of such size and density as to give the average Indian or Indonesian a sense of claustrophobia, their mode of life is making such density increasingly intolerable. In seven years, from 1950 to 1957, the number of motor vehicles in the United States rose by 37 per cent, while the population grew by less than 13 per cent. In the latter year, the average number of cars per square mile of land was 23. However, if half of them were stabled in urbanized areas of 50,000 or more inhabitants, the average density of this half was more than 2,500 cars per square mile.

As is well known, our urban masses are spreading from the more central to the peripheral portions of the urban areas in a frantic search for room in which to store and use their ever growing number of material possessions—automobiles, boats, trailers, television sets, freezers, king-size beds, saw-tables, archery equipment, golfing carts, and fishing tackle. Even their move

¹⁶ Cf. Arnold C. Harberger, "Variations on a Theme by Malthus" in Roy G. Francis (ed.) *The Population Ahead* (Minneapolis: University of Minnesota Press, 1958), pp. 108-124.

to the suburbs requires extra equipment, such as a power mower, an extra car, longer utility lines, more super-highways. Not only residences, but stores, offices, factories are moving out in an effort to satisfy rising space demands. But this attempt to escape the city is hopeless, because the conditions that make the city intolerable—the multiplication of goods and people—are carried to the suburbs (in fact stimulated by the suburbs), so that the erstwhile fringe becomes a part of the spreading city. Furthermore, the costs and wastes increase as the urban area, the population, and the goods expand. An ever greater fraction of our energy promises to be dissipated in meeting the costs of commutation, air pollution, water pollution, traffic congestion, noise abatement.

One finds it difficult, therefore, to justify continued population growth in industrial countries. Indeed, those among these countries which seem to enjoy the best life, and which are consequently magnets of immigration, are precisely the ones that have the fewest people in relation to resources. Why, then, does the birth rate remain so high?

It remains high in part because of the opposition of some religious groups to efficient birth control. This has the effect of not only increasing the proportion of unplanned births among adherents of such faiths, but, since municipal, county, state and federal administrative and welfare agencies are often influenced by the religious opposition, the availability of efficient birth control to the ordinary citizen, regardless of his faith, is reduced. A recent field study of a national sample of urban white women found that 16 per cent of the most recent pregnancies were not wanted by the wife, husband, or both. The percentage rose sharply according to how many pregnancies had preceded the last one. If the last pregnancy was the first, only 6 per cent reported it as unwanted by one or both married partners; if it was the ninth, the figure rose to 62 per cent.¹⁷ The study also found that the percentage of Catholic couples using contraception is less than the percentage of Pro-

testant couples doing so, but that the difference diminishes with wife's age:

	Percentage Practicing Contraception*	
	Wife Aged 18-24	Wife Aged 30-34
Protestant	74	76
Catholic	51	63

* Ronald Freedman, Pascal K. Whelpton, Arthur A. Campbell, *Family Planning, Sterility and Population Growth* (New York: McGraw-Hill, 1959), p. 108.

The people who need help from welfare agencies and who, on the average, are poorer and less educated than the ordinary citizen are particularly likely to be deprived of access to help in birth control. In this connection it is of interest to note that the illegitimate birth rate has risen substantially in the United States. In 1940 the estimated illegitimacy rate was 7.1 per 1000 unmarried women aged 15-44 years; in 1957 it was three times as high (20.9).¹⁸ It is also of interest to note that the nonwhite birth rate, always higher than the white, has tended to increase its advantage:

	Birth Rate*		Per Cent by which Nonwhite Exceeds White
	White	Nonwhite	
1925-29	22.4	30.9	38
1953-57	24.0	34.9	45

* National Office of Vital Statistics, *Vital Statistics — Special Reports*, National Summaries, Vol. 50, No. 19 (November 27, 1959), p. lxxii. The rates are based on births corrected for underregistration.

But in addition to the inadequate use of birth control, another factor plays a part, and probably a larger part, in the continuance of a moderately high birth rate. Children are liked in industrial societies, and families of a congenial size are desired. Even if all pregnancies were planned, it

¹⁷ Ronald Freedman, Pascal K. Whelpton, Arthur A. Campbell, *Family Planning, Sterility and Population Growth* (New York: McGraw-Hill, 1959), p. 75.

¹⁸ National Office of Vital Statistics — *Special Reports*, National Summaries, Vol. 50, No. 19 (Nov. 27, 1959), p. lxix.

seems likely that the birth rate would be high enough to yield substantial population growth. Indeed, as family planning has come to characterize a greater portion of all couples, the percentage of childless and one-child families has declined noticeably, just as has the percentage of families of six or more children. A greater portion of couples are now clustered in the two-, three-, and four-child range. With a low mortality in industrial societies, the average couple would need to have less than 2.2 children. In other words, some population growth would occur even if eight out of every ten couples had two children and the other two couples had only three. As the mortality is improved still further, the required number of births for replacement will approach ever closer to two per couple. This, along with the extension of life, means that a shorter and shorter portion of each person's existence would be spent with a young child in the household. It is questionable whether the tiny replacement-size family will ever be congenial to people.

Furthermore, a rate of reproduction low enough just to replace the population at the present low mortality would produce an extremely aged population. For example, in Table 3 are shown two life-table populations. Since a life-table population is one that has exactly the same fertility as mortality, it can be seen that in a population which has just enough births to replace itself and a mortality equalling that of United States white females in 1957, there would be more people aged 60 or above than children under 15. If mortality were improved only a bit further, to where a life-expectation of 83 was attained, the number aged 60 or over would be greater than the number under age 20. This prospect of a further aging of the population has become a key argument in the anti-birth control movement in France,¹⁹ and may become so in this country. However, the implication that we should maintain a high birth rate as the means of

solving the problem of an aging population overlooks the possibility that there are other, less heroic, means of doing so. It also overlooks the fact that family planning has other goals than simply the control of population, and that to ban it solely out of consideration for the age structure would be both short-sighted and ineffective.

THE DEMOGRAPHIC DILEMMA OF INDUSTRIAL SOCIETIES

Looking back over the history of the advanced countries, we can see that their demographic changes during the process of industrialization — the decline of mortality, the reduction of fertility, the rising proportion of adults in the active ages, the growth of cities, the rise of internal and overseas migration — all contributed greatly to the efficiency and hence to the industrialization of these nations. But the later stages of the demographic transition have turned up certain unanticipated problems that require, for solution, the utmost care and strategy on the scientific side as well as in governmental and welfare policy. These problems are in large part the ultimate consequences of the decline in mortality that set off the demographic transition in the first place. This decline, which did so much to free the industrial peoples from the spectre of early death, caused the traditional level of the birth rate to yield families that were too large and populations too expanding. As a consequence, the birth rate during the latter part of the nineteenth and the first third of the present century was reduced with unprecedented speed — faster, in fact, than the death rate during the same period, with the result that the problem of extremely rapid population growth was diminished. But the lower fertility in turn brought an age structure which, though at first quite favorable from an economic point of view, eventually turned unfavorable as the bulge began moving from the young to the older adult ages. Yet the birth rate was still not low enough to cause population growth to cease, even though the latter has been complicated by urbanization. In the meantime, the recent and quick transfer of the latest scientific death control measures from industrial to the non-industrial countries has caused their populations to grow at a rate never even approached in past human history, to

a point fast enough to double their numbers every forty years, bringing a tremendous inflation in the growth of world population. The immigration pressure on the industrial countries has accordingly been, and will be, greatly heightened. The population of most of the industrial countries, including the United States, is growing from immigration as well as from natural increase.

The industrial nations thus face today a peculiar demographic dilemma. On the one hand, they can conceivably reduce their birth rate to the point where their populations are just replacing themselves. This would solve the problem of rapid population growth at home, and would serve as an example of self-control to those abroad who are in poorer circumstances. But it would involve such small families, would give most people such a minimum exposure to young children during a long life, that they seem unwilling to take this course. Furthermore, it would increase still more the proportion of elderly persons in the population and would expose the borders to almost irresistible immigra-

tion pressure. On the other hand, the advanced countries can keep their moderately high birth rates and their moderately high rates of population growth. This would exert some influence in keeping the age structure younger than it would otherwise be, and give some basis for restraining immigration. However, the probability is very high that such a policy if continued indefinitely, would be followed by almost incredible congestion. Also, the truth is that further declines in the death rate in the advanced countries will cause the proportion of the aged to rise regardless of the birth rate. Indeed, whatever the path taken, short of increased mortality, the industrial societies appear to be destined to have an aging population. This does not present them with an insuperable handicap, but it does place a profound burden upon them to find the means to mitigate the hardships and the inefficiencies that might otherwise result. To be successful, the means will have to be sought at all levels — biological, economic, governmental, familial; and will have to be compatible with the competitive viability of the industrial nation.

World Population At Time of Christ : 300 Million

At the time that Jesus walked among men, the world's population may have totalled 300 million persons, concentrated principally in the Mediterranean basin, India, and China.

The Secretariat of the United Nations Population Division, after reviewing various estimates, suggests "that the world's population was likely to have been between 200 and 300 million at the start of the Christian era."

During the present generation from 1930 to 1960, the increase in the world's population will be approximately 900 million, or three times the total of the New Testament period. This increase of 30 years, moreover, may be twice as large as the global total at the time of the Reformation.

¹⁹ C. Watson, "Birth Control and Abortion in France since 1939," *Population Studies*, Vol. 5 (March 1952), p. 263; A. Sauvy, *De Malthus à Mao Tse-Toung* (Paris: Denoel, 1958), pp. 275-77; "Population Reference Bureau," "Children in Spite of Ourselves: France Struggles with a Dilemma" *Population Bulletin*, Vol. 12 (Nov. 1956), pp. 108-126.

Migration as a Process and Migrant as a Person

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I. MIGRATION AND ECONOMIC DEVELOPMENT

Millions of persons annually almost literally pull up their roots in their community of origin and move to new homes. Many go short distances; many journey for days. Some go great distances, but go quickly by that modern magic carpet, the jet. Those who journey differ in many ways: in age and sex, in education, in skill, in color, in religion, in experience.

Some journey because they are victims of man's inhumanity to man, of forcible eviction from their homes because someone or some institution does not like their skin color, their religion, their political ideas, or their ancestry. Dr. Elfan Rees, one of the great humanitarian leaders of the world, wrote only four years ago of the 40,000,000 persons made homeless between the end of the war in 1945 and 1957.¹

The International Labor Organization in that same year estimated that 16,500,000 refugees were "not yet fully resettled". Many have found permanent homes since then, but hundreds of thousands are added annually in Europe, Asia, Africa and the Middle East. There is a tendency to discuss this type of migration as arising out of "an emergency"; as something unusual, abnormal, and therefore something which, when dealt with, will leave the world free of problems of migration. I am sure we all hope that the uprooting of peoples by military conquest is waning in importance and will soon be abolished. I am sure that we are all working for the day when people will not have to seek refuge in foreign lands from political or religious persecution as

they now must. But I am not speaking of D.P.'s or refugees, as important as they are. I wish to speak of those who technically are voluntary migrants. In spite of widespread differences in the superficial characteristics which men use to "classify" and to "label" other men, such as skin color or nationality, and in spite of the varied situations in which migration takes place, I have always found four factors present in all migrations I have studied. They are

Ambition,
Hope,
Courage, and
Differential economic opportunities.

The need for migration arises from the existence of serious and widespread discrepancies between the distribution and growth of population on one hand and the distribution and growth of developed resources for the support of population on the other. This statement applies on the national scene in many countries as well as on the international scene. The breakneck speed at which population is growing is adding about 50 million a year to the number of mouths to be fed, bodies to be sheltered and clothed and minds to be educated. Overwhelmingly this growth takes place among the three-fourths of the world's people who suffer terribly from poverty and deprivation already. India adds 8 million each year to its population, for example, and China adds more than one million each month.

There is a popular feeling nowadays that industrialization will solve the problems of the overpopulated, under-developed areas. Three sets of facts must be kept in mind in this connection.

First, economic development is tremendously expensive in money and is agonizingly slow. It is conservatively estimated that, to

raise the per capita income of the poverty-stricken of the world by one dollar a year for the next decade would take an investment of at least 100 billion dollars (100,000 million, as our British friends say), or 10 billion a year. And this would bring their average annual income up to \$100 by the end of the ten year period! The amount required is two-and-a-half times the average annual investment in the under-developed areas in recent years.

Second, population growth eats into economic advance so vigorously that the population of a number of nations, Egypt, for example, now have lower levels of living than they had 20 years ago. This basic fact has led Eugene R. Black, president of the International Bank for Reconstruction and Development, to warn that:

"I must be blunt. Population growth threatens to nullify all our efforts to raise living standards in many of the poorer countries ... Unless population growth can be restrained, we may have to abandon for this generation our hopes of economic progress in the crowded lands of Asia and the Middle East."¹

Third, as nations, or sections of nations, modernize, it takes fewer and fewer people to produce the basic goods, the food and the fibre. This is illustrated by the experience of the United States in farming. One worker on the farm could produce, in 1850, enough food and the fibre to supply himself and three other persons. By 1900, the ratio had risen to 1 to 7; by 1940, 1 to 11 and by 1958, one worker on the farm could supply himself and 24 others. The major factor in this increase has, of course, been the application of technology to farming. The average investment per farm worker in the United States today is \$20,700. One result is a "surplus" farm population in the United States of at least 1½ million farm families, or around 5 to 6 million persons. In addition, some 40 per cent of our young men growing up on the farm must leave farming and find an urban occupation if they can.

A careful study of the relation between economic development and the ability of an

economy to support a high rate of population growth, based on analyses of Puerto Rico and Mexico, reaches the following conclusion:

"As labor utilization improves, national income grows. The workers in a new textile factory produce far more cloth than the one using a hand loom. A motor truck transports more goods and transports them more quickly than an animal drawn vehicle. And so it goes — virtually every new element introduced as part of the process of economic growth leads to higher labour productivity. This means that there can be substantial increases in national income without any change in the overall level of employment. In fact, national income can double or treble without an increase in the volume of total employment, because the rate of increase in national income is closely related to the rate of increase in labor productivity, while the rate of increase in total employment depends primarily on the size of the labour reservoir."²

The experience of Puerto Rico in the early days of its widely-lauded industrialization program is indicative of the dilemma of the overpopulated areas striving to raise levels of living. The first five industrial plants were built at a cost of roughly \$11,000,000. They gave employment to 992 workers, or \$11,082 for each job created. In recent years the investment per worker has risen and now comes closer to the \$25,000 needed in the United States. Thus it is seen that if the industrializing area succeeds in securing the high investment needed to build new, modern, efficient manufacturing plants, it puts few people to work! If, on the other hand, it installs obsolete and inefficient machinery, it may put more people to work but the higher cost of production will probably cause the new industry to fail in competition with the products of the more efficient factories. And thus the workers are again unemployed!

II. THE FUNCTION OF MIGRATION

It should be apparent from this hasty sketch of the dynamic interaction of population and economics that overpopulation

¹ Elfan Rees, *Century of the Homeless Man*. (New York: Carnegie Endowment for International Peace, 1957.) p. 196.

¹ Address to the Economic & Social Council of the United Nations, New York, April 24, 1961.

² A. J. Jaffe, *People, Jobs & Economic Development*. (Glencoe, Illinois: The Free Press, 1959.) p. 157.

in various areas is not likely to be solved in the near future. Nor, for that matter, assuming a continuation of present trends in international financial and technical aid, will it ever be solved. The question of migration from the underdeveloped areas to the industrially-advanced areas inevitably arises, as does the question of population control after the spectacular success of Japan in cutting its rate of natural increase. This discussion is confined, of course, to migration.

Let us look first at international migration. Compared with the high points of the past, voluntary international migration today is small. However, in terms of the personal suffering of millions of persons who will be involved for many years to come, humanitarians cannot ignore these movements which will continue in spite of nationalistic restrictions in all regions of the world.

Asia and Africa are likely to be the regions in which the largest numbers are involved, but significant streams of immigrants will continue to flow from the underdeveloped to the more developed areas in Europe, and from Europe to better economic opportunities in North and South America, Australia and New Zealand, as well as between nations in the Western Hemisphere. There is also considerable movement from the United Kingdom to other parts of the British Commonwealth¹ and from some parts of the Commonwealth to the United Kingdom.²

Much of the latter is not technically international immigration, since those moving are citizens of the receiving coun-

try, just as those moving from Algeria to France or from Indonesia to Holland in recent years have been citizens. The Puerto Rican moving to the mainland United States also is an internal migrant, not an immigrant, since Puerto Ricans have been citizens of the United States since 1917.

The Puerto Rican migration and that of the West Indians to the United Kingdom have engendered a great deal of publicity in recent years, in spite of the relatively small numbers involved. The Puerto Rican net migration averaged 41,212 annually during the 1951-60 decade, or a total of 412,120. The West Indian flow totalled 177,950 in the same ten years, or 17,795 per year.³ Possibly as many as 20,000 have returned to their original homes during that period.

There is one considerable difference between the United Kingdom and the United States as receiving areas. It has been some centuries since the former received any sizeable numbers of immigrants, but the United States had counted 41,840,961 since records were first kept in 1821. The total was made up of 34,574,632 Europeans, 5,753,214 from the other nations of the Western Hemisphere, 1,097,772 from Asian countries, and small numbers from other parts of the world.⁴

Let us compare the 1951-60 flow of 412,120 from Puerto Rico with the total immigration to the United States for those years, which was 2,515,479. Immigrants from Europe made up 1,328,293; from Asia, 147,453; and from other Western Hemisphere countries, 996,944.

Now let us look at the internal migration which took place in the United States in the same ten years. Each year saw an average of 5,370,000 persons migrating within the borders of their own State and 5,170,000 more migrating into at least an adjacent State. Some years saw at least half of that 5 million migrating from one

³ "Activities of the Migrant Services Division, Commission in the U.K. for the West Indies, British Guiana and British Honduras" London, The Commission, 1961. (Typescript).

⁴ *Annual Report of the Immigration and Naturalization Service*, Washington 1960, pp. 41-42.

¹ See for example, Lionel Birch, "The Long, Long Queue to Leave Britain." *The Reporter*, March 7, 1953, pp. 20-22.

² A scholarly study of both emigration and immigration is Julius Isaac's *British Post-War Migration*. Cambridge University Press, 1954. An early, rapid survey of the West Indian movement is contained in Clarence Senior and Douglas Manley, *A Report on Jamaican Migration to Great Britain*, (Kingston: The Government Printer, 1955.) Later reports includes S. K. Ruck, ed., *The West Indian Comes to England*, (London: Routledge & Kegan Paul, Ltd. 1960) and Ruth Glass *Newcomers: The West Indians in London* (London: George Allen & Unwin Ltd., 1960).

region of the United States to another. The major movements were from the South to North and from the East to the West. Movements within States and between States within regions all showed the same tendency; the migration was from areas of less economic development to those of greater economic production and therefore of greater employment opportunities. Urban areas in all parts of the country grew at more rapid rates than did the rural areas. Some urban areas grew at slower rates than others, of course. This was a reflection of differing economic opportunities. Some cities which had been growing with great rapidity in the past had been affected by industrial shifts and technological changes and this was reflected in a drastic decline in their growth rates. Some which had been based on coal mining, for example, have been losing population with the decline of production from their mines. Many of their people have migrated to expanding areas. Similar conditions prevail in cut-over forest areas, eroded farming areas, etc. And always the poorer areas are burdened with heavy rate of population increase.

Thus the United States shows, within its own borders, the same phenomena which take place throughout the world, and which would be much more widespread if nationalistic barriers had not been erected almost universally. Data on internal migration from other nations are not available in the same form, but a recent survey by the International Labour Organization shows how widespread is what has been called "the flight from the land".¹ Figures are given for 25 major nations which have dependable census machinery. They all display a reduction during recent years in the proportion of the labor force occupied in agriculture. That proportion has come to be looked upon as a highly significant index to the general economic development of a nation. Those with over 50 percent of their labor force in agriculture, with the proportion so engaged are listed here as illustrations:

Thailand	..	..	96 per cent
India	..	..	74 "
Philippines	..	..	66 "

¹ *Why Labour Leaves the Land*, (Geneva: International Labour Organization, 1960), pp. 229.

Egypt	..	..	64 per cent
Mexico	..	..	61 "
Brazil	..	..	58 "
Spain	..	..	50 "

On the other end of the development scale are found these nations

United Kingdom	..	..	5 per cent
Belgium	..	..	12 "
Australia	..	..	13 "
United States	..	..	13 "
Switzerland	..	..	17 "
Canada	..	..	19 "
Netherlands	..	..	19 "
New Zealand	..	..	19 "
Sweden	..	..	21 "
Germany (Fed. Rep.)	..	..	23 "
Denmark	..	..	25 "

It should be further noted that the absolute numbers of persons working on the land decreased during the years surveyed in 15 of the 25 countries, including all but one of the 11 with between 5 to 25 percent so occupied. The one exception was the Netherlands, which is not typical because of the economic blow it suffered in the loss of most of its empire.

All of the data of this section point in the same direction. There is now and for many years to come there will be a vast redistribution of population taking place, even if and when the legacy of political, religious and racial persecution has been eliminated and if further forced migrations were to be prevented.

Voluntary migration is an essential factor in economic advance. It benefits the migrant himself, the economy of the receiving community and of the sending community as a general rule.

The manner in which voluntary migration responds to the requirements of a well-developed labour market is illustrated by the experience of the Puerto Ricans. The average annual migration for periods shown gives a general idea of the reaction of the flow from Puerto Rico to employment opportunities in the United States:

1909-1930	..	..	1,986 per year
1931-1940	..	..	904 " "
1941-1950	..	..	18,794 " "
1951-1960	..	..	41,212 " "

The slight recession which started late in 1953 resulted in a 69 per cent drop in the migration. The years 1955 and 1956 were somewhat more prosperous, and the migration climbed, only to be sent down again by the 1957 recession, which resulted in a fall of 28 per cent in the migration, followed by a further decrease of 26 per cent in 1958. There was a slight rise in 1959, but 1960 showed a fall to 16,298, the lowest point in 15 years. This was also the year of the greatest unemployment in two decades.

The West Indian migration shows a similar reaction to the presence of job openings in the United Kingdom.

The recorded experience of millions of immigrants to the United States has been analyzed by several scholars to trace out the relationships between its economic development and immigration. They all find a high correlation between the ups and downs of business cycles and the rise and fall of the numbers of immigrants reaching its shores.¹

Much migration causes human suffering as well as bringing economic advancement. However, the friction, and dislocations and suffering which often accompany migration can be reduced by governmental and voluntary social action. Such institutions as churches, labor unions, community centers, and school systems all have an important role to play in this process.

III. MIGRATION AND THE MIGRANT

What happens to the individual migrant? What happens to his family? Is he more at peace with himself after he migrates than he was before? Assuming that he has bettered his lot economically, does he feel that he is actually better off? These and a myriad other questions will be asked by those whose major interests lie in helping

¹ Among the more important studies in this field are: Harry Jerome, *Migration and Business Cycles*. (New York: National Bureau of Economic Research, 1926.) Dorothy S. Thomas, *Social and Economic Aspects of Swedish Population Movements, 1750-1933*. (New York: Macmillan, 1941.) Brinley Thomas, *Migration and Economic Growth*. (Cambridge, University Press, 1954.) Simon Kuznets and Ernest Rubin, *Immigration and the Foreign Born*. (New York: National Bureau of Economic Research, Inc. 1954.)

man improve his lot. The answer for millions of immigrants had undoubtedly been that their migration was a tremendous step forward. Others have given an opposite answer and have indicated their unhappiness by returning to their original home. Every major stream of voluntary migration has its counterpart in a return migration.

Sometimes the gross movement is many times the net; usually it runs from 2 to 5 times the net. There are also persons who "grit their teeth" and make the best of what they believe to be a bad bargain. The personal characteristics of a person sometimes interfere with his becoming adjusted to new circumstances and then integrated into the new community. Usually lack of adjustment can be traced to economic, political and social factors in his new environment and to conflicts between the conduct norms he learned in his old home and those he is required to follow in his new home.

One of the chief problems which hinders adjustment and integration is that the new community (and this is usually a city) is unprepared to receive the migrant; often the migrant is not prepared to live in the city. Both of these lacks can be corrected by proper action at both ends of the migration. Many of the new urban dwellers come relatively short distances geographically, but if they have come from farms they are likely not to know as much about the complexities of city living as would be desirable. Some recent studies in the United States have found that it takes from 5 to 10 years for newcomers from the farm to equal the voting participation rates of the older urban residents, for example.

Large numbers of the internal migrants must bridge both long geographical distances and great cultural differences, since much of the movement is between regions of the country. Many come from those sections of the country where large numbers of persons are disadvantaged when judged by any of the usual indices such as high death rates, high birth rates, widespread illiteracy, low per capita income, high proportions in agricultural, forestry and extractive occupations, etc. And if the newcomer crosses national boundaries, and especially if he does not speak the local lan-

guage, his adjustment problems become even greater!

It is persons who come from the "underdeveloped" areas of the country, or of the work, who are most likely to have difficulties in adjusting to the new environment, who suffer the most in the transition from the old world to the new, and who are most likely to be referred to in either a contemptuous or patronizing manner as "problems".

Basic to an understanding of them and to programs for helping them is the realization that successful urban living involves a variety of patterns of learned behavior. The newcomer must learn, and learn rapidly, how to cope with new and strange problems. Habits learned in different, and usually simpler, surroundings do not make for satisfactory results in the new environment. Customary ways of making a living, keeping house, raising children, visiting friends and neighbors, playing and worshipping, may all, and all at one time, be called into question. Matters treated casually in the old environment may, in the new, suddenly become invested with high emotional content (e.g. disposal of refuse). Added to all these puzzling changes often goes the reduction in self-esteem which comes from being labelled as a "Problem", from being treated as a member of a conspicuous "minority", instead of as a person.

It is right at this critical point that most receiving communities, whether national or local, cannot answer a crucial question: "Who, or what institution, in our community is responsible for helping the newcomer learn the new patterns of behavior?"

Who, indeed, is prepared to teach the people of the receiving community to cope with new situations; to understand the role of the migrant in helping maintain their economy, for example?

Leaving aside the question of "who does what?" what do we need to do? Our Judaeo-Christian tradition counsels us to love the stranger "as thyself". Generally this does not happen. It is more likely to happen if the stranger belongs to our own racial, ethnic or nationality group, to our church, to our lodge, to our union or at least to our own socio-economic class. This is because he is

somewhat more likely to have been raised as we were raised, to "talk the same language", to have the same tastes, to have developed the same habits, the same reactions to daily events. In the vast majority of our daily actions we are creatures of habit; life would become a mass of intolerable choices in small matters if we were not. Trouble begins, in a society of rapid social change, when habits rule decisions on matters vitally affecting democracy and public issues. That is, trouble begins if we have not deliberately cultivated habits which are consonant with the democratic way of life in human relations.

Left to their own devices, our habits will often be guided by an insidious and universal fallacy known to scholars for years as ethnocentrism. This is an old synonym for "group centeredness". It has now been described and analyzed by social scientists and is understood to be part of the "natural" behavior of mankind. It is by applying intelligence and self and social control to "natural" actions that man becomes human, however. We now know that we must become aware of the process in which we acquire our habits, our feelings, our ideals, our ideas, and especially our assessment of "strangers". We must become aware of the fact that if a stranger comes from another ethnic, racial, nationality, religious, or class group he may well have habits, feelings, ideas, and ideals which do not coincide exactly with our own.

The most common expression of ethnocentrism is labeling: it is found universally. "Sticks and stones may break my bones, but names will never hurt me." Children used to recite this little rhyme in self-defence, but names do hurt. They are particularly harmful when they injure the self-esteem of members of a minority group who are already struggling under great disadvantages to make their way in the world. We in the United States have had a deep and varied experience with name-calling. The "drunken" Irish, the "stuffed-shirt" Englishman, the "lazy" Negro, the "over-emotional" Italian, the "philandering" Frenchman, the "pushing" Jew, the "stingy" Scot: they have all appeared in our fiction and been heard on our stage and

in our everyday life. And I understand that in other countries people from the United States are often referred to as "nouveaux riches", "over-ambitious", "uncultured", and "immature".

The Asian children in Hawaii sometimes accuse the Caucasian children of "stinking of carrots". I am told that what is called "the French Pox" in England is called "the English Pox" in France. In Czechoslovakia drinking too much is "to drink like a Dutchman", but in Holland it is "to drink like a Pole". In Hungary and Austria, the cockroach is known as a "Swabian", in Poland as a "Prussian", and in Germany as a "Frenchman".

There is another tendency which is perhaps a pathological extension of ethnocentrism-xenophobia. It is a malady known to psychiatry as "a morbid dread of meeting strangers", but this definition does not convey all the danger which the term applies. Xenophobia affects communities as well as individuals. It exists in mild or extreme form in most parts of the world, sometimes in epidemic proportions. It becomes more menacing as rapid transportation brings the peoples of the world closer together physically. Although it is by no means necessarily the only, or even the most basic, cause of undemocratic or otherwise bad human relations, the disease is surely one cause that must be diagnosed and treated if good human relations are to be established.

Xenophobia is insidious—a person may suffer from it without knowing he is ill. The symptoms are well-known, however, and awareness of its treacherous character is the beginning of the cure. The person affected by fear of strangers may act somewhat like a victim of malaria: he may have chills and fever in the presence of an unfamiliar person or group.

Xenophobia arises from irrational fears and emotional reactions. Attempts are made from time to time to give some semblance of reason to such emotions by talking of "inherent racial tendencies" as an explanation for allegedly "inferior" or "superior" groups. No scientific student of human affairs today believes in the myth of

inherently "inferior" or "superior" races or ethnic groups. Social scientists have shown it to be as completely without foundation as it was in the eleventh century when Said of Toledo, a Moorish savant, warned his listeners that they should not buy slaves from the North:

"Races north of the Pyrenees are of cold temperament and never reach maturity; they are of great stature and of a white color. But they lack all sharpness of wit and penetration of intellect".

Those interested in maintaining the institution of slavery had many "scientific" arguments (as well as "religious" ones) to salve the consciences of the slaveholders. All have fallen into the ashcan of history along with other beliefs which at one time were the absolute truths against which it was dangerous to contend—such as the sun rotates around the earth or that the earth is flat.

There are some corollaries which belong in the same ashcan but have not yet been completely discarded: e.g. that some racial groups are "temperamentally" different from others, that there are racial differences in disease and death rates independent of social, economic, and geographic conditions, and that cultural differences, including morals, are actually racial differences. These are all expressions of ethnocentrism, of the belief that one's own group has the only correct solution to ways of working, living, playing, and praying.

We now know that race refers exclusively to physical features—skin color, hair texture, etc.—and has no relevance, as such, in human behavior. What makes it relevant is our attitude toward it! In other words, there are no human problems which can properly be labeled "racial". We know that man's behaviour, with the exception of his food and sexual appetites, is learned behavior. Even the social expression of his animal drives is governed by what his social environment has taught him.

Children of one race do not "naturally" hate children of another race. Children only hate those whom their environment teaches them to hate. In Liverpool, Eng-

land, for example, I found white children playing with Negro children with no friction whatever. The teachers told me, however, that the same children wouldn't play with "lower class" white children!

Another source of difficulty for the newcomers lies in the very nature of the society into which many of them move. The "underdeveloped" areas many times pay much more attention to the values of leisure, friendship, delight the comparatively slow rhythms of nature, and self-expression through poetry, song and dance. Family ties are strong and loyalties are primarily to the family group and to close friends. The newcomer is likely to be puzzled and frustrated by the "coldness", the impersonality of life in a more highly urbanized and industrialized community. Family ties are strained by the exigent demands of the new environment; the woman is likely to be forced to work by the unaccustomed demands of the "cash and carry" economy. The children find themselves torn between the values of their parents and the values of children in their new neighbourhood who have been brought up with different values.

Insecurity and competition suddenly permeate the lives of the newcomers, but insecurity and competition are found by social scientists and psychiatrists to be damaging to the personality. The psychiatrist Karen Horney points out that "from its economic center competition radiates into all other activities and permeates love, social relations and play. Therefore, competition is a problem for everyone in our culture, and it is not at all surprising to find it an unfailing center of neurotic conflicts".

We know that disadvantaged persons suffer more from both infectious and chronic diseases, although these formerly were considered exclusively in individual terms. The Secretary-General of Great Britain's National Association for the Prevention of Tuberculosis, Dr. Harley Williams, a few years ago gave one of the clearest explanations of the modern view of therapy. He declared that tuberculosis patients died not only from the effect of the disease-causing germ but also "from inward des-

pair which lowers their resistance and prevents their taking advantage of the help the community is able to offer". With all the recent medical advances in the treatment of tuberculosis "there is danger we are getting too much science and too little understanding", he asserted. The germ which causes tuberculosis, Dr. Williams continued, "is really only one half the cause. The other half lies in unhealthy social conditions, bad nutrition and in personal anxiety and strain of body and mind. Most of the scientific methods are directed against the germ. The very success may tempt us to ignore the patient's background and the patient's own psychology."

It is not only in cases of personal or social pathology that the influence of our competitive, acquisitive society is found. Children who have been told "don't blow your own horn", or "don't push yourself forward" are at a great disadvantage in school, at play or, later, at work, if they do not "play the game" as competitively as it is played in their new environment.

It is factors of this kind which must be kept in mind in helping prepare the receiving community for the reception of newcomers. The United States, having received over 42,000,000 immigrants during its history scarcely two centuries of nationhood, has had time and opportunity to make many mistakes. Generally, it has learned from them, especially in regard to attitudes towards newcomers from abroad. Attitudes toward those with strange customs from other parts of our own country have also improved in recent years, although in both fields, there is great room for improvement.

It is now a great source of pride to us that we are "a nation of immigrants".¹ Gone are the days when attempts were made to shame immigrants into repudiating their cultural background, "forgetting the old country", discarding their mother tongue and its song and its poems; in other

¹ E.g., see the brochure by that title written by the present President of the United States, John F. Kennedy, while he was a senator of Massachusetts. (New York: Anti-Defamation League of B'nai B'rith, 1958.) 40 pp. plus colored map of the United States showing where major immigrant groups settled.

words, endeavoring to get them to throw themselves into "the melting pot". The simile was not far-fetched; a deliberate attempt was made to have people cast away their old culture as they did their "outlandish" clothing and to become "like everyone else" in resemblance to the uniform gray slag which pours out of the foundry furnace.

Happily today we generally subscribe to a completely different set of ideas. They are usually called "cultural democracy" or "cultural pluralism". Sometimes this approach is called, by analogy, "orchestration", or "tapestration". It implies that "unity with diversity" is the ideal of the democratic citizen of the United States, that just as violins or colorful threads make their contribution to a symphony or a tapestry, so the "strangers in a strange land" need not divest themselves of their cultural heritage.

New York City, for instance, is proud of the fact that 17 languages are used every day for broadcasting on 9 different radio stations in the city and that 241 newspapers are published there, in 32 languages. One commentator recently remarked that the city was losing ground in languages since 18 were spoken on Manhattan in 1644 when it was still part of the Dutch Empire!

There are still serious problems to be solved. Housing for people of moderate means is still in terribly short supply in all major cities; problems of neighbourhood decay, urban congestion, overcrowding in schools, shortage of medical care and hospital facilities at prices which working class people can pay; all these and many others face all working class city dwellers. The newcomer has these problems aggravated by the misunderstandings he is likely to meet. Sometimes he is blamed for the slum conditions, even though they existed long before he came and he is their victim, not their cause.

Orientation of the migrant toward his new life and his new community may help reduce the amount of personal and family disappointment and dislocation in the new community. Much of the activity of the I.R.O., the I.C.E.M., and the various reli-

gious groups concerned with refugees and D.P.'s has been in the field of preparation of the immigrant for life in his new community. Many of their clients were already established professional people who did not have too much difficulty getting accustomed to new surroundings. In any case, most of the migration was fairly highly organized. During recent years I have been acquainted with orientation programs for the spontaneous, unorganized, migration from Puerto Rico to the mainland United States and from the West Indies to the United Kingdom. The two migrations differ in some essential respects, but the parallels between them are many, as they are between all voluntary working class migrations. Orientation of the prospective migrant starts at home in both cases. The Migration Division of the Puerto Rico Department of Labor has a unit of 7 professionals working in Puerto Rico through 9 local offices of the Puerto Rico Employment Service and 37 municipal migration committees. Television, films, radio, newspapers, mass meetings and group and individual consultations are all used. All 29 radio stations on the island carry programs every week called "Guide to the Traveller", based on the experiences of the migrant reported through the fourteen offices of the Migration Division maintained on the mainland.

The Migration Division has functional sections dealing with employment and employer relations, social welfare, community organization and relations, educational relations (625 of the 750 public schools of New York City have Puerto Rican children in attendance), information and public relations, and a special section on seasonal farm workers, who come to labor on the mainland farms as sugar-cane employment in Puerto Rico falls towards the end of the season.

Just as the biggest concentration of Puerto Ricans is in New York City, so the largest office of the Migration Division exists in that city. The staff of the Division regularly works in over 100 cities, however, and is constantly in touch with many civic organizations among the Puerto Ricans themselves, who now number about 950,000, first and second-generation, in the United States.

The Migrant Services Division of the Commission in the United Kingdom for the West Indies, British Guiana and British Honduras has a somewhat similar organizational structure: welfare and reception, community development, industrial relations and public relations. It places a great deal more stress on meeting the migrants at dockside or airport than does the Migration Division. The latter does maintain two staff members in the Idlewild International Airport in the offices of the voluntary National Traveler's Aid.

The total of West Indian migrants in the United Kingdom at the end of 1960 was estimated at 188,000, with 70,000 of these living in London. The kinds of difficulties encountered which are serious enough to cause some persons to return home are listed in the latest annual report of the Migrant Services Division:

"Among the various reasons given are inadequate housing, the rigours of the climate, unpleasant experiences through the hostile activities of the host communities, the absence of the traditional West Indian good neighborliness, and problems arising out of family disruption".¹

The 1959-60 Annual Report of the Battersea, Clapham and Brixton Moral Welfare Association carries a note on comparative moral imperatives which sheds light on another area of difficulties:

"Young white girls are becoming attached to coloured men and these men have good intentions towards the girls, plan for the coming of the babies, providing home comforts for the mother and child, and wishing to marry the girls. But the parents of the girls are refusing their consent because of the men's colour so that the girls are left to 'live in sin'."

Both Puerto Rican and West Indian governmental efforts have received a hearty welcome from local governments and from a wide range of religious, civic, welfare, labor, and other voluntary groups which it would take pages to catalog.

The Puerto Rican Migration Division has issued some 6,000,000 leaflets in the past 10

years, both for the information of members of the receiving communities and for the orientation of the migrant. The titles translated into English of some of the latter give some insight into the kinds of problems on which the migrants are forewarned:

"When in Rome . . .", which suggest that one should take his cues for many day-to-day actions from his new neighbors—except in the case of discrimination against people with darker skins—"which is ugly, anti-social and thoroughly un Puerto Rican".

"You Need These Documents", a check list of official papers which a migrating person or family must have. (This one has just been adapted and published by the Council of Southern Mountains to aid the migrants from the Southern Appalachian Mountains area to the big industrial cities of the North).

"How to Get to Jail Quickly", humorous treatment of the serious question of driving a car without a driver's license!

"Stretch Your Dollars", warnings about "easy credit" merchants and others who will try to fleece the newcomers.

"Climate and Clothing", dealing with the need for heavier clothing in the North, especially in the winter.

There are 31 other titles, all dealing with day-to-day problems of living, working, schooling, participation in election campaigns, etc. These efforts, plus the efforts of the civic organizations of the Puerto Ricans themselves have made possible substantial advances in many fields. For example, Puerto Rican civic organizations have helped enormously in "getting out the vote". The Council of Puerto Rican and Spanish-American Organizations of Greater New York, which was founded in 1952 and now consists of 54 civic, social, cultural, religious, and fraternal organizations, in each recent election year has set up stations at which persons are advised on various aspects of their civic duty. The Puerto Rican vote in New York City rose from about 35,000 in the 1954 election to about 85,000 in 1956. In 1960, as the result of an intensive registration campaign carried out through the combined efforts of the Migration Division, Puerto Rican community groups, the Spanish-language press, radio,

¹ Op. Cit., p. 11.

and theatres, and the political parties, total Puerto Rican and Hispanic registration in New York City rose to 230,000, — a remarkable achievement for a group the majority of whose members have been in New York for less than a decade.

Puerto Rican ranks now include two state legislators, a city magistrate, and a number of appointive officials in the executive branch of the city and state governments.

Community work through the Associations of Parents and Teachers is constantly emphasized. Here is an example of how rewarding such civic action can be. The Parents Association of a school in East Harlem, a school which is about 92 percent Puerto Rican, was told that the playground would be closed for the summer. There were no funds to pay supervisors. That summer the children played in the streets. Before the following summer, however, a delegation of parents found out how much it would cost to maintain the school's playground facilities. This amount was collected, in nickels, dimes and quarters, and the kids were off the streets. The results in one index of "delinquency" alone were spectacular. First summer, 238 broken windows in the school building. Second summer, 23 — a reduction of 90 percent.

This is only one illustration of successful Puerto Rican civic activity. There are many more. The Boy Scouts report that although their East Harlem district is the poorest of the city, it is generally the first to fill its quota in annual finance drives. East Harlem not only fills its quota first, but gives the highest per capita average in Manhattan.

Let me close by just a glance at the role of the churches and their auxiliaries in helping speed up the integration of the Puerto Rican. Until the Spanish-American War, Puerto Rico was legally Catholic; U.S. Protestant denominations established churches in 1899. They "zoned" the island, assigning a section to each of eight major denominations; created a common theological seminary; and attempted to gain converts. Protestantism is not, then, strange to these newcomers. While 80 to 85 percent of them are Catholic, the intensity of belief varies widely among geographic regions

and social classes. But what about the religious feelings of Puerto Ricans in the United States? The Columbia University study found 83 percent to be Catholics, 9 percent Protestants, of the long-established denominations, 5 percent belonging to the "store-front" or less well-known sects, and 2 percent "spiritualists".¹

Both Protestant and Catholic churches in all major centers of Puerto Rican settlements provide services not directly related to religion. Elena Padilla² reports that relations between Protestant ministers and their Puerto Rican congregations are closer and more personal than between Catholic priests and their parishioners. This may be partly due to the fact that in the 42 Catholic parishes in New York City with Spanish-speaking priests, only one is a Puerto Rican, while almost all of the 270 some Protestant churches with Spanish services have Puerto Rican ministers.

According to the Reverend David W. Barry of the City Mission Society, the Puerto Ricans "can't be matched by any previous ethnic group coming to New York City", in terms of money contributed and in hours per week devoted to church work. The per capita contribution of members of churches affiliated with the Society is \$65 a year, with some of the churches averaging more than \$100 per year. The national average of all Protestant churches in the United States is \$57.

Probably the most comprehensive program among Protestant Puerto Rican churches in New York City is that conducted by the City Mission Society's Church of the Good Neighbor in East Harlem. In one month between 5,500 and 7,500 persons (mostly children and young people) participate in activities sponsored by this church. It sends more than 600 children to camp each summer and conducts the only psychiatric clinic in the city staffed by Spanish-speaking psychiatrists and other professional personnel. To manage this extensive program, the Church of the Good Neighbor

¹ Mills, C. Wright; Senior, Clarence; and Goldsen, Rose Kohn. *The Puerto Rican Journey*.
² Padilla, Elena. *Up From Puerto Rico*. (New York: Columbia University Press, 1958.) pp. 317.

maintains a staff of 16 full-time and an equal number of part-time workers.

I must quote the Reverend David W. Barry again. He says that:

"No previous immigrant group so quickly numbered among its members so many policemen and welfare workers, teachers and social workers, office workers and independent businessmen, and even doctors and lawyers — after barely a dozen years in New York. And the signs of the future are in the substantial enrollment of young Puerto Ricans in the city's colleges and universities."

Those of us who have been connected with the orientation work of the Department of Labor of Puerto Rico agree with the UNESCO conference in Havana which

defined integration as "the gradual process by which new residents become active participants in the economic, social, civic, cultural and spiritual affairs of a new homeland. It is a dynamic process in which values are enriched through mutual acquaintance, accommodation and understanding. It is a process in which both the migrants and their new compatriots find an opportunity to make their own distinctive contributions."

We feel that our work, and that of our colleagues in the West Indian activities in the United Kingdom, has demonstrated that the process of integration can be speeded up and the amount of human suffering in migration reduced by purposeful social action by governments and voluntary organizations in co-operation.

Scientific Law

"A scientific law is related to the perceptions and conceptions formed by the perceptive and reasoning faculties in man; it is meaningless except in its association with these; it is the *resume* or brief expression of the relationships and sequences of certain groups of these perceptions and conceptions, and exists only when formulated by man

We are thus to understand by a law in science, i.e. by a "law of nature", a *resume* in mental shorthand, which replaces for use a lengthy description of the sequences among our sense-impressions. Law in the scientific sense is thus essentially a product of the human mind and has no meaning apart from men. It owes its existence to the creative power of his intellect. There is more meaning in the statement that man gives laws to Nature than in its converse that Nature gives laws to man."

—KARL PEARSON, *The Grammar of Science*,
(London: Black. 1900) p. 82.

Growth and Characteristics of Pakistan's Population*

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1. INTRODUCTION

The sovereign state of Pakistan came into being on August 14, 1947. The Pakistan idea was first propounded by Dr. Mohammed Iqbal in the 1930s. In 1940, the All-India Muslim League adopted it as a major political aim. In the remainder of the period of British rule, the Muslim League, under the leadership of Mr. M. A. Jinnah, pressed the Pakistan demand. It was finally conceded in the June 1947 British government decision to create two independent states from undivided India.

Pakistan has an area of 364,373 square miles and a very unusual geographic make-up. The country consists of two separate parts which are divided by more than a thousand miles of Indian territory. The western portion has an area of 309,239 square miles and is nearly six times the size of the eastern part which has an area of only 55,134 square miles.

Pakistan contains four distinct geographic regions, three in the west and one in the east. The largest and most densely populated of the western regions is the Indus River Valley, a vast plains area extending a thousand miles from the Himalayan mountains in the north southward to the Arabian Sea. The Indus Valley includes the former provinces of Sind, the Punjab and lowland portions of the North-West Frontier Province.

The second western region is the mountainous Himalayan tract rising at the northern limit of the Indus plains and extending north to the Afghan border. High mountains fill large sections of this area which contains several special Frontier areas and semi-autonomous states. Some lowland valleys are thickly settled but most are isolated and thinly populated.

* I am indebted to Professor S. Chandrasekhar for his valuable suggestions in the preparation of this paper.

The third western area comprises the arid chain of mountains rising to the west of the Indus plains and consists of what was formerly Baluchistan and part of the N.W.F.P. The mountains run from the Arabian Sea north to the Hindukush mountains of Afghanistan and form the borderland with Iran and Afghanistan. This region holds half the territory of West Pakistan. It is largely barren, dry and very thinly populated.

The separated eastern portion — East Pakistan — consists of the flat, lush delta of the Ganges and Brahmaputra rivers. East Pakistan is extremely fertile but densely populated. More than half the population of Pakistan is crowded into the small area. It also contains a low range of forested mountains rising to the north of Chittagong city. These are called the Chittagong Hill Tracts.

As demarcated in 1947, Pakistan received two-thirds of undivided Bengal province and nearly 5,000 square miles of Assam province, all of Sind and the North-West Frontier Provinces and two-thirds of the undivided Punjab. In addition, there were the Governor-General's province of Baluchistan, the Baluchistan States Union, the princely states of Khairpur and Bahawalpur, as well as specially administered frontier territories in the North-West Frontier region.

Pakistan was initially organized politically into five provinces — Sind, Baluchistan, the Punjab, the N.W.F.P. and East Bengal — special Frontier Agencies and a number of princely states retaining semi-autonomous status. The capital was located at Karachi, which was made a federal area and separated from Sind.

In 1956, the administrative structure of Pakistan was reorganized and all the units in the western area including princely states were consolidated into a unified province of

West Pakistan. The province of East Bengal was renamed East Pakistan at the same time.

In 1959, the Pakistan Government announced its decision to shift the capital from Karachi to a site near Rawalpindi in the northern part of West Pakistan. Karachi was reintegrated into the West Pakistan administrative structure in 1961.

2. CENSUS OF PAKISTAN

The first census of the new country was taken during February 1951. The organization of a census administration was a difficult task, but the Pakistan government felt it important to hold the census at the usual time. The lack of statistical data for the partitioned provinces of East Bengal and the Punjab made it particularly desirable that no undue delay occur.

In addition, the usefulness of the data covering Pakistani territory from previous censuses of undivided India had been largely vitiated by the radical population shifts that occurred in the holocaust of partition. Moreover, earlier reports had an all-India perspective, something quite different from an all-Pakistan analysis.

The census organization was broken down into provincial and district groups with the Census Commissioner, R. H. Slade, in overall charge. The staff numbered 156 officers, 18,000 supervisors and 173,000 enumerators. Local revenue department officials were the backbone of the supervisory staff.

The census results were initially published in four bulletins which gave provisional overall tables, population according to religion, urban and rural population and population according to economic categories. The complete 1951 census report contained eight bound volumes. Volume 1 gave the general report and tables for the country as a whole. Volumes 2-6 covered the reports and tables for the five provinces. Volumes 7 and 8 provided tables of economic characteristics for East and West Pakistan.

The atmosphere in which the 1951 census was carried out was conducive to success. Slade commented that "the troubles which had caused an attempted boycott in 1931 and the deliberate inflation in 1941 did not arise. There was in fact a helpful attitude

on the part of the public in many places due largely to the publicity given to the Census by the press and by Radio Pakistan. Many enumerators treated their work as a patriotic duty and the public often accepted the Census in the same spirit."¹

The Census Commissioner concluded that the data on the total population of the various provinces were reasonably accurate but that the count for the larger cities was probably somewhat incomplete. The 1951 census covered approximately the same ground as previous censuses of undivided India, except for the elimination of detailed data on caste.²

Ten years later, the second census of Pakistan was carried out during a twenty-day period ending February 1, 1961. The administrative set up was similar to the one used in 1951. The number of enumerators rose to 187,000. The first census bulletin appeared on February 28, 1961 and provided provisional data on population, literacy, and sex ratio, as well as information on residential housing.

3. GROWTH OF PAKISTAN'S POPULATION

A. Total Population

The population of Pakistan in February 1951 was 75.8 million people, 42.1 million of which lived in East Pakistan, 32.5 million in West Pakistan and 1.2 million in the Karachi Federal Capital Area. The population of the provinces of West Pakistan was 20.7 million in the Punjab, 5.9 million in the N.W.F.P., 4.9 million in Sind and 1.1 million in Baluchistan.³

In 1941 the population of the territory included in Pakistan was 70.3 million or 5.5 million less than in 1951. East Pakistan had 42.0 million population, West Pakistan 28.0 million and Karachi 0.3 million. Between 1941 and 1951 East Pakistan's population remained almost stationary while West

¹ E. H. Slade, *Census of Pakistan, 1951 Vol. I* (Karachi. Manager of Publications, Government of Pakistan), p. 2.

² Ibid.

³ The figures for the Frontier regions are included with NWFP, Bahawalpur State together with the Punjab. Khairpur State with Sind and the Baluchistan States Union with Baluchistan.

Pakistan's increased by 4.6 million and Karachi's rose by 0.8 million.

The provisional 1961 figures show a population for the country as a whole of 93.8 million or 18 million more than the 1951 population. East Pakistan has a population of 50.8 million, West Pakistan 40.8 million, and Karachi 2.2 million. The increase over 1951 in East Pakistan was 8.7 million, in West Pakistan 8.3 million and in Karachi 1.0 million.

TABLE I
Pakistan: Population, 1941-61.

Area	(Millions)		
	1941	1951	1961
East Pakistan	42.0	42.1	50.8
West Pakistan	27.9	32.5	40.8
Sind	4.4	4.9	6.3
Baluchistan	0.9	1.1	1.3
Punjab	17.2	20.7	25.6
N.W.F.P.	5.4	5.9	7.6
Karachi	0.4	1.2	2.2
All Pakistan	70.3	75.8	93.8

The population of India was 359.2 million in 1951 and 438.4 million in 1961. The ratio of the populations of India and Pakistan is thus a little under five to one. On a global basis, Pakistan had the seventh largest population in 1951. By 1961 Pakistan had moved ahead of Japan and Indonesia into the fifth spot. Only Communist China, India, the Soviet Union and the United States now have more people than Pakistan.

B. Growth Rate

The population of Pakistan grew 7.9 per cent during the 1941-51 decade which was considerably less than the 18.8 per cent increase in the 1931-41 period. However, between 1951 and 1961 the population rose a record 23.7 per cent.

The large increase in the last decade for both India and Pakistan tends to confirm Kingsley Davis' conclusion that the population of the Indo-Pakistan sub-continent was in "what appears to be a period of rapid

and gigantic expansion".⁴ A technical analysis of the reasons for the 1951-61 record growth in Pakistan cannot be made since the necessary vital statistics on the birth and mortality rates are not available. The experience of India in the same period, which may be assumed to be fairly similar to Pakistan's, shows an appreciable drop in the death rate from 14.4 to 11.0 between 1951 and 1957.⁵

TABLE II
Percentage Growth of Population in Pakistan, 1931-61.

Area			
	1931-41	1941-51	1951-61
East Pakistan	17.9	0.1	20.9
West Pakistan	19.8	17.3	25.3
Sind	15.5	11.9	28.6
Baluchistan	1.2	36.9	17.8
Punjab	23.7	20.3	24.2
NWFP	15.6	8.9	27.7
Karachi	44.9	158.4	76.5
All-Pakistan	18.8	7.9	23.7

The rate of growth for East Pakistan has been lower than that of West Pakistan during the entire thirty-year period. In the 1931-41 decade, East Pakistan rose 17.9 per cent while West Pakistan rose 19.8 per cent. Between 1941-51, East Pakistan grew a mere 0.1 per cent; in the same time, West Pakistan increased its population 17.3 per cent. Between 1951 and 1961, East Pakistan grew 20.9 per cent to West Pakistan's 25.3 per cent.

The disparity in the rate of growth of the two areas is understandable. West Pakistan has had a number of major irrigation projects in this period which have turned large desert areas into fertile farmlands. These have attracted considerable in-migration and

⁴ Kingsley Davis, *The Population of India and Pakistan* (Princeton, Princeton University Press, 1951), p. 28.

⁵ S. Chandrasekhar, "Population Growth and Economic Development in India 1951-61" *Population Review*, Vol. 5, No. 2 (Indian Institute for Population Studies, Madras, 1961) p. 63.

permitted expanded development of the West Pakistan economy. Already overcrowded East Pakistan has had much less scope for the development of new lands. During the 1941-51 decade, East Pakistan also suffered from the 1943 famine, which resulted in an estimated 1.2 million deaths in undivided Bengal.

Additionally, the 1941 figures for East Bengal were somewhat inflated as different religious communities tried to increase their share of political representation by overstating their numbers. Seats in legislatures were then allotted in proportion to the populations of the respective religious groups. Slade writes that "inflation of 1941 (figures) would tend to exaggerate the increases in the 1931-41 decade and the decline of the Hindus in the 1941-51 while minimizing the Muslim increase in the latter decade."⁶

C. Density

The density of population per square mile in Pakistan was 208 according to the 1951 census. Distribution was, however, very uneven. The density was 777 per square mile in East Pakistan, but only 108.6 per square mile in West Pakistan. East Pakistan had 14.8 per cent of the total land area and 54.5 per cent of the total population. West Pakistan, including Karachi, on the other hand, had 85.2 per cent of the land and only 44.5 per cent of the population.

In West Pakistan itself, there was a wide variation in density among the different areas. The Punjab, the most thickly settled part, had 259 people per square mile, the NWFP 150, Sind 87, and thinly settled Baluchistan only 8.8

Over the past ten years, the density has risen from 208 to 257 per square mile according to the provisional 1961 totals. East Pakistan increased to 922 while West Pakistan rose to 136. The area of the former Punjab stood at 325.7, former NWFP 192.6, former Sind 112.4 and former Baluchistan 10.2.

⁶ Slade, *op. cit.*, p. 26.

TABLE III

Pakistan: Area and Density, 1951-61*

	Ar sq. miles in 000's	Density per square mile	
		1951	1961
East Pakistan	55.1	777	922
West Pakistan	300.8	108.6	136
Baluchistan	125.9	8.8	10.3
Sind	56.2	87	112.4
Punjab	79.6	259	325.7
NWFP	39.3	150	192.6
Karachi	8.4	145.2	256
All-Pakistan	364.4	208	257

* The data on area and 1961 density figures have been taken from Census Bulletin No. 1, Census of Pakistan, 1961. Las Bela district of former Baluchistan is thus included in the Karachi Federal area. The 1951 density figure for Karachi also includes Las Bela district. Actual area of Karachi in 1951 was 812 sq. miles and density 1,387.

The bulk of Pakistan's population is crowded into a very small part of its area. Sixteen out of seventeen districts in East Pakistan had a density higher than the national average in 1951. The only district with a lower density was Chittagong Hill Tracts. But only sixteen districts out of 48 in West Pakistan were above the national average in 1951. Mr. Slade points out that "more than half of West Pakistan's population is concentrated in the 15 districts of the fertile Punjab region through which the waters of four rivers are spread in an extensive canal system".⁷ The 1961 census added Hyderabad district to this group.

Pakistan is less densely populated than its neighbour India, which had a per square mile density of 314 to Pakistan's 208 in 1951 and 374 to 257 per square mile in 1961. Comparing the different parts of Pakistan with the Indian sub-regions outlined in the 1951 Indian Census report, East Pakistan stands just after the lower Gangetic plains as the most densely settled portion of the Indo-Pakistan sub-continent. The per square mile density of the lower Gangetic plains in 1951 was 832 in contrast to East Pakistan's 777.

⁷ Slade, *op. cit.*, p. 37.

The Pakistan Punjab fits into the category of medium density sub-regions of India, densities which ranged from 332 for the trans-Gangetic plains to 226 for Gujerat. The other areas of West Pakistan place among the low density sub-regions. Baluchistan was the least densely populated area in the entire sub-continent.⁸

4. COMPOSITION OF PAKISTAN'S POPULATION

A. Age

The data collected on age composition of Pakistan's population in 1951 showed that 28.3 per cent of the population was under 10 years of age, 52.2 per cent between 10 and 39 years, 14.4 per cent between 40 and 59 years and only 5 per cent 60 years and over.⁹

The Census had originally attempted to classify age composition in five year age groups. However, it was found that the data collected for East Bengal, the Punjab and NWFP and the All-Pakistan statistics were not realistic. The difficulties stemmed from the ignorance of many Pakistanis about their age.¹⁰

The age composition in East and West Pakistan was similar. East Pakistan had a slightly larger percentage in the 0 to 9 year age group and in the 40 to 59 year group. But West Pakistan had a larger share in the 10 to 39 year and the 60 and over group.

One interesting sidelight was the number of centenarians. Over 14,000 East Pakistanis, more than a thousand Sindhis and 449 Baluchis claimed that they were more than 100 years old.¹¹

⁸ R. A. Gopalswamy, *Census of India, 1951, Vol. I India, Part I-A-Report* (Delhi, Government of India Press, 1951) p. 12-34.

⁹ Karol J. Krotki, "A First Glance at the Pakistan Age Distribution", *The Pakistan Development Review*, Vol. I, No. 1 (Karachi, Institute of Development Economics, 1961), pp. 64-75. Krotki in a detailed analysis of the comparative age curves for Pakistan, India, Algeria, Egypt, and Sudan believes that the 1951 data on Pakistan below 14 years contains serious errors. He concludes that there was an unprecedented underenumeration of males below age 10 and of girls below age 15.

¹⁰ Slade, *op. cit.*, p. 49.

¹¹ *Ibid.*, p. 54.

TABLE IV

Pakistan: Age Structure, 1951
as per cent.

Area	AGE GROUP			
	0-9 years	10-39 years	40-59 years	60 years and over
East Pakistan	29.4	51.5	14.6	4.4
West Pakistan	26.9	53.1	14.2	5.7
Karachi	26.7	55.9	13.2	4.2
All-Pakistan	28.3	52.2	14.4	5.0

A comparison between the 1931 and 1951 censuses shows that the percentage of the population 9 years and under has declined and the percentage 60 years and over has increased. Between 1931 and 1951 the percentage of males 40 years or older rose from 17.91 to 20.35 per cent of the population. Females 40 and over rose from 15.65 per cent to 18.30 per cent. Slade concludes that "in every province and in every community this tendency is apparent and... seems to indicate an improvement in health and longevity."¹²

It is difficult to make a precise comparison of the 1951 age data for India and Pakistan since different age groups were used. The Indian Census had nine groups to four for Pakistan. But the age composition of India's population seems to be about the same as Pakistan's. In both countries there is a preponderance of young people in the population and a very small portion of old people.

Pakistan's age composition in 1951 contrasts greatly with that of the United States in 1950 where there was only 19.5 per cent of the population under 10 years old, far less than Pakistan, and 8.1 per cent over 65 years, far more than Pakistan. Actually, the age composition of the American population in 1880 was rather similar to Pakistan's in 1951. 26.7 per cent of Americans in 1880 were under 10 years of age. Only 3.1 per cent were over 65.¹³

¹² *Ibid.*, p. 50.

¹³ Warren S. Thompson, *Population Problems* (McGraw-Hill Book Co., New York, 1953) p. 95

B. Sex Composition

Pakistan had an excess of 112.8 males for every 1000 females in 1951. The male excess was lowest in East Pakistan where it was 110 and highest in the Karachi Federal Area where it was 134.5. The excess for West Pakistan was 116.4.

The 1941 census showed an excess of 112 males per 1000 females or slightly less than in 1951. East Pakistan had 107.5, West Pakistan 119.1 and Karachi 133.2. Thus between 1941 and 1951 the male excess increased in East Pakistan and Karachi and decreased in West Pakistan.

The provisional 1961 data indicate that the male excess is 110.8 for the whole country, a decline of nearly 2 per cent from 1951. All areas show a smaller male excess than in 1951. East Pakistan has 107.3, West Pakistan 114.2 and Karachi 129.5.

TABLE V

Pakistan: Sex Ratio
Excess Males per 1000 females, 1941-61.

Area	1941	1951	1961
East Pakistan	107.5	110.0	107.3
West Pakistan	119.1	116.4	114.2
Sind	121.0	122.1	120.7
Baluchistan	113.0	121.3	121.8
NWFP	119.1	111.8	109.2
Punjab	118.6	115.3	113.9
Karachi	133.2	134.5	129.5
All-Pakistan	112.0	112.8	110.8

The results of the 1951 census were no exception to the longstanding rule that "an excess of males over females has been a feature of all the Censuses of the Indian sub-continent."¹⁴ From 1901 to 1951, the male excess for 1,000 females increased from 108.3 to 112.8 in Pakistan territory. The 1961 results reversed this longstanding trend by showing a decrease in the male excess for the whole country.

¹⁴ Slade, *op. cit.*, p. 54.

In West Pakistan the peak was reached in 1921 and 1931 when a male excess of 121.5 was recorded. Since then, the male excess has been decreasing. In East Pakistan the male excess continued to rise until 1951 and declined only in 1961.

The degree of male excess in 1951 varied with different age groups. It was 104 for children under one year of age and 105 for all children under 10 years of age. In the 10-39 year age group, the male excess climbed sharply to 119 in West Pakistan and 109 in East Pakistan.

At the other end of the scale, the male excess declined in the sixty years and over age group. Females able to survive the earlier years turned out to be sturdier than the older males.¹⁵

There are a number of plausible explanations for the large male excess. Gopalswamy points out that there are more male than female babies born in India.¹⁶ The 1951 Pakistan Census also reported 1,104 male to every 1,000 female babies under one year of age.¹⁷ Girls tend to receive somewhat less attention than boys and consequently may be more likely to succumb to various childhood diseases. Most important, females marry at a very early age and suffer heavily from mortality in child birth. The custom of purdah may also have a possible harmful effect on the health of women.

Part of the male excess in Pakistan can additionally be attributed to underenumeration of females by Muslims. Slade states that "while underenumeration of females is undoubtedly a danger which has not been entirely overcome, it cannot have taken place (in 1951) on such a scale as to account for the whole difference between the sexes."¹⁸ The tendency not to report on females is a more important factor in West Pakistan than in East Pakistan and is probably responsible for part of the greater male excess in this area.

The tendency for underenumeration may also be a partial explanation for their being a somewhat larger male excess in Pakistan

¹⁵ *Ibid.*, p. 56.

¹⁶ R. A. Gopalswamy, *op. cit.*, p. 60-61.

¹⁷ Slade, *op. cit.*, p. 59.

¹⁸ *Ibid.*, p. 54.

than in India. The latter country in 1951 had 106 excess males for every 1,000 females to Pakistan's 112.8.

Official interpretation for the drop in male excess in the provisional 1961 figures must await the census reports. It is possible that a fuller enumeration of females was made. The higher age at marriage and improved medical services may also have been a factor.

C. Marital Composition

The data on marital composition of Pakistan's population in 1951 showed that 41.1 per cent of males and 45.1 per cent of females were married and that 55.2 per cent of males and 45.0 per cent of females were single. Only 3.4 per cent of males and 9.6 per cent of females were widowed. A negligible 0.3 per cent of males and 0.4 per cent of females were divorced.

Looking at separate age groups, less than one per cent of those under ten years of

age were married. In the 10-39 year group, 45.7 per cent of males and 65.9 per cent of females were married. In the same age group, 52.5 per cent of males were single, but only 29.6 per cent of females.

In the period of middle age, the 40-59 year group, 88.2 per cent of males were married and 65.0 per cent of females. Those still unmarried dwindled to 2.6 per cent of males and 1.0 per cent of females and the remaining 8.8 per cent of males were widowers and 33.1 per cent of females, widows.

Among those 60 years and over, 72.0 per cent of males were married, but only 36.1 per cent of females. On the other hand, only 26.0 per cent of males in this age group were widowers while 62.6 per cent of females were widows. Single males were 1.2 per cent, single females 0.6 per cent, divorced males 0.8 per cent and divorced females 0.7 per cent of those 60 years and over.

TABLE VI

Pakistan: Marital status by age group, 1951 as per cent.

Age Group	Married		Single		Widowed		Divorced	
	Male	Female	Male	Female	Male	Female	Male	Female
0-9	0.1	0.5	99.9	99.5	—	—	—	—
10-39	45.7	65.9	52.5	29.6	1.6	4.0	0.2	0.5
40-59	88.2	65.0	2.6	1.0	8.5	33.1	0.7	0.9
60 and over	72.0	36.1	1.2	0.6	26.0	62.6	0.8	0.7
All Ages	41.1	45.1	55.2	45.0	3.4	9.6	0.3	0.4

The marital composition of India's population in 1951 differed slightly from Pakistan's although the basic pattern was similar. The proportion of the population married in India was 45.1 per cent for males and 48.4 per cent for females. Unmarried males were 49.1 per cent and unmarried females 38.8 per cent. Thus, India had a higher percentage of both sexes married. Since nearly all Indians and Pakistanis get married, the explanation for the larger portion of married people in India must be that Indians marry at a younger age than Pakistanis.

Slade concluded from the 1951 marital data that the age of marriage had risen in Pakis-

tan during the decade. Slade states that "in every case the proportion of persons in the 10-39 age group who have been married was then (1941) higher than it is in 1951. People of both sexes and communities are marrying at older ages."¹⁹

The sizeable percentage of widows in the 40-59 and 60 and over age groups doubtless stemmed from males frequently being much older than females at the time of marriage.

Polygamy, permitted by Islam, was found to be very rare. Indeed, in West Pakistan

¹⁹ Ibid, p. 61.

there were actually more married men than married women. This was partially explained by there being more males than females among refugees. Underenumeration of females was also a factor.

Divorce, although theoretically easily obtainable under Muslim Law, was apparently quite unusual. The census report points out that public opinion weighed heavily against divorce.²⁰

D. Rural-Urban Ratio

The Pakistan Census authorities defined an urban area as any town or city with more than 5,000 inhabitants.²¹ Slade points out that the definition, while arbitrary, probably achieved the purpose of separating essentially rural or agricultural from urban areas.²²

In 1951, 89.6 per cent of Pakistan's population was rural and 10.4 per cent was urban. East Pakistan was 95.6 per cent rural and only 4.4 per cent urban. West Pakistan, on the other hand, was 15.2 per cent urban and 84.8 per cent rural. With the exception of Karachi, which was 94.9 per cent urban and 5.1 per cent rural, Punjab was the most urbanized area of West Pakistan with 17.4 per cent. Urban percentages were 14.2 in Sind, 12.4 in Baluchistan and 8.6 in the N.W.F.P.

TABLE VII

Pakistan: Rural-Urban Ratio, 1951

Area	Rural	Urban
East Pakistan	95.6	4.4
West Pakistan	84.8	15.2
Baluchistan	87.6	12.4
Sind	85.8	14.2
Punjab	82.6	17.4
N.W.F.P.	91.4	8.6
Karachi	5.1	94.9
All Pakistan	89.6	10.4

²⁰ Ibid, pp. 61-64.

²¹ In addition, all incorporated municipalities and towns managed by Notified Area Committees were included in the urban classification, even if their population was less than 5,000.

²² Slade, op. cit., pp. 39-40.

Half of the 1951 urban population was concentrated in the eleven cities with over 100,000 population. Nine of these were in West Pakistan and only two in East Pakistan. Nearly one quarter of the urban total was found in Karachi and Lahore, the only two cities with more than half a million inhabitants.

The 1961 provisional data shows that the urban population has risen appreciably in the past decade. The number of cities with more than 100,000 population has increased from eleven in 1951 to sixteen in 1961. In 1951 urban areas with over 100,000 population comprised 5.0 per cent of the total population. In 1961 they were 7.3 per cent.

Karachi, the largest city in Pakistan, increased from just over one million in 1951 to 1.9 million in 1961. In twenty years it has grown from a provincial city of under 500,000 to a major metropolis with nearly two million inhabitants. Lahore, the second city and capital of West Pakistan, grew from 849,000 in 1951 to nearly 1.3 million in 1961. Dacca rose from 339,000 in 1951 to 558,000 in 1961. In the same period, Hyderabad increased from 242,000 to 434,000 and Lyallpur from 179,000 to 426,000. Chittagong, Multan and Rawalpindi showed populations between 300,000 and 400,000 and another eight cities had between 100,000 and 300,000 in 1961.

Twelve of the sixteen cities with more than 100,000 population were in West Pakistan and only four in East Pakistan—Dacca, Chittagong, Narayanganj and Khulna. Khulna, however, had the highest rate of growth between 1951 and 1961, increasing 204.8 per cent. Two other cities, Lyallpur in West Pakistan and Narayanganj in East Pakistan, more than doubled their population during the decade.

Pakistan with 10.4 per cent urban population was considerably less urbanized in 1951 than its neighbour India which had a 17.3 per cent urban proportion. This was about the same as the Pakistan Punjab, the most heavily urbanized part of Pakistan. India in 1951 had 73 cities with more than 100,000 population.

Even in 1961, Pakistan remained a predominately rural country with a small, though growing, portion of the population living in urban areas. The urban proportion

TABLE VIII

Pakistan : Selected Data on Urban areas with more than 100,000 population, 1951-61.

Selected Items	Urban areas with 100,000-499,000 population		Urban areas with more than 500,000 population	
	1951	1961	1951	1961
Number ..	9	13	2	3
Total Population (thousands) ..	1,994	3,114	1,918	3,771
Percent of Urban Population ..	25.4	not available	24.4	not available
Percent of Total Population ..	2.6	3.3	2.4	4.0

has actually been rising since 1911, very slowly until 1941 and since then more rapidly.

Slade explains that "the more marked gain of the urban element over the rural in the 1941-51 decade is largely due to the

TABLE IX

Pakistan : Population of Principal cities, 1951-61.

City	Population (thousands) 1951	Population (thousands) 1961	Per cent increase 1961 over 1951
Karachi	1,068	1,916	79.4
Lahore	849	1,297	52.8
Dacca (E.P.)	339	558	64.6
Hyderabad	242	434	79.3
Lyallpur	179	426	138.0
Chittagong (E.P.)	294	363	23.5
Multan	190	358	88.4
Rawalpindi	237	343	44.7
Peshawar	152	213	40.1
Gujranwala	121	197	62.8
Sialkot*	168	168	0.0
Narayanganj (E.P.)	73	162	119.2
Khulna (E.P.)	42	128	204.8
Sargodha	78	112	43.6
Quetta	84	107	27.4
Sukkur	77	103	33.8

* Served as refugee collection point in 1951.

refugee movements".²³ Refugees swelled the population of West Pakistani cities like Karachi, Lahore, Lyallpur and Hyderabad, despite a large emigration of Hindus and Sikhs.

The urban growth in the 1951-61 decade seems to be related to the development of new industrial and administrative centres. Cities registering an increase of more than 100 per cent are ones where a substantial number of new industries have been located. The three major administrative centres, Karachi, Lahore and Dacca, grew by more than 50 per cent. Slower growing urban areas like Peshwar, Chittagong, Sukkur, and Rawalpindi have had relatively little new industry.

During the next decade, Rawalpindi is likely to show a substantial increase with the location of the national capital nearby. Karachi will probably be less able to maintain its present rate of growth as its administrative importance diminishes.

E. Language composition

Thirty-two languages were given as mother tongues by Pakistanis. Fourteen of these were named by more than 50,000 persons.²⁴ Bengali, the mother tongue of East Pakistan, was the most important, named by 54.4 per cent of the total population. Punjabi, the mother tongue in the

²³ Ibid, p. 40.

²⁴ Ibid, p. 65.

Punjab and in Dera Ismail Khan and Hazara districts of the NWFP, was given by 27.5 per cent. Pushtu, the mother tongue in other parts of the NWFP, was listed by 6.6 per cent; Sindhi, the mother tongue in Sindh, by 5.3 per cent; Urdu, used as the mother tongue by many refugees from India and most significant in Karachi, by 3.2 per cent and Baluchi, the mother tongue in large parts of Baluchistan, by 1.2 per cent.

TABLE X

Pakistan : Language Composition, 1951 (Mother Tongues)

Language	Number of Speakers (thousands)	Per cent of total population
Bengali ..	41,167	54.4
Punjabi ..	20,842	27.5
Pushtu ..	5,002	6.6
Sindhi ..	3,994	5.3
Urdu ..	2,457	3.2
Baluchi ..	943	1.2
Gujarati ..	228	0.3
Brahui ..	219	0.3
Hindi ..	125	0.2
Santhali & Khasli ..	111	0.1
Khowar ..	95	0.1
Rajasthani ..	78	0.1
Arakanese ..	74	0.1
Kohistani ..	67	0.1
Others*	232	0.3

* Others include: Assam-Burmese Tongues—111,860, Burmese—39,657, Persian—21,340, Oriya—16,609, English—12,359, South Indian Languages—5,724, Kafir—2,943, Kashmiri—2,551, Arabic—1,249, Marathi—1,007, Assamese—873, Shina—100, Tribal Dravidian Tongues—94, Miscellaneous—15,589.

Gujarati is the mother tongue of a sizeable number of persons in Karachi and also in Tharparkar district of Sind. Brahui, a Dravidian language, is the mother tongue in Kalat State of Baluchistan.

Santhali and Khalsi, survivals of the pre-Dravidian Austric languages, are spoken by tribal people in Dinajpur, Rajshahini and Rangpur districts of East Pakistan. Arakanese and Tibetan-Burman tongues are spoken in Sylhet, Chittagong Hill Tracts and Mymensingh districts of East Pakistan. Khowar and Kohistani are the mother tongues

for substantial numbers in the Malakand Frontier Agency of the North-West Frontier Regions.²⁵

Many Pakistanis are multi-lingual and data were also collected on languages commonly spoken. Table XI shows the figures for languages spoken by more than one million people. Persian and Arabic, prestige languages in Pakistan, are also included. Multi-lingual speakers make the total number of speakers of the different languages greater than the total population.

Bengali was spoken by 56 per cent of the population, Punjabi by 29 per cent, Urdu by 7.3 per cent, Sindhi by 5.9 per cent, English by 1.9 per cent and Baluchi by 1.5 per cent.

TABLE XI

Number of Pakistanis able to speak Nine Main Languages, 1951

Language	Number in thousands	Percentage of total population
Bengali	41,292	56.0
Punjabi	21,467	29.0
Urdu	5,419	7.3
Sindhi	4,359	5.9
Pushtu *	3,590	4.9
English	1,377	1.9
Baluchi	1,075	1.5
Persian	227	0.31
Arabic	65	0.09

* The Frontier Regions are not included in this enumeration. Thus, the Pushtu speakers are less than those listed as giving Pushtu as their Mother Tongue. The Frontier Regions are also excluded from total population in this Table.

Urdu was spoken by twice as many as those who considered it their mother tongue. The difference was even more pronounced for English, a mother tongue for a few thousand but spoken by nearly 1.4 million.

It is probable that the number of Urdu speakers was somewhat understated. Slade comments that "at the time of the Census there was a great deal of agitation afoot in connection with the State language question

²⁵ Ibid, pp. 68-69.

and . . . possibly the census record of the number of persons in East Pakistan who can speak Urdu is an understatement. . . . The number of Urdu speakers in the Punjab . . . seems very low when it is considered that, at least in the towns, most persons whose mother tongue is Punjabi can speak and understand Urdu."²⁶

There are four major language groups found in Pakistan: Indo-European, Austric, Dravidian and Tibetan-Burman. Speakers of Indo-European languages made up 99 per cent of the population in 1951 and the other three groups were used by the remaining one per cent.

Languages of four branches of the Indo-European group are spoken in Pakistan. Indo-Aryan branch languages were used by about 90 per cent of the population and include Bengali, Sindhi, Urdu and Punjabi. Iranian branch languages include Pushtu, Baluchi and Persian and were spoken by 6.7 per cent of the population. English from the Teutonic branch was spoken by 1.9 per cent. The Dardic branch is found in the mountainous Himalayan part of West Pakistan and was spoken by less than one per cent.²⁷

While Pakistan contains many languages, the country is a far more homogeneous linguistic entity than India. Fifteen languages were listed in the Indian Constitution.²⁸ These were spoken by 324 million people in 1951. In addition, there were another six languages with more than one million speakers and a total of 48 with more than 100,000 speakers. Finally, there were 782 other languages spoken by less than 100,000 people.

Languages from the Indo-European family predominated and were spoken by 72 per cent of the Indian population. However, unlike in Pakistan, the non-Indo-European languages were quite significant in India. Languages belonging to the Dravidian family

²⁶ *Ibid*, p. 70.

²⁷ The philological divisions correspond to those of Sir George Grierson's *Linguistic Survey of India*.

²⁸ These were Hindi, Urdu, Hindustani, Telugu, Tamil, Punjabi, Kannada, Marathi, Gujarati, Kashmiri, Oriya, Bengali, Malayalam, Assamese and Sanskrit.

were spoken by 22 per cent of the population and tribal languages in the Austric family by 2 per cent of the population.²⁹

F. Literacy

The 1951 census defined a literate person as someone able to read any language in clear print. By this definition 18.9 per cent of the population were classified as literate. In East Pakistan, 21.1 per cent of the population was literate; in West Pakistan, 15.4 per cent and in the Karachi Federal area, 31.4 per cent.

The 1931 census used a stricter definition for literacy — the ability to read and write a simple letter in any language. The 1961 census used still another, describing literacy as "ability to read with understanding a short statement on everyday life in any language". According to the 1961 definition, 15.3 per cent of Pakistanis were literate. The percentage of literacy was 17.6 in East Pakistan, 11.7 in West Pakistan and 31.3 in Karachi.

TABLE XII

Pakistan: Percentage of Literacy, 1951-61 *

	1951	1961
East Pakistan	21.1	17.6
West Pakistan	15.4	11.7
Karachi	31.4	31.3
All Pakistan	18.9	15.3

* Defined as ability to read clear print in 1951 and as ability to read with understanding a short statement on everyday life in any language in 1961.

The 1951 census also collected data on the languages which people were able to read or write. The data showed that over 7.6 million were able to read Bengali, nearly 2.8 million Urdu and 2.4 million English. Sindhi was read by 363,000, Arabic by 321,000 and Persian by 255,000. There

²⁹ R. A. Gopalswamy, *Census of India. Paper No. 1, Language, 1951 Census* (Delhi, Government of India Press, 1954), pp. 6-19.

were, however, another 6.5 million Pakistanis who claimed ability to read the Holy Koran in Arabic.

The changing of definition makes a meaningful comparison of literacy in recent censuses difficult. It is, however, possible to compare the 1951 data on the ability of people to write the chief language of the province with the 1931 literacy figures for Muslims. On the basis of this comparison, Slade concludes that there was a considerable rise in literacy from 1931 to 1951.³⁰ The emphasis currently being placed on education should result in further rises in the levels of literacy in succeeding censuses.

TABLE XIII

Pakistan: Literacy rates in various Languages, 1951

	Read and write	Read only	Total literate	As per cent of total literates
			(Thousands)	
Bengali	5,948	1,717	7,655	55.0
Urdu	2,360	427	2,787	20.0
English	1,953	452	2,405	17.3
Sindhi	317	46	363	2.6
Arabic	172	149	321	2.3
Persian	211	44	255	1.8
Punjabi	54	40	94	0.7
Pushtu	23	9	32	0.2
Baluchi	2	—	2	—

A comparison of Table XIII and Table XI shows considerable variation in the significance of different languages as written or oral media for communication. Bengali is the leading language, both written and spoken; however, Urdu and English are both much more important as written languages. Punjabi and Pushtu are important spoken languages, but hardly ever written. Sindhi is important regionally, both as a written and spoken language.

Urdu serves as the *lingua franca* of West Pakistan and is generally the language of instruction at the primary and middle school level. Sindhi is used as a written language in Sindh. In the Punjab and NWFP, Urdu

is the written language although Punjabi and Pushtu are the spoken languages.

The reorganization of West Pakistan as a single province in 1956 and the subsequent adoption of Urdu as the official provincial language are likely to result in its increased use and development.

English was the language of administration and business and the medium of instruction in high schools and colleges. The most influential newspapers also use English, rather than Urdu or Bengali. It was more important as a written than a spoken language since many who use it in their work do not speak it in everyday life.³¹

G. Educational Composition

In 1951 Pakistan had 4.3 million graduates of primary schools, 1.7 million who had finished middle school, and 522,000 high school graduates. There were 86,000 holders of college degrees and 22,500 who also had advanced degrees.

East Pakistan had slightly over 3 million of those who finished primary school while West Pakistan had approximately 1.2 million. There were over 1.1 million middle school graduates in East Pakistan and just over 0.5 million in West Pakistan.

The difference between provincial educational achievement was less marked at higher levels. There were 282,000 matriculates in East Pakistan and 200,000 in West Pakistan. The eastern province had 40,000 degree holders, the western 35,000. West Pakistan was actually ahead with regard to advanced degree holders with 11,000 to 8,000 for East Pakistan.

Looking at the country as a whole, in terms of percentages, 5.6 per cent of the population completed primary school education in 1951, 2.2 per cent middle school, 0.7 per cent matriculation, 0.7 per cent were college graduates, and 0.03 per cent holders of advanced degrees.

The Karachi Federal Capital Area showed the highest educational level proportionately, with 8.2 per cent of its population primary school graduates, 3.7 per cent middle school, 3.2 per cent matriculates, 0.8 per cent college degree holders and 0.03 per cent advanced degree holders.

³⁰ Slade, *op. cit.*, pp. 77-78.

³¹ *Ibid*, pp. 72-76.

TABLE XIV

Pakistan : Educational Levels, 1951 (thousands)

Area	Primary School Graduates	Middle School Graduates	Matriculates	B. A.	Advanced Degrees
East Pakistan	3,002	1,149	282	41	8
West Pakistan	1,157	502	200	35	11
Baluchistan	20	10	6	1	—
N.W.F.P.	122	49	23	4	1
Punjab	937	420	158	27	9
Sind	78	23	13	3	1
Karachi	98	45	38	10	3
All-Pakistan	4,256	1,695	522	86	23

TABLE XV

Pakistan : Educational levels, 1951 as per cent of total population

Area	Primary School Graduates	Middle School Graduates	Matriculates	B. A.s	Advanced Degrees
East Pakistan	7.1	2.7	0.7	0.1	0.02
West Pakistan	3.6	1.5	0.6	0.1	0.03
Baluchistan	1.8	0.9	0.5	0.09	—
N.W.F.P.	2.1	0.8	0.4	0.07	0.02
Punjab	4.5	2.0	0.8	0.1	0.04
Sind	1.6	0.5	0.3	0.06	0.02
Karachi	8.2	3.7	3.2	0.8	0.25
All-Pakistan	5.6	2.2	0.7	0.1	0.03

East Pakistan compared favourably with Karachi at the primary and middle school levels with 7.1 per cent and 2.7 per cent respectively of its population having completed this much schooling. However, it fell behind in more advanced education. Only 0.7 per cent of East Pakistanis were matriculated, 0.1 per cent college graduates and 0.02 per cent holders of advanced degrees.

West Pakistan had the lowest all-round educational achievement, although it had a higher percentage of advanced degree holders than East Pakistan. At the primary school level, only 3.6 per cent of the West Pakistan population had completed primary school, 1.5 per cent had finished middle school, 0.6 per cent were matriculates, 0.1 per cent college degree holders and 0.03 per

cent holders of advanced degrees. Within West Pakistan, the Punjab showed the most progress and Sind the least.

H. Religious Composition

Pakistan is undoubtedly a Muslim state, but not every Pakistani is a Muslim. The 1951 data for the country as a whole indicated that 85.9 per cent were Muslims, 12.9 per cent were Hindus (5.7 per cent Caste Hindus and 7.2 per cent Scheduled Caste), 0.7 per cent Christians and 0.5 per cent belonged to other religious groups.

In East Pakistan, Muslims were only 76.8 per cent of the population, 9 per cent less than the national percentage. Hindus were 22.0 per cent, nearly one quarter of the provincial population (Caste Hindus 10 per cent and Scheduled Castes 12 per cent). Christians were 0.3 per cent and Buddhists were 0.8 per cent.

In West Pakistan, the Muslim percentage was 97.1, Hindus were only 1.6 per cent (Caste Hindus 0.5 and Scheduled Castes 1.1 per cent). Christians were 1.3 per cent.

Most West Pakistani Hindus lived in Sind where they constituted almost 10 per cent of the provincial population. The Christian population in West Pakistan was concentrated in the Punjab. A tiny 5,000 member Parsi community was almost entirely located in Karachi.

TABLE XVI

Pakistan : Religious Composition, 1951 as per cent of total population

	Pakistan	East Pakistan	West Pakistan
Muslim	85.9	76.8	97.1
Caste Hindu	5.7	10.0	0.5
Scheduled Caste	7.2	12.0	1.1
Christian	0.7	0.3	1.3
Buddhist	0.4	0.8	—
Other*	0.1	0.1	—

* Includes Parsis—5,356; Tribals—30,278; and other or no religion—11,792.

The religious composition of Pakistan in 1951 differs radically from the 1941 pattern. After partition, over seven million Muslim refugees emigrated from India and a somewhat smaller number of Hindu and Sikh refugees emigrated from Pakistan.

M. H. Masood, Provincial Census Superintendent for the Punjab, writes that "the composition of the population by religions has undergone a complete metamorphosis in the Punjab and Bahawalpur State. With the departure of Hindus and Sikhs en bloc on the one hand, and the influx of Muslim Muhajirs (refugees) on the other, the whole territory now consists of Muslims with a sprinkling of Christians and others."³²

In the NWFP, the proportion of Muslims rose from 91.7 per cent in 1941 to 99.8 per cent in 1951. Hindus who were 5.9 per cent and Sikhs 1.9 per cent in 1941 migrated to India after partition leaving the population almost entirely Muslim.³³

In Sind, the proportion of Muslims rose from 73.2 per cent in 1941 to 90.1 per cent in 1951. Caste Hindus, who were 20.9 per cent in 1941, declined to 2.9 per cent in 1951. Over 750,000 Caste Hindus left Sind after partition. Scheduled Caste Hindus, on other hand, rose from 5.2 per cent in 1941 to 6.9 per cent in 1951. Unlike Caste Hindus they did not emigrate to India.³⁴

In East Pakistan, the decrease of the Hindu population between 1941 and 1951 was less marked than in West Pakistan. Twenty-eight per cent were Hindus in 1941 and twenty-two per cent in 1951, a 6 per cent drop. The Muslim percentage in the same period rose from 70.3 per cent to 76.9 per cent.³⁵

³² M. H. Masood, *Census of Pakistan, 1951, Vol. V, Report and Tables, Punjab and Bahawalpur State* (Karachi, Manager of Publications, Government of Pakistan), pp. 56-57.

³³ Sheik Abdul Hamid, *Census of Pakistan, 1951, Vol. IV, Report and Tables North-West Frontier Province* (Karachi, Manager of Publications, Government of Pakistan) pp. 22-23.

³⁴ Zul Hassan, M. I. Abbasi, *Census of Pakistan, 1951, Vol. IV, Sind and Khairpur State, Report and Tables*, (Karachi, Manager of Publications, Government of Pakistan), pp. 18, 33-35.

³⁵ Slade, *op. cit.*, p. 27.

I. Occupational Composition

The data on occupational composition showed that 30.7 per cent of Pakistan's population in 1951 belonged to the labour force, 0.6 per cent were self-supporting without working and 68.7 per cent were dependents.

The labour force was divided into two major categories — agricultural and non-agricultural workers. The former represented 23.2 per cent and the latter 7.5 per cent of the population of the whole country. Thus, three out of four Pakistani workers were engaged in agriculture and just one in four in non-agricultural activity.

East Pakistan and West Pakistan each had 30.7 per cent of its population in the labour force. East Pakistan had 0.3 per cent self-supporting without working while West Pakistan had 0.9 per cent. East Pakistan had 69 per cent dependents and West Pakistan 68.4 per cent.

However, the composition of the labor force in each area was substantially different. East Pakistan had 25.6 per cent of its population engaged in agricultural work and 5.1 per cent in non-agricultural work. West Pakistan, on the other hand, had only 20.1 per cent in the agricultural and 10.6 per cent in the non-agricultural category.

TABLE XVII

Pakistan's occupational composition, 1951 as per cent of total population

Category	All Pakistan	East Pakistan	West Pakistan
Labor Force			
Agricultural	23.2	25.6	20.1
Non-Agricultural	7.5	5.1	10.6
Total	30.7	30.7	30.7
Self-supporting persons not in Labor Force	0.6	0.3	0.9
Dependents :			
Under 12 years	n.a.	36.3	35.8
Over 12 years	n.a.	32.7	32.6
Total	68.7	69.0	68.4

n.a. — Not available.

India in 1951 had 29.2 per cent of its population in the labor force (19.9 per cent in agricultural, 9.3 in non-agricultural work) and 70.8 per cent dependents. The latter group included part-time wage earners.³⁶ In comparison with India, Pakistan had a slightly larger portion of its population engaged in agricultural work and a smaller share in non-agricultural work. India's occupational pattern was quite similar to that of West Pakistan.

Table XVII shows that agriculture was the principal occupation in Pakistan. East Pakistan was, however, far more dependent on agriculture than West Pakistan. The ratio of agricultural to non-agricultural workers in East Pakistan was five to one, in West Pakistan it was only two to one.

Non-agricultural labor was broken down into fourteen categories. For the country as a whole, the two most important groups, with 22.4 per cent each, were skilled manufacturing and unskilled labor. East Pakistan had 19.8 per cent in skilled manufacturing while West Pakistan had 24.1 per cent.³⁷ In the unskilled labor group, East Pakistan had only 14.2 per cent while West Pakistan had 27.8 per cent.

The commercial group, which included tradesmen and shop-keepers, was third in importance for the country as a whole, constituting 18.7 per cent of the non-agricultural labor force. In East Pakistan, it was more important than skilled and unskilled labor, engaging 23.1 per cent of the non-agricultural workers. In West Pakistan, only 15.8 per cent was in the field of commerce.

Administrative workers, who included most civil servants, represented 9.3 per cent for the country as a whole and nearly like percentage in East and West Pakistan.

Fishermen were only 3.7 per cent for all-Pakistan but 8.5 per cent in East Pakistan where fishing is a major occupation. In West Pakistan, it was less than one per cent.

³⁶ Gopalswamy, *Census of India, 1951, Vol. I, Part I-A-Report* pp. 88-92.

³⁷ Slade, *op. cit.*, p. 107.

TABLE XVIII

Pakistan : Occupation of Non-Agricultural Labour Force, 1951

As per cent of total population

	Pakistan	East Pakistan	West Pakistan
Skilled			
Manufacturing	22.4	19.8	24.1
Unskilled Labor	22.4	14.2	27.8
Commerce	18.7	23.1	15.8
Administrative	9.3	9.5	9.2
Domestic Servants	6.4	5.9	6.8
Other Services	5.4	2.8	7.2
Professional & Technical	4.1	5.5	3.1
Fishing	3.7	8.5	0.6
Transport	3.5	5.3	2.3
Food & Drink	1.9	2.9	1.2
Police, Fire, etc.	1.7	1.7	1.6
Mining	0.2	0.1	0.2
Forestry	0.2	0.5	0.1
Other	0.1	0.1	—

It is difficult to compare this information with the occupational data collected in India because the classification system differs. However, it appears that a larger proportion of the Indian population was engaged in skilled manufacturing, food and drink, forestry and mining groups.

The information on the occupations of non-agricultural labor again underlines the relatively greater economic diversification in West Pakistan. Skilled manufacturing workers and unskilled labor comprised about 52 per cent of non-agricultural labor in West Pakistan compared to 34 per cent in East Pakistan.

The variation in the figures for the fishing and transport groups is explained by the greater significance of these industries to East Pakistan. The many rivers that criss-cross East Pakistan provide fish as part of the staple diet of the province and also serve as the main transport artery for passenger and goods traffic.

5. SUMMARY AND CONCLUSIONS

Pakistan has a large and rapidly growing population : In 1951, 75.8 million ; in 1961, 93.8 million. The increase between 1951 and 1961 was 18 million or 23.7 per cent. If the population increases at the same rate in the next decade, there will be 116 million Pakistanis in 1971.

Pakistan has jumped from being the seventh to the fifth largest nation in the world. Only Communist China, India, the Soviet Union and the United States have more people.

The distribution of Pakistan's population is uneven. Crowded East Pakistan contains more than 50 million people. West Pakistan has the remaining 43.8 million. With a per square mile density of 922 in 1961, East Pakistan is one of the most densely populated agricultural areas in the world.

West Pakistan's density of 136 per square mile is far less than East Pakistan's. However, the most fertile areas of West Pakistan are relatively thickly populated and half the province contains uninhabitable mountains or desert. In recent years, the population of West Pakistan has been increasing at a faster rate than that of East Pakistan. As a result, the difference in numbers between the two areas has narrowed substantially.

Pakistan has an extremely young population. More than one fourth of the population is less than ten years of age. A very small percentage reach the age of 60 ; however, longevity is increasing.

There is a sizeable excess of males over females. The male excess was 110 for every 1000 females in 1961. It was 112.8 in 1951. Practically all Pakistanis get married and only a very small proportion remains bachelors and spinsters. The age at marriage is quite young, but is rising.

The population is overwhelmingly rural. Just a fraction above 10 per cent lived in urban areas in 1951. Pakistan's urban percentage has, however, risen appreciably since 1941. Pakistan in 1961 had two cities with more than one million population and sixteen with greater than 100,000. East Pakistan is far less urbanized than West Pakistan.

Pakistan is a multi-lingual state. Seven languages were spoken by more than a million people each in 1951. Bengali was the principal language spoken by more than half of the population. Punjabi was spoken by more than 20 per cent. Pushtu, Sindhi, Urdu, Baluchi and English were the other languages spoken by more than a million. Bengali was also the primary written language, followed by Urdu and English.

The percentage of literacy is relatively low, but is increasing. The rate of increase is difficult to measure since succeeding censuses have changed their definition of the term. The extent of educational achievement in 1951 was in line with the low degree of literacy. Out of 75.8 million Pakistanis, only 0.7 per cent were college graduates.

The population was principally Muslim in 1951. Slightly less than 15 per cent followed other faiths. The bulk of non-Muslims lived in East Pakistan, where Caste and Scheduled Caste Hindus comprised 20 per cent of the provincial population.

The labor force in Pakistan was primarily engaged in agricultural work. Non-agricultural activity occupied only 25 per cent of the total labor force and was more significant in West Pakistan than in East Pakistan. In West Pakistan it occupied one third of the labor force, in East Pakistan only one sixth.

How do the populations of India and Pakistan compare? In 1961 Pakistan had 93.8 million and India 436.4 million. Pakistan's growth between 1951 and 1961 was slightly larger than India's in terms of percentage. India registered an increase of 22.8 per cent and Pakistan 23.7 per cent. The population density in 1961 was higher in India, with

374 people per square mile to Pakistan's 257 per square mile.

The age, sex and marital compositions of the two countries are similar. There are, however, some differences in the respective rural-urban ratios and occupational compositions. Pakistan is appreciably less urbanized than India and also has a larger share of its labor force engaged in agriculture.

The most striking differences between the two countries are the religious and linguistic compositions. Pakistan is primarily a Muslim country with a relatively small Hindu minority. India is just the opposite — primarily a Hindu country with a relatively small Muslim minority.

From the standpoint of linguistic composition, Pakistan is a more homogeneous country than India. Pakistan had seven languages spoken by more than one million each in 1951, while India had twenty.

The full report for the 1961 Pakistan Census will appear shortly and should make possible a more complete understanding of the characteristics of the nation's population. It will be interesting to see the information on physical and social characteristics such as age, sex, marital, linguistic and religious composition. By their nature, these characteristics have probably not changed as much from 1951 to 1961 as others like urban-rural ratio, literacy and educational and occupational composition.

Changes in these latter will be particularly useful tools in measuring the extent of progress made in Pakistan during the 1950s. The full 1961 census report should also provide material for a more thorough demographic analysis of the growth of Pakistan's population in the preceding decade and the probable future increase.

Methodological Needs in Migration Research *

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I. INTRODUCTION

The population of an area is a function of three variables: births, deaths, and migration. There are four ways in which the number of people in an area may change: (1) someone may be born in the area, (2) someone may die in the area, (3) someone may move into the area, and (4) someone may move out of the area. Consequently, demographic analysis involves creating and applying devices that will reveal reasonably accurate rates of fertility, mortality, and migration.¹ The first two variables are sometimes combined to form a composite variable: natural increase, or the excess of births over deaths.

The causes and consequences of shifting fertility and mortality rates are better understood by demographers than those thought to be associated with migration. The reason for this is that both the collection and the analysis of migration data are comparatively underdeveloped. "There has been relatively less migration research, particularly in this country, than study of fertility and mortality, in spite of a continuing interest in the subject on the part of a number of people."²

This paper attempts to explain why research techniques for studying migratory behaviour are inadequate. Comment is made on some of the principal difficulties encountered in collecting and analysing migration statistics. The paper concludes with suggestions for further development of research procedures.

II. DIFFICULTIES IN THE COLLECTION OF MIGRATION DATA

The recording of basic data concerning migration is inherently more difficult than the recording of data concerning fertility and mortality. Although the reporting and recording of births and deaths are not beyond criticism, fertility and mortality statistics are infinitely more consistent, available, and reliable than those dealing with migratory behavior. Birth and death take place at brief and definable moments, while migration is both continuous and varying. Everyone is born once and dies once; a man may migrate many times in his life—or never. The facts of birth and death are usually known; the forces generating migration are difficult to identify.

Seven factors appear to be responsible for the difficulty in obtaining accurate migration statistics. First, there is the decision concerning the selection of the political unit that is of greatest relevance in recording the data. The proportion of "movers" who are defined as "migrants" varies considerably, depending on which political boundaries are used to establish migrant status. For example, of the 15.7 million Americans who moved to a different county between 1935

* Valuable editorial and stylistic contributions were made by Don J. Hager of Los Angeles State College, to whom appreciation is herewith offered.

¹ It is customary to treat in-migration and out-migration as the same phenomenon, based partly on the fact that they are complimentary—that is, every in-migrant to one area is also an out-migrant from another area.

² John K. Folger, "Models in Migration," in Milbank Memorial Fund, *Selected Studies of Migration since World War II*, New York, 1958, pp. 155-165.

and 1940, 6.5 million (41%) moved between states, 4.2 million (26%) moved between divisions, and only 3.0 million (19%) moved between regions.³ Here, the number of "migrants" depends on the selection of the smallest unit used in the given study; a man moving from New York City to Philadelphia is a state-to-state migrant, but not a region-to-region migrant.

Second, in making this decision, the demographer is normally restricted to data collected on the basis of existing territorial units. Thus, the scope of his decision is delimited by the frequency of existing political boundaries. A man moving any given distance may or may not be recorded as a migrant; if at the end of his move he is in a different political entity than at the beginning of the trip, he enters the migration tables — otherwise, he is referred to as a person who has moved locally, but is not recorded as a migrant. In the United States, a man may travel two thousand miles and not be regarded as an international migrant; this would be impossible in Europe. Under these circumstances, comparison of European and North American migration data is extremely restricted. Unless the research demographer is able to perform a complete origin-destination study, he must work with existing data tabulated in conformity with existing political units and their boundaries.

Third, the regularity of the boundaries is important. Anyone who has driven west along Route 50 from Annapolis, Maryland, might recall that he successively passed through Maryland, the District of Columbia, Virginia, West Virginia, Maryland, and West Virginia. The south-eastern corner of Missouri presents similar minor irritations to the demographer as well as to the traveller. Whenever political boundaries are irregular, migration statistics take on a confusing quality, since the decision to include a mover in the migration tables is partially determined by the existence of arbitrary boundary lines.

Fourth, changes in the boundaries interfere with comparability over any extended period of time. Comparability of migration statistics in Europe is seriously affected by the frequent territorial exchanges created by the vicissitudes of international politics. Also, boundary changes may create "migrants" even though no one physically moved, as in the case of the shifting of allegiance of Alsace and Lorraine (and consequently of their stationary inhabitants) between France and Germany.

Fifth, knowledge of the purpose of the move is critical. Motive is implicit in the thinking of demographers when defining what constitutes a migrant. A temporary change of locale does not constitute migration, but it is not always possible to separate the permanent from the short-term mover. The traveller's purpose may be unknown to authorities, either because it is not asked, or because it is misrepresented, or because it is not understood by the traveller himself. If a man is taking a summer vacation trip or commuting to work, he certainly should not be considered a migrant, but if he is making a permanent change of residence or taking another job, he is clearly a migrant. However, it is not always possible to obtain accurate statements of intent, particularly from persons crossing an international boundary who would like to settle in the country of destination but who are not willing to make a declaration of that objective. Furthermore, purposes sometimes change; as in the case of the man who came to dinner, a temporary visit may be lengthened by unforeseen circumstances or by a change of heart—or disenchantment with the new area may make the prospective settler return to his former place of residence.

Sixth, the time period selected is also important. Three Census Bureau surveys show the following results:⁴

⁴ These surveys are reported in U. S. Bureau of the Census, "Internal Migration in the United States: April 1940 to February 1946," Series P-S, No. 11, December 6, 1946, Table 2, p. 4; averages were computed by Abram J. Jaffe, *Handbook of Statistical Methods for Demographers*, U. S. Bureau of the Census, Washington, 1951, pp. 183-184.

³ U. S. Bureau of the Census, 1940 Census of Population, "Internal Migration, 1935 to 1940: Age of Migrants," Washington, 1946, Table I: Migrants Classified into Types on the Basis of Areas Involved, for the United States: 1940, p. 2.

Period of Migration	Number of Months	Number of Migrants	Average Number of Migrants per Month
August 1945-February 1946	6	8,110,000	1,352,000
December 1941-March 1945	39	15,330,000	393,000
April 1940-February 1946	70	19,520,000	279,000

Jaffe concludes that "apparently, the longer the time period, the greater will be the absolute number of migrants. However, the longer the time period, the smaller will be the number of migrants per unit of time."⁵ Obviously, the longer the period, the greater the chance for migration. The monthly average decreases with time because of return migrations and incomplete reporting due to death of the migrant, faulty memory, or loss of records. Data collected over a ten-year period will yield different results from data collected for each of the ten years separately. The larger time period tends to cloak moves (reciprocal moves cancel each other out, for example).

A final source of inaccuracy is multiple migration by the same person, which may result in the omission of moves and/or migrants from recorded statistics. Usual methods of collecting data do not identify more than one move per person for any given time period. For example, during the fourteen months from August 1945 to October 1946, 10,717,000 civilian Americans moved. Of these, 9,610,000 (90%) moved once, 833,000 (8%) moved twice, 202,000 (2%) moved three times, 45,000 (0.4%) moved four times, and 28,000 (0.3%) moved five or more times.⁶ Had the Bureau of the Census not made a special survey, only the total, 10.7 million, would be known, obscuring the fact that there were at least 13.3 million moves made during that period. Multiple moves are often omitted in public or other migration reports.

When these seven weaknesses are supplemented by the usual problems of insufficient

research funds, uncertain use of the data, inadequately trained personnel, and mistakes in tabulation and arithmetic, it is obvious why valid and reliable migration statistics are difficult to obtain. Nevertheless, reliable migration data do exist — data that are often fully acceptable. These strictures do not imply that all migration statistics are suspect and unsatisfactory. In practice, it is possible to avoid as well as to overcome certain of the difficulties described above.

III. INADEQUACIES IN THE ANALYSIS OF MIGRATION DATA

There are considerable differences in the advancement and refinement of methodological accomplishments within the field of population analysis. Fertility and mortality studies rest on much more rigorous methodologies than migration. Prominent among research tools for analyzing fertility and mortality are (1) the life table; (2) various crude, corrected, standardized, and age-specific birth and death rates; and (3) generational measures of replacement. In contrast to this array, there are no widely accepted sophisticated statistical techniques for the analysis of migration.

Contemporary techniques for the study of migration tend to be inadequate because: (1) the time dimension is ignored, except in interpretation, where it is given qualitative attention only (excepting an occasional attempt to compute periodic rates—for instance, Jaffe's monthly rates cited above); (2) spatial factors are not systematically employed, and their use is generally limited to qualitative remarks such as "Since California is larger than Oregon, migration rates will differ accordingly," or "Certainly, the relative distance between places affects the tendency to migrate"; and (3) size of

⁵ Abram J. Jaffe, *op. cit.*, p. 184.

⁶ Current Population Reports, "Post-war Migration and Its Causes in the United States: August 1945 to October 1946," Series P-20, No. 4, October 7, 1947, Table I, p. 2.

population is considered quantitatively only occasionally, when a simple rate is obtained by dividing the number of migrants by the total population. In sum, we measure migration as the number of migrants from A to B over a given time, usually followed by the remark that the meaning of the figure obtained is affected to some unknown extent (although generally the direction of the effect is known) by the length of the time period, by the frequency of boundary lines, by the distance moved, by the relative densities of population over the area studied, and by the magnitude of the base population. Unfortunately, we are unable to specify the extent to which each of these variables affects the meaning of migration figures. While this level of analysis has utility, its weaknesses reflect the fact that techniques of migration analysis are not commensurate with those currently employed in the study of fertility and mortality.

Another problem is that migration involves four sub-variables: in, out, gross, and net migration. Migration studies rarely treat all four; their selection is generally determined by the relevance of each sub-variable to questions dictated in the research. Net migration is probably the most frequently used sub-variable, but since it often obscures large but counterbalancing inward and outward movements, many studies examine three sub-variables. Gross migration is not commonly used.

IV. SUGGESTIONS FOR METHODOLOGICAL RESEARCH

Given current increases in internal migration in most countries and continuing concern with world migration, the importance

of understanding migration trends can hardly be overstressed. Research tools for collecting and analyzing data on migration are inadequate. Although scores of demographers and sociologists are working hard to fill this intellectual cavity, no one will contend that the literature on the subject is awe-inspiring.

The history of science is in large part a history of increasing quantification. Sociology and demography are no exceptions to this rule. Social scientists continue to evolve quantitative techniques for the analysis of various demographic phenomena, but it is notable that J. Hajnal, in a recent article on mathematical models in demography⁷ cites models involving fertility, mortality, natural increase, and marriage, but not migration — a significant revelation.

Approaches to the quantification of migration phenomena could be developed using mathematical or statistical ideas such as those implicit in decision theory or the theory of games. Direction cosines might be useful; the directional derivative (employing partial differentiation) could provide a gradient showing how the number of migrants changes with distance from the point of origin or destination; in this way, a theoretical gradient could be compared with the actual frequencies. Vector analysis ought to be fruitful; the correspondence between migration and the three aspects of a directed line segment are as follows:

⁷ J. Hajnal, "Mathematical Models in Demography," in *Population Studies: Animal Ecology and Demography*, Cold Spring Harbor Symposia on Quantitative Biology, Volume XXII, 1957, pp. 97-102 (Discussion, pp. 102-103).

Mathematical term	Geometrical meanings	Migration significance
Magnitude	Length of line	Distance migrated
Direction	Angle of line with axis	Point of compass
Sense	Positive or negative	In- or out-migration

Using a cylindrical or spherical co-ordinate system to describe distance, direction, and gross number of migrants in a three-dimensional frequency distribution, the second moment (moment of inertia or radius of gyration) about the point of destination would be a measure of positive attraction, and the second moment about the same point, taken as a point of origin, would be a measure of negative attraction or repulsion. Using net migration about the point, it should be possible to measure its net attractive force for migrants.

A rough analogue of the life table population is a table of "standard million migrants." This table would show, for a universe of one million people, the number of migrants from every area to every other area within the given universe. As the life table shows the mortality of an area given the age-sex-specific characteristics of the people, so the standard million table is a theoretical statement of what would be the migration experience of the cohort given certain characteristics of the areas and/or their inhabitants. (Selection of which spatial, social, or economic characteristics are most relevant requires further research.) Another approach is related to the stable-stationary population concept of Lotka. This idea involves treating computed migration frequencies as rates to be applied at specified time intervals (say, every five years) until a certain critical point is reached or for a specified number of periods.

The Markov process suggests a probability model for the description of migration between any finite number of areas over any given time period, enabling us to (a) compare migration in different places and times, (b) project these movements into the future, (c) estimate eventual stable population distributions, and (d) estimate how long it will take to reach stability. Here the reasoning reminds one of the life table population. Two kinds of transition probability matrices are relevant: simple first-order matrices in which P_{ij} is the probability that a resident of area i at the beginning of the time period will reside in j at the end of the period, and modified first-order matrices in which M_{ij} is the

probability that a migrant from area i will reside in area j at the end of the time period. Further modifications could provide for changes in transition probabilities according to the previous history of the person, his age, business cycles, and so forth. Higher order Markov chains can be found for both simple and modified cases to estimate migration after two, three, or more time periods. For example, what is the probability that a resident of i in 1945 will reside in j in 1960, 1970, etc.? Perhaps other stochastic processes may also be relevant for migration research.

Another method⁸ involves comparison of migration rates by controlling for relevant spatial variables, in somewhat the same fashion as standardization of fertility and mortality enables us to analyze trends in natural increase. As standardization procedures allow for differences in the age and sex compositions of populations being compared, so this technique is designed to allow for interfering spatial variables that are important in the interpretation of migration data. Seven spatial variables are particularly significant: size of area of origin, size of area of destination, shape of area of origin, shape of area of destination, distribution of population within area of origin, distribution of population within area of destination, and distance moved. By means of a primitive mathematical model, theoretical migration frequencies are calculated and then compared with actual frequencies, yielding several indices of the propensity to migrate. The model does not attempt to predict, but rather to determine the effect of these seven spatial factors in order to permit demographers to concentrate their attention on the sociological and economic variables whose effects are thus isolated.

Quantitative techniques for migration analysis are unproductive partly because basic data are insufficient, and basic data are weak partly because analytical techniques are underdeveloped; improvement in either one should encourage improvement in the other. As soon as it is clear that

⁸ Ralph Thomlinson, "A Model for Migration Analysis," *Journal of the American Statistical Association*, Vol. XLVI, No. 295, September 1961, pages 675-686.

demographers can make effective use of precise quantitative data on migration, there will be an added incentive for data-collecting agencies to improve their accuracy. "The construction of models is a guide to future research both to improve the model and to refine the measurement of the data used in the analysis."⁹

The problem should not be set so as to appear entirely a conflict of data collection versus manipulation techniques. The development of both of these aspects of demographic research is a function of advances in population theory. The devices and models described in this paper necessarily flow from some theoretical stance or set of assumptions about the nature of migration. As these assumptions change, there are alterations in the type (social, psychological, economic, etc.) of dependent variables used. (For illustration of alterations in the number and character of explanatory variables, see the literature cited earlier in this paper.) It appears that migration theory lags far behind natural increase theory—a situation implying obvious recommendations for improvement.

Thus, three dimensions of the study of migration demand attention. (a) The reliability and validity of raw or primary statistics could be increased by improvements in data-collection methods. (b) Special techniques need to be devised to facilitate statistically sophisticated analysis and interpretation of these data. (c) Demogra-

phic theory explaining migratory behavior is immature and ready for conceptual refinement. These three facets are, of course, closely interconnected; advances in any one are bound to invigorate the other two. Where each scholar applies his effort is a matter of personal commitment and occupational requisites. The field of migration studies will be strengthened by gains in each of these three dimensions.

It is possible that collection, analysis, and theory are equally in need of scholarly advancement. Nonetheless, this paper makes no attempt at equal coverage. Stress is placed on (b) because of a belief that models and other analytical devices provide the greatest prospects for contributions to migration studies over the next decade. Less emphasis is given to (a), but it must be conceded that methods of obtaining data are highly important. (c) receives the least attention because progress in theory is slow and difficult to recognize as well as because this paper is methodological by intent; needed work on migration theory is a subject for another paper.

In conclusion, the burden of this paper is that one of our greatest present demographic needs and hopes for accomplishment is the elaboration of useful methods for analyzing migration. It appears reasonable to entertain the expectation that eventually demographers will be able to dissect migration patterns with roughly the same competence and thoroughness as we now achieve for fertility and mortality.

⁹ John K. Folger, *op. cit.*, p. 155.

The United States and Population Control Programs

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The most conservative projections of population for nations such as India, Indonesia, and Pakistan reveal how futile will be the efforts to improve living standards through an increase in productivity unless there is a curtailment of existing rates of population increase. Despite the willingness of the American government to provide aid in a wide variety of forms, assistance in achieving control over population increase has not been forthcoming.

Leaders who are making such valiant efforts to lift the levels of living of their peoples must be chagrined at the failure of the United States to take forthright action toward providing needed assistance for essential population control programs. President Mohammed Ayub Khan of Pakistan in his recent visit to Washington was the latest to request such aid, but there were no indications that the Kennedy Administration would take any action. This paper represents an effort to summarize some of the factors behind the American government's reluctance to act on this urgent matter.

Consideration will be given first to the officials both executive and legislative, who are most directly involved in the shaping of foreign aid programs. Such programs must receive the support of the congress and, except in rare instances, the president. As with many other issues, the manner in which an elected official may react toward the proposal that the United States provide assistance for population control depends in some measure upon his personal convictions, and to an indeterminate extent upon his appraisal of how a particular position will effect his political career.

Supporting population control programs is, unfortunately, a position which in the

United States is sure to bring severe castigation from some quarters, and few counterbalancing accolades. The opposition has intense, often religiously based convictions on the topic; such support as exists tends to be among those with a somewhat less fervent humanitarianism. Regrettably, those who stand to gain most from the implementation of an effective population control program in the more populous lands have no political potency on the American scene. The result is that the timid and the opportunists have been quite willing to join those who by conviction want to keep American foreign aid programs free from the "birth control controversy".

As is well known, the Roman Catholic Church remains one of the most militant opponents of any program that envisions the use of contraceptives to limit births. Efforts to liberalize the anti-contraceptive legislation of Massachusetts and Connecticut have always run into massive clerical resistance.

The official position of the Roman Catholic Church is condemnatory only of the use of artificial contraceptives for preventing conception. Many church leaders, however, extend their castigations to any advocacy of population limitation. For example, The Most Reverend Joseph A. Burke, Bishop of Buffalo, in speaking to a family-life convention, strongly attacked those who warn against over-population of the earth, referring to such persons as "pseudoscientists" and "followers of the devil".¹ It is understandable that men in public life hesitate to invite such vituperative attacks.

¹ "Bishop of Buffalo Warns Against 'Pseudo Scientists'", *Utica Observer Dispatch* (July 17, 1958), page 3.

Roman Catholics constitute about 23% of the American population, according to their latest tabulation, but they are coming to exert an importance in national politics out of proportion to this percentage. In the American manner of electing a president it becomes almost essential for a candidate to win such populous states as New York, Illinois, Ohio, Pennsylvania, and Massachusetts. And it is in these states that Roman Catholics are most heavily concentrated.² It is not surprising, then, that men with lofty political aspirations take care not to offend the Catholic hierarchy merely to alleviate the hunger and suffering of millions of Asians.

The timorousness of even top level political figures in dealing with the issue of population control aid has been illustrated by both Presidents Eisenhower and Kennedy. The committee that President Eisenhower appointed to study the foreign aid program said pointedly that the aims of the program would never be achieved so long as present population increases continued, but the president immediately made it clear that he would never support the offering of population control assistance by our government.³

During the 1960 presidential campaign Kennedy met questions about issues in which his Catholicism might be a factor with great candor, with one noticeable exception. There was no forthright statement on what might be done to aid in the curbing of population increases. Several times Kennedy stressed that he would never force a program of population control on any nation — but then no one was advocating such coercion.⁴

A very different source of opposition to the United States' involvement in population control programs comes from those with economic motivations. There is a tendency on the part of influential business

interests to regard each new Indian (or Javanese or Formosan) as a potential customer for American products. These entrepreneurs would, in their own self-interest, like to increase the purchasing power of the under-developed peoples, but they see no profit in diminishing their numbers.

In a nation in which the annual agricultural problem centres around the disposal of surpluses, the populace finds it difficult to envision a situation in which it is simply impossible to produce enough food. More mouths seem like a Heaven-sent means of disposing of the chronic glut of farm products; that is, of course, so long as the mouths or their custodians have the means to pay for the needed food.

There are also those in this country who seem to consider it a matter of honor to "think positively" and "think big" about this subject. Americans are not noted for their humility in coming face to face with the challenges of nature; mountains are there to be moved, deserts to be watered, and swamps to be drained. It appears to be regarded as a sign of technological failure if an ameliorative program includes provisions for the curtailment of population increase.

Level-headed scholars may know better, but another fairly commonly encountered type of American is one who regards disparities in levels of living as due largely if not exclusively to differences in energy and ingenuity. To this type it may be worthwhile to send technicians over to teach in the underdeveloped lands, but there hardly seems need for birth control.

The conscientious legislator or the interested layman who turns to the writings of the demographic "experts" for guidance on the need for population limitation is likely to find just enough disagreement to leave him undecided. Admittedly, the great preponderance of serious students of population have long since concluded that death control without birth control is disastrous for any land. But dissenters, some carrying apparently strong professional qualifications, continue to express their view that population control is unnecessary, or at least not now.

The English Roman Catholic economist, Colin Clark, is a prominent example. *Fortune*, a Luce publication aimed especially at the businessman, published in December 1960 a Clark article "Do Population and Freedom Go Together?", in which an affirmative answer provides the theme. The reader is told that population increase provided a needed stimulus to progress for the British, Japanese, and the Dutch. One, of course, can more plausibly conclude that the population pressures in these lands led to imperialistic ventures that added nothing to the freedom of millions. The lack of population growth in pre-World War Two France is alleged to have been responsible for the stagnation of the French economy and the devaluation of the currency; the comparable difficulties that many high birth rate Latin-American countries are now having are dismissed as due to other factors.

Population control programs also do not receive support from those scholars who believe that the only effective way to depress a birth rate is by first raising standards of living. This group readily concedes that the rate of increase must be reduced, but believes that the desire to take effective control measures must arise spontaneously from within. And, it is held, such desires are an inevitable outgrowth of higher living standards. Needless to say, one gets no help from these sources on just how the desired change in conditions can be brought about while a land is exhausting itself to merely feed the annual increment of new babies.

A similar blind spot is manifested in a closely related position, one which holds that the raising of educational standards can be counted on to ultimately bring about a curtailment of birth rates. The staggering burden that present rates of increase place upon the educational system of the high birth rate lands makes proposals for drastic expansion appear completely fatuous.

Writers such as I have been referring to serve to provide some sort of forensic ammunition to those who essentially oppose aid in population control programs on non-rational grounds. They also have the effect of raising doubts among those legislators and citizens who habitually depend upon the "experts".

One ostentatiously noble position, smacking of cultural relativism, holds that it is unfair to "force" techniques of population limitation upon peoples who are obviously not interested. Holders of this view presumably ignore the entreaties of the duly elected leaders who are actively seeking this very aid.

A similar seemingly noble position maliciously attributes American interest in the dissemination of birth control information to Asian peoples to a "fear" of the growing numbers of these peoples. Such an argument might have greater plausibility if increased numbers in this case meant greater strength, in a military or economic sense. Unfortunately the reverse is true; it is the burgeoning population that is sapping the strength of the lands. It seems factually more reasonable to accuse the opponents of Asian population control of fearing the potential strength of these peoples once they attain a reasonable relationship between population and resources.

The advocate of population control measures frequently finds his position distorted so as to make it seem that he is uninterested in increasing productivity. Some detractors of population limitation speak eloquently about the possibilities of watering deserts, draining swamps, and bringing industry to the countryside. The birth control advocates must reiterate that population control is designed as an essential supplement, rather than a substitute for, a program for increasing a nation's output of goods and services.

That sizable group of Americans who believe that the "best government is the least government" cannot be looked upon to support a program for aiding population control abroad. With their inherent suspicions of all governmental activities, the unfamiliar role of a government seeking to influence family size is only regarded as indecent totalitarianism, the sort of thing that the United States should neither abet nor encourage. The growing popularity of Senator Barry Goldwater, an extreme exponent of this individualist point of view, suggests a growing center of resistance here.

Certain pro-natal influences in American culture must also be considered in account-

² According to the *National Catholic Almanac for 1960* (Paterson: St. Anthony's Guild, 1960), p. 435-6 New Jersey is 42.8%, Catholic, New York 35.30%, Illinois 33.48%, and Pennsylvania 30.8%.

³ "Text of Kennedy Statement", *New York Times* (December 3, 1959), page 12.

⁴ "Text of Eisenhower Statement", *New York Times* (November 28, 1959), page 18.

ing for the apparent tepidness with which Americans have approached their responsibilities in assisting with population control.⁵ Many depictees of American culture have commented on its "youth worshipping" ethos. The mass media—popular magazines, films, and television—seem to subscribe to the notion that the supreme pleasures of life are concentrated in the early years; after that all is anti-climax. Such a cultural emphasis is not conducive to the support of strong anti-natal measures. The aging believe that these delights of youth can be vicariously enjoyed, to a degree, through the lives of their children.

Babies, of course, are regarded with massive sentimentality. Couples who have just had another child are warmly congratulated, never consoled, no matter how inopportune is the birth. "Mothers of the year" invariably have a large brood. The large family is popularly stereo-typed as a happy one, despite the failure of sociological studies to find any confirmation for this depiction.

The cumulative effect of the several pro-natal elements in American culture that I have cited has served to produce a people who are not necessarily firmly opposed, but who are just unlikely to initiate or induce their officials to provide assistance in the limiting of population. The resultant hesitancy has no real rational basis, but it is nevertheless effective in preventing forthright action.

The evidence of growing disenchantment among large sections of the American populace with foreign aid programs in general

raises grave doubts as to the likelihood that future administrations will be more receptive to the idea of offering technical assistance on birth control. The "average American" believed that the millions that were sent overseas were to be a significant influence in relieving poverty and laying the basis for a better life; instead he keeps reading of instances where funds were misused, and he hears little that suggests that man's economic lot has been significantly improved in the areas of greatest need. He also thought that good will toward the United States would be one of the by-products of our aid programs; instead he finds that anti-Americanism is rampant in many lands that have been the major recipients of aid. Given this growing opposition to the continuance of foreign aid programs in general, it seems unlikely that those who are dedicated to their continuance will want to increase the already formidable opposition by the inclusion of the highly controversial birth control features.

To the writer the preceding facts lead to the conclusion that assistance in checking population increase will have to be obtained by interested nations from private American organizations, rather than from governmental sources. Fortunately several American foundations, with substantial economic resources, have become interested in stimulating research and spreading knowledge in this field. They are far less vulnerable to opposing pressure groups than timid politicians, with their eyes on the next election. Basic changes in American attitudes may come as the United States itself begins to feel the adverse effects of a staggering rate of population increase, but for the now heavily populated lands it would then be much too late. Help is needed now.

⁵ Dykstra, John W., "Pro-Natal Influences in American Culture", *Sociology and Social Research*, November-December 1959, pp. 79-85.

Report on a Study of Migration in Four Taluks of Bangalore District

By STIG ANDERSEN and D. BANERJI,

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INTRODUCTION

From February to April 1960 the Sociological Section of the National Tuberculosis Institute carried out a study of the migration in 35 randomly selected villages in Channapatna, Devanahalli, Magadi and Nelamangala Taluks of Bangalore District. The purpose of the study was, in the first place, to establish the rate of emigration from the villages in these taluks with a view to forecasting the likely loss of study population in a follow-up study on BCG-vaccination in this area. The opportunity was used also for studying other demographic characteristics of the population, notably birth and death rates, immigration rates and the proportion of persons temporarily absent from their normal residence. The study was also used for training a group of newly recruited social investigators in interviewing methods in social research.

POPULATION

The population included in the study was the total population of 35 villages randomly selected in the 4 taluks. The selection of the villages was done by the Statistical Section of the NTI on the basis of the 1951 Census Handbook for Bangalore District, all villages in the 4 taluks having an equal chance of being selected. Villages marked "Bechirak" were excluded.

*The field work was carried out, under the direction of the authors, by Miss G. Lalitha Kumari, Miss Susy Mathews, Miss Grace Oommen and Mr. M. K. Viswanath.

METHODS

All information was obtained by interviewing adult members of each household in the villages included. The interviews were conducted on a house-to-house basis, and the respondents were, with few exceptions, the heads of the households concerned, their wives or other near relatives. Only in the case of a few vacated houses and of temporarily absent whole families (which was somewhat more frequent), neighbours or friends had to be interviewed. In two or three cases the information had to be obtained from the patel of the village. The interview was done on genealogical lines, the interviewer trying to get a total picture of the family as many generations back as necessary to understand the complete composition of the living part of the family. The interviewer followed, with a few planned exceptions, the NTI Manual for Census Takers. The population sought was the *de jure* population during the night preceding the interview; temporarily absent persons were therefore included in the census, but marked TA, whereas temporarily present persons were excluded.

The principle of estimating the migration rates was a registration of the population of today, the population of exactly one year ago and all relevant events during the intervening year. This registration was carried out by listing each household in the following 5 categories:

- A. Persons now belonging to the household who also belonged to it one year ago.

- B. Persons born during the past year.
- C. Persons immigrated during the past year.
- D. Persons dead during the past year.
- E. Persons emigrated during the past year.

For each person the following information was registered: Name, father's name, sex, estimated age in years (for infants, in months), profession and position in family in relation to the head of the family. For persons under B (birth) also whether they had since died and for persons under C (immigrants) and E (emigrants) wherefrom or whereto they migrated and the reason for migration. Still-births were not registered.

There were several problems of interpretation of the rules, some of which were solved before and some during the work. Most were concerned with the question of whether final migration had taken place. Generally, the question was decided on the basis of the person's or his relatives' avowed or supposed intention of staying in or away from the village. Thus, a son who had gone to seek work in the city was considered an emigrant, whereas a daughter-in-law who had gone to deliver her child in her parents' village was merely considered temporarily absent. There were practically daily problems of interpretation and all doubtful cases were finally decided by one of the two sociologists who constantly supervised the work on the spot. Some problems became easier to solve when viewed "from the other end", i.e. would we have classified this emigrant or temporarily absent person as an immigrant or temporarily present person in his present residence? A few examples will show the type of decisions taken: families that had gone to seek work in Bangalore within the last year, but had retained their houses in the village and were expected back at least to sow their fields in the beginning of the rainy season were considered only temporarily absent; a 12 year old boy working since some months in a small roadside hotel with food and lodging as only pay was considered an immigrant, though he paid

regular visits to his parents' village 12 miles away; a married woman had left her husband 10 months ago to visit her parents and both husband and neighbours were positive that she would eventually return; she was classified as temporarily absent only.

Special care was taken in the case of completely vacated houses; for every house which could conceivably have been used for human habitation in the past year a careful interrogation of the neighbours was carried out.

Possible restraint on the part of respondents brought about by prejudices with regard to tax authorities or similar less popular public agencies was minimised by the interviewers' stress on the purpose being health and by the work being carried out without assistance from the conventional administrative bodies.

RESULTS

General:

The 35 villages surveyed were found to have a population of 13,838 persons at the time of the interview. This figure includes (see Appendix Table I) persons belonging to the villages both at the time of the interview and one year earlier (A) 13,183 + persons immigrated during the past year (C) 230 + the children born during the past year (B) 470 - those of these children who had since died 45 (see Table 2) = 13,838. The population one year earlier, spring 1959, was 13,645, namely (A) 13,183 + those emigrated in the ensuing year (E) 307 + those dead in the ensuing year (D) 200 - the 45 deaths which occurred among children who were born in the ensuing year. The net increase of the population from spring 1959 till spring 1960 was, therefore, 193 persons, or 14 per 1000. These figures have been compared with the official 1951 and 1941 census figures in order to check whether the present census was on the same level as the official census and to see whether the increase observed corresponds reasonably well with the increase between 1951 and 1959. The result of this comparison is

shown in figure 2¹. It is reassuring to see that the results tally so well with the official figures, partly because the results by virtue of this fact are immediately comparable to those from other sources, partly because it may be taken as an indication that the trends are reasonably stable. This latter fact is of the first importance for the possibilities of forecasting future rates (see page 77). At the same time, the comparison is a favourable comment on the method employed; it is unlikely that each of the rates are far from wrong when the net resulting change tallies so well with the change over the preceding 18 years.

Birth & Death Rates:

While the main purpose of the study was to establish the migration of the population, birth and death figures were collected as well, as described above.

The total birth rate found was 34 per 1000 (see Table 1), and if we assume that the 35 values were normally distributed around this figure, there is a 95% likelihood that the true value is between 28 and 40. Similarly, the crude death rate found was 15 per 1000, with a likely (95%) true value between 12 and 18.

An infant mortality rate can also be calculated from this material, though the estimate is somewhat more uncertain because it is based on the total number of infant deaths in one year and the total number of births in the same year, but it is unlikely that the figure should be far off the mark. The rate calculated in this way comes to 117 per 1000 births.

Little comment is called for on these rates in the present context, except perhaps that they all seem to be well within the expected range. This fact again lends support to the confidence in the general efficiency of the methods employed. It may be pertinent to compare the figures with other estimates for all India. The United

¹ The Comparison is done for 34 villages only; one village was excluded because the census figure for 1951 was obviously wrong. The figures for this village were: 1941: 932; 1951: 392 (sic); 1959: 986; 1960: 991.

Nations², for example, quotes the official Indian figures for 1957 as: birth rate: 24.2, death rate: 11.8, infant mortality: 99.9. But the paper adds the following note:

"Registered rate, not computed by the Statistical Office of the United Nations; rates estimated from comparison of 1941 and 1951 census returns, are 39.9 for births, 27.4 for deaths and 185 for infant mortality."

TABLE 1

Estimated rates of births, deaths, emigration, immigration and temporary absentees per thousand population and 95% confidence limits

No.	Category	Lower limit of confidence	Best Estimate	Higher limit of confidence
1	Births	28	34	40
2	Deaths	12	15	18
3	Immigration	13	17	21
4	Emigration	18	22	26
5	Temporary Absentees	45	55	65

Immigration & Emigration:

The total number of persons who had taken up residence in the villages surveyed during the past year was 230. That corresponds to an immigration rate of 17 per 1000. The 95% confidence limits of this estimate are 13 and 21.

The number of persons who had left the villages during the year was 307, corresponding to an emigration rate of 22 per 100 with confidence limits of 18 and 26.

This study was specifically planned to establish the likely loss of study population

² United Nations Statistical Papers, Series A, Vol. XI, No. 2, New York 1959.

for a follow-up trial in the area; and the hypothesis was that a rather large number of people were leaving the villages every year, thus rendering follow-up with a reasonable coverage impossible. This hypothesis can hardly be upheld. If no radical change occurs, and the apparent regularity of the development over the past years makes such a change rather unlikely, it can be estimated that no more than 5% of the population will be lost by emigration over a period of 2 years.

The distribution of the emigration by sex, age and destination is shown in Appendix 1, Table II and is summarised in Table 2.

About 1/3 of the emigration goes to the same taluk and 2/3 elsewhere. About 1/4 of the emigrants go to Bangalore City. It is clear from the age distribution that a good proportion of the women's emigration is because of marriage, and also that only a small proportion of the emigrants are more than 30 years old.

Persons Temporarily Absent :

During the survey, information was also collected on persons who were temporarily absent from the village. These persons were absent from their houses during the night preceding the interview and would thus not have been available for any examination, for example by X-ray or tuberculin testing. The total number of such persons was 770, corresponding to 55 per 1000 with confidence limits of 45 and 65. This figure, however, is not based on the events of a whole year, as are all the other rates given above, but only an observation during February to April. There is no doubt that absenteeism of this kind is highly seasonal and it is possible that an investigation at a different time of year would have given a rather different result. However, as this period was a marriage season (one of several) and marriage functions accounted for a large portion of the absenteeism it may be assumed that the true value for a whole year is not appreciably higher than 55 per 1000 population.

The Total Forecasted Population Loss in Two Years :

Of a population of 1000 it can be assumed that approximately 55 will be impossible to examine during the initial survey. This reduces the study population to 945.

Of the original 945 persons, we presume that 15/1000 die the first year and of the remaining persons 15/1000 die during the second year. This reduces the follow-up population to 917. Of these, a certain proportion will have emigrated, namely a presumable 22/1000 of 945 + 22/1000 of the surviving population at year 1:931 = 41. This leaves a follow-up population of 876. If we again assume an absenteeism of 55 per thousand at year 2, 828 persons will remain for follow-up. This, then, is the best estimate of the study population available after 2 years. If an estimate should be made of the maximum loss, the higher confidence limits of the temporary absentees, deaths and emigrations should be used. This gives an available study population of 798. As we want, broadly, a safe estimate rather than the least advantageous, it may be justified to conclude that a loss of 20% of the original study population is what should form the basis for further planning.

Obviously, no account has been taken in these calculations of the loss due to deficient coverage of the examinations, a factor which is likely to play an even bigger role than the factors here described. The above estimate deals with the inevitable loss, and other likely losses are considered outside the scope of this report.

CONCLUDING REMARKS

Clearly, the methods employed in the present investigation are subject to considerable error; for example, there are the important problems involved in relying on the villagers' memory over a period of one year. Therefore, all figures must be considered *cum grano salis*, and should not be lightheartedly used for purposes for which they have not been intended.

TABLE 2
Infant Mortality

	Male	Female	Total
Children born and died within last year	24	21	45
Children born during previous year and died last year	6	4	10
Total infant-deaths last year	30	25	55
Total births during last year	236	234	470
Estimated infant-mortality rate (per 1000)	127	107	117

TABLE 3
Distribution of Emigrants, by Age, Sex and Destination

Male	0-9	10-19	20-29	30 and above	Total	%
Same Taluk	11	12	10	10	43	30.7
Elsewhere	18	17	33	22	90	64.2
Destination not known	1	2	2	2	7	5.1
Total	30	31	45	34	140	100.0
Female	0-9	10-19	20-29	30 and above	Total	%
Same Taluk	8	32	9	4	53	31.7
Elsewhere	29	49	20	12	110	65.9
Destination not known	1	2	0	1	4	2.4
Total	38	83	29	17	167	100.0

APPENDIX TABLE I

Population, Birth, Death, Immigration, and Emigration in the 35 Villages

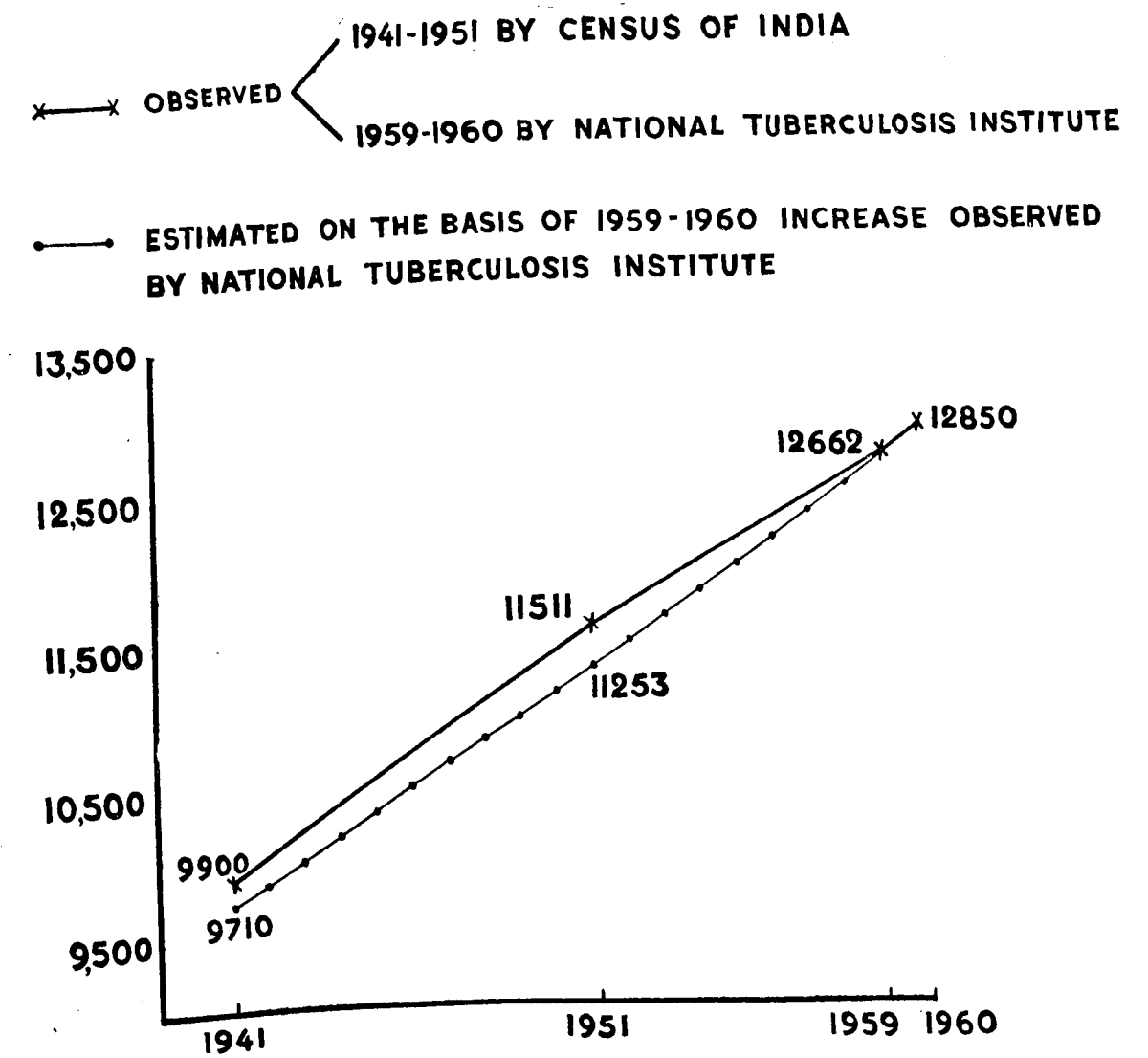
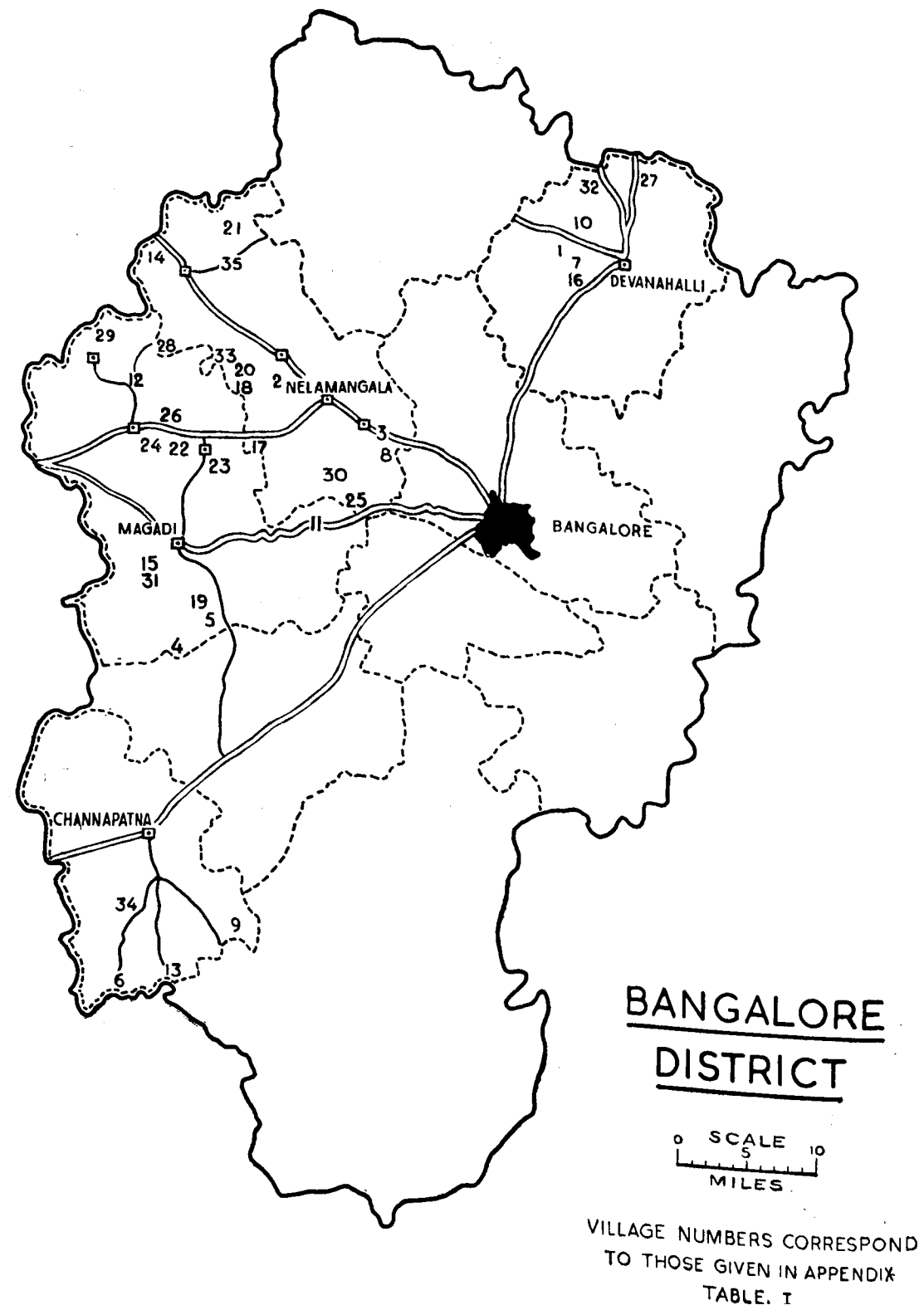
Group No.	1951 census popn.	1960 popn.* A	Births B	Immi-grants C	Deaths D	Emi-grants E	Tempo-rarily Absent TA
1	562	631	24	1	9	10	19
2	193	178	6	5	2	6	8
3	112	105	7	5	1	2	1
4	415	514	17	5	6	2	13
5	282	298	13	2	4	4	5
6	392	952	27	12	15	19	25
7	57	60	0	0	1	0	1
8	93	113	5	6	0	4	5
9	919	1,023	38	24	7	31	39
10	16	2	0	0	0	0	0
11	205	244	10	3	6	5	21
12	255	263	7	9	0	31	16
13	508	615	24	18	8	9	43
14	594	682	21	13	10	13	29
15	343	356	14	4	8	21	24
16	106	91	0	1	3	5	5
17	19	36	0	0	0	1	11
18	790	756	30	5	19	24	31
19	19	6	0	0	0	1	0
20	442	410	23	15	10	17	39
21	680	638	13	8	7	4	81
22	243	241	3	1	4	5	22
23	503	527	20	8	8	4	32
24	256	244	12	1	5	18	5
25	700	671	24	18	14	11	27
26	429	465	20	11	6	8	26
27	200	234	9	3	5	5	12
28	285	315	13	17	5	2	30
29	209	264	13	12	3	5	30
30	300	330	13	7	4	7	15
31	147	168	7	1	2	3	26
32	216	232	6	0	4	3	22
33	482	470	25	6	13	3	23
34	643	710	19	7	7	16	73
35	288	339	7	2	4	8	11
Total	11,903	13,183	470	230	200	307	770

* Persons now belonging to the households who also belonged to it one year ago.

APPENDIX TABLE II

Geographical Distribution of Emigrants — Sex + Age Breakdown

	MALE									FEMALE									Grand Total
	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70	Total	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70	Total	
Same Taluk	11	12	10	5	3	1	1	0	43	8	32	9	2	1	1	0	0	53	96
Diff. Taluk within 4	3	1	4	2	0	0	0	0	10	4	9	5	0	0	0	0	0	18	28
Same Dist. Bangalore	5	9	15	4	4	1	1	1	40	14	10	7	5	0	1	0	0	37	77
Same Dist. Diff. Taluk within 4 Not Bangalore	5	4	7	1	0	2	0	0	19	2	7	4	1	1	0	0	0	15	34
Diff. Dist. Same State	4	2	6	2	2	1	0	0	17	9	22	4	2	1	1	0	0	39	56
Other States	1	1	1	1	0	0	0	0	4	0	1	0	0	0	0	0	0	1	5
Destination not known	1	2	2	0	1	1	0	0	7	1	2	0	1	0	0	0	0	4	11
Total	30	31	45	15	10	6	2	1	140	38	83	29	11	3	3	0	0	167	307



Population Pressures and the Consumption Explosion*

By PROFESSOR S. CHANDRASEKHAR

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The world's population explosion, or rather demographic revolution, is today receiving more attention than it ever did before from thoughtful people, social institutions, business organizations and governments at many levels. Of all the problems faced by man in mid-twentieth century, none is more basic or grave than that posed by man's uncontrolled fertility. The population problem affects every aspect of man's social life—individual, national and international. It affects the health, happiness and security of individual families; it affects the economic development and social progress of nations; and it affects international security and peace, for problems of population pressure are connected, albeit latently with issues of peace and war.

WORLD POPULATION GROWTH

The facts of world population growth can be summarised briefly. Today the total world population has exceeded the three billion mark. According to some "guesstimates" there were probably no more than ten to fifteen million people in the whole world at the end of the Stone Age. At the birth of Christ the population had increased to about 250 million. In 1650 the number rose to about 500 million, and a century later, in 1750, to about 695 million. In 1850 it passed the billion mark and became 1091 million. Half a century later, at the beginning of this century in 1900, it rose to 1,500 million. But during the last sixty years (1900-60) the world population has doubled and has become three billion.

* Text of a talk delivered before a session of the International Industrial Conference jointly sponsored by the National Industrial Conference Board and Stanford Research Institute on September 12, 1961, at Mark Hopkins Hotel, San Francisco, California, with General William H. Draper, Jr., in the chair.

Thus it took man many thousands of years to multiply to a billion and a half, but it took only a little more than half a century to double that number—an incredible and unprecedented rate of increase. And now the United Nations estimates that at the current rate of increase, the world might have 6.2 billion people by 2000 A.D.!

In other words, the population of the world is increasing by about 45 to 55 millions a year—that is, the net annual addition. For thousands of years during man's early history the rate of increase of the world's population was infinitesimally slow, between .01 and .02 per cent per annum. And a few centuries ago, when man was slowly becoming the master of his environment, the rate of increase ranged between a quarter and a half of one per cent. And the annual rate of growth, which was about one per cent before the Second World War, increased to 1.6 per cent a few years ago, and today is about 2 per cent. That is, roughly, every year more than a hundred million babies are born and 50 million people of all ages die, leaving a net addition of some 50 millions to the existing population. As Professor Kingsley Davis aptly puts it, "Viewed in the long run perspective, the growth of the earth's population has been like a long, thin powder fuse that burns slowly and haltingly until it finally reaches the charge and then explodes."

Of these three billion people, Asia claims over one-half. Today Asians are increasing faster than Europeans and at the current rate of increase Asia might have to take care of 60 per cent of the total world population by 2000 A.D., an increase Asia can hardly afford at the present rate of her economic development and social progress.

DECLINING DEATH RATES

This tremendous increase in the world's population, particularly in Asia, in recent years is due to man's increasing control over disease and death. The effectiveness of death control is not uniform all over the world, for while the death rate in the more advanced and civilized countries of the West is about 10 per thousand, the rates in Asia are relatively high—about 30 to 35 per thousand in Burma and Nepal, and about 15 per thousand in India and Indonesia.

However, during the last decade and a half, since the termination of the Second World War, the death rate in many Asian countries has begun to decline, thanks to the work of the World Health Organization, American technical aid and the efforts of various national governments, providing a modicum of modern sanitation, environmental hygiene, health education, wonder drugs and basic health services. In Ceylon, for instance, between 1945 and 1955, the death rate was cut by more than 40 per cent; in India, within a few years by 33 per cent.

Once the improvements effected in preventive and curative medicine in the United States of America and North Western Europe are made available to the rest of the world—Asia, Africa and Latin America—the population explosion of the future will be all the more alarming. It is not generally realised that with such simple improvements as underground drainage, potable water supply, modern conservancy measures and the use of modern drugs, the death rates in under-developed countries in Asia and Africa will register an even more dramatic decline.

Science and technology have registered such gigantic strides during the last decade that the conquest of outer space seems to be within the realm of human possibility in this generation. And the sciences of medicine and biochemistry are bound to continue to make enormous progress. The implications of biochemistry affect two vital aspects of our life—that of obtaining an adequate supply of food and that of maintaining and improving health. Medicine and agriculture have always looked upon biology and chemistry as active allies in man's

struggle with Nature. Every new discovery in these sciences directly affects our current demographic explosion. They can, in a word, immeasurably alleviate human suffering (physical and mental), reduce the incidence of morbidity to an incredible minimum, control and eventually conquer disease, prolong the active and useful part of life, and postpone death as far as possible, and at the same time find the necessary resources for the sustenance and habitat of man. Theoretically and technically these are within the limits of human possibilities provided man has the necessary vision and wisdom to understand the needs of his fellow man, his fellow creatures, and Nature that sustains them all.

THE UNDERDEVELOPED WORLD'S LEVEL OF LIVING

But the countless applications of the marvels of modern science have not begun to affect the daily lives of a great majority of the world's population. Whether this is due to man's spiritual poverty and want of vision in understanding the interdependence of the modern world is a moot question. But science or no science, mankind continues to be divided into mutually hostile political camps, ethnic groups and economic classes.

Even the most casual look at the conditions of human life in the under-developed parts of the world shows how backward and distressing life is for the average man. The level of consumption of the basic requisites of civilized human existence in terms of food, clothing, housing, educational and health facilities, leisure and certain cultural amenities is shockingly low. Accurate statistics on all these matters are not available but they are not really necessary, for anyone who has travelled in Asia or Africa knows the wretched poverty in which a majority of the people live.

Food is Asia's biggest problem. According to a recent United Nations' Survey, four out of five people, or eighty per cent of the three billion people of the world, have never had and will not have in the foreseeable future what an American or European family takes for granted as a good square meal. And an overwhelming majority of the

underfed and unfed live in Asia. Most Asian countries are faced with food shortages and in a few countries the shortage is chronic, bordering sometimes on famine conditions. There is not enough food even of the coarsest and least nutritious variety to go around. But if the levels of consumption, both in quality and quantity, recommended by nutrition experts are taken into consideration, a hundred million Asians, not to speak of Africans, suffer from mal- and under-nutrition.

The per capita daily consumption in terms of calories varies from 1,700 in India and 1,900 in Ceylon to 2,100 in Japan, as against an estimated minimum requirement of 2,500 calories for all Asian countries. This present low consumption is in striking contrast to the 3,000-3,400 calories consumed in Canada, the United States of America and countries in North West Europe. And if anything, the hunger in Asia is increasing everyday, for while food production is increasing, the number of mouths to consume it is increasing at a faster rate.

It is the same story with clothing, housing, health and education. As for education, there are some 550 million children from five to fourteen in the world today and only about 300 million are enrolled in schools. A majority of the remaining 250 million children are in Asia and Africa—children who have no chance of obtaining even a few years of schooling in this generation and who will grow up to swell the existing army of adult illiterates. And yet some of these developing countries are trying to be democracies despite the utter incompatibility of predominant illiteracy with effective democratic institutions.

In brief, the level of living of the vast majority of Asians and Africans is well below the poverty line. In fact, the entire vicious circle starts with incredibly low incomes. The per capita annual income of the Asian ranges between \$ 50 and \$ 120, depending on the particular country he lives in. This low income is in striking contrast to the per capita income of some \$ 2,000 in the United States and Canada and about \$ 1,000 in Europe excluding the Soviet Union. Millions of Asians and Africans earn in a day little more than what a package of cigarettes costs in Ame-

rica. This low income is both the cause and the consequence of the misery of life in the underdeveloped countries.

THE PROBLEM

The problem of the current demographic revolution is basically economic. "The miserably low level of living of most of the world's population is attributable not so much to maldistribution as to low aggregate product, the result of the low productivity of most of the world's peoples". The problem in its simplest formulation is: How can we raise the standard of living (which means more of food, goods and services for everybody) and cut down the still relatively high death rate (which means saving more people and taking care of them) when it is so difficult to support the existing population even at a low standard of living, if the population of Asia alone continues to increase by about 30 millions every year?

The peoples of the underdeveloped world cannot lower their standard of living any further, even were it possible. Nor can anyone suggest raising the death rate! What then is the way out?

THE SOLUTION

First of all, there is no easy solution to the world's population problem. Certainly part of the solution is to put the underdeveloped countries on their feet, and massive economic and technical aid is needed to make the underdeveloped countries going concerns. Are the advanced and affluent countries prepared to do this? The United States of America has been more than generous. But the poverty is so deep that we need American aid multiplied many times. If this were done—and this is a very big "if"—the population explosion could, theoretically, mean expanding markets, a boundless demand for goods and services, more houses and plants, a higher wage bill, higher consumption—in fact, a beneficial chain reaction. But the available resources are limited and before mankind can eat new "foods" from the sea or the air or any synthetic "pap" that biochemistry can give us, the population numbers will have increased fantastically. What is more, all the rich countries may not be will-

ing to underwrite the development of the underdeveloped countries. And who can blame them if they question why the fruits of their hard work and efficiency and planned fertility should be shared at the altar of the boundless fertility of the backward.

Therefore, only if massive economic and technical aid to the underdeveloped countries of the world is accompanied by universal birth control to alleviate and prevent the aggravation of existing poverty can a real solution to this problem be effected. In the present context the population explosion does not mean a consumer explosion; it only means the multiplication of poverty.

Today the conventional birth control methods have by and large failed among the masses in Asia. What is needed is a

really cheap, effective, acceptable and harmless birth control "pill". Here again, the aid of American science and technology is needed to perfect just such a pill.

All this—massive economic aid and high-powered technical help to perfect an ideal contraceptive, and quickly—will mean a tremendous outlay, and patience and understanding of the problems of the underdeveloped world. But once the underdeveloped peoples have been enabled to become solvent, their prosperity is bound to have vast and beneficial repercussions on the advanced Western countries. Prosperity, like social justice, is indivisible. Economically, and in fact in every sphere, the world has become so small and interdependent that we can no longer afford a world half prosperous and half starved.

America's Population Crisis

America is in the midst of a population crisis that threatens our traditional way of life. It is a crisis that becomes more severe with every day of the 1960's. It promises to become a national catastrophe and is already costing us heavily in money, terrible social problems and lost liberty.

Between 1940 and 1960, our population gain of 48 million was almost equal to the total population of the United Kingdom. By 1970, at our present rate of increase, we would have a population of 215 million. By 1980, we would have 260 million citizens, an increase over today's 180 million that is about equal to the population of the United Kingdom and Canada, Sweden, Norway and Denmark. By the year 2,000, our population would be around 385 million—a gain of another 125 million—enough to set up a new country that, in terms of today's populations, would be the fifth largest nation.

Admittedly, America faces no immediate food shortages, since the cropland actually in use averages more than two acres for every person living. But a population of one billion would leave us less than four tenths of an acre per person, close to that of the poorest lands.

The crisis in raw materials is more urgent. In 1900, we produced 15 per cent more raw materials than we used. By mid-century, we were consuming 10 per cent more raw materials than we produced, and a Presidential commission noted that 33 vital minerals were already on a critical-shortage list. We may not be able to depend on other countries very long for our present raw-material needs, let alone the increased needs of an expanding population. Foreign nations increasingly have their own shortages because of population gains.

—PHILIP M. HAUSER, "America's Population Crisis",
Look, (New York) November 21, 1961.

Migration Conference Statement

The World Council of Churches — the Division of Inter-Church Aid and Service to Refugees—organised an International Migration Conference at Leysin, Switzerland, June 11-16, 1961. Delegates and consultants from many countries presented papers on various aspects of migration at the conference. The World Council of Churches has already published *In A Strange Land* being a report of the World Conference on Problems of International Migration and the Responsibilities of the Churches. The following statement issued at the end of the conference may be of interest to the readers of this journal.

—Ed.

INTRODUCTION

The society in which the Churches now live and witness is a dynamic and revolutionary society with a consequent intensification of human need and suffering. At this moment in history the world's population is increasing explosively with a resultant increasing pressure on the whole world in its struggle for the recognition of human rights and for peace with freedom and justice.

After the Second World War the Churches responded and they continue to respond to the needs of refugees seeking "freedom from fear" and "freedom from want" and the chance to build their lives anew.

Today the Churches are faced with a whole complex of migration on a world-wide scale and are challenged to bring Christian thought and practice to bear upon the manifold problems this phenomenon poses.

Migration itself however cannot be isolated but must be seen in the context of the contemporary world of a technological civilisation. The advance of technology in industry and commerce has made all parts of the world economically interdependent, is causing an increasing proportion of mankind to become mobile and is rapidly creating a world which is one community and one labour market. This is a development which blurs the old-time rigidity of national frontiers and makes it increasingly difficult to distinguish between permanent and temporary migration. As a consequence new societies are being created in which the native and the migrant play new roles, the one of assimilation and the other of integration.

Challenged by this situation and the problems it poses, the Central Committee of the World Council of Churches in 1956 resolved:

"To request the Administrative Committee of the Division of Inter-Church Aid and Service to Refugees to consider the calling of a special conference of church leaders with consultants representing governmental and inter-governmental agencies and others specially qualified to undertake a comprehensive study of the role and resources of the churches in the field of International Migration."

We have now met together in Leysin, a fellowship of 200 delegates from 75 churches representing 30 countries.

We have taken as our terms of reference to mean that it was our task:

- (a) to provide an opportunity for the churches to discuss their common concerns in the field of Migration and to determine their specific responsibilities;
- (b) to advise the World Council of Churches about any future tasks in the field of Migration;
- (c) to make representations to the World Council of Churches' Third Assembly in New Delhi in November, 1961.

The following are the general conclusions at which we have arrived and which we commend to the concern of the churches. Recommendations designed to implement these conclusions are being submitted separately for consideration by the Central Committee of the World Council of Churches.

1962

I. THE CONCERN OF THE CHURCHES REGARDING MIGRATION

Inherent in the Christian Faith is the affirmation of the unique value of each human being as a person for whom Christ died, and a universal concern for human need in whatever form it appears. Also implicit in this faith is a passion for justice in all human relationships under the sovereignty of God. Therefore the Church must be concerned about those who—voluntarily or involuntarily—move from one country to another. The churches have both a witness to make and responsibilities to discharge with regard to various aspects and problems of migration.

II. THE IMPACT OF IMMIGRATION ON THE LIFE OF THE CHURCHES

Apart from any other consideration Christian love and responsibility require the churches to be concerned about all migrants in need. At the same time migration also affects the life of the Church.

Immigration often affects the indigenous churches by increasing awareness of that unity in Christ and that world mission of His Church which transcend all cultural distinctions. But this new awareness will only emerge when these churches and their members are willing to minister adequately to immigrants and accept them implicitly as equals.

Sometimes indigenous churches lose an important opportunity of assisting the integration process of foreign immigrants of similar confession by unrealistic expectations regarding the linguistic and social adjustments of the latter. The refusal of the formation of foreign language congregations or branches of indigenous churches in the past has led to an unnecessary multiplication of separate denominations. The existence of both a native and a foreign language congregation of the same denomination next to one another or even in the same building can prevent some of the unhappiness accompanying the language controversies. There can then be a flow from one congregation to the other.

The ethnic churches must keep in mind that the use of either the ethnic or indigenous language should be subordinated to the spiritual welfare of their members. At

the same time these ethnic churches have nearly always been of invaluable assistance to the mental and emotional stability of the newcomers who felt lost because they were confronted with the necessity to revise a whole system of sentiments, norms and values vital to their inner security.

There are strong indications that the maximum opportunity for indigenous congregations and for individual immigrants to bridge the gap between cultures and languages lies in the extent to which the Christian faith is not simply nominally held or merely professed, but is actually and personally appropriated.

III. THE SPECIALIZED MINISTRY OF THE CHURCH TO THE MIGRANT

The specialized ministry of the Church to all types of migrants is a Christian ministry to the whole man, which should be given to believers and unbelievers alike. In this ministry to the migrant the Church witnesses to the fact that in serving the stranger, it is serving its Lord.

The Church, as the Body of Christ, shares material and spiritual blessings as an expression of "diakonia" (service) and "koinonia" (fellowship). Furthermore, it is reminded by the lives of all migrants that the Church itself is a pilgrim people in history, and also among the nations. Through this ministry a mutual benefit is derived as Christians manifest that they are members one of another in the Body of Christ.

The churches, both at home and abroad, should help the migrant to fulfil his Christian calling in his situation, even though his calling is basically the same as that of all believers. The peculiar circumstances of his life present a challenge. On the one hand his migration is a parable of the pilgrimage of the people of God. On the other hand his situation is one in which with the help of his brethren he must overcome such difficulties as may be caused by differences in language and culture, and which may form an impediment to the fulfilment of his vocation as a Christian.

The ministry of the churches to the migrant involves their whole membership, but special training must be given to those who have specific pastoral responsibility.

(a) The service of the Churches

It is urged that the provision of counselling and information services is a basic and continuing responsibility of the indigenous churches, such services to be fostered, informed and co-ordinated by the World Council of Churches.

Local Congregation: The role of the pastor in this regard is limited but significant: It consists of (i) counselling and (ii) establishing contact between the migrant and technical information and counselling services. He cannot be expected to be an expert on migration details. But in counselling he can make clear the implications of eventual migration. With his intimate knowledge of the family situation, he can help those contemplating migration to explore their basic motives for seeking emigration, to see what a great decision is involved for the whole family, and all the issues on the basis of which a realistic decision may be made. Congregations should be encouraged to use lay resources for counselling.

Regional, National and International Counselling Services: Pastors and others will refer the prospective emigrant for technical knowledge to church offices (where they exist) and appropriate governmental and inter-governmental migration information offices. The services provided under church auspices should as far as possible be co-ordinated with government facilities and should not duplicate them. This responsibility should be discharged in co-operation with the World Council of Churches.

The World Council of Churches has responsibility in developing lines of communications with churches or national councils concerning general needs and trends. Because of its world view the World Council of Churches might, as required, take the initiative in fostering the necessary services by national churches and in promoting liaison between them where such services do not already exist on an international or confessional level.

Some communions have an international structure for referral from church to church and congregation to congregation and have available their own information facilities. This referral service has proved its usefulness and deserves to be extended.

Some counselling and referral work is carried on through the ministrations of chaplains on migrant ships, and by means of reception facilities at the port of arrival. Until such time as there is organic church union, this co-operative approach is desirable and necessary.

Reception and Integration: The local congregation should co-operate with other churches and with community organisations in providing a friendly welcome, and sometimes by helping with the provision of housing, jobs, material aid as well as by providing information and counselling services, etc., for all who come as immigrants.

One of the essential ways in which the churches can help in this process is through the arranging of church services in the immigrant's own language. In some cases this can best be done through ethnic congregations or through language cells or departments within established congregations. This will often involve the ministration of pastors from countries of emigration. Indigenous churches may often help in a truly ecumenical fashion by allowing congregations of other confessions to use their buildings for their services of worship. Immigrant pastors and all pastors who minister to migrant congregations need special training and preparation. Migrant pastors should receive such help both before they leave their country of origin as well as in the receiving country.

It is recognised that some denominations provide services and minister to some migrants of their own confession, but where such facilities do not exist and cannot be established, the aid of national and ecumenical agencies should be utilised.

Where churches of the immigrant's own confession are not present the local congregation should ensure that a welcome is extended to them without any intention of proselytising.

THE ROLE OF THE WOMAN MIGRANT

It is important that in the whole process of migration special attention be given to the woman migrant, especially when she is the wife and mother in the migrating family.

In the pre-emigration period it is important that she take her own responsibility together with her husband, in the decision to migrate, and that she be given practical help in learning something of the new language and of the new way of life of the country of immigration.

In the process of integration it is she who has to make the family life. The main burden falls upon her of the difficulties which arise from the entrance of the children into school, the going to work of the older children and the necessary adjustments which the husband has to make as he takes up his employment in a new land. She needs especially her own contacts in the fellowship of the church, in club life, and with her neighbours, as well as with the school community. These will help to break through the loneliness of confinement to the house with its many duties. It will be necessary for her to be continually helped in establishing these new contacts.

(b) Confessional and Cultural Ties

As a general principle the confessional ties of a migrant should be respected and encouraged, so that he is placed in touch with a congregation of his own church. Where this is not possible he should be informed of an accessible congregation whose teachings and traditions are nearest to those of his own church. Practically the procedures to be followed should be worked out ecumenically. It is recognised that the final decision will rest with the individual. Care should be taken to see that no form of assistance be used to induce the migrant to join a particular church.

The church recognises that cultural traditions affect the way in which persons are nurtured in, and bear witness to, their Christian faith. In aiding migrants and their families during the period of integration care should be taken that the traditions and values of the old culture consonant with Christian standards should be preserved. The churches everywhere should help the migrant to understand that his loyalty to Christ transcends his loyalty to his culture both old and new. The migrant should be helped to adjust himself to his new culture in such a way that he does not contravene his obedience to his Lord, but is encouraged

to witness to Him. In these ways both parents and children will be better able to fulfil a Christian vocation and make a valuable contribution to the Church and the cultural life of their new land.

IV. AREAS OF CONCERN AND STUDY

(a) Europe

We have studied the migration trends in Europe today and, while recognising that the traditional movement of people from Europe overseas will continue, though in reduced proportions, we have been made vividly aware of the remarkable development of intra-European migration. Much of this is on a temporary basis, although there is increasing evidence of permanence, where and when it proves legally as well as economically possible.

We urge that the churches be alerted to the phenomena of increasing numbers of international seasonal migratory workers (not only in Europe but elsewhere). This will involve additional responsibility for the churches in providing services. Since in many countries migratory labourers are scattered throughout the area, they become the concern of local congregations of indigenous churches which should be informed of their presence and their need of pastoral care.

Because of the importance of preserving the family unit, stress should be laid on family movement, whether in permanent or seasonal migration. The churches have a responsibility to take counsel with employers of seasonal workers, in respect of the working conditions, the housing and the leisure time etc. of their workers.

The churches also have a responsibility to represent to governments that they should organise and undertake specialised courses for seasonal workers so that they may increase their technical knowledge. Immigration countries should help unskilled workers to acquire technical knowledge which could later become an important contribution to the development of their countries of origin.

The governments which for the good of their countries' economy invite seasonal workers from other countries should acknowledge a concomitant responsibility

not only for the social and cultural welfare of such workers, but also for their spiritual welfare through the appropriate ecclesiastical channels. This recommendation is intended to apply to particular situations in Europe and not to all countries where seasonal workers are employed.

In addition, the churches should consider the provision of centres of welcome, hostels, flying squads of chaplains etc., where possible on a co-operative basis.

(b) *Asia and Africa*

(i) *General*: We believe that just as in the past the World Council of Churches has given attention and concern to the needs of European migrants, so too it must give serious and comparable attention to the similar concerns of Asia and Africa.

Churches, national councils of churches in Asia and Africa, and regional church bodies, such as the East Asia Christian Conference and the All Africa Church Conference, must take this responsibility much more seriously than in the past—in preparing their own people to migrate, in ministering to newcomers—including students—in bringing Christian opinion to bear on the migration policies of governments, and in understanding more fully the needs and opportunities of migration.

(ii) *Asia*: There is an almost overwhelming pressure on many people in Asia to migrate. Among the elements in that pressure the most important are the following:—

- (a) Over-population in relation to economic development;
- (b) insufficient available land;
- (c) political pressures;
- (d) a widespread desire for economic betterment.

Yet migration opportunities are strictly limited—in fact for the great majority of people they do not exist at all. We believe that while the situation may improve at particular points, most people in Asia who urgently need or desire to migrate will be unable to do so. We realise that in view of the magnitude of the problem in Asia which is reflected in the desire or need to migrate, migration alone cannot provide a solution. However, some new opportunities to migrate would do much to improve the psychological

situation of all those in need. They might in addition offer a permanent solution for those resettled and might well contribute to the well-being of the world by permitting those concerned to live their lives more fully in areas where their services are needed.

The obvious factors which militate against migration are:—

- (a) The restrictive immigration policies of national governments which often reflect many factors, social, cultural, ethnic and economic;
- (b) The lack of necessary skills on the part of those wishing to migrate;
- (c) Lack of economic development in countries to which people might migrate.

Nevertheless, the churches should work unceasingly to encourage governments of all countries to accept Asian migrants.

(iii) *Africa*: In Africa the position is radically different, primarily due to the fact that there is on the whole, less population pressure, but there is and will continue to be much migration resulting from:

- (a) People seeking improved living conditions;
- (b) The need for cash;
- (c) Unemployment;
- (d) The traditional habits of movements and land policies;
- (e) Political pressures;
- (f) Psychological unpreparedness of minority groups for living under a changed regime.

It is important to note that migration on the part of Africans usually involves the best elements in the population, although these are in fact needed for the development of their newly independent nations. It also should be borne in mind that in the African context migration often implies a certain stigma unless it is the whole community that migrates as a communal group.

Some factors that militate against migration are:—

- (a) Restrictive immigration policies of governments;
- (b) Communal groups regard persons from other groups, often within the same political boundaries as “foreigners”;

- (c) Employment practices often involve “men only”;
- (d) Social security involved in tribal life;
- (e) Socio-religious attachment to the land;
- (f) Lack of finances to exploit natural resources.

There is a particular problem in many African countries (which may also apply to other countries) where men leave their families for long periods in order to find employment. We believe that the churches, the national Christian councils and the All Africa Church Conference should study this intra-continental migration, and seek to offer special services to meet the demoralising situation which results, including the need for the provision of facilities for families.

(iv) *Latin America and the Caribbean*: We have heard a statement on the needs and problems of emigration to Latin America, but have not given sufficient attention to this aspect of our task. We regret this omission and urge that the Churches and the World Council of Churches give major attention to this problem as well as to that which will attend the various programmes which are being implemented in Latin American countries together with those now proposed by the Intergovernmental Committee for European Migration and the governments concerned.

We have also heard with great interest reports of the present migration of Puerto Ricans to the United States of America and of British West Indians to the United Kingdom, and of the efforts of governments and voluntary agencies, including the churches, to care for the needs of these migrants. We would emphasise the importance of the giving to them of a friendly welcome in the receiving countries, and in particular the importance of the role of the churches in helping to make sure that these migrants should be integrated into the life of the country and of the Church without delay and without distinction of race.

V. THE RESPONSIBILITY OF GOVERNMENTS AND THE CHURCHES' WITNESS CONCERNING IT

1. Churches and nations alike are subject to the sovereignty of God. It is the duty of

the churches to remind the nations that in regard to migration as in other respects, national sovereignty and self-interest are subordinate to the authority of God which is binding upon all nations.

2. As parts of the Church Universal, the churches feel their responsibility for the welfare of all peoples. The churches must therefore urge upon nations the duty to harmonise national self-interest with the universal commonweal in their immigration policies, and to consider the effects of these policies upon the needs and claims of other peoples.

3. Migrants generally represent a valuable asset to the life of a nation and a means of cultural enrichment as well as economic advancement. The churches should, therefore, urge governments to consider whether generous immigration policies may not be conducive to constructive national planning.

4. On the other hand, since it would be irresponsible not to acknowledge that completely uncontrolled and unlimited migration could lead to disorder as well as to injustice, the churches cannot recognise any unqualified right to migration, but must uphold the primary responsibility of national governments to regulate it.

5. Accepting then the right and duty of governments to regulate migration, the churches should urge the governments to take the following points into consideration in establishing and administering their migration policies.

With regard to emigration—the right of emigration without hindrance except for governmental control in relation to such matters as crime, necessary financial restrictions, and preventing the exploitation of intending emigrants.

With regard to immigration—

- (a) The need to avoid any exclusion of migrants on the basis of race, nationality or religion;
- (b) The responsibility to help ease population pressures in situations where feasible migration can make a contribution;
- (c) The humanitarian claims of migrants in situations of special hardship;

- (d) The particular claim of the political refugee upon the help of the world community ;
- (e) The vital importance of preserving the family as a unit, making every effort to avoid separating the wage-earners from the rest of their families over an extended period and facilitating reunion when members have migrated ;
- (f) The responsibility for friendly reception and assistance in the adjustment of the migrant ;
- (g) The need to support the efforts of international organisations in the field of migration to increase their scope and effectiveness ;
- (h) The need for the speedy development of unused economic resources so that each country can make a maximum contribution to the welfare not only of its own citizens, but of those of other lands.

VI. THE WORLD NATURE OF THE PROBLEM

Migration is an indivisible problem in one world. It is therefore related to the wider issue of justice in securing for all people a fair share of the earth's resources. It is accordingly essential that it be within the area of international consideration, discussion and action. The problem of migration is related to broader issues of economic and social development, including the question of restraining population increase. A quickened pace of development, aided by adequate technical and financial assistance can help to relieve economic pressure in the countries of emigration and to enlarge economic opportunities in the countries of immigration. That which is international must also be ecumenical and the concerns and ministry of all the churches everywhere must be joined in seeking the answers to the problems with which our Conference has been confronted.

We have made practical recommendations to the Central Committee of the World Council of Churches and through it to the churches. We would also emphasise the need for the continuing study of the doctrinal and ethical aspects of the Church's relation to migration. Indeed there are many

points where further study is necessary if the Central Committee and churches endorse our submission that we must embark on this new ministry and service. We would again make particular reference to the massive population increases which constitute one of the dynamic concerns of our time.

Finally, we would emphasise that while we have been facing a new aspect of an old problem and urging new action, we cannot forget that our first association with this problem was our Christian response to the claimant need of the forced migrants—the refugee. We recognise the melancholy fact that this problem remains with us and is likely to continue a permanent factor in our age.

The refugee problem is a disease of our time which is spreading rapidly from Europe to Asia and Africa. New challenges and new tasks therefore call for new and additional effort and not a diversion of service from those who continue in the greatest need and the most hapless plight.

While in this Conference the needs of the voluntary migrant have become manifest to us, we have not lost sight of the fact that the problem of the migrant embraces that of the refugee. We have also seen that the refugee does not have an exclusive claim on a ministry which must be extended to all those who for one reason or another leave their own countries for life in a new land.

RECOMMENDATIONS TO CHURCHES AND COUNCILS OF CHURCHES

1. That they should call into consultation those involved in national migration policy, members of universities with special competence, officers of welfare agencies etc. together with their own informed representatives to ensure that Christian witness and Christian principles are applied to the national policies of migration and the services rendered to migrants.

2. That they should seek to influence their members and welfare agencies locally so that all may appreciate the problems of migrants, and be ready to help with their preparation for emigration, or adjustment on immigration, and to hold them in Christian fellowship, welcoming generously both members of other confessions and non-Christians.

3. That they should explore methods and opportunities of more adequate training for ordained and lay workers amongst migrants so that they may render more effective Christian service.

4. That they should review the extent to which through their agencies and other means they are serving migrants or can develop work amongst them at both the national and international level, and consider

how to utilize and develop all available resources more extensively for this purpose.

5. That they should seek to discover the points at which ecumenical initiative on migration is called for, which might be provided by the World Council of Churches.

6. That they should study the report of the Migration Conference to discover the ways in which they may feel called upon to implement it.

Water

The task of maintaining an adequate water supply for a violently expanding population accustomed to heavy use of water presents an urgent and immediate problem. The water needs of the average American citizen have doubled in this century, partly because of the demand for showers, flush toilets, air conditioners, dishwashers, lawn sprinklers, and swimming pools. The really heavy users of water, however, are industry — it ordinarily takes 60,000 gallons of water to make a ton of paper or steel — and farmers, for irrigation. Farmers use half of all water consumed in the United States. Geographer Gilbert F. White of the University of Chicago asserts that the United States is running out of water and will face serious difficulties within fifteen years. He points out that many communities in western Texas and in Arizona, by their irrigating and sprinkling, are draining their underground water at a rate that far exceeds natural replenishment. Water tables are falling. In some communities water is being withdrawn twenty times as fast as it is being replaced. And in some areas of North Dakota and Long Island, underground water levels have fallen so low that further "mining" of water is curbed by regulation. Most of the towns in western New York State have a chronic water problem and tens of thousands of residents regularly pay one dollar for a five-gallon jug of cooking and drinking water.

Some arid communities such as in Hudspeth County, Texas, have just about given up because of lack of water. Many cities in the West are foreseeing the day when they will have to turn away all industries that are large water consumers. Long Beach, California, recently sought permission to start reclaiming for certain uses purified sewage water which had been flowing into the ocean.

VANCE PACKARD, *The Waste Makers*,
(London. Longmans. 1961) pp. 203-204.

From the Press Cuttings

AFRICA

INDIANS IN EAST AFRICA

*Task Before Immigrants
Natives' Fears must be Allayed*

By Jagdish R. Sondhi

The position of the Indian in Kenya is something of an anomaly. He hails from a country that fought not only for its own independence, but also for the freedom of all dependent territories from colonial rule. And it was as a result of India's ties with Britain that the Indians came to settle in Kenya in large numbers. The first influx was brought to build the Uganda railroad at the turn of the last century. Since then, spurred on by stories, mostly apocryphal, of untold wealth in Africa, the Asian population in Kenya has gradually built itself up to a figure of some 200,000 strong. Bringing different religions, cultures, customs and practical skills, they have woven themselves into the multiracial fabric of Kenya. This has inevitably caused stresses and strains.

The Indian, however, looks back on the past as a series of uphill struggles against the European Settlers, and the influence they wielded on the Colonial Office, and sees in the future a disintegration of all that he has managed to build for himself by hard work. The wealth, educational attainments, commercial enterprises, technical knowledge and standard of living attained by the Indian single him out as a target for the African community. In his turn, the Indian generally considers the African backward and primitive; and only mixes with him at the highest levels.

Recently, I attended a meeting addressed by a well known African politician subscribing to one of the two rival African groups now fighting for power in Kenya. The audience, almost entirely composed of Indian professional and business people, was told that if they supported the opposite faction then he could not guarantee their safety. It was a blatant open threat which left the audience full of misgivings, and justified many of their fears for the future.

Nature of African Charges

The African accuses the Indian of a callous disregard for the welfare of the indigenous community. He points to the fact that the Government spends five times more on the Indian child's education as against that of the African child.

He cites cases where Indians have overseas contracts of service with better terms and remuneration although they are local inhabitants. He accuses Indians of deliberately obstructing the progress of Africans in securing posts in the large commercial houses and Government departments where they and not Indians should serve as chief clerks and accountants.

Enlarging on this theme he accuses the Indian of malpractices in trade. As one African politician told me quite frankly, the blackman's image of the Indians is that of a shopkeeper who has just robbed an ignorant African woman of her last ten cents. Naturally, he is accused of overcharging by Africans purchasing goods from him, and of undercutting by Africans competing against him. He is accused of sitting on one side of the fence or the other, or on it, as the occasion arises. Whatever he does, the African finds him an obstruction to his progress; and the Indian realises this.

Yet basically, Indians have always supported the African desire for freedom. Any other interpretation of the Indian political attitude would be false. The clash arises, however, as a result of the African's desire to eliminate immigrant communities from predominant control over trade, commerce and Government in the country. Were this to be effected in a gradual manner there would be little objection.

Extremists' Demands

There is talk also by extremists of the redistribution of the wealth and resources of the country in a more equitable manner. The African leadership, except for a very small elite, generally of low calibre, finds itself willy nilly swept along by the basest

emotions of the crowd. There is a repetition of words, phrases and clichés gleaned from the newspapers. One is lectured at, at length, on democracy; but one wonders what interpretation the speaker puts on it. One is asked to contribute to the funds of parties that he cannot join. One feels that he would like to get the hell out of here and go somewhere else. But where? It seems an Indian is welcome in no part of the world. One's country of origin will reluctantly accept you, if necessary, and let one live in circumstances of penury from which one's forefathers escaped.

Africans absorb European culture like dry sponges absorbing liquid. You find yourself fighting within yourself against the dichotomy of desire; wanting to become Westernised and yet wanting to retain your individuality as an Indian. You find yourself bewildered, puzzled, lost, and distraught. You hear of shiploads of people leaving the country and rumours of Africans dividing up amongst themselves your various businesses as soon as "Uhuru" (freedom) comes. When driving by you see the sullen look of hatred from African pedestrians at your relative opulence. You hear stories of insults heaped on members of your community by Africans. You suffer them yourself. You find that your rational urges are strained as racial consciousness imposes itself on you.

What then will be the outcome of all this? Is it merely a passing phase which will balance itself when Uhuru is achieved, or is it something deeper?

I feel that it is something deeper. The African, conscious of his ignorance and ashamed of his relative backwardness, is struggling to free himself from his shackles. He is determined to progress to a level of material comfort and intellectual snobbery that the immigrant constantly displays. Thus the future, it would seem, is darkened by clouds of uncertainty and despair; but it is possible to discern the silver lining in the common interest that will emerge in the solution of the problems of this country.

—The Hindu (Madras),
7th November 1961.

INDIA

PLAN AND LONGEVITY

Statistics in regard to the various aspects of the growth of population in India are known to be incomplete and imprecise, which is an important reason why one should be chary of drawing definite inferences from such figures as are available. The relation of cause and effect is particularly difficult to establish when a variety of factors are involved each of which, by itself or in conjunction with others, might equally support different conclusions. When, on signing the final report of the Third Plan last week, Mr. Nehru pointed, with legitimate satisfaction, to the present increased life expectancy in the country as a measure of the success of the two Plans, he was, of course, pointing to something which, broadly speaking, does not admit of refutation. India's mortality rates were, not so long ago, among the highest in the world. That the average Indian can now expect to live to the age of 47.5 years is clearly an achievement in the light of the fact that in the decade from 1941 to 1951 his life expectancy was 32 years. But it would be trenching on controversial ground to proceed, from this, to the assertion that the increased life expectancy "in spite of the tremendous increase in population indicated not merely better health but very considerable improvement in the standards of life."

How easy it is to be misled by figures is illustrated by the fact that the "tremendous", and even alarming, increase in population can itself be plausibly attributed to "better health", whereas the truth is that nations with notably high living standards are not as prolific as the under-nourished ones. It would appear that more precise and detailed information should be available before the framers of India's Plans could take all the credit for the present increased longevity. The social and medical side of the United Nations Organisation, for example, has undertaken and carried out in many Asian countries massive programmes for the eradication of diseases which formerly took a heavy annual toll. In India itself, malaria in past years accounted for one million deaths annually, and the fitful and sporadic "control programmes" of the Indian Gov-

ernment had no great curative or preventive effect. Substantial American aid, too, has made possible "eradication" measures which have reduced the death rate from malaria to negligible figures and the number of those who suffered from it from 80 million to four million a year.

As for "standards of living", these should fairly be judged by the pattern of consumption. Family budget surveys have shown that food claims 50 to 70 per cent of the total expenditure. The Nutrition Advisory Committee of the Indian Council of Medical Research has suggested, as the *minimum* daily requirements of an adult, 14 ounces of cereals, three ounces of pulses, four of root vegetables, three of fruit, ten of milk, two of sugar and jaggery, three of vegetable oils and fats and one egg. The average Indian family still goes without the minimum requirements of pulses, cereals and sugar, while egg, fruit and milk are wholly beyond its means. As for employment, the Plans have of course contributed to an impressive expansion of the bureaucracy, but notoriously failed to solve the unemployment problem. The Planners need not be denied the satisfaction of patting themselves on the back on the basis of figures supplied by officials, but it would be a sobering experience for them to look occasionally beyond these figures to the actual conditions of life under an inflation-afflicted economy.

—*The Mail (Madras)*,
Editorial, 11th August, 1961.

ANGLO-INDIANS' MIGRATION

Migration of Anglo-Indians from India to the Commonwealth countries, particularly to the United Kingdom, has been reported for some time past and it is stated to be of the order of 1,000 to 2,000 a year. A majority of the emigrants belong to Madras, Bangalore and Calcutta.

A large number of Anglo-Indians left this country after independence for some reason or other. Most of them were well-to-do. But most of the emigrants now are poor and unskilled. Almost all of them have chosen to go to the United Kingdom because of some special facility that has been offered to Anglo-Indians by the British Government.

The British Government accept an Anglo-Indian emigrant without a "guarantor" or

anybody having to stand surety for his repatriation in case the need arises. Apparently every Anglo-Indian is able to get a job when he goes to England.

The question arises why Anglo-Indians should choose to go to the United Kingdom and whether they find conditions more satisfactory in that place. On this point, an Anglo-Indian leader expressed the view that his community was occupying a privileged position during the British rule and it was quite natural that they found it rather difficult to adjust themselves to the changed circumstances. A type of work like that of a "waiter" which an Anglo-Indian appeared to be prepared to do in Britain, he did not feel inclined to do in his own country. It was a psychological factor and hard fact, he said.

Special Privileges no Longer Available

Under British rule, the Anglo-Indian community was enjoying various special privileges. There were special schools for them and those schools received special teaching grants. Destitute children were given "destitute grants". Many posts were reserved for members of that community in the Railway, Telegraph and Customs services. Those privileges were all continued by the Indian Government for a specified period after independence and the concessions have now lapsed. In regard to grants for Anglo-Indian schools, however, the Madras Government have agreed to continue the concession till 1963.

An office-bearer of a local Anglo-Indian Association claimed that, by and large, the Anglo-Indian community was poor. At the moment, the well-to-do in the community could be counted on one's fingers. Those going in for higher education were very few and even the financial assistance being offered by the Association for pursuing higher studies was not availed of fully. Asked for the reason, he said that Anglo-Indians had a bent of mind more for the mechanical side than for the academic and he wished the authorities took note of it in providing jobs for them. He added that those taking high school certificates too were small in number and that a high school certificate was the minimum qualification for Government jobs. The result was, according to him, there was unemployment among the

members of the community. The minimum wage in U.K. was nine pounds a week and that was the attraction for those who emigrated to that country.

The minimum wage in Britain might be attractive on paper. An Anglo-Indian might be getting far less in this country. But the real point is whether an Anglo-Indian, who migrates to the United Kingdom, finds life there comparatively easy and comfortable. When this question was put to the President of a local Anglo-Indian Association, he said that a person had to work hard in Britain. He would have to do himself the cooking and other kinds of domestic work. In fact, a large number of emigrants were returning from the United Kingdom disappointed. All the same, on the other side, emigration was still continuing.

Plea to Continue Concessions

The Association, he said, did not encourage emigration. His view was that though some of them might feel, rightly or wrongly, that there was some discrimination against the community in this country, it could not be more than it would be in any other country they might choose to go to. He also felt that every educated Anglo-Indian had as much chance to reach the top as any other citizen of India. He, however, pleaded for the continuation of the concessions to the community for some more time, observing that it had been 'a spoon-fed community,' and it would be easier for a person to adjust from a lower level to a higher level than for one to do it in the reverse direction.

—*The Hindu (Madras)*,
21st October 1961.

NO DOCTORS

The Union Health Minister's answers in the Lok Sabha on the subject of doctors and dispensaries became curiouse and curiouse as supplementary followed supplementary, until the Speaker was obliged to tell him that if he "was not in possession of details, he should say so." The Speaker's own experience lent point to the members' questions. Thirteen dispensaries were opened in his district, Chittoor, but there was a dearth of doctors. Mr. Karmarkar maintained that the Government's solicitude for the people's

health manifested itself in attempts "to eradicate communicable diseases and lessen the demand for doctors." He justified the absence of provision for opening more medical colleges on the ground that "it was not necessary." It is to be presumed that hospitals and dispensaries will continue to be built if only because the Government may be able to point to their number as proof of fulfilment of Plan targets. But dispensaries without doctors, like dams without engineers, are worse than useless; they are a drain on the harassed taxpayer's money.

When members asked for details about the number of doctors and the number of dispensaries without doctors, the Minister launched forth into an explanation of the Government's primary health centres and other schemes. How are these schemes to be operated without an adequate number of physicians and surgeons? If the Minister feels that one primary health centre is sufficient for every 60,000 of the population, he must at least give an assurance that each such centre will be properly equipped and staffed. Why is so much pains taken to maintain the standards of medical education, and why should compulsion be exerted on doctors to go to the rural areas, if the Minister thinks that "it is not good to increase the number of doctors"? It is possible, as the Speaker himself seems to have thought, that the Minister was ill-informed on an important matter, but this is no reason why answers patently irrelevant and unacceptable should be given. It is to be hoped that the Government will repudiate the view that there is no need for doctors. There is need for them, and more and more of them, if the appalling health problems of the country are to be brought within manageable proportions.

—*The Mail (Madras)*,
Editorial: 30th November 1961.

SPEAKER PULLS UP KARMARKAR

New Delhi, November 30: The Speaker yesterday pulled up Mr. D. P. Karmarkar, Health Minister, for his replies to questions on the subject of shortage of doctors in the country and said this was a serious matter and if the Minister did not have the figures about the shortage of doctors, he might say

so. There was no point in saying that, he would remove communicable diseases and no doctors were necessary.

Mr. Kamarkar told Mr. Barua there was shortage of doctors except in West Bengal, but he had no information about the extent of shortage.

Replying to supplementaries, he said that with the elimination of communicable diseases, which the Government aimed at, the need for having more doctors would become less and less. He was quite sure that after about ten years a deputation would go to him asking him to curtail the number of medical colleges.

Without Doctors

Mr. Ayyangar expressed his "surprise" at the replies given and said that in his district (Chittoor) there were 13 dispensaries which he got opened and it was difficult to get doctors for them.

Mr. Karmarkar said there were 80,000 allopathic doctors and 500,000 non-allopathic doctors. The plan was to have one primary health Centre for 60,000 people and ultimately there would be one for 10,000. Of the 3,000 primary centres, there were some which were without doctors but others were well equipped.

The Speaker said he was allowing a debate on this matter.

—*The Mail (Madras),*
30th November 1961.

MALAY INDIANS

Though the 800,000-strong Malay Indian community has no major political problem in the Federation of Malaya, it has undoubtedly serious economic problems to solve. As numerically the weakest of the three races in the Federation, it is not very influential in the councils of the Government though Dato Sambanthan, the only Indian Minister in the Federal Cabinet, is highly respected for his ability and integrity. Economically the Malay Indians are much worse off than the Malays or the Chinese. Even in pre-Merdeka days the wages of Indian labourers on the plantations used to be less than those of the Chinese. The Malayan Federation of Plantation Labour, a finely organised and efficiently run labour organisation,

has sought to secure fair conditions of service for all the plantation workers, irrespective of race, but Indian labourers on the plantations have been confronted with a new threat in recent years. Many of the old estates are regularly coming up for sale for one reason or other and in several cases these estates are bought up by wealthy Chinese financiers who make large profits from the transactions by breaking up each estate into small lots and selling the latter to the Chinese who cultivate them on a family basis. The immediate result of each such transfer of a large estate from its former owners into the hands of the Chinese is the elimination of the Indian labourers who may have been working on it for years. There is apparently no legal means of preventing the breaking up of estates once they have changed hands. It was to meet this grave threat to the orderly lives of the Indian workers on the plantations that the Malay Indian Congress, on the initiative and inspiration of Dato Sambanthan, hit upon a scheme for the co-operative purchase and running of rubber estates. A co-operative society called the National Land and Finance Co-operative Society has been started with the object of collecting regular deposits from Indians and utilising the amounts thus collected for the purchase of estates whenever they are put up for sale. Already the Society has bought one 3-million (Malayan) dollar estate and has been working it successfully. The Society needs more members to have enough funds coming in regularly to make further purchases.

It is important for the future of the Indian community in Malaya that this great co-operative experiment should succeed. The community has suffered in the past because of the general reluctance of even those members, who could afford to set apart enough savings for buying land in Malaya to do so. While the Chinese, who came as labourers or pedlars, dug themselves in by buying property and becoming permanent settlers, the majority of the Indian labourers either sent their savings to India or dissipated their earnings in the country without acquiring any properties there. The result is that while the vast majority of the Chinese and the Malays own some land of their own and very often possess good houses, most of the Indians are

landless and houseless. If the Malay Indian Congress's co-operative project receives the support which it ought to from the Indian community, the Land and Finance Society can have, within a short period, enough funds to proceed with a steady programme of buying up of estates and establishment of housing colonies. A regular monthly saving of 10 (M) dollars is not a heavy burden for the average Indian worker in Malaya, while skilled workers and others earning larger incomes should be able to make bigger contributions. With a membership of 60,000, the Society, it is claimed, could buy one estate every two or three months. The membership drive which the Malay Indian Congress has launched should receive every support. An immediate obligation rests on Indian banks operating in Malaya to extend to the NLFC Society whatever financial assistance it may need in the next year or two to make purchases of estates till its own resources are expanded. Such help can be a sound financial proposition, while also serving a very deserving cause.

—*The Hindu (Madras),*
Editorial, 27th November, 1961.

"WHITE AUSTRALIA" POLICY

Menzies Refuses to Revise

Melbourne, Nov. 24 : The Australian Prime Minister, Mr. Robert Menzies, today refused to change his "White Australia" policy and declared : "We are not going to change our policy against unrestricted Asian immigration in my time."

Addressing an election meeting in an industrial suburb of Melbourne, Mr. Menzies told hostile interjectors, mostly university students demonstrating against restrictions on Asian immigration, that his Government had the support of all parties in the Australian Parliament including the Labour Opposition in maintaining Australia European. "No Asian Government had ever objected to Australian Immigration Laws, he said.

Replying to questions, Mr. Menzies said that Australia had voted in the U.N. against South Africa's apartheid policy, but Australia opposed the imposition of economic sanctions which would damage at least two

major Australian industries and weaken those industries in South Africa which employed Africans.

—*The Hindu (Madras),*
25th November, 1961.

POPULATION RECORD

OVER 16 PER CENT RISE

Latest Census Data

Lucknow : What has been the response of U.P., the home State of Prime Minister Nehru, to his appeal for planned parenthood? Far from encouraging if one goes by the provisional report of the country's Census authorities—just published. The 25-page report makes the disappointing disclosure—disappointing for the "family planning" campaigners—that the State remains the most populous part of the Indian Union.

The report reveals that during the period of 10 years since 1951, the population of the State has risen from 63.22 millions to 73.67 millions—the percentage of the rise being 16.54 compared to 11.82 during the decade 1941-51. Which means that roughly there are now seven persons where there were six. In respect of the growth of population U.P. stands midway between the States of the highest and lowest growth—Assam and Kashmir, registering respectively the rates of 34.30 and 9.7.

The population figures—still provisional—collected during the last Census show that the State's population of 73.67 millions is spread over an area of 113,454 square miles. The density of population is 649 persons per square mile as against 557 persons per square mile in 1951. The district of Lucknow has the highest (1,377 persons per square mile) and that of Chamoli, the lowest density (72 persons per square mile). If the Union territories are excluded, U.P. stands fifth in the matter of density of population after Kerala (1,125), West Bengal (1,031), Bihar (691) and Madras (671).

SEX RATIO

The number of females per 100 males according to the 1951 Census was 91. The figure has dropped to 90.7 in 1961. Roughly

one male in every 10 does not have a female counterpart. The sex ratio is the lowest in Naini Tal district — being as low as 72.1 per cent.

The urban population of the State is 9.39 millions and its rural population 64.28 millions, compared to 7.42 and 55.79 millions respectively at the 1951 Census. There is no city in the State with a population exceeding 10 lakhs. Three cities having each a population of more than five lakhs are Kanpur (947,793), Lucknow (662,196), and Agra (509,108). Of the remaining two towns, Banaras has a population of 490,120 and Allahabad 431,007.

The percentage of literates has gone up from 10.8 to 17.22. The male literacy is 26.67 per cent — roughly one in four; and the female literacy is 6.82 — roughly one in 15. Dehra Dun has the highest percentage of literacy (36.61) and Budaun the lowest percentage (9.65). In the matter of literacy Kerala tops in the country with a percentage of 46.2. U.P. stands 12th among the 15 States, the three States having lower literacy being Madhya Pradesh (16.9 per cent), Rajasthan (14.7 per cent) and Kashmir (10.7 per cent).

THE HANDICAPPED

The deaf, the dumb, the blind, the crippled, the lame and the diseased offer a permanent challenge to our social consciousness. Many of these handicapped persons do not want to become beggars by the compulsion of events. Thanks to the steadily increasing facilities which are now available to the handicapped persons, many are able to get a specialised kind of training which will enable them to work at jobs as efficiently as a fully-fit person. They seek no charity from employers. They can do a good job and only desire employment opportunities. The Government, egged on by voluntary organisations of social workers, have become more and more conscious of the need for providing suitable employment for this class of citizens. It would be idle to deny that there is a kind of mental barrier which prevents people from employing handicapped persons when physically fit individuals are available. This has to be overcome. The Government, in particular, should set a good example; their activities are steadily increas-

ing and impinging on so many aspects of modern life and administration.

An idea of the scale of the problem can be had from the fact that in Kerala State, for example, there are over 70,000 handicapped persons. A recent survey has indicated that over half this number is in the 15-54 age group. The main cause of disability has been disease, though, in the non-agricultural classes, there is a larger proportion of people injured in accidents. In countries which participated in wars, there are, in addition, a considerable number of people who have suffered war injuries. Society feels that it has a very special responsibility towards these war-injured and every facility is afforded to them to equip themselves for jobs and to provide them with jobs, too, if necessary by government compulsion.

In recent years, we here have become increasingly conscious of our duty towards the handicapped. Indicative of this is the report which says that the Union Government have finalised plans, involving a sum of Rs. two crores, for providing relief and assistance to groups of handicapped persons. The aid is to be channelled through voluntary and charitable organisations, municipal bodies and panchayats. The provision of relief is one aspect of the problem. The other is the provision of enough jobs. The Kerala survey has shown that handicapped persons seek jobs in factories, as teachers, and business assistants, in spinning and weaving and in arts and crafts. Governments are making special efforts to place trained handicapped persons in suitable posts. The response from employers should certainly err on the generous side. This problem is closely linked with the attempts made to eradicate beggars. It is true that there are many fully able-bodied beggars who have turned to beggary because they do not desire to do any honest work. But there are also many among them who have become beggars as there was nothing else for them to do to keep body and soul together. It should be the special duty of the government to prevent the latter development.

—The Hindu (Madras),
Editorial, 25th October, 1961.

WELFARE OF THE SCHEDULED TRIBES

The comprehensive report on the Scheduled Tribes submitted by a Commission headed by Mr. U. N. Dhebar for the consideration of the Government of India is an extremely valuable document both for the information it contains and the thoughtful recommendations it has made. The general public of this country are scarcely aware of the living conditions and problems of the tribal people who number more than 23 million. About one-third live in the scheduled areas which cover about 100,000 square miles of India. The main tribes are the Gonds, Santals, Bhils, Oraons, Khonds, Mundas and Boro Kacharis. Large numbers of these and the dozens of minor tribes live in the hills and the forested areas of the plains. Yet the vast majority depend on agriculture for their living. Some of them are good farmers and fairly prosperous but most tribes are poor and their lack of education and knowledge of their rights under the law leads to considerable exploitation so that to this day some of the very backward tribes are forced into bonded labour to pay off their debts.

The welfare of the tribes is under the Constitution a special responsibility of the Governors of the States. But in practice the annual reports are prepared by the Tribal Welfare Directorate in each State and this is regarded as a routine departmental report and thus gets little attention in the Assemblies. There are Tribes Advisory Councils but they have little to do with the preparation of the annual reports. The general laws that are passed in each State have to be modified in their application to the scheduled areas on the advice of the Councils but the present report shows that in many States this job has not been properly done. It is important that the Tribes Advisory Councils should have their own staff and should study the proposals put forward in the Five-Year Plans as they affect the tribes. Although the funds allotted for the uplift of the tribes are far from adequate, it too often turns out that even these sums are not spent and also that when plan allocations are reduced by axing "social services", tribal welfare schemes automatically suffer from the cuts. Yet it is obvious that this is an area of the greatest human need.

The Commission points out that land is being continually alienated from the tribes by money-lenders, contractors and others who take advantage of the ignorance of the tribesmen and it urges that there should be a prohibition of such transfer of lands except by the express permission of the Collectors or Deputy Commissioners. The tribes also lose their traditional territory when the Government acquire it for the purpose of building factories or dams and very often this is done without providing satisfactory colonies elsewhere. The Commission suggests that when large projects are thus taken up, the evicted tribals should have preference in employment, provided they are qualified for the work. It points out that, as regards the land rights of the tribes, the record of rights should be completed as soon as possible.

The tribes have suffered both as farmers and foresters from various prejudices against them. Their practice of shifting cultivation has been condemned though the experts are by no means agreed on whether it is really harmful. In any case, the practice could be curbed to some extent by contour bunding or by allotting the tribals waste lands in less hilly areas. The Forest Department has also been hostile to the tribes in the past, though the contractors who take forest leases have actually done greater harm in depleting forest growth. The commission suggests that forest tribes should be given security of tenure and should be organised in labour co-operatives when timber is to be cut. The Forest Department should be charged with the welfare of such people and try to give them employment as forest guards or organise co-operatives to market forest products. In this connection the report cites the excellent work done in Gujarat and also in Andhra in both these directions.

Community Development functions in the scheduled areas as Tribal Development Blocks and has already made considerable headway in winning the co-operation of the people. A serious handicap is that Government workers rarely know the tribal language or customs and are also hampered by the difficult living conditions in these regions. It is important, however, that at least in the first two years of the primary school, education should be given in the tribal language. The whole process of education could be im-

proved by employing educated persons from the tribes themselves but they should not be in a hurry to impose compulsory schooling before adequate preparations have been made. The Commission has made a series of recommendations regarding the provision of wells, irrigation, health centres, communications, cottage industries, housing, etc., which should be carefully studied by the State authorities. The uplift of the tribes is no doubt a difficult affair but the progress that has already been made is proof that it can be done if the will is there and the problem is approached in a sympathetic manner.

—*The Hindu* (Madras),
Editorial, 25th November, 1961.

THE HANDICAPPED

About 50 to 60 lakhs of people in this country seem to be blind or deaf or otherwise crippled. There is a growing awareness on the part of the State and the public of the need for looking after these handicapped persons. A crore of rupees has been provided for the rehabilitation of the handicapped during the Third Plan period and the Centre has liberalised the rules governing the giving of grants to institutions assisting handicapped persons. Indicative of the interest in this question is the fact that the first national seminar on the training and employment of the handicapped has just concluded in Bangalore. It has naturally concerned itself both with the methods by which handicapped people have to be trained to fill suitable jobs and with expanding the employment opportunities available to them. The training of these people is itself a job which calls for specially qualified instructors. The seminar has recommended that the Central Government should prepare a uniform syllabus for teachers' training institutes and has made other suggestions regarding the manner in which their service conditions could be improved. Special employment exchanges for "placing" the fully-trained handicapped persons should be set up in all States and the officers in charge should be men with a keen interest in the humanitarian job they would be doing. The seminar, as a matter of fact, has suggested that these officers themselves should be specially trained to understand the problems of the handicapped. For one thing, there is likely to be natural incli-

nation among employers (including Government departments) for appointing physically fit persons in preference to the handicapped. It has to be stressed in such cases that society owes a duty to the handicapped, too, and that, provided the handicapped persons are otherwise fully qualified to do certain kinds of work, the fact of their being physically handicapped should not stand in the way of their being appointed. This prejudice has to be met and removed by persuasion and argument.

The goal is "the social integration and economic independence" of the handicapped. In this regard State and Central Governments have been working in co-operation with voluntary social work organisations, employers' organisations and trade unions: representatives of all these interests took part in the Bangalore seminar. A number of other important recommendations have been made by the seminar which deserve the most sympathetic consideration at the hands of the Government. An all-out attempt at "placing" trained handicapped persons is important. To be handicapped is itself reason for being psychologically upset. To be trained to overcome these handicaps and then to find that there is no way of putting the training to gainful use would be even more frustrating. We must always bear in mind that the handicapped do not ask for charity but only for a chance to prove their usefulness to society.

—*The Hindu* (Madras),
Editorial, 24th December, 1961.

KOREA

KOREA BOOSTS BIRTH CONTROL

The Korean Ministry of Health and Social Affairs has issued teaching materials for conducting a nationwide birth control campaign.

According to *The Korean Times* of Seoul, a Ministry spokesman said it has been decided to sponsor a series of lectures in nine major cities to train a total of 1,250 physicians and maternity nurses for the family planning drive that began November 20.

The manuals point out that families in Western countries generally prefer three or four children, urged people to use family

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planning methods suitable to their living standards.

The booklets contain detailed instruction on contraceptive methods and state that the best child bearing years for a woman are between 20 and 35.

—*The Asian Student*,
(San Francisco),
9th December, 1961.

PAKISTAN

PAKISTAN'S POPULATION TOTALS 93 MILLION

The population of Pakistan on February 1, 1961 was 93,801,556, according to the *Census Bulletin* released last week by Minister for Home Affairs Zakir Hussain at a news conference in Karachi.

Of the two wings of the country, West Pakistan's population has increased at a higher rate than that of East Pakistan during the last six censuses. The former showed an increase of 27 per cent as against 21.2 of the latter. At present out of 93.8 million people in Pakistan, East Pakistan has 50.8 million and West Pakistan 42.9.

There are more than 82.5 million Muslims in Pakistan or 88.1 per cent of the total population.

—*The Asian Student*,
(San Francisco),
2nd December, 1961.

UNITED KINGDOM

THE UNPLANNED MILLIONS

By S. Chandrasekhar

India's tenth decennial census, and the second since independence, was completed in March, 1961, and yielded a provisional total of 438 million. This number exceeds by several millions the most liberal upper estimates made by various statistical agencies. That is, India has added 77.26 million to her population and registered a 21.49 per cent increase during the last decade, as against the 42.6 million addition and 14.1 per cent increase between 1941 and 1951. That India has added in a decade more than the population of any European country (with the exception of the Soviet Union) or North or South American

country (with the exception of the United States) and that this number is more than what the planners had expected and feared, call for far-reaching changes in our economic and social plans and policies.

Apart from the massive size of the total population and the alarming rate of its growth, a striking feature is the heterogeneous increase of population in the various States. The percentages of increase in the States during the last decade cover a wide range, from 34.30 in Assam and 32.94 in West Bengal down to 11.73 in Madras.

What are the factors behind this tremendous and unwelcome increase? To begin with, India in 1951 had a large population, and even a small rate of increase would have yielded an impressive decennial addition. But the rate of increase of 21.5 per cent is not small, and the increase of 77 million is unexpected. Any detailed and valid explanation of the decennial increase must await a more detailed analysis of the census returns, and, what is more, a satisfactory explanation will be possible only if reliable birth and death rates are available for the period. Vital statistics in India are still unreliable.

However, an explanation of the country's population growth has to be sought in the nation's birth and death rates. If the birth rate is assumed to have been stationary, the death rate would have had to decline from 27 per 1,000 in 1951 to less than 19 per 1,000 during the decade 1951-61 to yield an increase of 21.5 per cent for the same period. Hence it is possible to suppose that there has been not only no decline in the nation's fertility but, if anything, an increase. Obviously the nation's efforts to popularise family planning have not yet been successful for the country as a whole. It is true that for the first 10 years after independence (1947-57) the question of family planning received little impetus.

The pursuit of family planning in a serious and sustained manner is of recent origin, and here again only a few States in the Union, such as Madras and Kerala, have demonstrated any lively and effective interest in the subject. While Mr. Nehru periodically pleads for family planning, neither his informed concern nor his enthusiasm has infected the Health Ministry. Perhaps there is a need to remove family planning from the Health

Ministry and give it a strong and independent status, in view of the pressing nature of India's population problem.

As for the death rate, the available evidence shows a definite decline. The death rate has declined from 31.2 per 1,000 (1931-41) to 21.6 (1956-61). The infant mortality rate (based on incomplete data) has fallen from 123 per 1,000 live births in 1951 to 98 in 1959. The official figures may not be exact, but the declining trend is obvious in the general death rate and its age and sex components. On the other hand the expectation of life at birth has increased from 32 in 1951 to 42 in 1961.

Two other major improvements are responsible for India's population growth. There has been no famine during the last 15 years. There is still malnutrition and undernutrition, but famine with all its rigours is a thing of the past. India has received food grains from many countries, particularly the US, and the per capita consumption of food is, if anything, higher today than it was a decade ago. Secondly, incredible as it may sound, malaria has been almost wiped out. In the past the number of people who suffered from malaria and the number who died from it every year ran into some eighty million and a million respectively.

If anything, with progress in preventive measures and with more medical institutions and medical personnel of all kinds, and help from the WHO, Colombo Plan, etc., India is bound to register a further decline in her infant, maternal, and over-all death rates.

The real question before India is whether this formidable increase in numbers has helped or hindered the economic development of the country. Population numbers by themselves mean nothing. Population trends and economic development are closely inter-related and each is a determinant and consequence of the other.

The population factor—which includes the size of population, the rate of growth, age and sex composition, and fertility and mortality rates—has a direct bearing upon the development factor—which includes the resources to be spent on supporting the population at a certain level of living, the size and possible employment of the labour force, the rate of current consumption and saving available for investment, etc.

It is difficult to construct a single and precise index of economic development for the country for such a short period as a decade. In India reliable and comparable statistical data on various sectors of economic development during the last decade are not available. The national income is perhaps the most reliable single composite index of economic development. During the first Five-Year Plan (1951-56) the country registered considerable progress in the agricultural sector and the total national income increased by 18 per cent over the figure for 1951. At the end of the second Five-Year Plan (1956-61) the national income had increased by 20 per cent over the figure for 1956.

The population increased during this period at an annual rate of 2.15 per cent over the 1951 population figure, whereas the increase in national income was 4.2 per cent over the 1950-51 income figure at constant prices. The per capita annual income was Rs. 246 in 1951 and it increased to Rs. 286 in 1961, in terms of 1948-49 prices. This works out at an increase of 14 per cent during the 10 years as against the 20 per cent increase envisaged by the Planning Commission because of the commission's underestimate of population growth.

The record of agricultural production in India during the past 10 years has been impressive. The total production of food grains in 1949-50 was 54,000,000 tons. The preliminary estimates for 1960-61 show that an all-time peak of 77,000,000 tons of food grains has been reached at the end of the second plan period. Thus there has been an increase of nearly 38 per cent in food production during the period 1951-61, while the increase in population was 21.5 per cent. Most of the States have increased their food production at a rate faster than their population.

As for the pattern of consumption, recent family budget surveys show that generally 50 to 70 per cent of the total expenditure of the average family is on food, the important components being cereals and pulses. The net availability of cereals and pulses for consumption has been steadily increasing during the last 10 years. As against a total of 13 ounces of cereals and pulses per capita per day in 1951, the corresponding amount available in 1959 was 16 ounces. While the calorie and protein content of the diet of an

average Indian is still very low, the position has improved during the last 10 years.

Has India's economic progress kept pace with her population growth? Has the level of living of the average Indian risen at least a little, if not substantially? How much of a barrier has the high decennial addition proved to be?

In spite of lack of adequate statistical data, it is obvious judging from trends of agricultural and industrial production, that the decade has witnessed significant economic improvement. An upward trend is visible in almost every sector of the economy. There is no doubt that the level of living of the average Indian family has gone up in terms of the basic requisites of decent human existence. The economy of chronic shortages is being gradually transformed into an economy of near-self-sufficiency, although it is still a long way from affluence even according to Indian standards.

But the major question still is whether it would not have been possible to attain even higher levels of living had the growth of population been at a slower rate. The answer is in the affirmative. Had we added about 38 million, or about half the actual increase, more families, would have received more amenities.

It can of course be argued that this great increase in population is itself an index of the over-all improvement in India's level of living. Theoretically all populations, particularly in underdeveloped countries, increase in numbers in response to the slightest improvements in the conditions of life. This increase is bound to go on for some years until the level of living becomes high and sustained, and then the population numbers are likely to be stabilised at a fairly high level of living. This is apparently what is happening in India. Therefore the next pertinent question is whether the country can afford to support at a higher level of living five hundred and more millions by 1971.

Thus, India's present demographic dilemma of registering substantial population increases as the economy's productivity increases may continue for some decades. This dilemma can be resolved only by massive economic aid from abroad and a radical

cut in the birth rate through bonuses for family limitation.

—The Guardian (Manchester),
India Today Supplement,
15th August, 1961.

U. K. IMMIGRATION BILL

Measure 'Certainly Discriminatory'

New York, Dec. 16: The New York Herald Tribune said to-day that, whatever may be said about the proposed British Bill to restrict immigration, it will "in fact discriminate almost entirely against men with black skins."

"The Commonwealth Immigration Bill which Parliament is now stormily debating has become a national case of conscience for Britain," the newspaper said in an editorial.

"Unemployment, social dislocation and racial discrimination are genuine reasons for seeking a fresh approach to the immigrant problem, and Mr. Macmillan's Government is determined to push the Bill through in one form or another. Americans are not exactly entitled to pontificate, but it does seem there are broader considerations to be taken into account.

"One, obviously, is British responsibility to its position as the multi-racial Commonwealth's founder-member. Whatever may be said, the Bill will in fact discriminate almost entirely against men with black skins.

"Then, too, there is Britain's responsibility toward its colonies, or former colonies, whose life and social structure it has ordained through the centuries. This is especially true of places like Jamaica, where the crushing poverty of the black masses is like a wordless verdict on the injustice of history."

The Hindu (Madras),
18th December, 1961.

UNITED NATIONS

SEX CRIMES REDUCED BY EARLY WEDLOCK

New York, Oct. 4: Early marriages cut down sex crimes, the United Nations General Assembly's Social Committee was told yesterday.

Mr. Jamil Baroody (Saudi Arabia), who made the statement, added that where there

were "delayed marriages," the result was "clandestine relations."

The Committee was debating a draft convention on consent to marriage, minimum age of marriage and registration of marriages. The draft proposed that all marriages should be registered in each country by an appropriate authority.

This met with general agreement, but a provision that no marriage should be entered into without the "full and free consent" of the parties concerned led M. Alphonse Sita (Congo-Leopoldville) to observe that the "great problem" of marriages in Africa was not lack of consent, but "real consent." He said that because of pressures, a young girl sometimes went into marriage "despite herself." A definition of the word "consent", was needed, he added.

Some delegates also argued that the draft convention, which states that each country should have legislation laying down a minimum age of marriage should specify a definite age.

—*The Hindu* (Madras),
7th October, 1961.

U.S.A.

EPISCOPAL CHURCH FOR BIRTH CONTROL

Population Rise Cited

Detroit, Sept. 28: The Protestant Episcopal Church endorsed artificial birth control here today.

At the same time it approved the dissemination by the United States Government of birth control information to less-developed nations "wherever it is officially sought."

The three-million-member denomination, meeting in triennial general convention, thus joined the growing number of Protestant bodies that have formally approved planned parenthood.

Among these were the American Baptist Convention, the United Lutheran Church in America, the Methodist Church, the United Presbyterian Church and the United Church of Christ.

Lambeth Stand Recalled

A resolution stating the position of the Episcopal Church was overwhelmingly

adopted by both its House of Bishops and House of Deputies.

It recalled that in 1958 the Lambeth Conference emphasized that "there are many lands today where population is increasing so fast that the survival of young and old is threatened and population control has become a necessity."

Lambeth is a gathering held in England every ten years of all bishops in the Anglican communion. The Episcopal Church in this country is a part of world Anglicism.

In an extension of the Lambeth thesis, the convention in Cobo Hall here maintained that "it is the duty of the better-developed countries such as our own to help such countries to become self-supporting in food supplies and health measures through technical and other aids."

"In particular," the resolution declared, "while condemning abortion and infanticide, we believe that methods of control which are medically endorsed and morally accepted may help the people of these lands so to plan family life that children may be born without a likelihood of starvation, and we approve the rendering by our Government of assistance to this end wherever it is officially sought."

A second resolution adopted by the convention was taken word-for-word from another Lambeth statement. In part, it said:

"This general convention holds that the responsibility of deciding upon the number and frequency of children has been laid by God upon the conscience of parents everywhere: that this planning, in such ways as are mutually acceptable to husband and wife in Christian conscience, is a right and important factor in Christian family life and should be the result of positive choice before God....."

"Although it is clearly a primary obligation of Christian marriage that children be born within the supporting framework of parental love and family concern, with a right to an opportunity for a full and spiritually wholesome life, it is not to be held from this that the procreation of children is the sole purpose of Christian marriage. Implicit within the bond between husband and wife is the relationship of love with its sacramental expression in physical union."

The twelve-day Episcopal convention will end tomorrow with the reading of a pastoral letter from the House of Bishops.

—*The New York Times*,
29th September, 1961.

16 MILLION OVER 65:

U. S. GROWING OLD FASTER THAN RUSSIA

Chicago, Dec. 9 (UPI): A man who works with his brain for a living does not consider himself "old" until he is 70. A man who works with his hands feels "old" at 60.

A woman of the upper economic class thinks she is "good looking" at 35, while her lower economic class sister thinks she has reached the peak of her beauty at 25.

These and other conclusions about growing old—the problem that puts wrinkles on our faces, gold watches in our pockets and time on our hands—were reached in a pioneer study by scientists of the University of Chicago.

The report, originally released by the university on November 26, also concluded that the United States may be handicapped in its struggle with communism by the aging problem—a problem so basic that one out of every 11 Americans can confront it just by looking in the mirror.

Every year an increasing proportion of the U.S. population—and in fact, that of all the free world Western democracies—is being absorbed by "oldsters." The rate of increase, according to the study, has made America an "old" country relative to the population of its world rival, the Soviet Union.

"If youth means vigor and age debility, the Western and free nations may be handicapped in the intense competition—economic, social, political and perhaps military—which lies ahead," warned Philip M. Hauser, in an introduction to a report on the study published in the fall issue of the university magazine "Context."

Mr. Hauser, director of the university's population research center, noted that since 1900 the number of Americans over age 65 has increased 500 per cent to 15,800,000—the one out of 11 ratio.

By 1980, he predicted, there will be another 50 per cent increase producing a total of at least 24,500,000 Americans over 65.

Perhaps more significant than many of these statistics is the fact that the rate of increase of oldsters is proceeding along at a clip almost twice that of the nation as a whole.

Will the result in any eventual showdown with the Soviets sap our national strength and consign us to a sort of turtle-and-hare competition?

Mr. Hauser points out that "youth has not always triumphed over age, and age has many virtues and strengths not possessed by youth." But to exploit them, America must take a "dramatically" more critical look at the problem of aging than it has been willing to do in the past, he and his colleagues agree.

The studies of the "age scientists" cover a broad range of physiological and psychological aspects of the aging process. Some of their tentative conclusions:

Work in genetics and the study of mutation—furthered by similarities between radiation injury and natural aging—offer hope men may someday learn to retard the aging process.

Men may one day discard the chronological yardstick for judging age in favour of a flexible system which recognizes the common fact that some men of 70 feel and act 50 and vice versa.

As more and more Americans join the oldster category, their very numbers will produce a sense of belonging in an independent "sub-culture" that will enable them to better compensate for "social, economic and psychological losses" common among our old people now.

The new "sub-culture" of older Americans has definite distinctions among economic classes, according to results of a 10-year study known as the "Kansas City project." In the survey conducted among a pilot group of people 40 to 85 in the Midwestern city, subjects were divided into four social classes: upper middle, lower middle, upper lower and lower lower.

In general, the interviewers found, the upper-class man sees a slow period of arriving at maturity followed by a relatively short period which he defines as "old age." The

lower class man, it was found, saw life speeded up, with the first phases of adulthood appearing to pass quickly followed by a long "old age."

For example, a "lower lower" class man thought he had reached the peak of maturity at 25, while maturity for an upper middle class man was defined as 40.

The older woman's view of herself similarly was affected by her social group. An upper middle class woman tended to consider herself most "good looking" at 35 and "in her prime" at 40. A lower lower class woman felt she reached the peak of her beauty at 25 and her prime at 35.

The study showed that 75 per cent of America's older people believed an older person had no chance of saving enough money to care for himself in old age and thought the Government should provide money for his maintenance.

Ernest Watson Burgess, professor emeritus of sociology at the university, concluded that the "rocking chair" stereotype of America's old people must be discarded rapidly in favor of a more flexible approach to oldsters as the true individuals the Chicago study showed them to be.

"The time has come for a critical evaluation of policies, programs and projects" to learn the "capacities, needs and potentialities of older people," Mr. Burgess said. Otherwise, he warned, the Government was wasting money on its "uncritical" welfare programs.

Mr. Burgess is a fine example of his own argument. He is 75.

THE AGE 'GAME'

How Men Look at Aging

When is a man	"at his prime?"	"middle-aged?"	"old?"
Upper middle class	40	47	70
Lower middle class	35	47	70
Upper lower class	30	40	60
Lower lower class	25	40	60

How Women Look at Aging

When is a woman	"good looking?"	"most confident?"	"prime?"	"old?"
Upper middle class	35	38	40	70
Lower middle class	30	35	40	70
Upper lower class	27	30	38	67
Lower lower class	25	25	35	65

—The Pittsburgh Press,
10th December, 1961.

U.S OFFERS TO HELP POPULATION STUDIES

*Won't assist in Birth Control or
Make Aid Conditional*

Washington, Dec. 13: The United States Government is now officially committed to the proposition that rapid population growth poses serious economic problems for many underdeveloped nations.

The Government is actively seeking to stimulate study and public discussion of these problems.

It is prepared to consider requests from other countries for U.S. technical assistance in conducting studies of population growth rates and their impact on economic development.

But it will not make population limitation efforts a condition for future U.S. economic aid. It will not urge or advise any nation to undertake birth control programs. And it is not prepared at this point to provide birth control information or devices to countries which decide on their own to launch such programs.

This summary of U.S. policy was given in an interview by William T. Nunley, special assistant to Undersecretary of State George W. Ball.

Action demanded by Non-Catholics

The policy was not evolved quickly or casually. It was carefully framed after months of consultation among high officials who are aware of the intense religious, political and diplomatic pressures which have built up around the whole question of population control.

The policy-makers were confronted, on one hand, with demands from a number of prominent Americans, including many Protestant and Jewish religious leaders, that this country take a vigorous initiative in coping with rapid population growth rates which, according to World Bank President Eugene Black, "threaten to nullify all our efforts to raise living standards in the poorer countries".

They were mindful, on the other hand, that the U.S. Catholic hierarchy has formally served notice that it will fight any use of American tax funds "to promote artificial birth prevention, abortion or sterilization" in any land.

Beyond these domestic pressures, the State Department faced a potential diplomatic row in the United Nations, where Sweden and Denmark have proposed action to assist underdeveloped countries in "finding a solution" to their population problems.

The Swedish-Danish proposal has been placed on the agenda for debate at the current session of the General Assembly. Its inclusion on the agenda was opposed by several predominantly Catholic countries but was supported by the United States.

Nunley said the U.S. position is that "it is time to get this subject off the blacklist of things people don't talk about and bring the problem into the open for study and discussion."

He emphasized that the United States is not advocating any particular solution for population problems.

"The main thing we're trying to do is to get people to think and talk about these problems and to recognize that there is an important relationship between population growth rates and economic development."

He warned against over-simplifying this relationship, or leaping to the conclusion that birth control programs are the only way to

raise living standards in underdeveloped countries.

"In dealing with this matter, we are standing on a small island of knowledge surrounded by a vast ocean of ignorance and uncertainty.

"There are tremendous variations in the population problems of different countries. Population growth rates are affected by a great many factors other than birth control.

"We cannot be sure whether the problems produced by population growth will ultimately be resolved, in any given country, by reducing the rate of population growth, by technological break-throughs in the production of goods and services, by commercial arrangements which permit a better distribution of goods and services, by mass emigration, or by various combinations of these services."

He said the United States is "prepared to consider on their merits" requests from other governments for assistance in "acquiring additional knowledge about their own population problems." In fact, it already is helping some countries with the essential preliminary step of conducting an accurate census.

Won't attempt to impose policy

But the United States "will not attempt to impose" any policy toward population-growth countries receiving U.S. economic aid, and it "will not advocate any particular technique of population control."

He said that to date no nation has ever asked the United States for "specific assistance in controlling population growth."

If an underdeveloped country did not seek help in launching a birth control program, he said, it would be referred to a private U.S. agency, or to some of the foreign governments, such as Sweden and Denmark, which are ready to give technical advice in this field.

"I do not know whether the U.S. Government will ever consciously provide specific assistance in controlling population growth, and I am even less certain whether we will ever offer assistance in support of birth control programs," he said.

"At the present moment, incredible as it may seem to some Americans, birth control

is not a major issue in most parts of the world. It certainly is not a policy objective of the United States Government. Our real objective as Undersecretary Ball said recently, is simply to make sure that every birth everywhere in the world will some day be accompanied by a birthright."

—The Louisville Times,
13th December, 1961.

FREE SPEECH ARGUED IN BIRTH CLINIC CASE

New Haven, Dec. 8 (AP): The defense injected alleged violation of the right of freedom of speech today in the trial of two persons accused of violating Connecticut's eighty-two-year-old anti-birth control law.

Catherine Roraback, the defense counsel, used the freedom-of-speech approach in what she called a new attack on the law's constitutionality.

Circuit Court Judge J. Robert Lacey continued the case indefinitely until he could study Miss Roraback's brief.

The two defendants in the case are Dr. C. Lee Buxton of Yale University and Mrs. Richard W. Griswold of New Haven. They have pleaded not guilty to charges of being "an accessory to the use of contraceptives."

It is the defense contention that Dr. Buxton's right to freedom of speech is violated by the state law that prevents dispensing advice on the use of contraceptives.

Dr. Buxton and Mrs. Griswold were arrested November 10, ten days after they had opened a birth-control clinic here and had begun to give advice on the use of contraceptives.

—The New York Times,
10th December, 1961.

'FAMILY BREAKDOWN' IS CALLED NO. 1 SOCIAL PROBLEM IN U.S.

The Family Service Association of America, which will begin the observance of its fiftieth year this week, said yesterday that family breakdown was now "America's No. 1 social problem."

A special edition of Family Service Highlights, the association's official journal, said, this "disease" of society required a "crash program" to investigate the causes. The goal

would be to inform the public of the enormity of the problem and to seek its support in a program of education and prevention.

The association, which opens its fiftieth anniversary conference today with the theme of "fortifying the family for the stress of the Sixties," lists these results of present stresses:

A tripling of the rate of illegitimacy in the last two decades.

A divorce rate of one in four new marriages.

A delinquency rate tripled since 1940.

An annual admission rate to mental hospitals of more than 200,000 persons.

All of these spell "family breakdown," Highlights observed.

"Behind these statistics are not only individuals but whole groups of people—families—which are blighted. And these social ills are but a small part of the syndrome that constitutes the over-all, debilitating disease we call family breakdown," it was said.

"A strong family is more than one in which the symptoms of family breakdown, such as divorce or delinquency or alcoholism, are absent. Hence the urgent need for the Family Service Association to develop and vigorously expand its programs of preventive family counselling, social planning and action family-life education and other vital work."

The four-day conference at the Commodore Hotel, a special biennial one commemorating the association's anniversary, will bring together staff and board members from more than 300 local family counselling agencies in the United States and Canada. To-night's opening session will hear Frederick G. Storey, president of the association.

—The New York Times,
12th November, 1961.

185 MILLIONTH AMERICAN IS BORN

The population of the United States hit the 185,000,000 mark 17 seconds after 3-01 p.m. Thursday, according to the "census clock" in the U.S. Department of Commerce.

Secretary of Commerce Luther H. Hodges led cheers in Washington as the population count hit an all-time high. The census clock, while not absolutely correct, is believed

"quite close." At the time of the April 1, 1960, census, the clock's estimate was 11,000 less than the actual door-to-door count.

The clock looks like the mileage meter of an automobile speedometer and its tally changes to reflect these developments: a birth every 7.5 seconds, a death every 19 seconds; the arrival of an immigrant every 1.5 minutes and the departure of an emigrant every 25 minutes.

The Census Bureau records showed the population density of the United States on Thursday to be 52 residents per square mile. In the Netherlands, the world's most densely populated country, the figure is 900 persons for each square mile.

As Hodges marked the 185,000,000 population count Thursday, he said the event proved the country's "strength and virility." He said that if the population continues to grow as it has, it will reach 200 million in five years.

—The Atlanta Constitution,
1st December, 1961.

'BIRTH CONTROL IS OUR HOPE'

Mankind must take up widespread birth control or face annihilating nuclear war, Professor Kingsley Davis told the International Industrial Conference here today.

"World War III is close at hand and the use of atomic weapons in conducting it is probable," the famed University of California demographer (student of population problems) told the businessmen and industrialists from 60 Free World nations meeting here this week.

Just yesterday Neil H. McElroy, former U.S. Defence Secretary and present head of the giant Procter & Gamble Soap Company, urged the world's business leaders to abolish the grinding poverty which afflicts more than half of mankind.

And John J. McCloy, the attorney and banker who is President Kennedy's principal adviser on disarmament, called for a means of settling international disputes without war.

But Professor Davis said flatly that no economic or political solution will avert nuclear war in the absence of an immediate, effective brake upon the population explosion which is flooding the earth with human beings.

"Unless the unremitting population pressure is released in the near future by lowering the birth rate, it seems likely that it will be tragically released by a rise in the death rate from the use of modern armaments," he said.

"Today, in an era of rising expectations, there is little likelihood of mass starvation, but a distinct likelihood of warfare.

"The maintenance of peace among nations can hardly be achieved by such superficial means as pronouncements deploring warfare, agreements limiting armaments, or votes in the United Nations Security Council. These measures deal with the symptoms, not the causes."

He put his finger on what is really causing "unrest and resentment".

"The uncontrolled and meaningless expansion of human numbers.

"This factor is operating in industrial societies, where such amenities as space, clean air, recreational facilities and water are becoming scarce in relation to the multiplying hordes

"It is in operating in non-industrial societies where even elementary education, clothes, and shelter are hard to get."

There has been no "peace" since World War II, he noted. From 1955 to 1959 there were 16 revolutions, eight of them accompanied by civil war. "The old colonial system has continued to crumble . . . Africa is being balkanized by the process of drawing national boundaries around tribes . . . the Communist empire has continued to expand . . . small-scale warfare has been endemic . . . nations all over the world are devoting large shares of their income to military preparedness . . . peace is indeed precarious."

Free food does not solve the population problem—indeed, it makes it worse, by reducing mortality without reducing fertility, he said. A public health program which leaves the birth rate untouched or increases it . . . "may be so deleterious as to nullify the gains."

—San Francisco News-Call Bulletin,
12th September, 1961.

POPULATION GROWTH WORLD'S No. 1 WOE

No 20th century problem is more grave or more basic than the problem posed by man's fertility, Dr. S. Chandrasekhar, Director of the Indian Institute for Population Studies, said here today.

"The facts can be summarized briefly," he told the International Industrial Conference.

"Today the total world population has exceeded the three billion mark.

"According to some 'guesstimates' there were probably no more than 15 million people in the world at the end of the Stone Age. At the birth of Christ the population had increased to about 250 million. In 1650 this number had risen to 500 million; and a century later to 695 million.

"In 1850 it passed the billion mark. Half a century later, in 1900, it rose to 1,500 million.

"But during the last 60 years, the world population has doubled and become three billion.

"Thus, it took man many thousands of years to multiply to a billion and a half, but it took only a little more than half a century to double that number. At the current rate of increase, the world might have 6.2 billion people by 2000 A.D.

"All the rich countries may not be willing to underwrite the development of the underdeveloped countries. And who can blame them if they question why the fruits of their hard work and efficiency should be shared at the altar of the boundless fertility of the backward?"

—San Francisco News-Call Bulletin,
12th September, 1961.

BIRTH CURB PILL — OR WAR THREAT

What is needed to overcome wretched poverty in many parts of the world is "a really cheap, effective, acceptable and harmless birth control pill," Dr. S. Chandrasekhar of India asserted here yesterday.

And if birth rates aren't lowered, the likely alternative is war, said Kingsley Davis, chairman of the University of California Department of Sociology.

The two addressed a panel of the International Industrial Conference at the Mark Hopkins Hotel.

At the conference are 619 industrial and financial leaders from more than 60 nations. It continues through Friday. It is sponsored by Stanford Research Institute and the National Industrial Conference Board.

The world population is increasing by 45 to 55 million per year, said Dr. Chandrasekhar, Director of the Indian Institute for Population Studies, and the total is now three billion.

"Of all the problems faced by man, none is more basic or grave than that posed by man's uncontrolled fertility," he said.

"Even the most casual look at the conditions of human life in the underdeveloped parts of the world shows how backward and distressing life is for the average man."

Living standards can't be lowered any further, and raising the death rate is unthinkable, he added. Only universal birth control could help, and "today, conventional birth control methods have by and large failed among the masses in Asia."

The aid of American science and technology is needed, he said, to perfect the ideal "cheap, effective, acceptable and harmless" birth control pill.

Tension

Davis, the UC sociologist, said the population pressure was an essential cause of tension in the world today.

He cited reports that Red China, may have instigated the resumption of Soviet nuclear testing; and he pointed to 16 revolutions in the world in the last four years as triggered by population pressures.

"Unless the unremitting population pressure is released in the near future by lowering the birth rate, it seems likely that it will be tragically released by a rise in the death rate from use of modern armaments," he concluded.

Capital

Two other panel speakers noted other possible methods of economic improvements in underdeveloped areas.

Dr. Alexander King, of England, deputy director of the European Productivity Agency, said a concentrated effort to develop

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"human capital" as well as dollar capital, speeds productivity.

Needed, he explained, are such factors as better education and research, and economic conditions encouraging investment and innovation. The European Productivity Agency attempted such a program, he noted, and "its success has been manifest."

Goods

Charles H. Kellstadt, chairman of the Board of Sears, Roebuck and Co., predicted—in a report read for him—that total consumption of goods in the free world "will rise somewhat more rapidly than population."

"Even though per capita consumption may not increase appreciably in many densely

populated (and underdeveloped) countries, other areas will raise the overall average."

Kellstadt also reported a current slowdown in durable goods sales in America (appliances, power mowers, TV sets, etc.) and said it probably would continue through the 1960s.

However, "the stage is being set for the biggest marriage boom in our history in the late 1960s" as war babies reach adulthood, he noted.

Thus, a boom in durable goods sales is expected several years later.

Arthur Rosenbaum, Sears director of research, presented the paper for Kellstadt.

—San Francisco Chronicle,
13th September, 1961.

Assimilation and Inter-marriage as Means of Eliminating Tensions

Since the very beginnings of immigration, a complete merging of the alien groups with Brazilian society has been a basic postulate. The ruling Luso-Brazilian majority was unwilling to conceive of a national society other than in terms of a culturally homogeneous structure striving toward a "Brazilian race" to be achieved by intensive intermarriage. Whatever the wishful image of a "Brazilian race" is, it certainly centres round the idea that the darker strains will eventually be absorbed by the lighter ones.

The ideals of cultural and biological merging had a common root in the Brazilian concept of political loyalty. Intermarriage is not merely taken as a matter of course; Brazilians also subconsciously desire that all foreign groups coming into the country cease to be foreign in the next generation by intermarrying, so that they do not stay within their own little clans. If a German immigrant marries an Italian immigrant, it is as satisfactory as his marrying a Brazilian. But when Germans begin to marry only Germans, as the Japanese have been trying to marry only Japanese, then we feel profoundly disturbed. Even if we do not put it into so many words, the feeling is there—when people of any racial or national minority begin to marry among themselves, the ominous cry, "racial cyst", is taken up. All Brazilians feel that there lies a mortal danger for the country.

—EMILIO WILLEMS, "Brazil" in *The Positive Contribution by Immigrants* (Paris. UNESCO. 1955) Pp. 143-44.

Book Reviews

POPULATION PROBLEMS

PETERSEN, WILLIAM. *Population* (New York. The Macmillan Company. 1961) pp. 652. Price \$ 7.50.

Professor Petersen of the Department of Sociology, University of California at Berkeley provides us in this book with a general text on population for use in undergraduate and graduate courses in Demography in American colleges and universities.

Besides an Introduction on "Population as a Field of Study", the book is divided into three parts. The first part is devoted exclusively to an examination of the growth and composition of the population of the United States. This is understandable in view of the fact that the book is primarily addressed to the American student. The ten chapters in this part discuss such conventional topics as the Growth of the Nation, Sources of Demographic Data, Age and Sex Composition, American Immigration Policy, Internal Migration, Urbanism and Urbanization, Family and Fertility, Morbidity and Mortality, and Population Projections. These chapters introduce the student to the various demographic concepts in terms of the American population situation in a simple and lucid style.

The second part of the book, dealing as it does with "Population in Various Types of Society" is of more interest to the non-American reader. It contains chapters on The Population of Primitive Societies, The Population of Preindustrial Civilizations, Population During the Industrial Revolution, The Population of Totalitarian Societies (the Soviet Union and Nazi Germany) and The Population of Underdeveloped Countries. In the chapter on the Population of Underdeveloped Countries, Professor Petersen includes Japan, China and India. While the author notes that Japan is the only Asian country which has become an industrial power, it is not clear why Japan is included in the chapter since Japan is technically a "developed" nation. The discussion of the policies of the Soviet Union and Communist China are admirable, but the reader wishes that the author could have given a little more space to India's population policies.

The third part of the book titled "The General Determinants of Population" contains four chapters on Malthusian Theory and Its Development, The General Determinants of Fertility, The General Determinants of Mortality, and The General Determinants of Migration.

This book transcends the conventional limits of population analysis and provides the latest data on a number of societies. While half of the book is devoted to the United States of America, it does not, unlike other textbooks in the field, discuss only the U.S.A. under the title "Population Problems". There are numerous valuable tables and charts and a brief and excellent bibliography at the end of each chapter for further study. A brief appendix is devoted to "Some Notes on the Techniques of Population Analysis". There are nearly forty apt and illustrative photographs. A carefully compiled index completes the volume.

In addition to the latest available data for many countries, the book includes the data of the 1960 census of the United States. A book such as this has necessarily to trespass into disciplines in which a single author cannot be expert, and yet Professor Petersen is very much at home in Economics and Anthropology. A few maps in a subsequent edition might further enhance the value of the book.

The present reviewer used this book in a one semester graduate course on population problems at an American university recently and found it an admirable text. What is more, the book can be highly recommended to students in the departments of demography, economics and sociology in Asian colleges and universities. The author's excellent style makes the book very readable. He is to be congratulated on this book.

THE FLIGHT FROM THE LAND

Why Labour Leaves the Land: A comparative study of the movement of labour out of agriculture (Geneva, International Labour Office, 1960). pp. 229. Price \$ 2.25.

This study is concerned with the causes of the movement of labour out of agriculture

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into other occupations, the problems that arise from such movement and the policies that have been adopted to deal with such problems. The rural exodus generally involves both change in occupation (from agriculture to industry or other occupations) and change in residence (from rural to urban). The migration of manpower from the country to the city gives rise to many problems at both the sending and the receiving ends.

What are the economic, social and cultural factors that are behind the "push" of the villages and agriculture and the "pull" of the city and urban occupations? When agricultural workers leave the farm, does it improve or have adverse effects on farm efficiency? Is agricultural labour skilled? When they arrive in the city is there alternative employment readily available and at lucrative remuneration? What about housing, medical and other basic social services? Are these problems the same in advanced and under-developed countries?

This study examines these problems in such economically advanced countries as the United States of America, Canada, Denmark, France, Western Germany, the Netherlands, Norway, Sweden, the United Kingdom and Italy. Italy which is not quite an advanced country according to the definition adopted here is nevertheless included in this category. Countries with a large surplus agricultural population, such as India, Pakistan and Japan are examined in a second category. While Japan is relatively more advanced than India and Pakistan, she has been included in this category for purposes of convenience. Countries which are in the process of rapid development are examined as a third category. These are, Brazil, Venezuela, Iraq, Africa south of the Sahara, Turkey and Yugoslavia.

The major reason for labour moving out of agriculture is the desire for better pay and shorter hours, better educational and medical facilities, more and better recreation facilities, and better social status. Perhaps the most important reason is that it is difficult to support a family on a small holding, that is, if the agriculturist has any holding at all. If he is a landless labourer, the situation is much worse. In advanced countries where the differential between country and agricultural and non-agricultural occupations is not very marked, the rea-

sons given for labour moving out of agriculture are "greater security" and "more social amenities". Both the landed and the landless agriculturists suffer from numerous disadvantages compared with workers in other occupations, and the differential between agriculture and other occupations becomes more significant when the traditional advantages of urban life are contrasted with the well-known disabilities of the rural way of life. This contrast is very marked in all the under-developed countries where agriculture is more a traditional way of life and not, by and large, a successful commercial proposition.

This study provides some striking figures on the percentage of farm population to total population in various countries. In the United States of America in 1957 about 12 per cent constituted the farm population. This small segment of the U.S. population produced enough food to feed itself and the remaining 88 per cent of the non-farm population; and in addition large quantities of agricultural products were exported to many needy parts of the world. In Canada, the percentage of farm population to total population was 15 and in the Federal Republic of Germany 20; whereas in India, Pakistan and Japan the comparable figures for recent years were 74, 70 and 45 per cent respectively.

It is obvious, and these figures only underline the fact, that the rate of industrialisation and urbanisation in the under-developed areas is very low. The traditional paradox of too many people working on too little land producing insufficient food continues to harass the economic planners. The Asian agriculturist is only too ready to leave the eroded, over-crowded soil for the cities and the push mechanism of economic distress is always present. But, unfortunately, there is little or no pull mechanism in the cities. There are no urban occupations that can receive emaciated, unskilled and rural labour. The villager in the city has no regular, adequate employment and consequently gravitates to the slum or the pavement with all its attendant problems.

What is the answer? The study concludes: "Thus the evidence suggests that 'taking people off the land' is neither so easy nor so beneficial in practice as it sounds on paper. Movement may achieve only an equilibrium

of misery: it may be too slow to reduce rural poverty and pressure on the land, and yet too fast in relation to urban jobs and living conditions; it may result in wastage of manpower and undue stress from the conflicting claims of the means of livelihood on the one hand, and life itself on the other."

A way out is to improve the productivity of the land and its workers in order to raise living standards in both rural and urban areas. And this can only be done as an integral part of overall economic develop-

ment. In other words, the major objective of policy in both advanced and under-developed countries should be not to encourage or discourage rural exodus as such, but to improve the conditions of the workers on the land. If there should be migration, it should not be the product of distress but of voluntary choice between occupations.

This is a valuable and well-documented study, worth the perusal of interested social scientists.

Population Control

In the long run, in my judgment, the only sure relief for population pressure and the tensions and troubles it creates is population control. I use the phrase *in the long run* because it does not seem reasonable to me to expect the rate of population growth to begin to decline significantly in most of these Asian countries in less than about a generation. I want to make it clear that I am speaking here of the *rate of population growth*, not the *birth rate*. The birth rate may begin to decline in certain areas somewhat sooner, but the rate of population growth will rise as long as the death rate declines faster than the birth rate.

In the long run, man will no doubt learn to adjust his birth rate to his ability to produce the goods needed to provide a decent living, since the alternative to such control must be the return of a high death rate due to hunger and want and disease and probably *hot war* in the not distant future. I am not saying that it is impossible to support a much larger population in these Asian countries at some time in the future and at a better level of living, but I am saying that I do not believe the probable expansion of production and the probable population growth justify an expectation of much improvement in living conditions during the next generation. I am also saying that even a slow but steady improvement in the standard of living will not satisfy these peoples and that, consequently, economic and political tensions resulting from the growing feeling of poverty will increase.

Since I believe that *felt* population pressures will increase significantly in the near future, I am very much concerned that even China and India, in spite of their official approval of contraception, do not seem to be making the great effort necessary to secure its early adoption. If even one-fourth or one-third of the money and effort being used to establish heavy industry and basic services were devoted to educating the masses in the need for birth control, the rate of population growth could almost certainly be reduced in a shorter time than now appears probable, and the level of living could be raised much faster during the next two or three decades than will be possible by following their present plans for depending almost entirely on economic development to achieve this aim. This does not seem to be realised in either India or China.

—WARREN S. THOMPSON, *Population and Progress in the Far East*, (Chicago. University of Chicago Press. 1959) pp. 399-400.

Publications Received

- A Hand Book on Training Facilities in Punjab 1960-61* (Chandigarh. Economic and Statistical Organization. 1961) pp. 113. Price not given.
- ALONSO, ANNIBAL MARTINS. *Estrangeiros No Brasil* (Rio de Janeiro. Livraria Freitas Bastos. 1960) pp. 425. PNG.
- ANTTI TUURA — TAPANI PUROLA. *The Growth of Population and Labour Force in Finland upto 1970* (Helsinki. Population Policy Research Institute. 1960) pp. 100. PNG.
- Annual Epidemiological and Vital Statistics, 1958* (Geneva. World Health Organization. 1961) pp. 855. Price \$ 16.00.
- Census of India*. September 1961. (Delhi. Government of India Press. 1961) pp. 82. Price Re. 0.50.
- Paper No. 2. 1960 (Delhi. Government of India Press. 1960) pp. 179. Price Rs. 2.00.
- CHANDRASEKHAR, S. *A Report on South Indian Reading Habits* (Madras. Southern Languages Book Trust. 1961) pp. 90. Price Rs. 2.50.
- *Communist China's Population Problem*. Reprint from *The Atlantic*, December 1961.
- Control or Colour Bar: A Proposal for Change in Australia's Immigration Policy* (Melbourne. The Immigration Reform Group. 1960) pp. 52. PNG.
- CORMACK, MARGARET R. *She Who Rides A Peacock* (Bombay. Asia Publishing House. 1961) pp. 264. Price Rs. 12.50.
- Demographic Year Book 1960* (New York. United Nations. 1961) pp. 621. Price \$ 8.00.
- EATON, JOSEPH W. and POLK, KENNETH. *Measuring Delinquency* (Pittsburgh. University of Pittsburgh Press. 1961) pp. 102. Price \$ 7.00.
- Economic Bulletin for Asia and the Far East*. June 1961 (New York. United Nations. 1961) pp. 73. Price \$ 0.50.
- EKBALD, MARTIN. *The Prognosis after Sterilization on Social-Psychiatric Grounds* (A Follow-up Study of 225 Women) (Copenhagen. Ejnar Munksgaard. 1961) pp. 162. Price K 65.
- GATES, R. RUGGLES and BAHADURI, P. N. *The Inheritance of Hairy Ear Rims* (Edinburgh. *The Mankind Quarterly*. 1961) pp. 38. Price 6 shillings.
- GATES, THEODORE R. and LINDEN, FABRAN. *Costs and Competition*. American Experience Abroad (New York. National Industrial Conference Board. 1961) pp. 226. Price \$ 4.00.
- GHOSH, STANLEY. *Embers in Cathay* (New York. Doubleday. 1961) pp. 236. Price \$ 4.50.
- HATCH, JOHN. *Africa Today and Tomorrow* (New York. Frederick Praeger. 1960) pp. 289. Price \$ 1.75.
- HORRABIN, J. F. *An Atlas of Africa* (New York. Frederick Praeger. 1960) pp. 126. Price \$ 1.45.
- HUDSON, G. F. et al (Ed.) *The Sino-Soviet Dispute* (London. *The China Quarterly*. 1961) pp. 227. Price 5 shillings.
- Humanity and Subsistence: A Symposium* (Vevey. Annales Nestle. 1961) pp. 237 PNG.
- In a Strange Land*. A Report of a World Conference on Problems of International Migration and the Responsibility of the Churches (Geneva. World Council of Churches. 1961) pp. 96. PNG.
- KHAN, AZIZUR RAHMAN. *Wages and Prices in Karachi: A Case Study* (Karachi. The Institute of Development Economics. 1961) pp. 34. PNG.
- KULKARNI, P. D. *The Central Social Welfare Board* (Bombay. Asia Publishing House. 1961) pp. 78. Price Rs. 7.00.
- MAHALANOBIS, P. C. *Experiments in Statistical Sampling in the Indian Statistical Institute* (Bombay. Asia Publishing House. 1961) pp. 70. Price Rs. 10.
- Mater et Magistra: Encyclical of Pope John XXIII*. Christianity and Social Progress. (New York. Paulist Press. 1961) pp. 96. Price 25 cents.

- PACKARD, VANCE. *The Waste Makers* (London. Longmans. 1961) pp. 340. Price 21 shillings.
- PETERSEN, WILLIAM. *Population* (New York. Macmillan. 1961) pp. 652. Price \$ 7.50.
- Proceedings of the Pakistan Statistical Association* Vol. 9. 1960-61 (Lahore. Institute of Statistics. Panjab University. 1961) pp. 208. PNG.
- RAB, ABDUR. *Acreage, Production and Prices of Major Agricultural Crops of West Pakistan (Punjab): 1931-59.* (Karachi. The Institute of Development Economics. 1961) pp. 73. PNG.
- REINHARD, MARCEL R. and ARMENGAND, ANDRE. *Histoire Generale de la Population Mondiale* (Paris. Editions Montchrestien. 1961) pp. 596. Price 50 francs.
- Report of a Study Team on Panchayati Raj in Andhra Pradesh* (New Delhi. Association of Voluntary Agencies for Rural Development. 1961) pp. 48. Price Rs. 1.50.
- Report on a Survey of the Attitudes, Opinions and Personality Traits of a Sample of 17,065 Students of the University of Bombay* (Bombay. Orient Longmans. 1960) pp. 77. Price Rs. 1.25.
- Resettlement of Peoples. The Work of the International Catholic Migration Commission* (Geneva. 1961) pp. 24. Price 1 shilling.
- ROSSITER, CLINTON. *Parties and Politics in America* (Ithaca. Cornell University Press. 1960) pp. 205. Price \$ 1.65.
- ROSTOW, W. W. *The Stages of Economic Growth* (Cambridge. University Press. 1961) pp. 179. Price \$ 3.50.
- SENIOR, CLARENCE. *Strangers — Then Neighbours* (New York. Freedom Books Publications) pp. 86. Price 95 cents.
- Statistical Data 1960* (Strasbourg. Council of Europe. Documentation Section. 1961) pp. 459. PNG.
- VAMATHEVAN, S. *Internal Migration in Ceylon 1946-53* (Colombo. Department of Census and Statistics. 1961) pp. 73. Price Rs. 4.05.
- WESTOFF, CHARLES F. et al. *Family Growth in Metropolitan America* (Princeton. Princeton University Press. 1961) pp. 433. Price \$ 10.00.
- WIKSTROM, WALTER S. (Ed.) *Developing Better Managers* (New York. National Industrial Conference Board. 1961) pp. 182. Price \$ 4.00.
- ORLEANS, LEO A. *Professional Manpower and Education in Communist China* (Washington D.C. National Science Foundation. 1960) pp. 260. PNG.
- VINACKE, HAROLD M. *United States' Policy Toward China. Occasional Papers* (University of Cincinnati. 1961) pp. 52. PNG.



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Grams : Research

COMMUNIST CHINA TODAY

By S. CHANDRASEKHAR

Professor Chandrasekhar, eminent Indian Demographer and distinguished social scientist, recently returned from an extensive tour of the People's Republic of China and his views on Chinese life made international head lines. In this book Professor Chandrasekhar makes a candid report on China and gives his own impressions of his China tour.

He explains in his introductory Chapter that he did not go to China with any preconceived views but to find out the truth about life in China under the Communist Government. Professor Chandrasekhar's observations are incisive and often startling.

Readers will find here new insights into "The Great Leap Forward" the People's Communes, and other controversial developments in China through the eyes of a highly skilled and trained social scientist.

Professor Chandrasekhar, well known author of several books on Asian Demography, is Director of the Indian Institute for Population Studies. Mr. Frank Moraes contributes a Foreword.

* * * *

An extract from *The New York Times* editorial on the contents of this book under the caption "The Red China Zoo" is given below :

Regret has often been expressed over the fact that it is difficult, sometimes impossible, to get accurate news about what is really happening in Red China. There has been much speculation for example, about what life is really like in the new experimental communes, but only a little real testimony. We welcome therefore a break in the bamboo curtain.

Dr. Sripati Chandrasekhar is an eminent Indian social scientist, who has just returned to the free world after an extensive visit to Red China. He was well received there and the communists showed him with pride their various achievements. He got a close look at a "model" commune. What he saw has now been published in this newspaper.

This is not the work of a propagandist, or any sort of professional anti-Communist. It is rather the observation of a highly trained and skilled man whose one object was to find the truth. In his detailed exposition of what he saw he passed no judgment until his survey was complete That indictment is brought by a man who sought the truth.

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POPULATION AND PLANNED PARENTHOOD IN INDIA

By S. CHANDRASEKHAR

With a Foreword by Jawaharlal Nehru
and

An Introduction by Julian Huxley, F.R.S.

Dr. Chandrasekhar examines the growth of India's population in terms of her fertility, mortality and social institutions. He finds that the standard of living of the people is not increasing commensurately with the growth of population, which amounts to a net annual increase of some eight million people.

After a brief review of agricultural possibilities, large scale industrialization and migration, Dr. Chandrasekhar examines in some detail the place of family planning in a positive and democratic population policy for the country. He explores and answers the economic, sociological, cultural, religious and administrative difficulties in the path of wide-spread adoption of contraception among the Indian people. He also gives technical details of various available birth control methods in a language intelligible to the layman.

"Dr. Chandrasekhar gives a detailed and scientific account of India's population problem. He is not unaware of the many difficulties to be surmounted but rightly points out that the problem is so central and so urgent that difficulty must not be allowed as an excuse for inaction. His book is an important contribution not only to Indian thinking but to world thinking on this central and overshadowing problem of our age." —*Julian Huxley.*

"Dr. Chandrasekhar's advocacy of birth control will encounter opposition in various quarters, but his book, well arranged, clearly written, and informative, is a notable contribution to the modern scientific study of population." —*The Contemporary Review, London.*

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CHINA'S POPULATION

Census and Vital Statistics

By S. CHANDRASEKHAR

This book presents for the first time an authentic description of the first scientific Census conducted by People's China in 1953 and a careful and critical analysis of the census results. The book also describes China's new vital statistical organisation and gives the vital rates for the years following the Communist revolution. The author's conclusions on China's present pro-natalist population policy and its implications for her neighbours provide food for thought.

"The great value of Dr. Chandrasekhar's lucid exposition is that he provides a clear, factual basis which should be of help to all those who realise that no speculation about the future can be of value unless it is firmly based on current realities".

—*The Hindu, Madras.*

"Dr. Chandrasekhar describes in this book 'the great census drama' of China. Himself an authority on population studies, his analysis of China's population problem is at once academic, analytical and comprehensive".

—*Link, New Delhi.*

"This book gives the text of lectures delivered by Professor Chandrasekhar at the University of Hong Kong in June 1959. This study of China's population problems is commendable for its objective and realistic approach. We must be thankful to Dr. Chandrasekhar for this informative study and the quiet and yet caustic views with which he intersperses his comments. We look forward to his forthcoming bigger and comprehensive study of China's Population Problems."

—*Quest, Bombay.*

Second, Revised and Enlarged Edition, 1960. Price \$ 7.50 ; Rs. 8.50

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Madras — London — New York

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INFANT MORTALITY IN INDIA 1901 — 1955

By S. CHANDRASEKHAR

This is the first scientific survey of Infant Mortality in India and breaks entirely new ground. Professor Chandrasekhar surveys the census organization and the vital registration system in India during the last half century. He points to their numerous deficiencies and pleads for a complete reorganization, since sound policy demands accurate and authentic figures.

In simple and non-mathematical language he sets out some of the basic principles in the calculation of the Infant Mortality Rate and the difficulties which occur in making such calculations in countries where the statistics are inadequate. For the first time he sets out all the available Indian official data on infant deaths in the light of international experience and evaluates their significance for a future policy aimed at lowering the present inordinate infant death rate to a more acceptable and civilized level. The cultural, economic and pathological causes of these deaths are then surveyed. Finally he pleads for an enlightened and progressive approach to the problem at the Federal, State and local level and outlines a constructive policy.

This pioneer work will be invaluable to demographers and economists, sociologists, statisticians and public health workers, and to all students of underdeveloped areas.

* * *
"Dr. Chandrasekhar who holds the post of Director of the Indian Institute for Population Studies, is India's leading demographer. His book is primarily addressed 'to the intelligent reader, the patriotic citizen and those in authority' rather than to the narrower circle of professional experts; and as such is likely to prove a considerable stimulus to effective action.... The great merit of the book is its extreme lucidity. He has set out in detail the present position; he shows what needs to be done; and he indicates how best to do it."
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HUNGRY PEOPLE AND EMPTY LANDS

By S. CHANDRASEKHAR

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