

POPULATION AND WELFARE IN SOUTH ASIA

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The preceding papers of this session are concerned with population increase among peoples within range of North America, for whose problem a solution is to enter the broader economic life of this continent. This paper turns to an area where no such simple solution is possible.

That Asian population is large and growing is well known. It is equally well known that the growth is a handicap to development, since each year the provision of capital to new workers takes up a large portion of such saving as occurs; only saving in excess of this contributes to raising income per head. The image commonly used is that of the Red Queen who had to keep running in order to stay in the same place. These pertinent facts of the overall situation have been documented by Kingsley Davis¹, Coale and Hoover², and Thompson³, whose excellent work requires no sponsorship from me.

This paper explores a further aspect of the problem: that in the framework of the institutions of South Asia the handicap constituted by population growth is much greater than appears in the overall struggle to raise income per head. Instead of the reference to the Red Queen I shall ask you to think of a runner who has to carry a burden weighing five pounds. This is a handicap in the race that he is running, and it may well stand for the effect of population growth when considered in aggregate figures. But when one takes into account the unevenness of local distribution of population, and particularly the institutions of dividing and sharing that operate in South Asia, then one is forced to consider the load of five pounds as tied to the legs of the runner and so constituting a much more severe handicap than its mere weight. For it appears that the effect of rapid growth is to depress constantly the technical level of agriculture; to make impractical the adequate collection of agricultural taxes; to split countries apart politically into regions of high density which are poor and regions of lower density which are better off but disinclined to support their poorer fellow citizens; to make it increasingly difficult for employers to hire and pay industrial labour. In short the peculiar way in which population is growing in South Asia makes for a steady deterioration in the quality of economic effort under a free market system.

First a brief review of the statistics on the present level of population and its rate of increase. There are in South Asia: one country of about 400,000,000 (India: 397,540,000); two countries edging towards 90,000,000 (Indonesia: 86,900,000, and Pakistan: 85,635,000); three countries of about 20,000,000 (Philippines: 24,010,000, Thailand: 21,474,000, and Burma: 20,255,000); four countries around 10,000,000 (Vietnam: 12,800,000, Ceylon: 9,388,000, Nepal: 8,910,000, and Malaya:

6,515,000); and several smaller countries. The figures in parentheses are those given by the United Nations for mid-1958, and the total for that year is approximately 685,000,000 for the area which it is convenient to designate as South Asia. The United Nations does not pretend that these figures are exact and complete, but they are good enough for our purpose. During the year and a half that has passed since the date to which they apply the total has undoubtedly passed the 700,000,000 mark. This is slightly more than the reported population of mainland China.

It is not these levels of population which have attracted the attention of students of Asian development so much as the rates of change. Rates are not known precisely for the whole of Asia, but two countries do keep good vital statistics: Ceylon officially shows 36.6 per thousand in 1957 and Malaya 43.2 per thousand, both based on registrations which may be incomplete but which are unlikely to contain any duplication. The Indian censuses of 1941 and 1951 imply rates of 39.9 per thousand. Indonesia officially estimates a round 40 per thousand for the period since 1950, and this figure is as good a guess as any for the whole of South Asia at the present time. These rates have probably not changed greatly during the past century.

On the other hand death rates have changed drastically. During most of the past hundred years they must have averaged some 25 to 30 per thousand; no direct information is at hand, but deaths of this order along with births of 40 per thousand would give rise to the increases of population which actually occurred. Since World War II there has been a sudden drop in deaths. The figures for Ceylon show 9.9 per thousand in 1957, for Malaya 11.0.

The 1957 balance for Ceylon was 334,000 births against 93,000 deaths, a net increase of 241,000 persons, or 2.7 per cent. Malaya's growth reckoned in the same way was 3.2 per cent. It is true that Ceylon and Malaya are the richest countries in Asia and have had the benefit of the most thoroughgoing attacks on malaria and other diseases, but it is safe to assume that what is true of them today will apply to the rest of Asia tomorrow.

It is not difficult to foresee what the population of South Asia will be if these rates become general. Arithmetic shows that money or people compounding at 3 per cent double in about 24 years and at 2.5 per cent in about 29 years. Thus between 1984 and 1989 South Asia's 700,000,000 will have become 1,400,000,000. This is roughly in accord with the projections of the United Nations, which give for the year 2000 some 3,870,000,000 people in all of non-Soviet Asia, including South Asia, China, and Japan.

Interpretation of these figures remains a problem. To show how difficult it is I should like to contrast two theories of growth. The first is due to Malthus, and for our purpose it may be condensed down to the following statement:

Population tends to grow in geometric progression, and hence will increase faster than any growth of the means to feed it, which it is assumed will be arithmetic at most. Malthus used as an example the rate of increase of the American colonies which doubled in 25 years (about as Asia is now doing), but his theory is valid for any fixed rate of geometric increase however slow. The conclusion is that growth of population, if left to itself, is a menace that will sooner or later cancel out the benefits of any striving for improvement in the conditions of human life.

Now let me cite an alternative theory of growth: Birth rates are variable and there is a tendency for them to adapt themselves to death rates. During most of human history deaths were heavy, and the groups that survived were the fertile ones; they used every ideological, material, and institutional incentive to keep birth rates high. When death rates decline there is a tendency for birth rates to follow them downwards after a lag of two or three generations, which is the length of time that it seems to take institutions to adapt to new requirements. The evidence to support this theory is that a constant difference of one tenth of one per cent—say a birth rate of 40 per thousand and a death rate of 39 per thousand—would suffice to account for the present population of the earth if it originated from a single couple less than 25,000 years ago.

These theories are supported by somewhat similar arguments involving the properties of a geometric progression, but nonetheless they are as far apart as can be conceived in their consequences. One is radically pessimistic, the other optimistic. Malthus' pessimism is not simply that things are hard here and now, but that no amount of invention and no possible bounty of nature that may be discovered in the future will provide more than temporary relief. Each invention that produces more food constitutes a niche but all such niches will be promptly filled. Given Malthus' starting point his conclusion is inescapable, but his starting point must be thought of as selected from a whole barrel full of possibilities, of which I have indicated one other, each of which could be suitably dressed in arithmetic to constitute an equally inexorable law. Out of this collection Malthus took the one that would support the institutions of property that seemed necessary for Britain's development. The *Essay* followed the *Wealth of Nations* by only 22 years. Malthus feared that population growth would swallow the gains resulting from a market that was being rapidly freed. One sometimes feels in reading his text that it was not the theory of population that gave rise to his pessimism, but his pessimism that gave rise to—or at least selected—the theory.

Malthus is at his best not on the elaboration of his arithmetic of doom but on the institutions necessary for progress. He describes them in the allegory of Nature's Feast. This feast is rather like an English dinner-party and has nothing in common with Asian hospitality. There are just so many places set, and those who through their own improvidence or that of their parents have no places do not eat. If any of

those who do have places were to reach out some food to the hungry ones behind him instead of leaving them to starve, this intended kindness would have a weakening effect on basic institutions. With enough of such kindness society itself would dissolve as the disinherited fought for the table. Malthus wanted to jar people out of that short-sighted kindness which fits well in a static society but is not consistent with rapid economic growth. No more skilful argument has ever been devised to promote a social system that would lead to hard work and responsible behavior.

To see the application of Malthus's thought to South Asia it seems well to take a point from his friend and opponent David Ricardo. In England the owner and cultivator were usually different people; Ricardo described a process by which all cultivators had the same income for the same effort, and good land yielded a rent to the landlord equal to excess of its product over that of marginal land. The cultivator had either to adjust the number of his children to the share of crop which he received, or send them to the city where they pressed for jobs and so reduced labour cost in manufacturing. But if owner and cultivator are the same person, his family will consume whatever it needs and then sell what is left. On this very different arrangement a steadily smaller surplus of food comes off the land as population grows. In Java owner-cultivation is common; in other areas landlords still exist, but the pressure for nationalization is so strong that they are likely to disappear. From many points of view this will be an advantage, for the tenancy system has not in practice given either the landlord or the tenant an incentive to make improvements. No advantage whatever was taken of the possibilities of large-scale tilling. But disappearance of the landlord will entail the disadvantage that food which was sold to pay rent will now remain in the village. One might say that in those cases where the owner and cultivator are the same person Ricardo's law still holds; income received can be thought of as partly rent and partly wages, each following its own laws. But this formal statement is of no help in tracing the motivation of the person, for which we must consider how he treats his total income.

Taxes like rent bring food off the land, and their objective ought to be to induce the peasant to grow something he would not otherwise have grown, rather than to depress him by taking from him something that he has grown for his own use. But what becomes of this principle where population is dense? The peasant has plenty of time to grow crops other than those he needs for his own food, but he has no land. The tax then becomes the removal of part of the food that would be eaten by the cultivator and his family, or which would be exchanged for essential clothing or kerosene. Such a tax seems unfair, a squeezing of the holder rather than an incentive to more work, and in practice taxes have been largely abandoned in South Asia since World War II.

Institutional systems may be distinguished by who gets the food first. In those of post-colonial Asia it is the local population which pre-empt it before the tax collector or the landlord. We shall see also that it gets to the food before the seller of factory-made articles from the city.

The discussion so far has been in terms of aggregates, as though the new population was the same mixture of men, women, and children as the old. In fact at the present moment, just following a sudden drop in the death rate, the major increase in population consists of children who would formerly have died. I have heard Ceylonese statisticians say that though national income shows an annual increase of less than the 2.7 per cent by which population is rising, people feel that they are better off. The added income is not consumed by an extra child or two. This exemplifies the fact that the drop in the death rate will show itself in different forms during the next generation. First it appears as more babies surviving, then in crowding of the schools and the need to organize the building of new ones; its most dramatic consequence will occur when the new people reach working age and begin to demand jobs. The political effect of this is becoming apparent in Ceylon today. The gradual, virtually unseen onset of the consequences of population growth is one aspect of its treacherous character.

If those who reach manhood cannot be given either land or capital, what are they worth to the economy? What is the value of the lumber a man can saw in a day, less the cost of the logs? What is the value of the yarn he can spin, less the cost of the raw cotton? What is the value of the service of transporting goods on his back? I am anxious to obtain figures on these as they appear at prices determined by the competition of electric power. It will be surprising if they are sufficient to buy the rice or wheat that will keep the man working, let alone housed and clad. A human being is an inefficient machine in most kinds of routine physical work.

To move on to another of the ways in which the growth of population hinders a country aiming at development, consider the fact that population is unevenly distributed throughout Asia. Leaving for more leisurely study the historical reasons for differences in density, I shall here raise the question of the consequences within a single country. In Pakistan, East Bengal is densely populated compared with West Pakistan, even taking account of the richer soil of East Bengal. In India, Kerala shows great density and misery, while parts of the Punjab are relatively wealthy. But the most striking instance is Indonesia: Java, with 48,000 square miles, has a population of some 55,000,000, while Sumatra has five times the area and less than one fifth the population. Wages in Sumatra are much higher than in Java and there is some spontaneous movement of people; in addition there has been some assisted movement to government-sponsored settlements. But the best these have attained has been far less than 10 per cent of Java's natural increase of nearly one million people a year. The degree of organization needed to move people in the numbers required to keep Java's population from growing further is not present with all the other problems of an underdeveloped and crowded country.

Under the pressure of this growing population the fragile tissue of nationhood can easily be torn apart. The densely-settled portion of the country converts its land from

plantations of sugar cane and other export crops to food and still runs short. The lightly-settled portion--Sumatra and Celebes in the case of Indonesia--maintains a brisk export trade. The patriotism of the exporting areas is strained; they do not see why the foreign exchange that they earn should go to the support of the denser areas which cannot possibly produce anything in return. One Asian official asked me how it was that Canada could tolerate differences in income among its different areas; did this not mean that we lack a sense of nationhood? I replied that some Dominion-Provincial payments are made to redress the balance, but no one considers or desires that these be large enough to prevent migration; areas such as Prince Edward Island have been supplying people to the rest of Canada during the whole of the present century. But for Asians no feasible movement of people could balance off standards of living. Hence they consider that the redistribution of income is up to governments, which ought to be able to accomplish this by some means easier than moving large numbers of people.

Within the crowded areas of the countries of Asia there is an interaction between population and landscape. In Java, for instance, forests of teak and other wood, mostly of commercial value, are maintained by the state partly with the objective of preventing soil erosion. But squatters take up plots in the forest, cut down the trees, and put the land to the plough. A democratic government does not easily expel people who have no other source of livelihood; the consequence is that population pressure increases erosion, and the erosion in turn diminishes the crops that can be obtained from previously settled land, and so increases population pressure.

But far more drastic in its operation than the foregoing is a mechanism which is day by day lowering the technological levels of agriculture in the more crowded parts of Asia, as well as effectively discouraging the entry of people into industry. It appears especially in the irrigated rice fields whose construction so greatly increased the carrying capacity of land in each of the areas of Asia to which it has spread since its introduction. Our model may be described in terms of a typical fixed village occupying a few hundred acres. Once a tank and irrigation channels have been built, the lowest land can be cropped two or three times a year; higher land is capable of producing one rice crop when the terraces in which it is arranged are filled with rain; higher land yet is used for dry gardens which depend entirely on the monsoon and for houses.

The mechanism that is operating in the rice-surplus villages may be expressed in the words of a population-wise Javanese headman. He explained that the people of his village each year produced about half as much rice again as they needed for themselves, and thus one third of their output was sold outside the village. He plainly had in mind a sort of village balance of payments in which the rice eaten by the producers was considered to disappear along with that traded to others for services within the village, and attention focussed on the net surplus actually moved outside the village. It was sold for money in outside markets, and the money was used to buy roofing tiles, bicycles, clothing, baskets, and

other goods; the headman was sophisticated enough to see that money was only a means of exchange, and essentially the rice was being traded for these things, so that there would be more or less of these outside goods entering the village according as there was more or less rice surplus.

He also had some historic sense. He acknowledged that the population of the village had been increasing in recent years, that there was noticeably less rice available for export than there had been when he was a young man, and that in the years ahead there was likely to be less yet. He was farsighted enough to be worried about this, not on the grounds that any of his villagers would be hungry but rather because they would have fewer of the goods that make life pleasant after one has eaten. The consequences for people in the city that produced the inedible goods traded for rice would be more serious--they would see their markets declining, and they would have correspondingly less to eat.

One need not look very far into the future to see population climbing up on its food supply until village after village drops out of rice export. The amount of outside goods bought by the villagers diminishes in exact proportion to the decline in rice sent out, and a time will come when there is no rice for export and no village market for city-produced clothing and other goods. The clothing factories have gradually been reducing their output during this period complaining that the fall of purchasing power is throttling them. On the assumptions we have adopted, the growing population need have no effect on agricultural production, but acts exclusively to choke off town industry and to reduce the town population to unemployment and starvation, unless it can sell its goods in foreign markets where there is an agricultural surplus.

The operator of the clothing factory sees his difficulties steadily increasing. His workers insist on spending about 70 per cent of their wages on food; only beyond this fixed amount for themselves and their families will they take their salaries in clothing. In wage disputes the price of food is always a key item. If the clothing workers are to spend 70 per cent of their wages on rice, then 70 per cent of their clothing output must be sold to rice farmers--disregarding profits and sales abroad for foreign food. The result of surplus money in the city (brought about by an inflationary policy by which money is printed to defray government expenses) is that selling effort is directed to the wrong market. Competitive effort to sell in the city market does bring results to individual manufacturers, but collectively the manufacturers can sell clothing only up to the amount of the surplus of rice that is elicited from the countryside. When they aim the kind and design of goods at city buyers aggregate sales are less than if they were using the same effort to find rural customers.

Thus the only consequence of selling effort

directed at city populations is to alter the share of individual manufacturers in a fixed total amount of food wage goods. Unfortunately, if there is a good deal of money in the city and none in the countryside, there is no use exhorting the producer of shirts to seek markets in the countryside--he will reply that he must try to sell where the money is to be found.

All this is to demonstrate how much harder the rapid growth of population makes development. It seems to lead to a shared misery on a scale which has never been seen before, which cumulatively prevents the application of practical methods for its correction. On the other hand, once a degree of the education and discipline that come with development has appeared there seems to be no difficulty in handling the population problem.

Japan presents an example of how easy it is to control population when one has at one's disposal the means of communication and control that have been built up in the course of industrialization--after one has given up aspirations to world conquest. Japan's birth rate fell from about 33 per thousand of population in 1946 to about 17 per thousand 12 years later. Japan's methods included large-scale abortion, but it is expected that this will gradually give place to more widely acceptable methods. Even with the drastic fall in births the population is still increasing by 900,000 persons each year, but this will be further reduced if it seems necessary. The main point is that she has educated her population to understand an incentive system and has then applied it sharply. The incentive system is that wages are low enough and life sufficiently hard that people find it desirable not to have more family than they can afford. In other words, the national shortage of food is transmitted through an incentive system to the individual. The opposite condition applies in South Asia where large areas within nations are faced with starvation, but food subsidies prevent the urban dweller from being warned of this; and peasants on rich lands consume the surplus that was once removed by the landlord, the tax-collector, and the attraction of city-produced goods.

¹Kingsley Davis, The Population of India and Pakistan (Princeton N.J.: Princeton University Press, 1951).

²Ansley J. Coale and Edgar M. Hoover, Population Growth and Economic Development in Low-Income Countries (Princeton N.J.: Princeton University Press, 1958).

³Warren S. Thompson, Population and Progress in the Far East (Chicago: University of Chicago Press, 1959).