

CONFERENCE ON ECONOMIC GROWTH IN SELECTED
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PAPERS READ AT THE CONFERENCE.

- 1) Social and Demographic Aspects of Economic Development in India by Kingsley Davis.
- 2) Indian Economic Organization by D. R. Gadgil.
- 3) Comments by Chandler Morse on The "State" and Economic Development in India by Helen B. Lamb.
- 4) Village Social and Political Organization and Economic Growth in Modern India by Morris Edward Opler.
- 5) India's Economic Development since 1850, as illustrated by statistics by Daniel Thorner.
- 6) India's Economic Development since 1850, as illustrated by statistics by Daniel Thorner with the assistance of George Blyn. Part II Rural Economy, Trade, and Industry.

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Social and Demographic Aspects of
Economic Development in India

Kingsley Davis

Preface

This paper is in an unfinished form. Originally it was intended to embrace the following major topics:

- Part I. The Problem of Efficiency--attempting to state some of the aspects and hazards in the notion of efficiency as applied to societies or nations.
- Part II. India's Comparative Position and Rate of Change--seeking to measure the current status of India and her comparative rate of change among the world's nations and territories by means of certain indices.
- Part III. The Role of Population--endeavoring to assess the causes of India's population density and growth and the importance of these demographic factors in past and future economic development.
- Part IV. The Institutional Structure and Economic Modernization--trying to analyze the institutional framework of India from the standpoint of its relevance to past and future industrialization.
- Part V. Summary: The Probable Future--synthesizing the results of the discussion with respect to the question of what will probably happen in India's economic development during the next fifty or so years.

Unfortunately, because of circumstances not originally foreseen, it has proved impossible to get finished in time for distribution a version of Parts IV and V. The paper as it stands includes only the first three parts.

PART I. THE PROBLEM OF EFFICIENCY

In the highly competitive and conflictful international world of today, one of the chief concerns of any nation, qua nation, is to maximize its power vis-a-vis other nations. The power that a nation has depends on three things: (1) Its natural resources, (2) its manpower resources, and (3) its efficiency.¹ The natural resources

1.

One might regard a nation's alliances and treaties as another factor in its power, but since success in making favorable alliances or in influencing the policies of the alliance depends mainly on the other three factors mentioned, it can be construed as a consequence rather than a cause.

at a nation's command are pretty well fixed by the national domain. Manpower resources, while not fixed, are relatively slow to change, at least in the direction of increase. Furthermore, such resources are always double in their implication, for human beings are consumers as well as producers. For this reason it is possible to have too much manpower--too much, that is, in the sense of having too many consumers in relation to other factors.

If the natural resources are fixed and the manpower resources relatively fixed, it follows that the most flexible thing a nation has to work with is efficiency. In the case of the so-called underdeveloped areas, the lack of efficiency is so glaring as compared to that of the industrial nations that no doubt is left as to the proper course to pursue. The task is to increase efficiency fast enough to prevent the return to a new and more servile colonial status than many of these countries have had in the past.

The Nature of National Efficiency

By efficiency we mean simply the long-run maximization of production (goods and services) in relation to natural resources and manpower. Needless to say, the concept is fraught with various ambiguities and difficulties. One of the first of these is inherent in the degree of flexibility in total manpower, already mentioned. In so far as this quantity is subject to manipulation, as it is in the long run (although not commonly so considered), one aspect of efficiency consists in having the proper ratio of people to resources, so as to get the highest per capita return. Efficiency is not, therefore, something to be discussed only when raw manpower and natural resources are given, although this is the way it is usually conceived.

Given the two basic desiderata, the clearest formulation and most precise measurement of efficiency occurs in the technological, or engineering sphere. Its next most precise use occurs in economics. But as one moves from the economic to the other aspects of social organization, one encounters several problems. In the first place, most aspects of social organization outside the economic sphere are not normally conceived in instrumental terms. They are either ends in

themselves or are closely connected with such a diversity of ends that no common denominator exists. To ask, for example, whether a religious practice is efficient or inefficient is plainly sacrilegious to anyone who believes in that religious practice.² In the

2.

Unless, of course, efficiency is understood in the sense of finding the proper means to salvation or in relation to some other superempirical end.

second place, efficiency has a temporal aspect. It is not the effectiveness of one act considered in itself, but the consequences of that act for still other and future actions. For example, if productivity is measured in economic terms--say as the net national output divided by the labor force--we have an excellent index but not one that tells us much in an analytic sense. It is an average which does not tell us which pursuits have a high productivity per worker or, more importantly, which ones stimulate productivity in still other pursuits. It does not answer such a question as this: Does medical attention contribute more to the growth of national productivity than teaching?

It must therefore be admitted that in the matter of societal efficiency we have a concept without an adequate set of measuring devices. The concept says that, given a certain quantum of natural resources and human population, there exist countless ways of bringing the two together for the production of goods and services, some of these ways being more efficient than others. But it does not tell us how to measure efficiency with respect to any given part of the social system. We can make use of such indices as exist, but in the last analysis we are thrown back on speculation and general theory.

One key to the process of increasing productivity is industrialization. But the term "industrialization" is itself ambiguous. Too often it is thought of in terms of the construction and utilization of large factories. Again it is sometimes made synonymous with all the factors in efficiency, whatever they are--hence as a synonym for "modernization." Actually it can be, and is often, regarded as the use of mechanical contrivances and non-animal energy (fossil fuels and water power) to replace or augment human power in the extraction, processing, and distribution of natural resources or products derived from them. Viewed in this way, industrialization obviously implies an increase in efficiency. It describes what is doubtless a central element in the process of increasing productivity per man. Regarded in this sense, it opens up almost endless possibilities; and there is little wonder that the non-industrial nations ardently desire it.

But the application of mechanical power is only the first step in the explanation of how greater productivity is achieved. The next step calls for an answer to two additional questions: First, how is the application of mechanical power itself made possible. Second, how do other elements in society increase their productivity independently of the use of mechanical power? These two questions, though interrelated, are quite different. The second can be illustrated by suggesting that the teaching of languages may be made more efficient without any new or greater use of mechanical power whatsoever. Both questions,

however, clearly bring us into the realm of economic and social organization.

Intuitively, it is generally realized that all aspects of society bear some relation to a marked increase in productivity. Yet our intellectual tools, our statistical sources, and our methodological equipment are not adequate to work out the specific relationships. Often we feel that such and such is "a factor," but do not know the extent to which, and the clearly defined and measured conditions under which, it is a factor.³ To illustrate the complexity of what is meant

3.

An illustration is contained in the United Nations report, Measures for the Economic Development of Under-Developed Areas (New York: U. N. Department of Economic Affairs, 1951). Ch. 3, "Pre-Conditions of Economic Development," undertakes to specify the social conditions making for economic progress. These are nicely summarized, but no evidence concerning their relative importance and no ways of measuring them are given.

by "social factors," I have prepared a chart setting forth some of the leading phenomena referred to in the analysis of social systems. The chart is not presented as anything systematic, but simply as a checklist.⁴ From it one can readily see why the analysis of social systems

4.

A fuller and more systematic treatment will be found in Talcott Parsons, The Social System (Glencoe, Ill.: Free Press, 1951) and in the writer's Human Society (New York: Macmillan, 1949).

is carried out, not by one, but by a congeries of special sciences. One can also see why such a broad problem as the social aspects of economic development includes some reference to virtually everything in the chart.

For instance, the efficient use of manpower depends on the degree to which people are given tasks (employed), educated for special tasks (trained), rationally placed in productive enterprise (organized), given effective incentives (motivated), and given tools and equipment to work with (equipped). To accomplish these things, virtually every element of the social structure, as listed in our chart, must be somehow involved. The matter of incentives, for example, goes deep into the fundamentals of social organization.

The situation is similar in regard to natural resources. Their efficient utilization requires that they be explored and known as to quantity, quality, and location; that they be made accessible; that they be brought together in proper combination at particular sites and times; that they be extracted and processed by the most advanced techniques; that they be distributed as finished and semi-finished products in a speedy and economic manner; and that they be consumed with a minimum of waste and extravagance. It can be seen again that virtually every aspect of society is involved in their accomplishment. For instance, an advanced science and technology are obviously necessary,

<u>Sketch of Categories Used in Social Analysis</u>			
<u>FUNCTIONS</u>	<u>STRUCTURE</u>		
	<u>Means-end levels</u>	<u>Status and Role</u>	<u>Groups</u>
1. Production	1. Religio-ethical	<u>Bases</u>	
2. Reproduction	2. Political	1. Stratification	1. Religious and ethnic
3. Social integration	3. Economic	2. Kinship	2. Caste and class
4. Protection (defense)	4. Technological	3. Contiguity	3. Societies
	5. Scientific	4. Knowledge	4. Family and clan
	6. Resources	5. Occupation	5. Nations and parties
		6. Age and sex	6. Communities
			7. Scientific bodies
			8. Firms
		<u>Processes of Interaction</u>	9. Guilds and unions
		1. Competition	10. Age groups
		2. Cooperation	11. Professions
		3. Mobility	12. Schools
		4. Socialization and Education	
		5. Inheritance	
		6. Concentration (geog.)	
		7. Interchange	

Fig. 1.

and these require educational institutions, a respect for disinterested empirical investigation and a specialized role, with appropriate incentive mechanisms, for those engaged in scientific activity.⁵

5.

For an acute discussion of the societal requirements for the growth of science and scientific technology, see Talcott Parsons, op. cit., Chs. 8, 11.

Sometimes the term "capital" is used to designate everything that must be brought to raw manpower and natural resources to obtain greater productivity. But such usage obscures rather than clarifies the sociological requirements. If the term is used in its strict economic sense to designate funds invested in enterprise, further specification is necessary if the full connection with efficiency is to be understood. The various alternative uses of capital are not all equal in their effects on productivity. We are familiar with the fact that where labor is cheap, labor-intensive industries have a competitive advantage. We are not so familiar with the expense of rationalizing business or governmental organization, systematizing the legal system, eliminating superstition, or giving recognition to noteworthy achievement. Certain changes may be very large in their consequences and yet require little financial outlay.

Indeed, we know that the alternative uses of capital do not have effects precisely proportional to their competitive economic return. In wartime, for example, economic controls operate in such a way as to channelize investment into certain channels and not into others; and in peacetime the system of taxation does the same thing to a lesser degree. Increasingly in highly industrialized societies capital is being used to accomplish national as contrasted with private ends. Thus the growth of productivity does not reflect itself entirely in higher levels of personal consumption (i.e. through expenditures controlled by the individuals own taste), but rather through national expenditures for armaments, conservation, foreign aid, social security, bureaucratic organization, and what not.

Presumably a social system is efficient to the degree that those things are accomplished which in the long run have the greatest stimulating effects at the least ultimate cost. The planned effort to increase productivity has often overlooked the more intangible and in many cases least costly methods of stimulation in favor of more purely economic measures. There has been a tendency to rely upon the assumption that efficiency in any sector of the social system tends to breed efficiency in other sectors. Within limits this is certainly true, but it has been found in plant and animal breeding, that natural growth can be increased by applied science; theoretically, at least, the same is true of the growth of efficiency in society.

PART II. INDIA'S COMPARATIVE POSITION AND RATE OF CHANGE

Among underdeveloped areas, India is favorable for a case study of social factors in economic change. Not only are the data reasonably good in comparison with other retarded areas, but also India has a non-Western culture which allows us to observe some variables apart from the Western culture complex. In the retrospective analysis of change in the West, the essential factors cannot always be disentangled from the non-essential. A country such as India, like Japan, affords an opportunity to test, as a clinical case, hypotheses derived from the study of Western history.

In India, furthermore, the Government itself is wrestling with development problems and an educated stratum is thinking and writing about them. There is thus an extensive literature written by natives of the country, as well as numerous works produced by the British and other Europeans with years of experience there. Despite the complexity and diversity of India, therefore, we are reasonably well informed about it, though by no means adequately so.

How Underdeveloped is India?

As a starting point, let us try to assess the current position of India among the world's countries. Here we run straight into the deficiency of our comparative materials, because (apart from the figures I shall give in a moment) very few data exist for all the nations and colonies of the world which can serve as a means of placing any one country. For instance, estimates of average per capita income do not exist for all countries. In the absence of complete coverage, India is in danger of being compared with a selected sample.

As a result of research at Columbia, we can compare India with the rest of the world in connection with a few indices of socioeconomic development. It turns out, as Table 1 shows, that with respect to industrialization, as measured by the percentage of occupied males engaged in non-agricultural pursuits, India stands about at the midpoint. Fifty-one per cent of the world's population lives in countries more industrialized than India, but that is only because the industrial countries are more populous. Treating each country as a unit regardless of population, we find that by this measure only 43 per cent of the countries and colonies of the world are more industrialized than India. Thus, though India's figure of 71 per cent of occupied males engaged in agriculture in 1941, or 68.2 per cent of the total population in 1948,⁶ places her

6.

The second figure is an estimate of the National Income Committee. See Planning Commission, The First Five Year Plan: A Draft Outline (New Delhi: Government of India, 1951), p. 14.

definitely in the non-industrial category, she is slightly more industrialized (in per capita terms) than the average non-industrial country.⁷

7.

For our purpose an industrial country is defined as one with less

Table 1
INDIA'S RELATIVE POSITION IN THE WORLD:
SELECTED INDICES

	PER CENT OF WORLD'S POP- ULATION IN COUNTRIES ^f		PER CENT OF WORLD'S COUNTRIES	
	Ahead of India	Behind India	Ahead of India	Behind India
Industrialism ^{a/1}	51	49	43	57
Agric. Density ^{b/1}	57	43	69	31
Urbanization ^{c/1}	59	41	51	49
Literacy ^{d/1}	92	8	68	32
Per Capita Income ^{e/2}	57	43	73 ^E	27 ^E

^{a/} Measured in terms of the percentage of occupied males who are engaged in agriculture. Dates primarily for 1947 or near there.

^{b/} Number of gainfully occupied males in agriculture per square mile of agricultural land (i.e. land under crops or fallow). Dates same as (a).

^{c/} Percentage of population living in places of 20,000 or more. All data relate to the year 1950.

^{d/} Percentage of population age 10 and over able to read. Dates same as (a).

^{e/} Not based on world as a whole, but on 70 countries which include about 90 per cent of the world's population.

^{f/} Excluding the population of India-Pakistan for industrialization, agricultural density, and literacy; and excluding the population of India for urbanization and per capita income.

^{E/} These figures are meaningless, because colonies and other dependent territories are excluded.

^{1/} Data gathered or estimated by the Division of Population Research, Columbia University.

^{2/} Data from Statistical Office of the United Nations, National and Per Capita Incomes, Seventy Countries--1949 (New York: United Nations, 1950).

than half of its occupied males in agriculture. For the rationale of this measure, together with a discussion of world industrialization in terms of it, see K. Davis, "Population and the Further Spread of Industrial Society" in Proceedings of the American Philosophical Society, Vol. 95 (February 13, 1951), pp. 18-19. The percentage of occupied males in non-agricultural pursuits is a good measure of industrialization because, within a national economy, it shows to what extent men are being freed from the sheer production of food, feed, and fiber which, from an economic standpoint, are merely the starting point and not the end product of production. Furthermore, agriculture lends itself to mechanization and rationalization so that with high capitalization few men are needed to conduct it. Hence a high proportion of people in agriculture means a poor country. In addition, agriculture requires much more space than any non-agricultural pursuit (hunting and fishing being included with agriculture), with the consequence that it leads to isolation and consequently has a negative effect on the cultivation of the arts and sciences necessary for high productivity.

It should be noted that our data on occupational structure for the countries and colonies of the world do not all relate to the same date, but mostly to dates in the 1940's. The data are therefore not exactly comparable, but the error should be small. It is hoped in the near future to have ready estimates and figures for 1950 on a world basis. The 1941 figure for India includes the Pakistan area, but the occupational structure of the two countries at the time of partition in 1947 was quite similar.

Of course, the total picture is not revealed by averages. As the distribution in Fig. 2 shows, most of the countries of the world cluster toward the non-industrial end of the scale, giving us virtually a J-curve. The United Kingdom has only about 8 per cent of its male labor force in agriculture, the United States about 17 per cent.

India turns out to be more advanced occupationally than she is on any other index in Table 1. Possibly her people have been forced out of cultivation because of lack of land, not because of genuine opportunities in non-agricultural pursuits; or, to state the same thing another way, the bulk of the non-agricultural occupations may be low in productivity as compared to agriculture itself, for whatever reason.⁸

8.

Such explanations assume a high degree of accuracy in the data, which is not the case.

In any case, India is considerably worse off in agricultural density, having 152 male agriculturalists per square mile of agricultural land in 1941 as compared to a world average of 128. (See Fig. 3.) This may be due to her having more fertile land on the average than most undercapitalized countries, but it is harder to explain away India's disadvantage in terms of urbanization. We find that India has in 1951 6.7 per cent of its population in cities of 100,000 or more, as compared to 13.1 per cent of the world's population in such cities. India has less than half the urbanization that Brazil has (13.9 per cent in

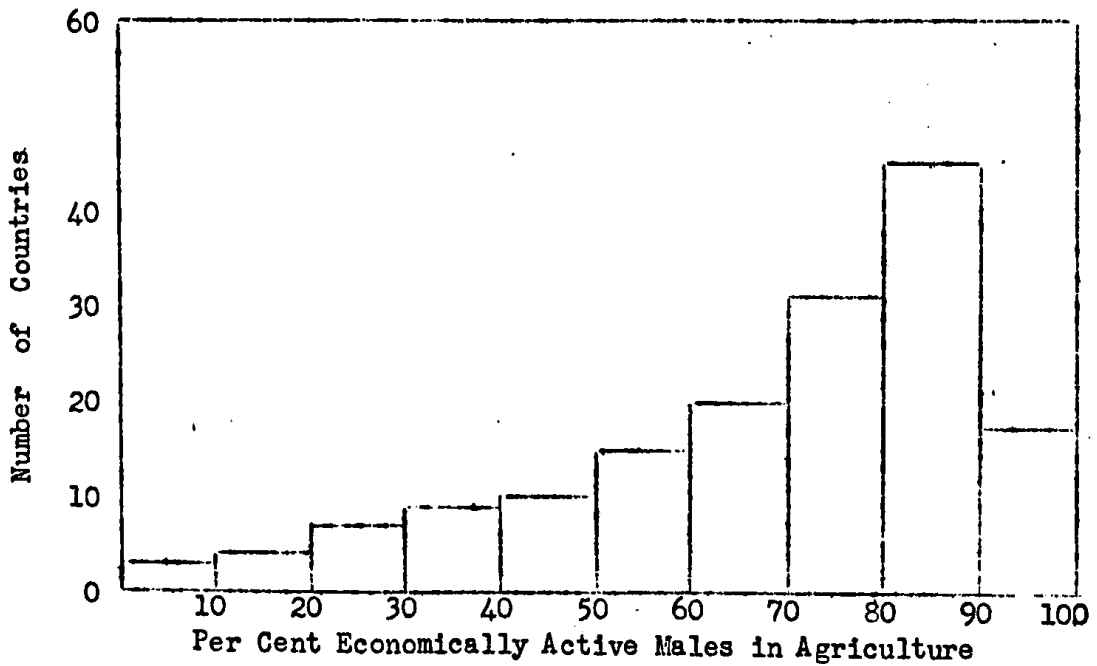
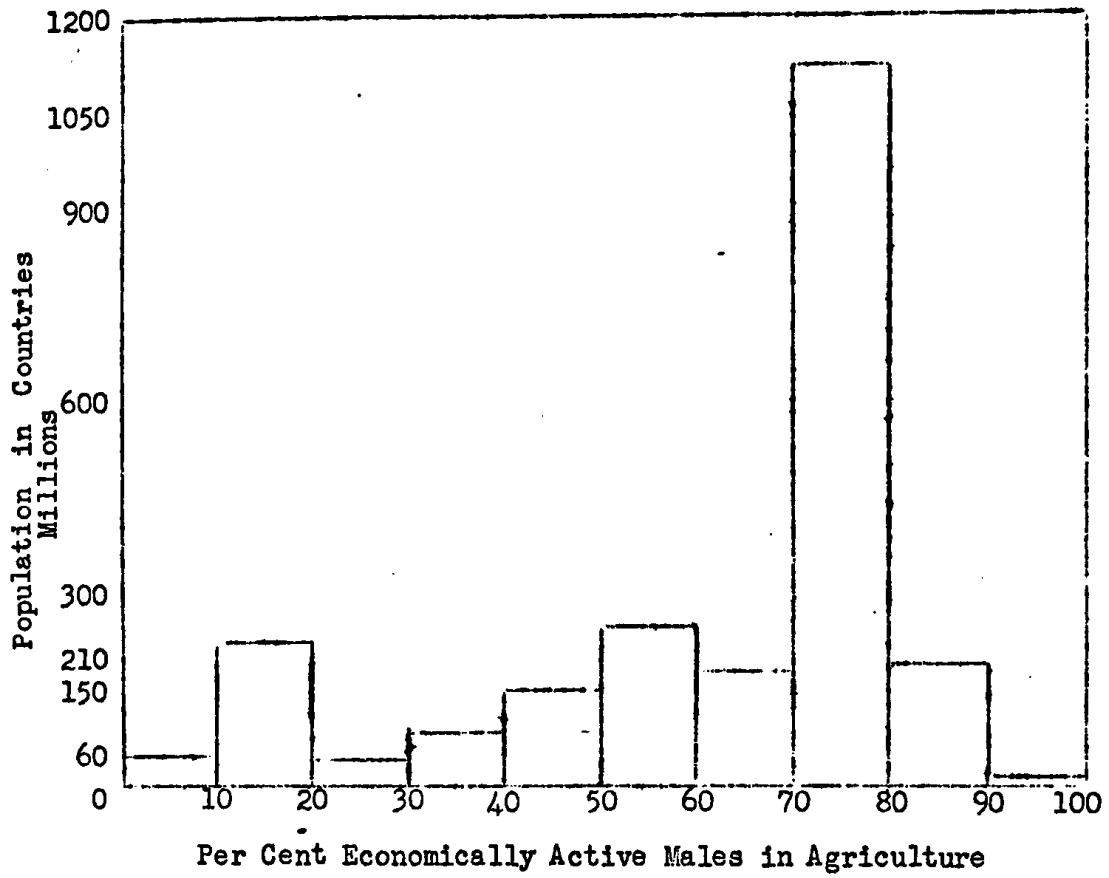


Fig. 2. Frequency Distributions of World's Countries and Population with Reference to Percentage of Occupied Males Engaged in Agriculture.

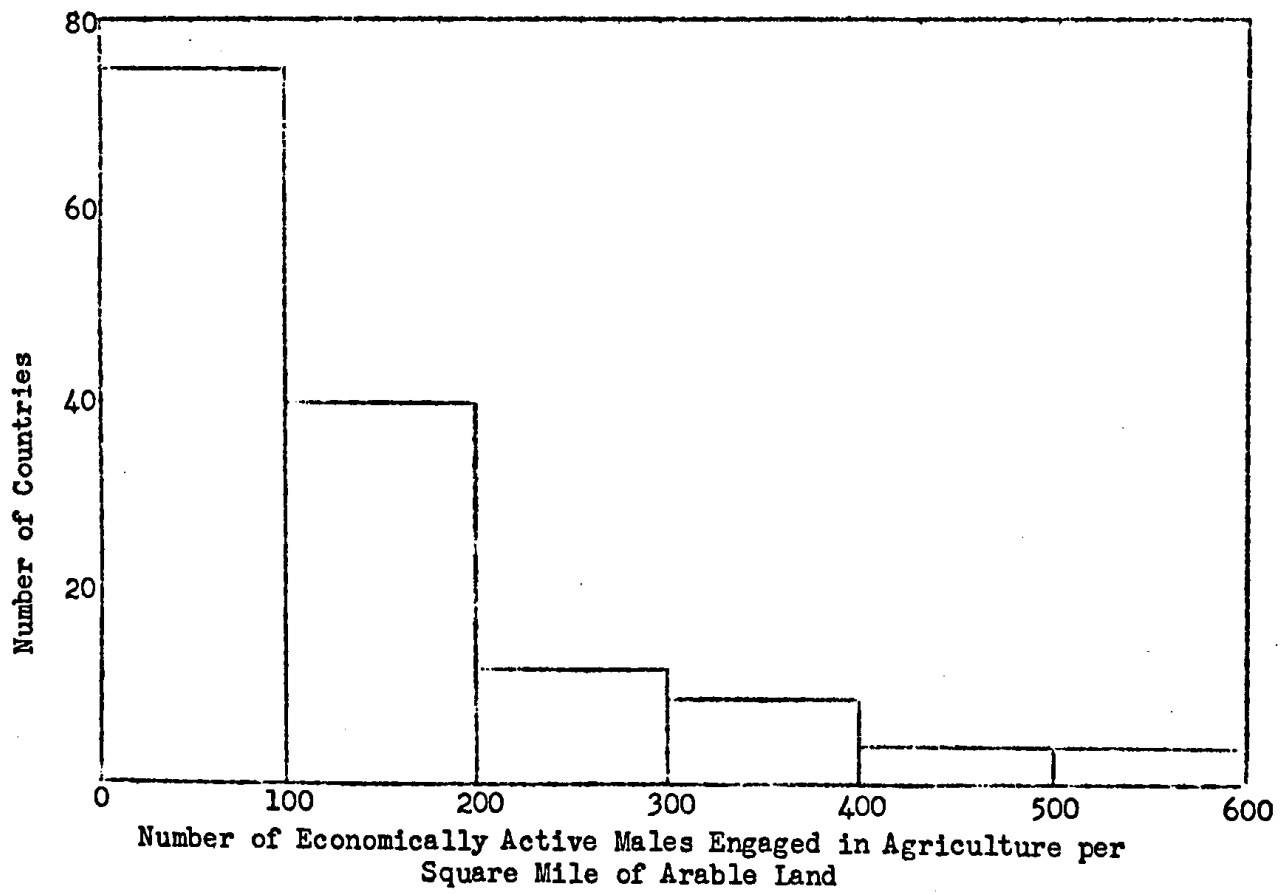
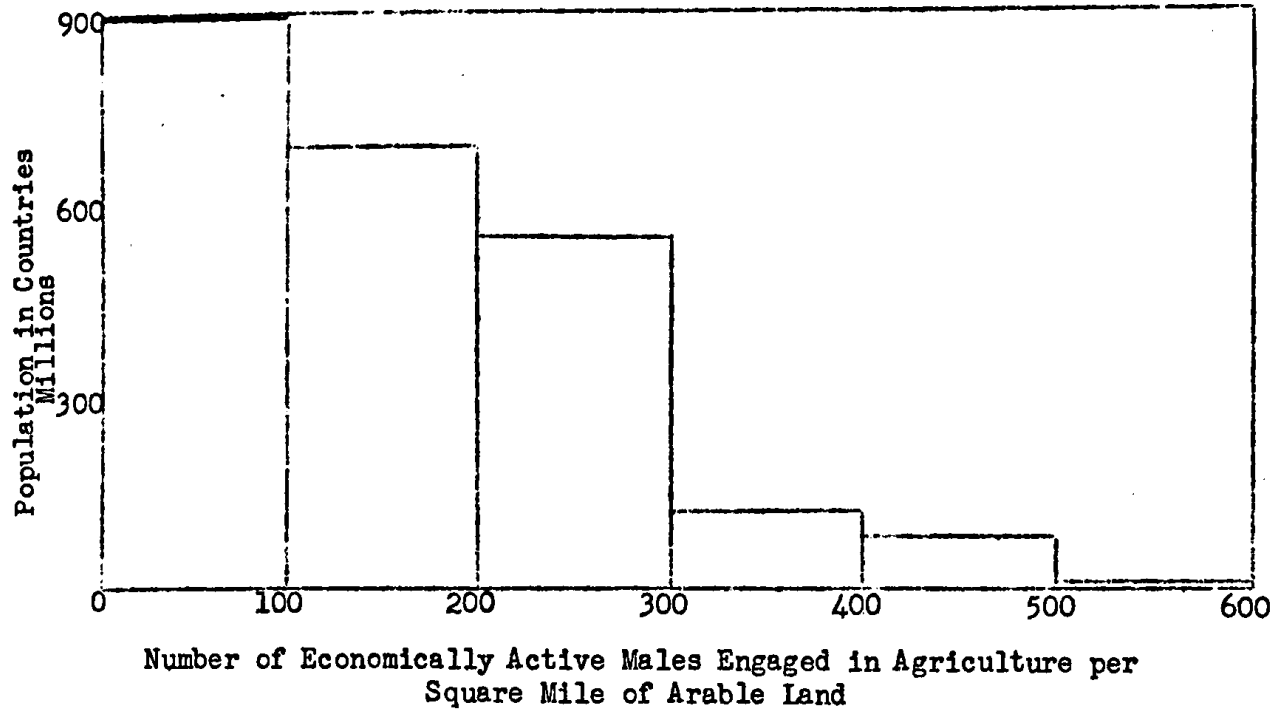


Fig. 3. Frequency Distributions of World's Countries and Population with Reference to the Number of Agriculturally Occupied Males per Square Mile of Agricultural Land.

100,000-plus cities in 1950) and only one-fourth the urbanization of Chile (26.0 per cent in 1950). (See Fig. 4.) However, it is in literacy that India's most pronounced disadvantage occurs. With approximately 85 per cent of her people aged 10 and over unable to read and write in 1941, she is far worse than the world average of 52 per cent. (See Fig. 5.) There is a suggestion in such data that, in comparison with the rest of the world, India is better off economically than she is socially--which might fit with her recently past history as a colonial area; but the comparative materials are too scanty and too questionable to give confidence to such an interpretation. More comparative analysis of the type used here, if the resources were available to get it done, might enable us to formulate and test reasonable hypotheses about India's present position. As things stand it is difficult to specify precisely in what respects India is most underdeveloped, to say nothing of deciphering the causes.

The Rate of Change in India

We need to know not only India's current position among the world's countries but also her comparative rate of change. This is extremely difficult. If it is hard to ascertain the current position, it is impossible to achieve an exact comparative knowledge of the past--simply because the historical data for most countries are missing.

Without a doubt the rate of change has been accelerating in India, but nobody knows whether or not the acceleration is greater than in the rest of the world or greater than in other countries in about the same position as India. What appears to be happening is that the social system and the economy are in the early stages of rapid growth, suggesting that there is more acceleration to come. With respect to urbanization, for example, the present percentage in cities of 100,000-plus (6.7 per cent) is about the same as the percentage in the United States in 1855.⁹

9.

The percentage is 29.4 in the United States, as of 1950.

But the curious thing is that urbanization is proceeding more slowly in India than it was doing in the United States at that time. This can be seen from Table 2 which compares the two countries. The United States had in 1820 a smaller proportion of its population in 100,000-plus cities than did India in 1891. But the growth in the proportion during the following decade was five times more rapid in the United States than in India. The American proportion in cities was also less in 1830 than it was in India in 1891, but the American gain during the following decade was 17 times as fast. As a result, whereas in 1891 India was about 55 years behind the United States in this regard, by 1931 she was over 90 years behind. Even though her rate of city growth increased markedly after 1931, it never reached the rates the United States had at the same level of urbanization. In consequence, by 1951 the Indian Union could be described as lagging almost 100 years behind the United States in the process of urbanization.

It may be objected that the United States was unusual in its development. But we have to be careful to make sure that it is not India that

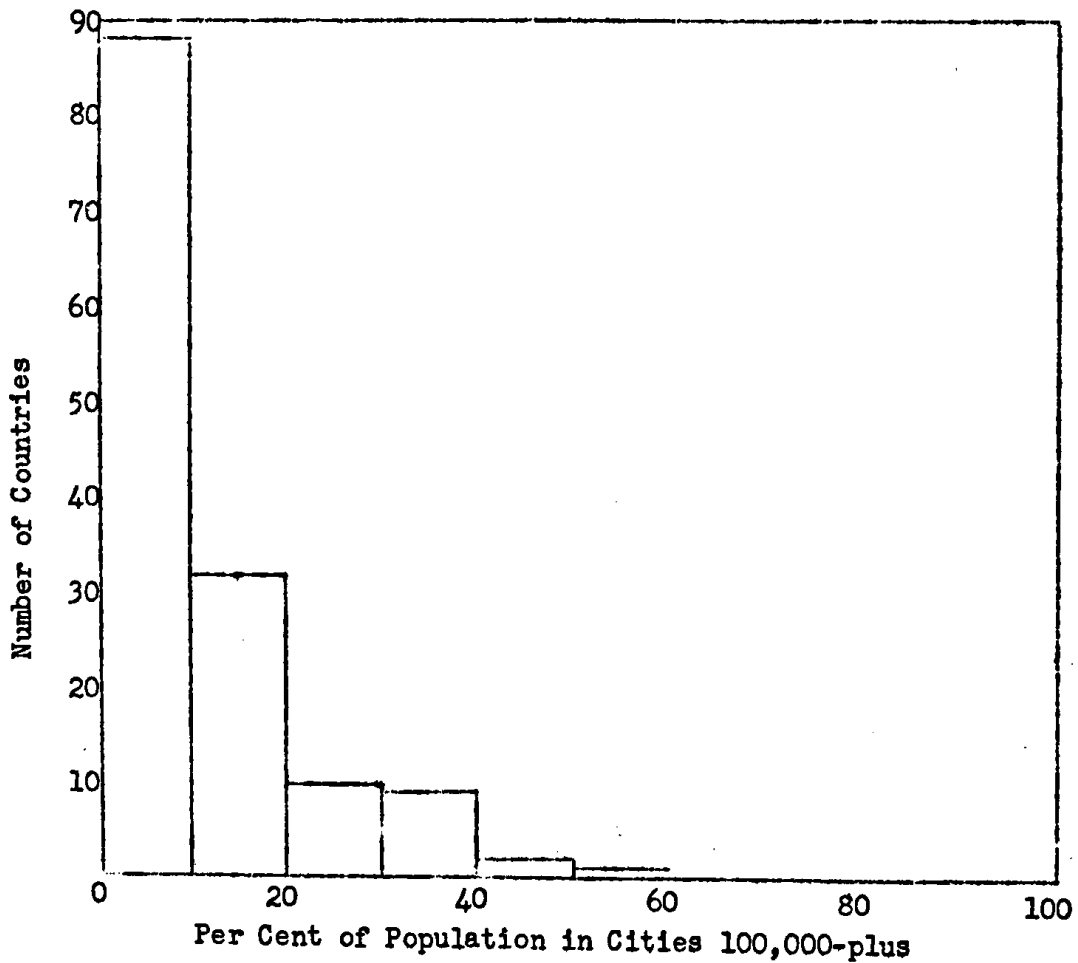
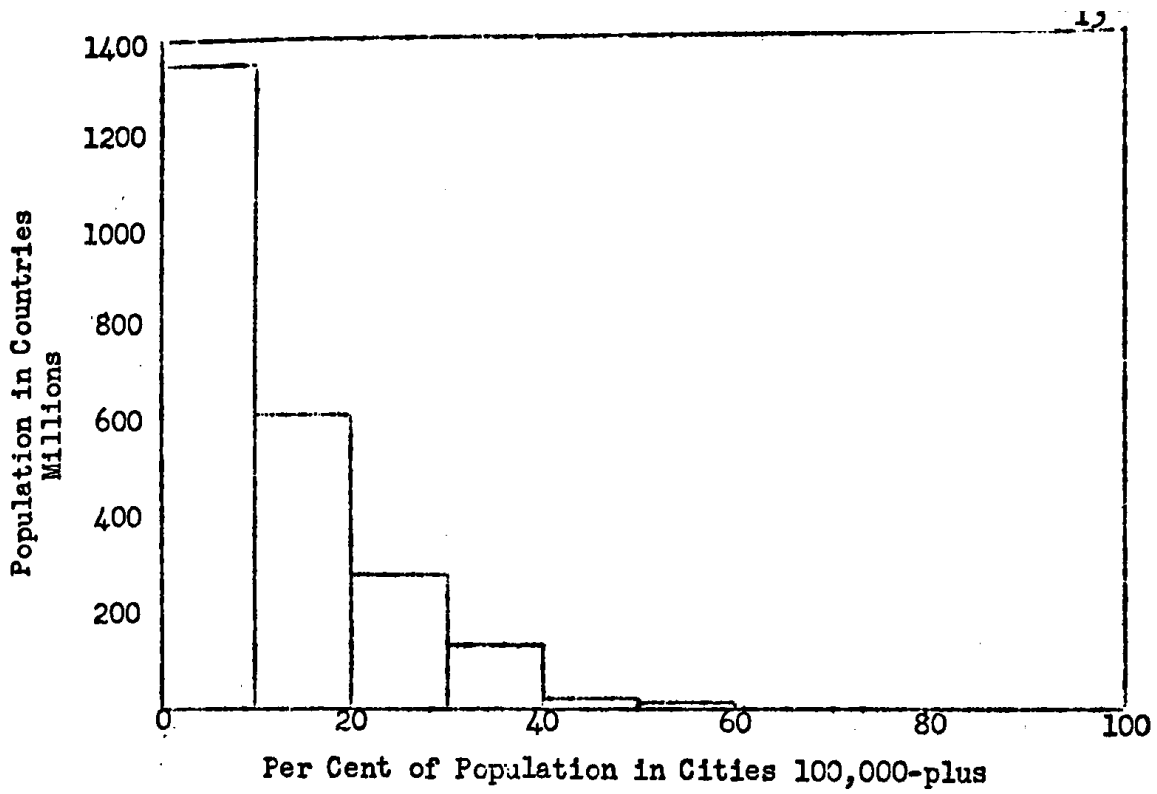


Fig. 4. Frequency Distributions of Percentage of Population in Cities 100,000-plus.

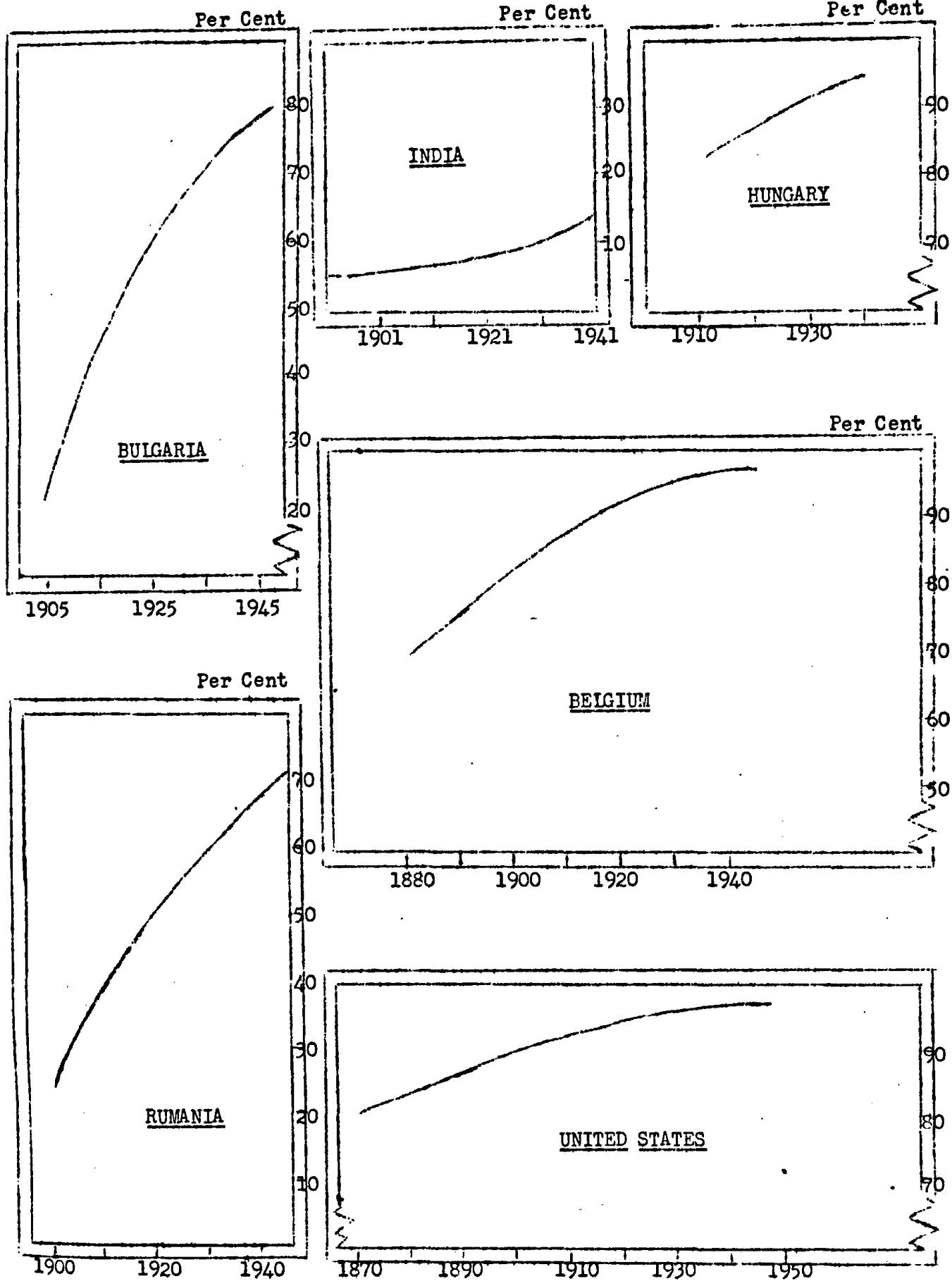


Fig. 5. Growth of Per Cent Literate Age 10 and Over, Various Countries

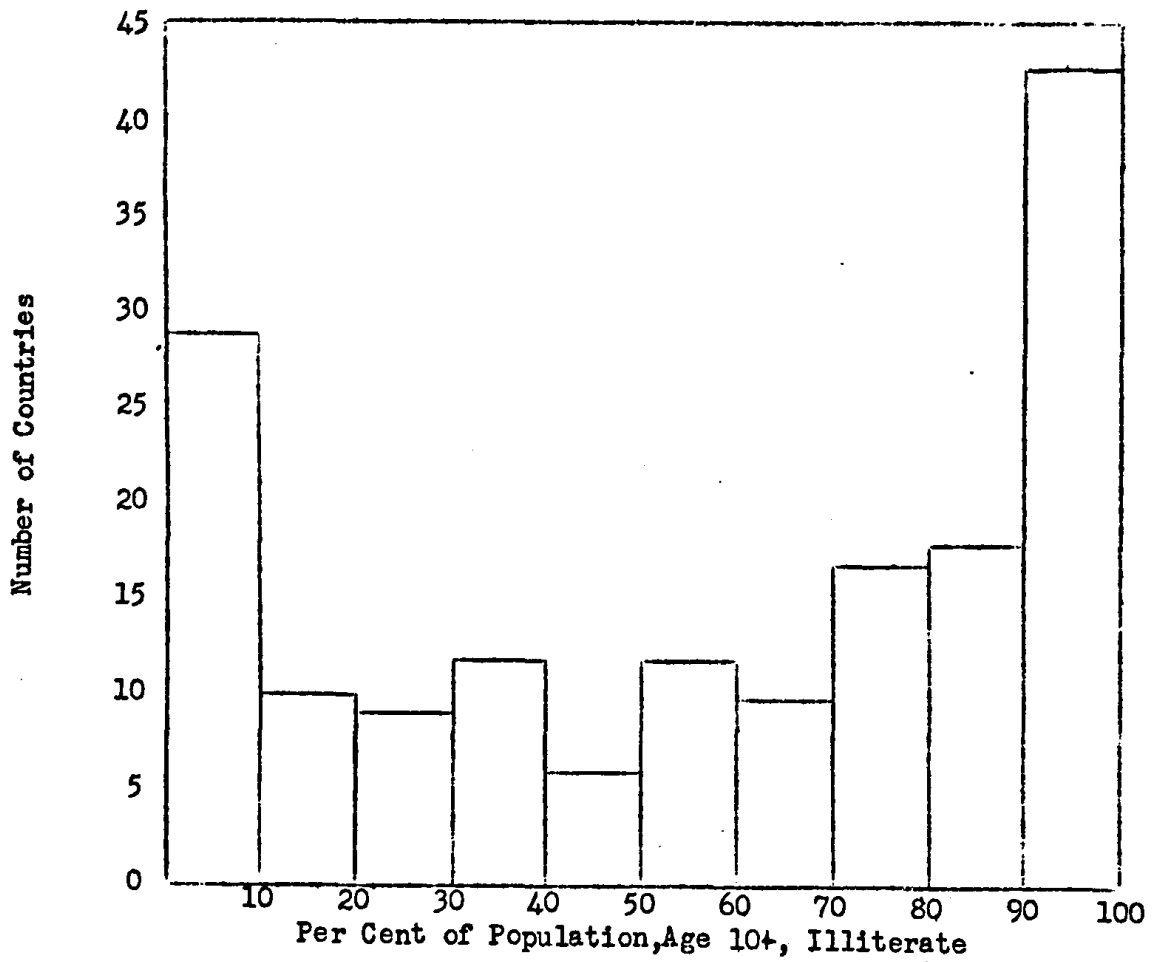
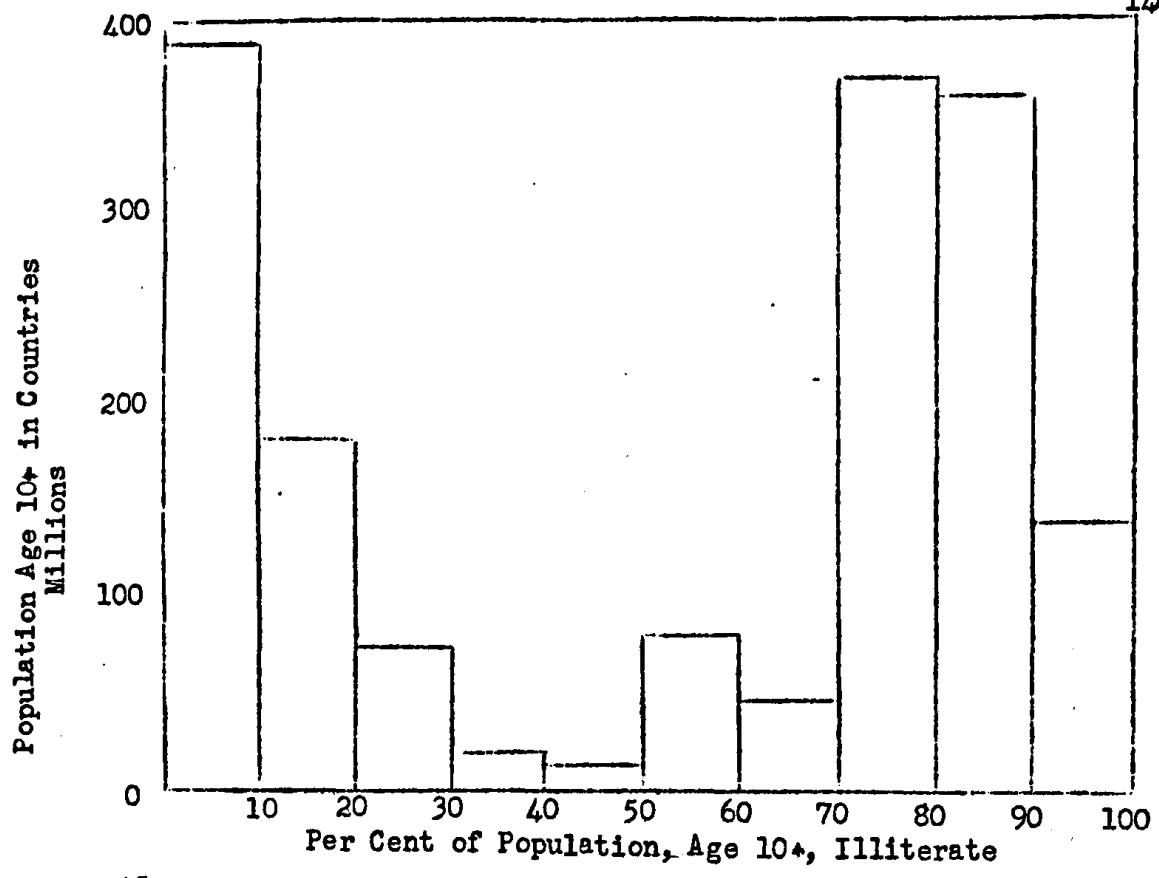


Fig. 5A. Frequency Distributions of the Percentage of the Population Aged 10 and Over Unable to Read.

Table 2

PROPORTION IN CITIES 100,000-PLUS, AND PERCENTAGE
CHANGE IN PRIOR DECADE, INDIA, UNITED STATES AND BULGARIA

INDIA/ ^a			U.S.A./ ^b			BULGARIA/ ^c		
<u>Date</u>	<u>% in Cities</u>	<u>% Change</u>	<u>Date</u>	<u>% in Cities</u>	<u>% Change</u>	<u>Date</u>	<u>% in Cities</u>	<u>% Change/^e</u>
1891	2.21		1820	1.28		1910	2.37	
1901	2.33	5.4	1830	1.57	22.8	1920	3.18	34.2
1911	2.34	.3	1840	3.03	92.4	1926	3.89	37.2
1921	2.69	15.0	1850	5.06	67.2	1934	4.72	17.8
1931	2.86	6.5	1860	8.39	65.7	1947	8.00	52.1
1941	4.25	48.5	1870	10.71	27.6			
1951	6.75/ ^d	44.9	1880	12.38	15.6			

^a/Computed from Indian censuses and from Economic Division, Indian Govt. Planning Commission, "Growth of Cities: Facts and Problems" (mimeographed, Nov. 19, 1951).

^b/Data from Philip M. Hauser and Hope T. Eldridge, "Projection of Urban Growth and Migration to Cities in the United States" in Milbank Memorial Fund, Postwar Problems of Migration (New York: Milbank Fund, 1947), pp. 162, 170.

^c/Computed from censuses. The figure for 1947 is in part an estimate.

^d/Indian Union only.

^e/Adjusted to a 10-year period in those cases where the elapsed time is not a decade.

is unusual. Presumably industrialization can be speedier the more recent its occurrence. The pace of change was exceedingly slow in England; it was much faster in Germany, Japan, and Australia. We might therefore expect India to move faster than nations did which became industrialized earlier. A preliminary analysis of our comparative data suggests that India is moving ahead from given levels of urbanization much slower than did the more recently industrialized countries when they had similar levels, but that it is going ahead about as fast as did either the older industrialized countries (such as France) or the currently underdeveloped countries (such as Bulgaria). The acceleration in India in the last two decades is what we would expect in terms of past history, and it is worth noting that the fastest gains in urbanization seem generally to occur after the 3 or 4 per cent level has been reached, rather than before--although, to be sure, there is such variation from country to country that a consistent height-slope relationship is difficult to establish.

The relative rate of change in literacy in India is harder to establish, because reliable information is unobtainable on Western countries for a period when their literacy was as low as that of India today. However, the panels in Fig. 5 show that most countries eclipse India's rate of gain in literacy, though starting from higher levels. This might suggest that India is atypically slow with reference to the growth of literacy, just as she is atypically disadvantaged in her present educational position; but this interpretation needs to be tempered by the apparent fact that the greatest slope in the literacy growth curve does not come in the early stages but later on--when, say, about 20 per cent of the population age ten and over can read. The synthetic curve in Fig. 6 makes this clearer; it has a clear logistic shape, as one might expect in the case of this type of measure.

Urbanization and literacy give us our two best indices of social as distinct from purely economic change in India. They both suggest that India is in the early stages where development is slow but that she is beginning to enter a more rapid stage, albeit lagging behind in comparison with what was historically true of the more recently industrialized nations.

The next question concerns the relation of these indices to economic trends. Here we emerge with a strange result: Despite our finding that India seems more economically advanced at the present time than she is socially, it appears that in the last few decades she has been making faster social than economic progress. If this is true, it must have been that in the nineteenth century the reverse was the case, that she made faster economic than social progress. I put no particular store by this interpretation, but it does raise some interesting speculation about colonial regimes.

By way of illustrating lack of change in our economic indices, let us take the percentage of the male labor force in agriculture. This figure has changed not at all, as the following figures show:

	<u>Per Cent</u> ¹⁰
1911	71.1
1921	71.9
1931	71.2
1941	72.8

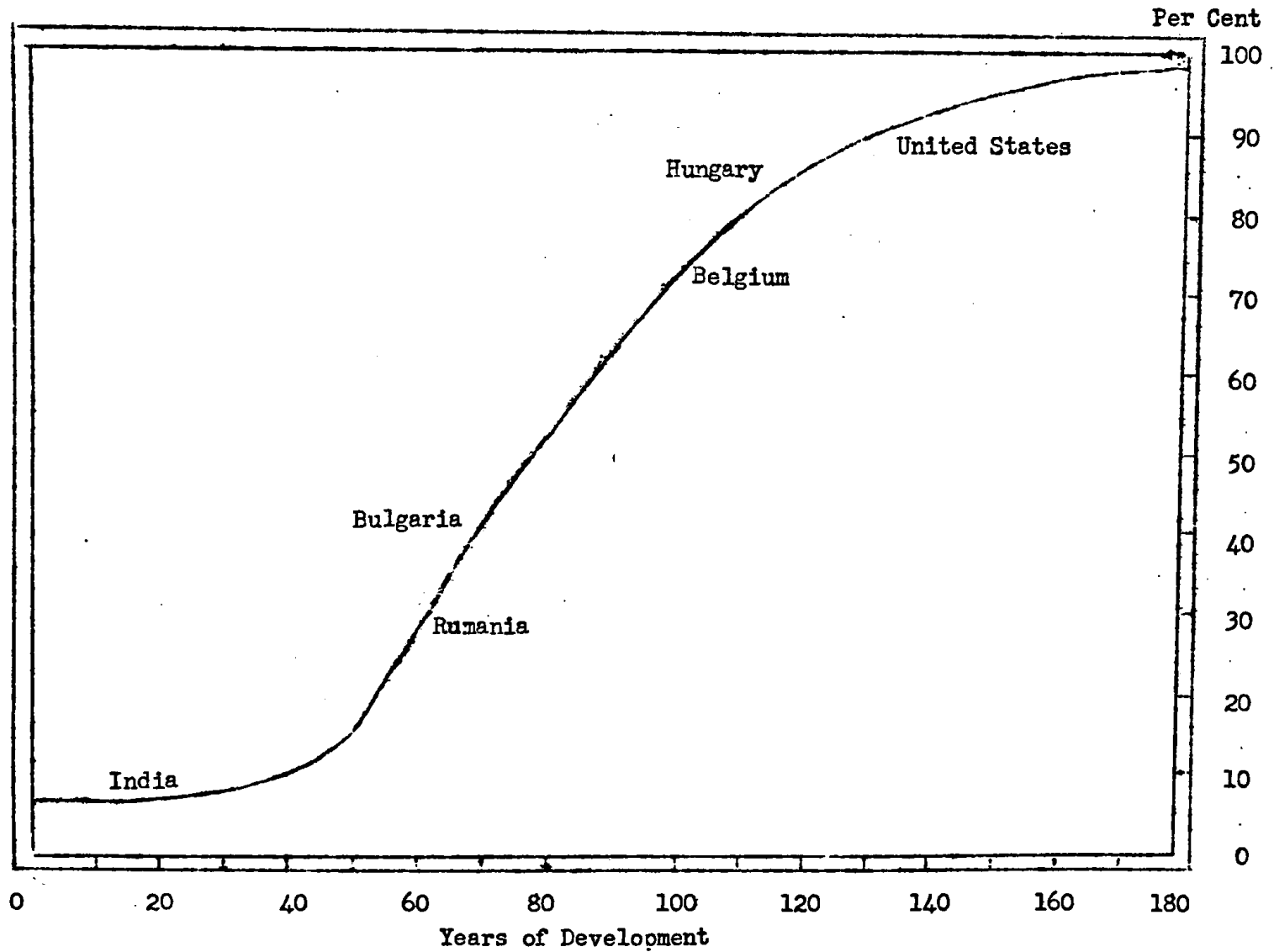


Fig. 6. A Synthetic Curve Showing the Growth of the Percentage Literate over Age 10. (Made by combining the curves for several different countries.)

10.

The first three figures are computed from G. G. Ghate, Changes in the Occupational Distribution of the Population (New Delhi: Office of the Economic Adviser to the Government of India, 1940), pp. 13, 20. The 1941 figure is estimated on the basis of five states and areas giving occupational data for the 1941 census. It is unreliable and should be taken as nothing more than an indication that the percentage had not dropped by 1941.

No significance should be attached to the apparent rise in 1941, because the figure is estimated on a tenuous basis. It has to be borne in mind that we are dealing with males and that there has apparently been some withdrawal of women from the labor force in agriculture.¹¹ But the figures

11.

The lesser proportion of women may also be due to stricter definition of employment for females in the more recent censuses.

do substantiate the continuance of a very high degree of agriculturalism. Indeed, the figure is so high that it is almost impossible to find good historical data for the industrialized nations at a period when their situation was comparable. Already in 1841 England and Wales had only 31.8 per cent of their economically active males in agriculture. In the United States, in 1820, the proportion of all gainfully occupied persons in agriculture was 71.8 per cent. The decline was somewhat gradual for the next two decades, but began to accelerate after that. If the Indian estimate of 68.2 per cent of all occupied persons in agriculture in 1948 is correct, India is about where the United States was in 1840 (when the percentage was 68.6). In other words, India is about 110 years behind the United States in this regard, with some evidence that the kind of moderate initial decline the United States experienced in the 1830's and 1840's is beginning to set in.

Since there has been some growth in both manufacturing and urbanization in India during the last few decades, the question may be raised as to how the agricultural labor force could have remained so large. One possible explanation is that rural handicraft has declined, removing rural folk from the village to the city but not lessening the proportion directly engaged in cultivation.

The general index of Indian industrial production rose in 1941 to a point 18 per cent higher than that of 1937, but it did not keep all of this gain during the next eight years, when it averaged only 15 per cent higher than the 1937 figure.¹² The index of overall agricultural

12.

United Nations Statistical Yearbook 1949-50, p. 132.

production fell in 1946-48 to 95 per cent of the 1934-38 average.¹³

13.

Ibid., p. 99.

Since the population grew by more than 13 per cent between 1941 and 1951, it can be seen that per capita economic gains were, on the whole, nil. Strong inflationary trends have pushed up the cost of living sharply, the index of wholesale prices rising by 1951 to four and a half times the pre-war figure.¹⁴ As a result "the level of real income

14. Planning Commission, First Five Year Plan, pp. 12, 27.

per head at present is probably no higher--and may well be lower--than, say, in 1939-40."¹⁵ In fact the estimate of Rs. 255 as the average per

15. Ibid., p. 12.

capita income for 1948-49 suggests, when adjusted for price increases, no higher real income than that arrived at in estimates for periods decades earlier.¹⁶

16. Ibid., p. 13. For a recent discussion of various estimates of per capita income, see J. B. Jathar and S. G. Beri, Indian Economics (London: Oxford University Press, Indian Branch 1949), Vol. 2, Ch. 4.

Thus the trend of economic change seems, in the per capita sense at least, remarkably stagnant, perhaps more stagnant than the trend of social change. Both sets of indices indicate that any modernization of India during the 20th century has been as slow as it was at an earlier time in the older industrial countries, and somewhat slower than it was in the newer industrial countries. In some respects, notably in literacy and urbanization, India has reached a level when considerable acceleration of change has often occurred in other countries, but there is no guarantee that such acceleration will take place. Comparisons with industrial countries are difficult because of the lack of adequate data for those countries when they were as underdeveloped as India is today. But a country can today modernize itself more rapidly than was possible in the 18th and 19th centuries--as the cases of Japan and the Soviet Union illustrate. This fact suggests that India is laboring under some kind of depressor. At best she is repeating the very slow history of the older industrial nations in their earliest stages of development. At worst she is not achieving even this. Granted that theoretically a newly developing country does not have to repeat all the old steps (it can simply borrow the most advanced elements without having to evolve them), the hypothesis of a depressor becomes plausible.

What is this depressor? Whatever it is, it is surely not a single factor but a multiplicity of factors in equilibrium. It is doubtless not peculiar to India but is shared by many underdeveloped areas. Our task is to assess some of the demographic and social elements that may be involved--understanding, of course, that they are analytically separable from the economic factors but not empirically independent of them. Let us start with the demographic side, which brings us back to the discussion of manpower in Part I.

PART III. THE ROLE OF POPULATION

Since manpower has a double aspect--being, on the one hand, a resource available to the economy for work when properly combined with other resources and, on the other hand, the goal of production in the sense that it is for the people's standard of living, for their protection and integrity that production is undertaken--a realistic analysis of human numbers must deal with both aspects in relation to each other. If it were not for the consuming side, a growth of manpower would have a much wider usefulness than it actually does. It would then be in the category of agricultural land or water power, the usefulness of which, when combined with other resources, would continue no matter how much they were expanded. But because of its consuming side, the growth and use of manpower has narrower limits than any other resource. As a resource, its utilization, like the utilization of any other resource, has its cost--the cost entailed in combining it productively with other resources; but it has on top of this an added cost. This added cost is the cost of its consumption; and, taken one way or another, this consumption is the total product of the society.

Viewed in this light, manpower is the most expensive element in production. It follows that any means of decreasing its use in relation to product is a gain. This is why the ultimate measure of economic progress is per capita production. If manpower grows to the point where added increments yield a per capita product less than the average, there is too much of it.

Due to its consumption side, manpower can never be a purely "idle" resource or, in Zimmerman's phrase, simply "neutral stuff." It is not like oil in the ground which costs nothing to leave there but may potentially be used at some future time. Manpower is costly to not use as well as to use. This being true, the effect of underemployment of human resources is greater in long run terms than the effect of underemployment of natural resources; at best it can be compared to the underemployment of capital equipment, which requires cost of maintenance while lying idle. But the cost of idle manpower must be measured in terms not only of production not accomplished and of the cost of maintenance, but also in terms of the cost of consumption above maintenance, which is an unavoidable cost.

Of course, the unemployment of human resources is simply an extreme case of their "underemployment." It is impossible to have all human resources unemployed, just as it is impossible to have all physical resources unemployed; but partial unemployment, or general underemployment, is not only possible but is, in certain cases at least, a partial function of the number of people in relation to given physical resources.

Underemployment in this sense is not only a failure to use the physical power of human beings to some optimum degree, but also the failure to use their faculties, inherited or acquired. Acquired faculties are largely a function of the level of living. Thus, in another way, we run into the fact that the consuming aspect of manpower is intimately related to its productive aspect. The numerical magnitude of the labor force can get in the way of its efficiency in the sense of acquisition of skills and faculties. Full "employment" in a physical

sense may therefore be, in certain instances, compatible with under-employment or unemployment of skills; and may, furthermore, be an obstacle to improvement.

With these considerations in mind, let us return to some of the known facts in India's case.

Growth of Population in India

During the half century from 1871-72 (when the first of the decennial censuses was taken) to 1921, India never had two decades of substantial population growth in a row. Since 1921 (more properly since 1918), however, she has had three decades in a row of the most rapid population growth she has ever experienced. The population and decade increase of the India-Pakistan area was as follows:

	Population (Millions)	Per Cent Increase in Decade
1921	305.7	
1931	338.2	10.6
1941	389.0	15.0
1951	437.5	11.2/17
1921-51		43.1

17.

The 1951 figure includes an estimate of 4.4 million for Jammu and Kashmir and of 561,000 for unenumerated tribal areas of Assam. There is some reason to believe that the figure for Pakistan, 75.7 million, may be an undercount. The growth in the Indian Union from 1941 to 1951 was 13.4 per cent.

In the territory now covered by the Indian Union itself, a rough calculation indicates that the population added between 1921 and 1951 was 110 million, an increase of 44 per cent in three decades.

Recent Population Growth in Relation to Production

Such a rise in total population tells us at once that the national product has risen sharply. The great expansion of numbers could not have come as a result of a simple reduction in average consumption, because the level of living was already so low in 1921 that little reduction was possible. A rise in national product was involved, and this can be substantiated in other ways. But the increase in total production, per contra, did not mean a rise in per capita product. My impression is that the latter could not possibly have risen much, because it is very low at present. We have already seen that the 1948-49 estimate of Rs. 255 (or \$57 U.S.) is not noticeably higher, when adjusted for price changes, than estimates running back three quarters of a century to 1875. If there has been no substantial rise in per capita real income during the last three decades, one is privileged to draw the conclusion that the 44 per cent population increase during that period has

eaten up the very substantial gain in national product.

One is also privileged to draw the conclusion that the population growth itself could not have been totally responsible for the increase in national product. The evidence of mounting unemployment and underemployment, the obvious piling up of people on the land, the scarcity of productive instruments in general in relation to people, all point to a redundancy of population. Therefore, it seems safe to say that a lesser population increase would have left the people with a greater average wealth and a greater average real income than they actually have.

It is difficult to say how much of a difference a lesser population growth, or even fixity of numbers, would have made. My view, admittedly hard to substantiate, is that the growth of population after 1921 contributed little to the gain in national product, and that consequently this gain could have been mostly available for distribution to the people if the total population had remained fixed instead of growing. This view is based on three grounds: (a) The population was already beyond the economic optimum in 1921. (b) The utilization of manpower today is indicative of a huge surplus of population. (c) Economic development is measured, not in terms of how much labor it uses, but how little. The first ground will not be discussed here, and the other two are implicit throughout. We can therefore move on to the point that, if population growth has caused the increase of national product to be dissipated in such manner that no noteworthy rise in per capita real income has taken place, then we have one of the depressors we are looking for in explaining what seemed to us to be a retarded position and a slow rate of economic development in India.

Such a conclusion should not, however, be a stopgap to further inquiry. There are two orders of additional questions to be pursued: First, why did national production grow no faster than it did and thus not get farther ahead of population increase? Second, why did the population grow as fast as it did?

Concerning the first question, we have seen that national production increased about as rapidly as population did. But why did it not grow more rapidly? Perhaps population growth itself had something to do with retarding the rate of increase of total national production, but its influence must have been slight. It is one thing to ask whether the population growth cut down, or virtually precluded, increases in per capita product; it is quite another to ask whether it reduced the total national product below what it would otherwise have been. If population growth had only slight influence in this respect, then what other factor kept the national product from rising faster? The first thing to ascertain, of course, is whether total production in the Indian economy was increasing about as fast as it could. This is a question of economics, and I shall not try to answer it except to say that the experience of other countries such as Japan and the Soviet Union seemingly demonstrate the possibility of a much higher rate of growth.¹⁸ If true, then what

18.

On potential rates of economic development in relation to population growth, see Joseph J. Spengler, "Economic Factors in the Development of Densely Populated Areas" in Proceedings of the American Philosophical Society, Vol. 95 (Feb. 13, 1951), pp. 20-53.

kept Indian production from doing so?

One of the stock explanations is the past status of India as a political vassal and economic satellite of Britain. Without going into the arguments for this interpretation, which have been well stated elsewhere,¹⁹ I shall accept the proposition as substantially true. This does

19.

See Romish Dutt, The Economic History of India under Early British Rule (London: Routledge and Kegan Paul, 7th ed., 1950) and The Economic History of India in the Victorian Age (*idem.*); Daniel H. Buchanan, The Development of Capitalistic Enterprise in India (New York: Macmillan, 1934), Ch. 19; Tulsi Ram Sharma, Location of Industries in India (Bombay: Hind Kitabs, 1946); H. Venkatasubbiah, The Structural Basis of Indian Economy (London: Allen & Unwin, 1940); Vera Anstey, The Economic Development of India (London: Longmans, 1929).

not mean, however, that had India remained politically independent from the decline of the Mugal Empire to the present time, her total production would necessarily have moved ahead faster. Political sovereignty guarantees neither economic independence nor economic advance. The cases of China, Thailand, Tibet, Liberia, and Haiti prove that. All that can be meant by the depressing influence of British rule is that, under ideal conditions either of British suzerainty or of political independence, the national product could have risen faster than it did. The important thing is not so much the fact of foreign rule as the way it was exercised. British rule represented a considerably lesser contribution to Indian output than it might have represented had every effort been intelligently and effectively bent in that direction. The growth in total output might actually have been less if India had remained independent; but also it is true that the per capita rise in production might have been greater. Britain's rule over India resulted in a balance of factors different, in all probability, from that which would have occurred if full independence had been retained. Among the differences of balance are perhaps a greater perpetuation of agriculturalism versus manufacturing and a greater emphasis on public health as against other welfare measures. The latter point, however, brings us to our second question, the causes of India's population growth, especially during the last 34 years.

Causes of Population Growth

If the demographic cause has been a decline in the death rate without a corresponding change in fertility, the social and economic causes must be sought in changes affecting mortality. It cannot be assumed that per capita food available to Indians has risen particularly since 1918, but it may well be that rationing and other government measures, such as the planned importation of food and the curtailment of commercial crops, have given the lower classes slightly better nourishment. Yet, in view of the very harsh food condition now prevailing, it would be questionable to say that better nourishment has played much of a role in the decline of mortality during the last 34 years. Nor can internal peace be mentioned as a significant factor, because that had existed for many years prior to 1918. Probably the most important single cause of mortality decline during the period under consideration has been the control of disease through modern medical science and public health

measures. Except for one great epidemic, the influenza holocaust of 1918 which took an estimated 18 or 19 million lives,²⁰ the population

20.

Davis, Population of India and Pakistan, Appendix B.

growth from 1901 would have been steady and substantial. The success after 1918 in reducing mortality below even the 1901-1917 average was therefore due to the avoidance of major epidemics and better medical work on non-epidemic ills. Improvement of the water supply in many areas has played a role. The use of medicine, inoculation, and vector control in reducing mortality from plague, cholera, malaria, typhoid, kala azar, and other diseases capable of attacking millions, has been very effective. At the present time still more strenuous sanitary and medical measures, plus the use of new drugs dating only from yesterday, are driving down the death rate still further.

If the major explanation of the drop in mortality is the application of modern medical science, then we can note a certain imbalance. Nothing like an equal amount of science is being expended on the control of fertility. The result is an acceleration of population growth, as previously noted.

Future Effects of Population Growth

The imbalance between mortality and fertility that has given such rapid population growth in India since 1918 is necessarily a temporary phenomenon. It cannot continue for very long, because it would result in a doubling of the population every 63 years. Doubtless the Indian economy could for a while develop faster than such a rate of growth (about 1.1 per cent per year), but it could not do so indefinitely. The reason that it could not do so indefinitely is clear: a growing superabundance of population in relation to other resources produces an eventual disequilibrium which hampers economic development itself.

But, it may be said, the question is not solely one of theoretical possibility in the indefinite future, but also of actual probability in the specifiable future. In other words, how long could the rate of economic development exceed the rate of population growth, under what conditions, and by how much? This is a question impossible to answer with precision, but there are several considerations that lead the writer to believe that coming conditions in India will not permit the continuance of the 1918-1952 rate of population growth for as many as four decades.

In the first place, there is already evidence that the current population density and rate of growth are hindering economic advance. The Indian Government, with the best of intentions for economic modernization, finds itself sacrificing capital formation for consumption, because consumption means to the majority of its people barely enough to eat and wear.

The Quest for Food

For example, the food situation has been getting more desperate, and as a result resources have been increasingly turned in the direction of simply getting more food. For the period 1936-1939, the average area under cereals was 167 million acres, whereas in 1949-50 it was 183.8 million--an increase of 10 per cent. But the production of cereals for the corresponding periods was 44.2 million and 46.1 million tons respectively--an increase of only 4.3 per cent.²¹ The comparison

21.

Planning Commission, First Five Year Plan, p. 12.

indicates either that India was having to put marginal lands into cereal production (with consequently greater cost and danger of soil depletion) or that productivity on old lands is declining. Between the two periods the population grew something like 15 per cent. As a result, India, an agricultural country, has had to import grain to the extent of 2.75 million tons per annum during the four years 1947-1950.²²

22.

Ibid., p. 69.

The Five Year Plan says that an annual importation of about 3 million tons must be contemplated, with perhaps a larger figure in exceptional years.²³

23.

Ibid., p. 72.

Thus India is losing precious foreign exchange which, if there were not so many mouths to feed, could be better spent on the importation of machines, machine tools, fertilizer, chemicals, technical books, technicians, and other necessities for a long-range program of industrial development. But the tragic part is that, despite the importation of foodgrains at great cost, the "per capita availability of cereals for domestic consumption is lower than before the war."²⁴

24.

Ibid., p. 12.

In consequence the steady growth of population is forcing the Government to take still other measures, not so much to increase the level of food consumption, but simply to maintain it at at least a low standard. Among these measures is the restriction of the use of land for commercial as opposed to food crops. Already, mainly because of the diversion of land to food growing, the production of such commercial crops as sugar, cotton, jute, and tobacco has declined;²⁵ and

25.

United Nations, Economic Survey of Asia and the Far East, 1949, pp. 7, 10-12.

the Five Year Plan envisages a future price policy designed to keep these crops from expanding at the expense of land for food.²⁶ Yet

26.

First Five Year Plan, pp. 78-81.

commercial crops afford valuable exports for foreign exchange and necessary raw materials for Indian industry.

In such ways the overriding necessity of getting enough food is hampering the very economic development which, if allowed to take place, might eventually make the food situation better. As the Planning Commission says, "India's food problem is not a temporary disequilibrium between supply and demand; it is a manifestation of the continually growing pressure of population on food supply."²⁷

27.

Ibid., p. 67. One often hears in India that the influx of Hindu refugees from Pakistan has forced the Government to provide for more consumption than would otherwise have been the case. This is true, but India's net gain from this source cannot have been much more than two million people. Against the total population of India, this is a very small percentage and cannot compare with the immigration into Palestine or some other countries at certain periods. Curiously, one hears the same complaint in Pakistan.

Manpower Utilization

Another respect in which population superabundance impinges on economic development in India, as mentioned already, is the utilization of manpower. Sheer unemployment is hardly a necessary consequence of population pressure, but when people are backed up on the land for lack of opportunities outside agriculture, when both capital and resources are extremely scarce in ratio to manpower, full or partial unemployment is extraordinarily hard to avoid. The biggest loss to the economy probably comes from inefficient employment, which is never solely a function of population redundancy but may in part be traced to it. For instance, the effort to avoid straight unemployment may lead in directions antithetical to efficient utilization. The "make-work" attitude which emphasizes the "necessity of a job" rather than the "job to be done" is prominent in Indian thinking; and Indian officials, though generally aware of its speciousness, are not always able to combat it. A frequent remark concerning specific measures of technological progress, particularly in agriculture, is "What would we do with the people who would be thrown out of work?" It is easier to make technological gains in something like medicine and public health which is not thought of in a job-supplying context than it is in agriculture, manufacturing, or government.

Indian manpower is so plentiful in relation to capital and resources that it is cheap; and, being very cheap, it is wasted. I watched a runway being built at an airport near Siliguri in Northern Bengal. A line of ragged men and women were carrying crushed stone in containers on

their heads. At first I thought a dump truck, or even wheelbarrows, would be cheaper, but then I reflected that rice is cheaper than gasoline or steel in India and that the wages of these "coolies" is little more than the rice it takes to keep them alive. In some areas daily wages are as low as a rupee-and-a-half (the current rupee value being about 21 cents). Such use of labor instead of capital equipment is obviously inefficient. The standard of living cannot rise much so long as human beings are cheaper to use than gasoline engines or wheelbarrows. The industrial countries of the West have often made progress precisely because they were short of human labor and thus had to use ingenuity, machinery, animal power, fossil fuels, and rational organization to get things done. In a country like India, on the other hand, where people are legion, where men fight for jobs, labor tends to be squandered in inefficient, useless, and often purely symbolic work.

It is not that full and efficient employment are impossible because of population pressure. It is rather that, with the density and rapid growth of numbers, the task of meeting the human tide with adequate measures of economic organization, under conditions of few resources and little capital, becomes harder and harder until, from a practical point of view, it simply is not done.

Future Demographic Possibilities

Granted that the demographic factor is an economic depressant in India, the next question is what future developments with respect to this factor are possible. We shall consider four conceivable alternatives separately, under the assumption that each alone is to be the possibility (as is often done in misplaced controversy), and then consider them in relation to one another (as is necessary from the standpoint of reality).

Emigration as a Possible End to Population Growth

It can be taken as axiomatic that massive emigration on a scale sufficient to remove the natural increase of India's population is merely a theoretical possibility, not a practical eventuality. Such emigration would have to count on the removal of about four million people per year. The greatest movement of international migration in human history--the peak period of immigration to the United States during the 15-year period from 1900 to 1914--brought an average of only 892,000 per year to our shores. Of these something like 30 per cent returned to their homes, so that the net immigration was hardly more than 624,000. In the meantime the whole world has become increasingly peopled. The stretches of virgin territory once open to the migrant have virtually all disappeared.²⁸

28.

See W. D. Forsyth, The Myth of Open Spaces (Melbourne: Melbourne University Press, 1942).

Population is still growing rapidly not only in India but nearly everywhere. There is little likelihood, therefore, that the rest of the world

will accept enough migrants from India to stop the Indian population growth even for four or five decades, much less forever.

Increased Mortality as a Possibility

A rise in mortality is more probable. The decline in the death rate since 1918, representing as it does an unbalanced situation, may prove temporary. Circumstances could arise in which warfare, famine, and disease would carry away scores of millions in India, depleting the population to the point where decades would be required to build up to the present number again.

It hardly seems likely that such an increased mortality would be a permanent condition. It would more likely be a temporary phenomenon which might reduce the population sharply and thus give a long breathing period in which economic modernization could take place without the magnitude of the present demographic impediment.

The Normal Industrial and Demographic Transition as a Possibility

A third possibility is that the Indian population will actually continue to grow until the industrial revolution has run its course and has caused fertility to be controlled. If this should occur, the experience of other nations shows that India would probably hold at least a billion people (nearly half of the world's present population) at the end of the transition. Right now it is hard to see either how the transition could be made or how the resulting population could have a standard of living high enough to support an industrial civilization. The possibility that industrialization will prove the sole means of eventually stopping the population growth therefore seems remote.

An Early Reduction of Rural Fertility as a Prospect

A fourth possibility is that a way will be found to reduce the birth rate in India prior to the industrial revolution. Since this would be the most humane and least costly means of stopping population growth, it is the one that every one is considering at the present time, especially since it would presumably aid the process of industrialization and hence facilitate a rise in the standard of living. Let us therefore discuss this possibility in some detail.

The remarkable news from India today is the widespread recognition in that country of a need for limiting births. The Government has officially recognized the need and has shown a readiness to do something about it. There is thus a bare possibility that a new and revolutionary step in human history may be achieved: the discovery of a way to bring birth limitation to massive peasant populations without awaiting the slow and demographically expansive process of urbanization and industrialization.

In my talks with government officials I was indeed surprised by their detailed knowledge of the population problem and their enthusiasm for some

line of action. They do not believe that overpopulation is solely responsible for India's poverty, or that the only remedy is through population control. Nor do they agree unanimously on either the importance of population or the proper means of dealing with it. A few still argue that economic measures alone are necessary or that more people mean more military strength. But the majority agree that family planning and postponement of marriage should be brought to the masses now, by quick and direct means. They believe that this step, if successful, would play a role in making possible precisely the rapid economic modernization that is sometimes proposed as an alternative to birth limitation. Many think that it would also play a role in saving India from Communism, because the hopelessness of an agricultural country clogged by too many people, with no prospect in view other than continued poverty with continued growth of numbers, is a fertile field for Communist activity.

Evidence of the Government's intentions is contained in the Planning Commission's report, which says:

Under present conditions, an increase in manpower "resources" does not strengthen the economy but, in fact, weakens it. . . . Unless measures are initiated at this stage to bring down the birth-rate and thereby to reduce the rate of population growth, a continuously increasing amount of effort on the part of the community will be used only in maintaining existing standards of consumption. . . . A population policy is, therefore, essential to planning.²⁹

29.

First Five Year Plan, p. 16.

The report later points out that although the purpose of family planning is to reduce the rate of population growth, its immediate effect will be to improve public health. If births are too frequent and poorly spaced, says the Commission, the health of both mother and children suffers, especially under conditions of poverty and malnutrition. Family planning is thus doubly important--so much so that the State should, according to the report, encourage it by educating the public as to its necessity, providing medical attention and contraceptive advice for married couples, and sponsoring research for the scientific understanding of all aspects of family limitation.³⁰

30.

Ibid., pp. 206-207.

Thus the Government has had the courage to commit itself on birth limitation as a part of its program. This commitment is of great significance, not only because governments usually shy away from the subject but also because, in India, the state is looked to for initiative much more than in the United States.

In this policy the Government seems to have the support of the educated classes. But what about the 80 to 85 per cent who live in villages, who cannot read, and whose reproductive behavior, unlike that of the upper

classes, is presumably governed by customs and attitudes evolved through untold centuries--how will they react to a program of birth limitation?

A conclusive answer to this question must await further research, but some evidence is already available. I went to India in a skeptical frame of mind on this point, but came back feeling that with a large-scale, concerted, and skillful effort, the villagers of India could conceivably be brought to the practice of family limitation. It is true that they do not practice it now. Women (though not necessarily men) still marry at extremely young ages and ordinarily begin bearing children soon after puberty. They and their husbands are as innocent of contraceptive knowledge as any group in the world. The birth of sons still brings prestige to the parents and conforms to folk definitions of good fortune.

But the villager, however poor and illiterate he may be, is not stupid. He is the product of a hard struggle for survival. Within the limits of his particular world he is a shrewd appraiser of his interest, a hard worker, and a realistic observer. If the population of his village has doubled in the last thirty years, he knows it; if the price of land has risen to dizzy heights, if the size of the average holding has dwindled, if returns from overworked land have diminished, and if the price of things he must buy has quadrupled, he may easily connect these events with the increase of population. He can grasp the fact that, with better health facilities than the village once had, children do not die so frequently and that consequently families are larger than they once were. He knows that grain is requisitioned and food hard to obtain, and that a larger family means a greater strain on his already limited food resources. He understands that change is in the air, that it is to the advantage of children to be educated, and that it is easier to educate children if they are few. In short, the villager is no longer living under the conditions in which a high fertility has utility.

If the villager is asked a direct question about how many children he wants or intends to have, he will tend to give a stereotyped response to the effect that this is a matter beyond his control. But if one really discusses the matter with him, it turns out that the stereotyped response is really a verbal formula and not necessarily a conviction, that he has actually thought about his family circumstances as well as those of his neighbors. On more than one occasion I was told by a villager that the community, if given a simple method of limiting births, would make use of it. If, then, the first reaction of the peasant is generally to oppose birth limitation, it is not necessarily an impregnable opposition.

The villager is not caught in the mental straight-jacket of a dogmatic religion. Hinduism, a broad and permissive way of life, embraces a great variety of deities, sects, and ritual practices. The very fact that different castes follow different customs, that India's geographical regions have diverse languages and cultures, has taught the Hindu a sense of relativity in ethical and religious matters. On the subject of birth control the semi-sacred literature of Hinduism is so vast and

varied that no single dogma could be derived from it, even if desired. Hindu religious leaders have generally agreed that planned parenthood is a good thing; the main opposition has come from the country's three million Roman Catholics.

True, there is a certain ascetic, or Puritanical, bent in Hinduism. Gandhi, who readily admitted India's overpopulation and the necessity of curtailing population growth, felt that the only acceptable method would be abstinence. I found a number of officials who were worried as to whether birth control might lead to the kind of sexual freedom Kinsey depicts in America. But the dominant tendency is to view family limitation as a practical matter, not as an issue to be settled by received dogma. "No Hindu need run afoul of his conscience by practicing contraception."³¹

31.

S. Chandrasekhar, "Demographic Disarmament for India," presidential address, First All-India Conference of The Family Planning Association of India, Bombay, Nov. 30-Dec. 2, 1951, p. 29.

Actually there are already many birth control clinics in India, both public and private. The Municipal Corporation of Bombay has created seven such clinics; Hyderabad City has some clinics, Poona recently started a municipal contraceptive service. Some doctors exhibit prominent signs announcing that they are specialists in birth control. Certain Christian missionaries are quietly introducing birth control into rural areas. Stores display contraceptive devices along with their other goods, and magazines and newspapers carry advertisements of such devices. Certain provincial governments are preparing to install contraceptive services. There is no popular outcry against these evidences of public interest in birth control. There is no particular opposition to voluntary sterilization for those with more children than they want.

Although clinical and commercial contraceptive services reach mainly the middle class urban people (and by no means all of them), family limitation is also appealing to the working classes. Miss Shakuntala Paranjpye, who has conducted a clinic in Poona for thirteen years, says that at least half of her clients are from the working classes. She has also worked widely in rural areas, where (with her great skill) she has received a favorable response. She, in common with many others, believes that contraceptive services should be an integral part of maternal and child welfare activity, helping couples who suffer from sterility as well as those who suffer from excessive childbearing. The new municipal service in Poona is of this character, and is apparently succeeding well.

One universally acknowledged difficulty is that Western techniques of contraception are not perfectly suited to India. The villager and his wife have little privacy, few facilities, and no money. They almost never discuss reproductive matters as between themselves; and they often live with older relatives, who are generally more old-fashioned. A contraceptive, to be acceptable, must either be free or cost almost nothing, must require no facilities to store or use, must

occasion a minimum of inconvenience and education to procure and utilize, and must be safe and effective. Since no contraceptive at present quite fits the bill (although some come close), one of the major spheres of research, as envisioned by the Government, is the development of devices better suited to Indian peasant conditions.

One of the known methods--the so-called "safe-period"--is currently being tested in India under the joint auspices of the World Health Organization and the Indian Ministry of Health. The tests, conducted with the technical advice of the Population Division of the United Nations, will definitely reveal, it is hoped, whether or not this method can be made effective for Indian women and what the factors are which govern its acceptability or inacceptability, its success or failure.

Doubtless one reason why the "safe-period" is being tested first is that it involves a certain amount of abstinence and thus comports well with the ascetic tinge in Hinduism. It also involves no monetary cost and yet, when properly used, is known to reduce fertility sharply. The big question is whether or not it can be efficiently used by illiterate couples under Indian conditions. There is little disposition to say that only this method shall be tested, or to condemn other methods.

Other research is under way on Indian attitudes and behavior with respect to reproduction. The Population Division of the United Nations and the Indian Government are jointly sponsoring a thorough field study in Mysore that will throw light on fertility patterns, family organization, and attitudes toward family size and age at marriage--particularly as affected by economic conditions in both rural and urban settings. Other studies of the same character are being made in a wide rural area by the Gokhale Institute of Politics and Economics at Poona. One survey completed several years ago in Bengal, under the auspices of the Indian Research Fund and the All India Institute of Hygiene and Public Health, indicated that rural women in a Bengal area desire, on the average, only two or three children.³² While the studies now

32.

This study has never been published. Reference to some of the findings is contained in Davis, Population of India and Pakistan, pp. 227-228.

in progress will deepen our knowledge of the role of reproduction in Indian life and thus lay the basis for possible action by the Government, more research will be required to test village reactions to specific types of educational campaigns, to various clinical approaches, and to particular contraceptive techniques.

Relative Assessment of the Demographic Possibilities

We now have four demographic possibilities before us, any one of which could theoretically stop population growth in India and thus remove the economic depressant stemming from this source. The death rate

may rise, mass emigration may occur, or the birth rate may be reduced either by an industrial transition or by a more immediate diffusion of birth control among the peasant population. I have dwelt on the last possibility at some length because, in past thinking about population, it has been too superficially dismissed. The assumption has been consciously or unconsciously made that the demographic future in India will go through stages similar to those through which Western industrial countries and Japan have gone. But the present condition of India throws considerable doubt on such an assumption.

The writings of Notestein contain what has been the general point of view among American populationists. Without citing evidence, or going analytically into the matter of social organization, he holds that fertility declines will come to such areas as India only gradually and "only in a period of rising levels of living, urbanization, widespread education, and growing contacts with foreign cultures." Since such developments, he says, would initially reduce mortality more rapidly than fertility, they would temporarily enhance growth.³³ Thus

33.

Frank W. Notestein, "Problems of Policy in Relation to Areas of Heavy Population Pressure" in Milbank Memorial Fund, Demographic Studies of Selected Areas of Rapid Growth (New York: Milbank Fund, 1944), pp. 152-153. Characteristically, this article contains not a single citation to the demographic, economic, and sociological literature. The conclusions have an oracular tone, and the reader apparently must accept them on faith.

Notestein sees no opportunity for reducing fertility in peasant-agricultural societies in advance of the industrial revolution. This is seen in the policies he advocates for eventually getting a reduction in fertility--policies which de-emphasize birth control and amount, instead, to a complete urban-industrial transition.³⁴ At best he sees

34.

Ibid., pp. 153-155. Among the proposals are the following: More education, development of native leadership, breakdown of caste system, more international trade.

only a chance to stress those aspects of the industrial transition which might be most conducive to reducing fertility. Six years later, in 1950, we find Notestein modifying his position slightly. He says that at least some of the causal factors in declining fertility "can be fostered in a rural setting."³⁵ He also grants that "appropriate,

35.

"The Reduction of Human Fertility as an Aid to Programs of Economic Development in Densely Settled Agrarian Regions" in Milbank Memorial Fund, Modernization Programs in Relation to Human Resources and Population Problems (New York: Milbank Fund, 1950), p. 98. Again this article contains no reference to empirical studies or other literature.

efficient, and cheap contraceptives are needed to hasten the decline in the birth rate."³⁶ But still he clings to his old position that

36.

Ibid., p. 99.

social conditions must be changed, that these changes will cause mortality to decline first, and that about all that can be achieved is to hold population growth down to the extent that numbers would only double during the next hundred years.³⁷

37.

Ibid., p. 95. Notestein made a serious factual error in this article when he said, pp. 99-100, that leaders in densely settled areas are unaware of and uninterested in problems of population growth. This is true neither of India nor of Puerto Rico.

An assumption in this point of view is that the peasantry in a country such as India is living under the same social conditions that it lived under two hundred years ago, and that unless these social conditions are changed, a high fertility will remain. The first part of this assumption is obviously not true. The conditions of life of the Indian peasant are today fundamentally different from what they were even thirty years ago. The very growth of population in rural areas is itself a new factor. Other new factors are the reduction of mortality, the greater commercialization of agriculture, the introduction of government procurement and rationing schemes, the decline of handicraft industry, the disintegration of the joint family system, the loss of village self-sufficiency, and the decay of caste. In order to draw an agricultural region into fruitful economic contact with the industrial nations, the colonial powers have altered the basis of life of the peasant.³⁸ The rise of nationalism and the achievement

38.

The corrosive impact of colonial control on the social organization of agricultural societies has been ably described by J. S. Furnivall. See his Colonial Policy and Practice (Cambridge: University Press, 1948), Ch. 8; his Netherlands India (Cambridge: University Press, 1944), Ch. 13; and his two papers in Phillips Talbot (ed.), South Asia in the World Today (Chicago: University of Chicago Press, 1950).

of independence have introduced further changes. The measures taken by the Indian Government since independence, measures to meet desperate situations which are themselves new, are far-reaching in their social effects. The peasant today is no longer living under the same conditions he once lived under. As a consequence, high fertility is no longer as useful to him as it once was. If he continues to have many children, it is more because he has not yet crystallized his goals in terms of the new setting or found the means of instrumenting new goals. If this much is true, then it follows that furnishing him with a redefinition of the situation and with appropriate instrumentalities may have considerable effect, without waiting until the entire country

has become urbanized and industrialized. In other words, if instead of putting the emphasis on the necessity of bringing about large scale social changes, as Notestein does, we put the emphasis on the possibility of capitalizing on those changes that have already taken place, we shall have a more accurate assessment of the chances of early and direct family limitation in India.

If the possibility of rural fertility decline has been underestimated, the prospect for a smooth and regular industrial transition has been overestimated. I see no reason to believe that India can, or will, become urbanized and industrialized according to the same pattern that the West and Japan have followed. For one thing, the expansion of population that normally accompanies industrialization is too great for India in its present condition to take. A high per capita production is required, by definition, for an industrialized regime, and India shows few signs of making headway in this direction. Although there is no certainty in such matters, my estimate would be that unless the rate of population growth is reduced soon either by rising mortality or by declining fertility, India will not have an industrial revolution. It is possible to see how sudden rises in mortality would write off the demographic factor and permit rapid economic change,³⁹ but this would

39.

For a fuller discussion of this point, see Davis, Population of India and Pakistan, p. 223.

not be a "smooth" transition as contemplated by most people who see industrialization as the likely course.

Fixing our attention on probable events rather than theoretical possibilities, we reach the conclusion that India will probably pursue none of the four alternatives to the exclusion of the others. Social change seldom respects logical alternatives. It looks as though the next quarter century will see some novel experiments in rural birth control and that these may have some success. But it also appears that the requirements for complete success on this front will not be met in time, and that political turmoil will therefore have to help along the process of change both by causing surges of mortality and by liquidating many institutional factors impeding economic development. It may turn out that India will prove incapable of affording the luxuries of democracy. A dictatorship may arise which perhaps finds it easier to industrialize rapidly, to sacrifice lives, and to manipulate the conditions and incentives for obtaining low fertility. But even if political democracy is retained, India's path will doubtless be one of muddling through on several fronts until somehow the demographic obstacle has been overcome sufficiently to permit a checkered and perhaps stormy industrialization and modernization.

India

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Indian Economic Organization
D. R. Gadgil

An attempt is made in the following to set out in brief the salient features of Indian Economic Organization. India is a large country and has an enormous variety of natural conditions. The stage of development reached also differs widely from region to region. In the circumstances, a brief general description necessarily involves considerable, somewhat arbitrary, simplifications. Approximately 85 p.c. of the population of India lives in the countryside. About three-quarters of residents in the rural areas are directly concerned with primary production; among primary production agriculture is overwhelmingly important.

The typical unit of agricultural production is the peasant family farm. Land tenure systems vary widely from region to region but the scale and organizational characteristics of agricultural production are comparatively uniform. There are States in which ownership of land is concentrated to a considerable extent in the hands of a comparatively small number of persons; in other States the bulk of the land is held by cultivating-owners and there are situations and systems lying between these two extremes. In almost all States, however the actual cultivator operates on a comparatively small scale, chiefly with the help of family labour. The status of the cultivator-tenant, owner etc. - may differ, the burden of rent may vary but the organizational pattern remains the same. This characteristic differentiates India from other important types of agricultural economies. Large estates do not mean, in this country, large agricultural units worked either as feudal estates or as modern farms. They have always been parcelled among and worked by small tenantry. The abolition of landlord systems in India has thus not the same consequences for productive organization as in the countries of, say, South and Eastern Europe. The dominant form of capitalistic organization in agriculture - the Plantation - which has become important in many underdeveloped countries during the last two centuries has also been confined to a comparatively small field in India. The plantation is the dominant form only in the cultivation of tea, coffee and rubber; and the cultivation of these crops is highly localised. Within their own regions, which are for the most part mountainous regions, unsettled previously, the plantations are the most important organizational type; outside these regions their influence in agricultural production is insignificant.

The form of tenancy does not also affect materially agricultural production. Crop-sharing which is widespread all over the country normally means the supply by the landlord of a proportion of the working capital. But this does not lead to a larger investment of working capital resources in crop-sharing units as compared with the farming of cash tenants.

The geographical conditions are extremely varied and the circumstances in which agricultural production is carried on equally so. At one extreme stand large arid regions with a scanty soil surface, with meagre supply of sub-soil water and small and uncertain annual precipitation of rain. Agricultural production activity in these regions is highly precarious, barely profitable, and confined to only a part of the year. On the other hand, there are rich alluvial tracts where the soil is highly productive, the rainfall plentiful and certain and where supplementary irrigation facilities make secure an appropriate supply of water throughout the year. In such regions agricultural production activity can be carried on throughout the year and its intensity raised to a high pitch. Among all these varying circumstances the size of the typical peasant family holding remains small; that is, as related to the supply of labour within the family available for employment on the farm. Under favourable external conditions this leads to migration, seasonal, or semi-permanent of members of peasant families. The volume and duration of migration depend chiefly on employment opportunities available to migrants. This may be casual or seasonal labour in the neighbourhood either agricultural or non-agricultural or seasonal or permanent employment in distant regions. Where agricultural activity is confined to a part of the year this may be held to generate streams of annual seasonal migrations. But seasonal migration is usually the result not of conditions in which agricultural activity is carried on but of conditions of living and employment in the region of alternative employment. For, in most rural regions which supply migrant labour the extent of chronic underemployment in agriculture is so large that these could supply in appropriate circumstances much larger numbers of migrants, seasonal or permanent.

The capital resources of the peasant family are correspondingly small. The stock of working capital and the resources available for capital development are both limited. India is an old settled country with a large population. Therefore, such development of land resources as can be carried out with family labour and with the equipment of implements and draught cattle available to the average peasant, has in this country proceeded very far. Similarly, intensity of cultivation compatible with the limitation of resources is also considerable in appropriate circumstances. The technical level at which productive activity is carried on varies; but in the more settled and developed areas the traditional technique is fully exploited and ordinarily, no marked improvement could be brought without a considerable increase in the capital resources available to the peasant family.

The pattern of productive activity is shaped by the organizational type. Broadly there are three purposes which productive activity has to serve; food for the family, fodder for livestock, chiefly draught cattle,

and a surplus for sale. The small size of the productive unit and the differences in terms made by the wide margins at both sale and purchase make for an emphasis on domestic production, as far as possible, to serve the first two needs. Ordinarily, even with an increase of unit size and with almost complete commercialization, production for domestic needs does not vanish though its proportionate importance decreases rapidly. This is statement of merely a common characteristic. Its manifestation will be different with differing sizes of units and different crop combinations. For example, in specially very small farms or among what may be called part-time farmers the need for a cash income may lead to a cash crop being grown or part of food or fodder production being sold even though the remainder is not fully sufficient for family and farm business needs. In the same way, in areas where extension of cultivation of particular cash crops is widely possible, at times specially of a relative increase in the price of these crops, cash crops may expand to the extent of making some purchase of food and fodder necessary even on a large farm. It is not often, however, that such a position is extensively reached. The production pattern thus contains everywhere a core of self-sufficiency. The share of production included within this aspect does not come on the market and is not monetized. Another part that is non-monetized or only partly so is that in which the primary payments are made in terms of produce. The most important part of this is the payment to casual or permanent labour and to artisan, in terms of produce. Crop sharing in the case of the smaller landlords may also be classed with this.

The structure of the agricultural labour economy is shaped by the dominance of the peasant family unit. This means that the majority of production units in most agricultural regions do not offer employment to outside labour except at times when pressure of seasonal operation makes such employment necessary. However, the distribution of the size of cultivating holdings is uneven and a small proportion of units in most tracts would demand the employment of agricultural labour on a more permanent basis. This would be the more prominent the more highly commercialised and intensively developed agriculture was in any particular region. In such regions again the monetisation of the larger part of the economy would have brought about a greater concentration of land operation and capitalistic agriculture, on one hand, and a permanent body of landless agricultural labour, on the other, would have emerged. Such regions would, however, be exceptional. For the larger part agricultural units employing agricultural labour through the year and families of purely landless agricultural labour would be small in numbers and the bulk of agricultural families would employ casual and seasonal agricultural labour and would be the source of supply of such labour.

Agricultural productive units as sketched above would come into contact with the outside world and with modern economy chiefly through the monetised sector of their operations. The extent of this would be defined by the extent to which the peasant producer family, in its aspect of both producer and consumer, needed to trade with the outside world and to the extent that its economic relations with outsiders made necessary dealings in money. And it may well happen that the latter aspect may in some cases be the more important. The agriculturist would

have such relations chiefly with the landlord, the state, the moneylender and the trader. Rent where it had to be paid in money, taxes such as the land revenue, the water charges etc., and the payment of interest etc., on the debt would all necessitate converting produce into money form. The extent to which any of these payments were inexorably timed, the sale of given volume of produce would be enforced on the cultivator at particular times. These monetary payments especially those in connection with debts may also have the effect among the smaller and poorer units of monetising an unduly large share of the economy. Many of these units would find it necessary to sell a large share of total production to satisfy immediate and pressing demands at one time of the year and to buy back for consumption needs part of these sales at a later period.

Agricultural produce available for disposal would come into the hands of the producer in significant quantities only at fixed periods in the year. The requirements for making outlays both as producer and consumer would be more continuous throughout the year. Hence the need for credit. The funds for repayment would accrue chiefly through the disposal of the surplus of agricultural produce. Credit would thus be linked with the marketing of agricultural produce; and moneylending and the marketing of agricultural produce and also general trading activities would tend to be combined by one agency. In economies where the landlord held the dominant economic position moneylending may be connected with this class.

The smaller the scale of the peasant, the greater his ignorance, and distance from the market the more would he be dependent on the trading-moneylending class and the greater would be the margins they would command. Apart from the scale of individual operations, the development of the transportation system of a region and the extent of demand for the product offered by the agriculturist for sale would determine the strength of position of the agricultural producer. In the extreme case, of the sugar cane producers of Bihar and U.P. there exists for them at present a guaranteed purchaser at prices fixed by government, in the local sugar mill. In crops like cotton there are in most important cotton areas a large number of regulated markets where the producer is usually certain of obtaining a price in fair relation to current quotations on the commodity exchange. Again, in commodities like cotton and some others, agents of exporters or local manufacturers often operate in producing regions for obtaining supplies immediately after harvest. The advantage of these comparatively sensitive markets will be available only to producers who are free to sell their produce in the way they think most suitable. A wide - preferably international - market, competitive purchase, good transport facilities and freedom to sell sensible even small producers to obtain fair market prices. This entire conjuncture is, however, obtainable only in a minority of cases, and on the whole, the dependence of the producer on the trading classes at all times is considerable.

This dependence is emphasized by the fact of the processing of most products being in the hands of classes allied to the trading and money-lending classes. Formerly some aspects of processing such as husking and partly milling and decorticating were conducted by the producers.

themselves; also the whole economy was more nearly self-contained. With greater commercialisation and a large portion of some crops being marketed, processing began to be divorced from agricultural production; and this happened especially after power-driven machinery was introduced for most of these processes. Consequently, today in all areas where the crop is an important commercial crop, husking and milling, ginning and pressing, hulling and decorticating are conducted in centralised units operated and owned by non-producers except in the rare instances where they are cooperatively managed. The one important instance of processing still remaining mainly in the hands of producers is that of the somewhat elaborate process of the manufacture of raw sugar from sugar cane. The key position of processors in the disposal of produce and the fact that they are usually able to combine among themselves for determination of terms of operation weakens still further the bargaining position of the agriculturist producer.

The productive organization of rural industry had many features in common with the organization of agriculture. It was conducted essentially on a family basis and drew usually on the supply of labour of the whole family. Its capital resources were meagre, it tended to be underemployed and the income yielded by it was consequently low. Attention needs to be drawn to one aspect of Indian economic organization in which it appears to differ from other similarly placed economies. The ordinary peasant household in India is not self-contained in relation to most industrial products and personal service needs. In this respect comparative self-sufficiency is the attribute not so much of the individual household as of the village community. The agriculturist aims at satisfying family and business needs by own instruction so far as concerns food, fodder and one may add fuel. For other products and services he depends on the specialised artisan or other families within the village community. The carpenter and the blacksmith, the potter and the cobbler, the barber and the washerman are all resident artisans entitled to a small part of the crop on the threshing floor. Most of even repair work regarding agricultural equipment is performed not by the agriculturist households but by the resident artisan families. In a large number of cases the artisan families would also have small cultivating holdings and would thus be part-time farmers. This would be the pattern in all the large settled plains areas in most regions of India where social life was organized in substantial village communities. In mountainous areas where isolated dwellings or hamlets were the rule households would be somewhat more self-sufficient.

The complement of artisans integrated within the village community organization would not be the same everywhere; this would be related, in particular regions, to products and services required continuously by the peasant families. Other artisan industry where products would be demanded only occasionally or periodically would not be so evenly spread and would not be connected integrally with the organization of the village community.

From the point of view of organization, rural artisan and cottage industry may be divided into two classes. The large majority of artisans who were scattered widely over the countryside lived in close

proximity to consumers of their products and services and did not face complex problems of credit and marketing. To a large extent their work was connected with maintenance and repair of equipment and in a number of instances of original production, raw material was supplied to them by customers and they got paid mainly for wage work. Not only would the majority of rural carpenters, blacksmiths, potters and cobblers fall within the class but also basket and rope makers and even oilmen may be mostly included in it. Artisans of this class would also be most likely to be part-time farmers in many instances. Their field of operations would be limited to a village or a small group of villages and the non-monetised sector in their business would be considerable.

The other class of rural artisans though located in rural areas would face problems of productive organization similar to those of traditional urban handicraft. The most numerous among these would be weavers of all kinds. This class of artisan or handicraft industry - rural and urban - would be dependent on the trader both for supply of raw material and sale of product and would need credit for carrying stock and for sustenance during the average length of the period of production. This credit would be almost invariably obtained from the trader at either the one or the other end, except in the not unusual cases where both ends of trading would be concentrated in the same class of trader. These artisan units would be even more dependent on the trading intermediaries than the peasant agricultural families; for, there would be no element of self-containedness in their economy. In this class also transition would be made from organization on family basis to the basis of a workshop; there would then emerge capitalistic owning of equipment and the employment of artisan on wage work away from their homes. Even when this capitalistic form of organization emerged most of the artisans and handicrafts industry operated as long as it was traditional, within specially circumscribed limits.

These limits were set by technical consideration. In this respect the position of Indian artisan industry differed from that of Indian agriculture. At least as far as the domestic market was concerned Indian agriculture was not faced with competition from production which was the result of superior technique of agricultural units either within the country or outside and barring the notable case of indigo, domestic production of particular agricultural products had not been affected by technical industrial advance. Traditional Indian industry, on the other hand, had faced for a century or more and continued to face a market which was continuously shrinking at a varying pace as the result of increasing variety and cheapness of machine products. The continuous pressure of the competition of machine industry had compelled traditional Indian industry to adapt its methods, readjust its stages, and limit the variety of its products; but whatever the equilibrium reached at any time by these processes, it was liable to be upset afresh by further extension of field of machine products, forcing traditional industry to further limitations and fresh adaptation. The survival within given limits of the traditional industry was itself dependent on taking partial advantage of modern industrial technique. Thus the weaver used machine spun yarn, the metal worker -- machine produced metal sheets

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and the leather worker, for the major part, leather produced in modern tanneries. And where improvements for strengthening the competitive position of traditional industry were proposed these involved taking further advantage of modern technique. Such were proposals for setting up central reeling, winding or sizing and warping plants for handloom weavers or for improved types of bullock driven oilmills fitted with ball-bearings.

The most important result of these conditions was that traditional industry whether conducted on the basis of the family or of the workshop unit suffered continuously from underemployment or unemployment. The underemployment suffered by peasant agriculture was the result of limited land resources and a growing peasant population, giving a small and a diminishing holding per family unit. The underemployment in artisan industry was the result of a diminishing field of demand for the products of that industry. In both cases the situation was revealed in the low income per worker; all calculations indicated that the average income of the small scale artisan industry unit in India is as low as the average income of the peasant agricultural unit.

The industrial revolution affected Indian agriculture primarily through increasing commercialisation and monetisation of agricultural economy. The first impact was through the increased demand created for agricultural products like cotton. The transport system in regions where these products could be grown was rapidly developed and the incentive of a large money income led to extension of cultivation of particular crops in these regions. Beginning with few crops and regions the movement became, in time, widespread. As pointed out above increased commercialisation or monetisation did not essentially change the unit or organization of productive activity. It did not also materially influence technique. Some new crops were introduced, the varieties in many were improved, in particular regions a new implement like the iron plough made progress; but there was no technical revolution. The most important change was in the relative economic strength of the landlord, trading and moneylending classes. The disappearance of the older political and social regulations and the establishment of the British judicial system strengthened the position of all these classes vis-a-vis the agriculturist producer and affected correspondingly the distribution of the increased incomes due to the commercialization of agriculture. During the last three decades legislative regulation has greatly undermined, in a number of regions, the position of the land owning classes. However, in spite of seeming policies to the contrary, the position of the trading and moneylending classes is as strong as ever and they continue to derive the greatest benefits from every improvement in the terms of trade of agriculture.

The nature of the impact on traditional industry has been already indicated. The first influence was the increasing imports of products of machine industry. This led, in course of time, to the disappearance of many old handicrafts, urban and rural, and continuous narrowing of the field for most others. The efforts at survival of these led to many adjustments in production and adaptations in technique.

For the impact of foreign influences the initial process was the opening up of the country. The most important aspect of this was the construction of a railway system connecting the main ports with important agricultural regions. This was done by British capital either private or borrowed by Government. At the same time the road system was developed and improved types of bullock carts introduced. Thus within a few decades a revolution from the older system of pack animal transport for internal trade was brought about. The main immediate effects of the development of this transport system were the distribution of imported machine made goods throughout the country and the export of important raw products in increasing quantities. Indian traders participated from early stages in the distribution of imports and the collection of raw produce for exports; the foreign side of the trade was throughout the nineteenth century in European hands. As ancillary to trading activities the British established from early days credit institutions of the modern type, especially banks, mostly in the chief ports. The first excursions in modern production activity were plantations - tea and coffee and in connection with the export of agricultural products were begun certain processing activities. Then followed exploitation of minerals and lastly manufacturing industry. Indians played almost no part in the nineteenth century in the development of plantations or mining. However, together with internal trade Indian trading communities undertook processing activity from the start in a large measure. One important feature of the development of industry in India was that in Western India, with Bombay as the nucleus, manufacturing industry developed in Indian hands from the very beginning. The chief reason for this seems to have been the presence of old established financial and trading houses and communities in Gujerat, Kathiawar and Kutch who were ready to take advantage of the new opportunities. As a result, the cotton industry, which developed chiefly in Western India, was always predominantly in Indian hands.

Till the first world war the policy of British Government in India was dominated by somewhat peculiar "liberal" concepts which led to imposing of a counterbalancing excise on Indian cotton manufactures, the moment a small revenue duty was imposed on imports of British cloth and to the banning of even the establishment of an Industries Department by the Government of a province. There were many other difficulties such as those in obtaining prospecting licenses etc., in the way of progress of modern business in Indian hands. At the beginning of the first world war, economic activity of the modern type was very limited in India. Manufacturing industry was represented chiefly by the cotton and jute textile industries, plantations chiefly by tea and only to a very small extent by coffee, mining by coal began chiefly by and for railways and general engineering chiefly by railway workshops. There was also the processing and a small number of minor industries. All these excepting the cotton textile industry and processing were predominantly British owned and managed. Modern banking was represented by the Presidency Banks of British origin and branches of foreign banks; insurance was conducted mostly by foreign companies and coastal shipping by steamers carried on mostly by British firms of either Indian or British registration.

During the first decade of the twentieth century Indian banks and insurance companies were first established and some change in policy of the State was brought about after the first world war. Modern business in Indian hands steadily increased in volume and diversity during the inter-war years. The Indian beginnings in each line were usually with the smaller scale operations and the British still continued to do the pioneering in most new fields. An important new development during this period was the establishment of subsidiaries by important international groups or units; this was part of a world-wide movement. Concerns like the Imperial Chemical, Unilevers, Dunlop tyres, Westinghouse Electric, General Motors etc. established either completely owned subsidiaries or allied concerns in collaboration with Indian capital. During the inter-war years activity of British and other foreign business interests did not recede. They continued to hold their main developed positions in the older fields and initiated many new ventures. However, Indian business grew at a much more rapid pace and hence its proportionate share had become substantial in most fields on the eve of the second world war. Apart from the older fields of jute manufacture and coal mining and plantations where Indians obtained significant shares, they made special headway in new lines such as iron and steel and hydro electricity, cement and sugar. Their growth in banking and insurance was vigorous; they began to participate in coastal shipping and took a substantial direct share in foreign trade. The number of stock exchanges in 1914 was three; of these Europeans dominated only the Calcutta Exchange. During inter-war years stock exchange business mostly in Indian hands, grew in a large measure. And in all important centres in the country a number of commodity exchanges, in which the speculative element was important, also sprang up.

A more radical change in the situation came about in the 'Forties as accompaniment of the withdrawal of British political power. The gains during war time of many Indian capitalist groups were large and they were willing to offer favourable terms for acquisition of British interests in all types of business. The somewhat uncertain future induced many British businessmen to seize the opportunity and there was fairly large scale transference of ownership and management from British to Indian hands. It is, however, possible to exaggerate the total effects of this transference. Details regarding transference of ownership are difficult to ascertain. However, British interests still continue to control the major portion of the jute, coal and tea plantation industry and have large important units in most other manufactures. The activities of foreign banks, insurance and shipping companies continue to be important and the sphere of operation of subsidiaries or Indian collaborators of the dominant international units or groups is not decreasing.

The existing structure of Indian economy contains within itself a large number of divergent elements. In each aspect it has, in particular, an important residue of pre-industrial revolution forms and usually also an important element of the most advanced industrial technique and organization. In transport, for example, side by side with the aeroplane, steamship, railway and mechanical road transport, there

exist country craft and bullock carts; and the share of both these latter continues to be very considerable. In finance and banking the indigenous system had been well developed in pre-British times for the conduct and finance of an extensive long distance internal trade; money changing, and a system of trade and financial bills was fully operative. With the extension of trade in agricultural products a connection had been established between urban indigenous banking and traders and agents in rural areas. Today there is, in the country, a modern monetary and banking system; there is a central monetary and banking authority in the Reserve Bank of India; and the Imperial Bank, whose growth has been state-sponsored, has an intermediate, somewhat anomalous position; the finance of international trade is still largely in the hands of branches of foreign banks and within the country banking has developed in the direction of the concentration of deposits and business in the hands of a small number of giant concerns with a wide-spread network of branches. Even so the banking system has not reached the smaller centres of trade and the ill-defined policy of government towards cooperative forms has not enabled cooperative marketing, processing and banking organization to cover any substantial part of the field. The primary field of trading and finance still continues to be occupied, therefore, by surviving parts of the older system. The relation between the two systems is, however, not well articulated and this makes for difficulty in proper regulation and in the implementation of positive policy.

The development of modern industry has been on the usual lines of extension mainly in textile and other consumer goods industries such as sugar and vegetable oils. Because of specially favourable conditions and of tariff protection an important iron and steel industry and a cement manufacture have been established. Heavy chemicals, production of machinery, electric equipment, and other capital goods industries are still in their infancy. The future progress is dependent on planned effort whose direction and extent are, however, yet unclear. Today though industrial production is much more diverse than it was two decades ago, its total extent is small in relation to size and requirements of the country. Employment afforded by modern industry is very small; the vast bulk of industrial employment is still in other forms. The total proportion of urban population - approximately 15 p.c. - is itself an index of underdevelopment. Apart from modern large industry, towns afford employment in a large number of miscellaneous industries such as bidi or country cigarettes, bakeries or flour mills or various branches of building trades; they also give occasion for a considerable body of modern types of workshop activity for repair, maintenance etc. The main industrial employment, however, still comes from the traditional artisan industry of the types described above. In special instances new intermediate forms of industry such as the power loom industry have arisen; but they are confined to few industries and localities and are not numerically important. Between the two fields of traditional and modern industry there is, however, little integration. Two types of rationalised arrangements have for example, been reported from countries like Japan. One relates to the division of markets between the two types of industry and the other is the accommodation of traditional skill, cheap human labour and domestic working by division of production by processes

some of which are allotted to domestic industry in the structure of modern industry. Intelligent action on either lines is not evident in India; hence, the haphazardness of the process of transition and its associated social and economic costs are both enhanced.

In the early stages of industrial development, capital and management as well as technical personnel were all foreign. The displacement of foreign influence has come about in all lines and today, excepting a small number of highly specialised experts, technical personnel is normally Indian. There are no special difficulties in the way of recruitment, training or in bringing about an adequate increase in the supply of such personnel. Experience during war also shows that, when required, the minimum technical training of industrial labour even for munition factories can be accomplished rapidly through intensive methods. The strength of trade unions in India is also not considerable and unless backed by State and legislative support these would, in the large majority of cases, find it difficult to stand up against employers and their associations. The total potential supply of industrial labour is very large indeed. The main difficulty in the way of its proper utilisation seems to be the conditions of living and employment in the main centres of industry. The important point to notice in this connection is the heavy concentration of modern industry in India in particular centres and regions.

The initial development of the transport system was such as to lead to a concentration of modern business activity in the main ports. First developments in manufacturing industry also took place chiefly in the port areas. With later growth concentration in the ports especially Calcutta and Bombay has become specially intense and within the other centres in the country there has been an equal tendency to concentration and over development. This means that not only is there a small number of centres of modern industry but also that they are broadly distributed; the economic life of large regions is thus practically unaffected by forces of industrialisation. It also means that the social problems in the industrial centres are specially acute. Housing conditions are very bad and family living is practically impossible for the bulk of industrial labour in most industrial concentrations. There is an entire absence of social security services such as sickness or unemployment insurance or old age pensions and this further makes it impossible to build up a permanently settled industrial labour force even in the largest cities. Ill-health, instability, unnecessarily large and frequent movements of labour between the cities and rural areas of origin are natural consequences.

Another feature of the development of modern business is the concentration of trading and entrepreneurial activity in comparatively small sections of the total population. Because of the dominance of caste in Indian social life there has always been a high specialisation of occupational distribution. The trading and financial castes have been always highly urbanised and have rarely undertaken directly agricultural or handicraft productive activity. However, it is these communities that had the resources and acquaintance with business technique required to venture in fields opened by modern business. A small number of these

castes, therefore, chiefly supplied and continue to supply, in the main, those who occupy the field not only in trading and finance but also the entrepreneurial role in modern manufacturing activity. Caste and community bonds help to maintain and accumulate strength gathered in particular fields and also the extension of activities to others. As pointed out above the crucial economic position in relation to agriculturists and artisans industry is also occupied by members of these communities. Members of the industrial labour force and the technical personnel usually belong to entirely different sets of communities and this fact and their trading and financial bias give a peculiar turn to the operations of the Indian entrepreneurs.

The bias towards financial manipulation rather than production performance has been greatly accentuated by the general prevalence of the "Managing Agency" system. British companies who pioneered industrial and economic development in India on modern lines during the 19th century were usually formed and incorporated in England while their actual business was carried on in India. In the then prevailing conditions of transport and communication it was impossible for a British company directly to conduct this business. In the circumstances, there arose a practice by which British firms in India having British personnel continuously residing in the country undertook the actual conduct of the business in India on behalf of British companies. For this they were paid a commission and an allowance. This arrangement was called a managing agency and in time the important British firms in India -- the chief centre was Calcutta -- came to hold managing agencies of a number of companies and in various businesses. It also happened that initiative for floating British companies for particular projects was taken by the managing agency firms themselves. In this case the prospectus of the company would itself state who the managing agents of the company were intended to be, and the reputation of the agency firm would help the promotion of the company. The institution of managing agents thus arose out of a peculiar situation. When Indians and Indian companies entered modern business the institution was naturally adopted from the British in India. In the early days when the capital market was undeveloped and Indian personnel experienced in managing modern business limited, the agency system had some justification, even though the business and the company were not separated by large distances. Also, in the days before the growth of modern banking, Indian managing agents, who were in origin mostly financing or trading firms, were useful in the supply of working capital to industry. Today the situation has changed completely and it is no more difficult for a company in India than in U.K. to manage its business through a manager or a managing director. But the managing agency system is by now strongly entrenched and it has in recent years served as a device by which rising financial groups have brought under their control established companies in a variety of industries and trades. Legislation was passed in the thirties which put a term - renewable, of course, - to all managing agency agreements and which indicated a basis on which commissions might be determined. Events of the last decade show that this legislation has not had much effect. Fresh legislation is at present under contemplation, but is encountering much opposition.

This feature of the situation gives a very peculiar turn to Indian developments. It helps to retain control of the productive organization in hands, primarily, of financiers. And it leads to agglomerations or combines of a peculiar type. The trend in India is not, as elsewhere, for either horizontal or vertical combines round a central productive activity. Instead, there arise, because of the operation of managing agency, large financial combines with a very mixed composition; this is because the link between the various members in the group has not been technical production or trading considerations but only financial opportunity. It has been calculated that towards the end of the second world war the seven biggest managing agencies in India (four of which were British controlled) gave employment to more than seven percent of the total employed persons in modern plantation and manufacturing concerns in India and that the corresponding percentage for the first twenty was more than 14. It will be realised that concentration of this type made action as pressure groups much more effective than when the sphere of individual combines was confined to particular spheres of economic activity. The effect was intensified by the control by many of the biggest managing agencies of banks, insurance companies and also newspapers.

Another feature of the Indian situation which helps concentration of economic power is that no legislation in restraint of monopoly has ever been enacted or even contemplated in India. Not only are there no laws comparable to the anti-trust laws of the U.S.A., but even nothing on the pattern of the post-war anti-monopoly legislation of U.K. has been thought of. As a matter of fact, the government has found it convenient to deal with trade and industrial associations, has encouraged their formation and has, in instances, given them legislative recognition in such matters as price fixation procedures. This has given an impetus to the formation of producer and trader associations in each important field of modern business and the more influential of these have freely indulged in price maintenance and price raising activities.

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Comments by
Chandler Morse
on
The "State" and Economic Development in India
Helen B. Lamb

The former Indian state, notwithstanding numerous changes in form, retained throughout its generally alien and specifically British character. By concentrating on these invariants, and forswearing the temptation to adopt a more orthodox scheme of topical or chronological presentation, Mrs. Lamb has produced a remarkably compact and perceptive study. She has persistently probed for the essence of her complex subject, and has sought to analyze and explain, rather than to describe in detail, what the state did to promote--and retard--Indian economic development.

The emergent picture is one of a government whose activities promoted mainly British, not Indian, interests, and whose alien character was a fundamental determinant of its influence on the Indian community for both good and ill. Where Indian interests were served this was largely a by-product of the pursuit of British aims. The presence of the British did, unquestionably, operate as both a disintegrating and a reintegrating force, and so speeded some aspects of the transition from a medieval to a modern social order. On the other hand, the basic imperial compulsion to avoid political and social disorder operated in the opposite sense.

These judgments are, of course, interpretations, based on a record whose inherent ambiguities have been heightened by a wealth of contrary coloration. Like all groups who desire to retain (or aspire to attain) power, the British sought to demonstrate the beneficence of their policies. And, as in many such cases, there was an element of validity to the claim. But it was far more true during the most dynamic phase of British policy in India, in the second half of the 19th century, than it was either before 1850 or after 1900. Even in that relatively dynamic period the identity of interest between the ruler and the ruled was far from complete, and it has been one of Mrs. Lamb's major objectives to "formulate certain hypotheses" that would explain "Britain's ambivalence vis-à-vis India in both forward- and retarding economic development."

Her method is to identify and trace the effects and inconsistencies of three major strands of British policy, stemming from (1) the prevailing conceptions of India's role in meeting Britain's economic needs; (2) the

pursuit of political objectives dictated by the desire to retain effective control over the king-pin of the empire; and (3) the application to the alien Indian economy of the doctrine of laissez-faire, which served Britain herself so well in the 19th century, and which was a standard item of intellectual equipment for British university-trained officials. Economically, India was regarded as a neat complement to the United Kingdom--a source of food and raw materials and a market for manufactures. Politically, the basic aim was to maintain minimal "law and order" government. Ideologically, "method was hardened into principle and an end in itself," and "amounted to taking the stand that India should have only that amount of development which was consonant with the principle of laissez-faire."

Mrs. Lamb's employment of the laissez-faire aspect of British policy as a fundamental component of her analytical structure is a powerful device for focussing attention on the consequences of the fact that the Indian state was the instrument of a power whose history, institutions, and conceptions were wholly alien to those of the territory it administered. At times, however, she seems to overemphasize the ideological, as distinct from the expedient, basis of the application of laissez-faire to India. Where clear pragmatic justification existed, the Government was able, in good British fashion, to effect a compromise with received doctrine, and its consequent promotion of railways and irrigation projects in the late 19th century was a phase of policy which one recent writer has felt justified in calling "an experiment in state socialism." Although the "experiment" was exceedingly limited in scope, and in other respects the departures from laissez-faire principle were inconsequential, part of the explanation for both facts is to be found in direct, and often short-sighted, pressures by private British economic interests. Had it not been for this, the mutual advantages to be derived from a progressive enlargement of the internal Indian market might have been more widely recognized, and there might have been more concessions to growing Indian demands in the 20th century for infant-industry protection and for the direct stimulation of manufacture. There were, indeed, some initial moves in this direction. That they were quickly stifled, and that public works were not carried further, is no doubt explained in considerable measure by the addiction to 19th century habits of thought, but the desires of British capitalists to obtain revenue that would otherwise accrue to the government from "productive" public works, and the lobbying activities of Lancashire mill-owners, interested in preserving a weakened position in the existing Indian market, were a contributory influence. In the absence of such home pressures, the British genius for doctrinal flexibility and political adaptation might have manifested itself in greater degree.

A structural feature of the Indian state, not considered by Mrs. Lamb, is of possible interest in this connection. There were, in a very real sense, three Indian states, not one. The home branch (India Office and Parliament) had the final word, to be sure, but the Government of India was an independent factor in the determination of policy all the same, not only through the exertion of influence but also in the sense that administrators always determine policy in the act of executing it. Thirdly, within the Government of India itself, there were the provincial governments, subject to the control of the Centre, but enjoying a considerable

(though varying) measure of autonomy. In Indian eyes there was, of course, only the unitary British Raj, a view no doubt fostered by the fact that policy differences among the several branches were so far as possible kept under cover. But the fact is that the Indian state was trifocal, and this fact may help to explain certain aspects of the ambivalence of British policy noted by Mrs. Lamb.

There is evidence, for example, that there was considerable articulate sentiment within the British community in India favorable to more active prosecution of public works, to more effective government supervision of railway management policies, and to measures designed to aid industry. To some extent these sentiments must be attributed to that "instinct of workmanship" that can infect even bureaucrats. Such seems to have been the case with Chatterton, in Madras, whose efforts were effectively blocked by the Morley despatch of 1910. But it is not intended to suggest that the Indian Civil Service typically desired to promote Indian interests, only to be frustrated by the Secretary of State. As institutions, both the Government of India and the India Office sought to promote British interests, but sometimes these looked different when observed from Calcutta or Delhi and the Provinces than when observed from Whitehall. The so-called "Era of Public Works" in the latter 19th century, for example, is probably to be explained less as a response to the United Kingdom's need for food and raw material imports, as suggested by Mrs. Lamb, than as a response to the "need" of British officials in India to meet the administrative problems posed by recurrent famines and unstable tax revenue. P. J. Thomas, referring to the "proverbial dependence of the Indian Government on the monsoons," quotes Sir Guy Wilson as once having said that the Indian budget was "largely a gamble in rain," and he proceeds to assert that "the fundamental cause of the change [from a strict laissez-faire to a public works policy] was the growing recognition that the Government's revenue was dependent on agriculture Even in those parts of the country whose agricultural condition directly affected the public revenues, improvements were generally carried out as the result of some crying evil which called for urgent remedy. Famine was the chief of these evils Between 1860 and 1880, several devastating famines broke out in one part of India or another and caused great suffering and the loss of much revenue. This convinced the Government that a more systematic policy of economic and social improvement was essential in their own interest as well as in the interest of the people. Thus originated the new policy of financing public works by loans." Similarly, when the Indian Government favored the eventually won (in exchange for Imperial Preference) greater freedom for India in setting import duties after the first World War, the motivation appears to have been less a desire to promote Indian development than to acquire an added source of revenue. It should also be remembered that such departures from strict laissez-faire principle accompanied other departures at home and within the Empire as a whole, brought about by social pressures in the one case and the desire for greater imperial cohesion in the other.

If, at times, the administrative needs of the Indian Government impelled it, with the consent or against the opposition of the India Office, to advocate economic policies conformable with the social and economic needs of India, it was frequently otherwise on the political

front. High level Cabinet policy with respect to the constitutional question had inevitably to take some account of the demands of British liberals who favored increasing the degree of Indian self-rule. In India, British officials were but little affected by the climate of opinion at home and, seeking to avoid trouble, were both opposed to Indian desires for political and social reform and agreeable to perpetuating or furthering divisive communalism. E. S. Montagu, Secretary of State for India, 1917-22, was deeply impressed by this fact on his visit in 1918, and recorded it in his diary. As quoted by D. H. Buchanan, he wrote: "These British people here, --- living in their seclusion and in a firm belief in their superiority, are really tinkering with the subject. They are not in earnest in suggesting a fundamental reform. He the Government at Madras told me that he believed we ought not to talk politics to these people at all; we ought to play with them, humour them on politics, and discuss with them, industrial development, education, and social reform; that there was no necessity for doing anything;--- He assured me that all respect for government had gone; that people used to consider all officials from the Viceroy downwards, as a sort of gods not to be argued with or challenged. That had all disappeared; we were playing with fire; danger was written everywhere." Although these policies had apparently not been pursued with sufficient singleness of purpose to satisfy their most ardent exponents, Mrs. Lamb's conclusion that they were none-the-less an important deterrent to Indian advancement has authoritative support.

Perhaps we may conclude that it is well-nigh a law of administrative behavior, governmental as well as corporate, that the executive act ambivalently; wishing to perpetuate itself in power, it must directly or indirectly, also serve the interests of those to whom it is ultimately responsible. In India, because the executive was not responsible to those over whom it administered, no ultimate legal sanction existed. Indian benefits largely depended, therefore, on far weaker drives--the administrator's desire to make things easy for himself and his absorption in the job as such. These factors sometimes operated to India's economic advantage, but politically, the tendency was the other way.

A point implicit in Mrs. Lamb's analysis, but not stated explicitly, is that a change occurred in the affairs of India after the turn of the 20th century. Until then the All-India Congress, founded in 1885, was unable to make itself felt as an important pressure group, and there was relatively little clash between the economic policies that the Government of India thought appropriate and the economic and imperial interests of Britain which both they and the India Office desired to promote. Nor had Germany, Japan, and the United States appeared as major competitors in the Indian market. Economically, and even to some extent politically, there was a considerable harmony between Indian and British interests in the 19th century. What was good for Britain was, in a not too limited sense, good for India. This was an accident in history, but it was a fortunate accident.

That Britain had begun, in the 20th century, to lose its position of world industrial primacy and its sense of political direction, and that these changes were accelerated by the first World War, was less fortunate for India. The strains inherent in the nature of the relationship between

the Indian state and the Indian people, and in the structure of the state itself, were progressively aggravated by the changes that were occurring both within India and in her economic relations with other countries. There was again a certain harmony of interests, but now the shoe was on the other foot: what was good for India was good for Britain. Both countries stood to gain from all-round Indian development. But the conception was too big, the relation of economic development in India to declining industries and unemployment in Great Britain too remote, the 19th century habits of thought too limited. Britain's policies in the 20th century, therefore, served neither her own nor Indian interests well. India needed to convert her export surplus into an import surplus and Britain needed more exports. But the economic gears did not cleanly mesh. Britain could think only of reviving cotton and coal, while India needed capital goods. Economic development in India required economic reorganization in Britain. As Mrs. Lamb says: "The British in India failed to understand both the imperative of Indian economic development and the general nature of the problem of development in the 20th century. That Britain was unable to transcend her own experience was partly a result of the pressures of special interests against Indian industrial development. Put in broader terms, this was a failure of Britain herself to act and think expansively in relation to the British economy and that of the whole empire in the context of emerging modes of operation of the 20th century. To do this would have required a different mentality as to the way economic activity might be organized."

It would also have required a different sort of economic analysis than that to which British leaders were accustomed. They saw their long-run problem as one of prices and markets. Pending adjustment, they were confronted with an immediate financial problem, to be dealt with in financial terms. To the extent that they thought in terms of economic reorganization at home and development in the Empire they felt their hands tied by the burden of debt and the paucity of revenue, notwithstanding the existence of idle resources. Indeed, they could scarcely have thought otherwise. Realization that scarcity of real resources poses one kind of problem, scarcity of financial means another, is a curiously modern idea. Perhaps this is why Mrs. Lamb did not trouble to point out, in her discussion of fiscal policies between the wars, that it is unnecessary to collect taxes to finance public works, and hence that this was a phantom obstacle--or, at least, that it would have been if the British had not delayed establishing the Reserve Bank of India so long, and had been willing themselves to finance Indian capital equipment purchases in the United Kingdom. Given a reasonable measure of financial flexibility, taxation is more important as a device for controlling inflation than as a means of financing social and economic improvements. From this point of view it is well-nigh essential, in a country like India, that the tax system be somewhat regressive. This is an unpleasant fact which must be faced, and Mrs. Lamb, in her zeal to show how delicately the British handled the well-to-do minority, does not seem to face it. The objective of social justice conflicts with the need to siphon away, and realize as saving, a large part of the money-income increments accruing to the lower income groups as the result of development. This does not mean that the upper-income groups should be favored; their incomes should be heavily taxed. But it does mean that it will be difficult to avoid inflation by relying

mainly on revenue (saving) from this source--unless, of course, the pace of development is slow or its pattern so lopsided that little income filters down to the masses of consumers. A further point to bear in mind is that customs duties, if levied with proper selectivity, will constitute a charge mainly on the upper income groups, and can also help to retard the growth of imports as income expands.

No doubt wisely, Mrs. Lamb has avoided the complexities of Indian Constitutional development between the wars. They have some reference to her topic, however. On the Indian side, efforts to overcome sturdy resistance to the grant of responsible government channeled leadership energies into agitation for political rather than economic and social reform and, in the case of Ghandi's movement to revive cottage industry, even diverted them into advocacy of economically retrogressive policies. On the British side there were similar diversions and confusions. The reforms of 1919 had been regarded as a definite step towards Parliamentary rule for India but, according to Coupland, the Simon Report a decade later marked a "reversion to the scepticism which had prevailed before 1917 as to the practicability of British Parliamentary government in India." This is a symbol of the confusion of leadership into which Britain had fallen. It is also, perhaps, an indication of the fact that it is easier for the "ins" to see how their use of power can serve the interests of the "outs" than to recognize the mutual advantages to be obtained by a well-prepared transfer of power.

What lessons emerge from this study of the role of the state in Indian economic development?

One, noted by Mrs. Lamb, is that the problems of those areas that are undeveloped relatively to the West require a new theory of the role of government and its relation to industry. Those nations that have become "mixed" economies through the expansion of the government into areas left open by private enterprise must be prepared to see this procedure reversed in differently situated countries. This is a fruitful suggestion whose implications for social and economic policy in the less-developed countries fully merit the further exploration that Mrs. Lamb implies is needed.

Another lesson is that we have a lot to learn about the actual workings of the colonial relationship. Because it is the essence of colonialism for sovereignty to be exercised by a foreign, usually alien, power, there has been a tendency for evaluations of this relationship to be more emotional than analytical. A polarization near two extremes can be observed. At one extreme are the attitudes of justification, typified by the "white man's burden" theme. At the other are the attitudes based on belief in the liberal principle of self-determination (colored with Xenophobia on the part of subject peoples). Those holding the latter type of view are often distrustful of evolutionary policies; and with some justice, for this middle ground is largely, but not quite wholly, barren of successful ventures. Conspicuous examples of matured and liquidated colonial relationships are furnished by Canada and Australia, two very special cases. (In South Africa and New Zealand the problem has become an internal one of the relation between the established white and the native colored populations). Examples of less successful transitions,

effected under pressure and without adequate preparation, are supplied by India, Ireland, and Indonesia. Indo-China is a notable example of a non-evolutionary situation, and it remains to be seen what the future holds for French North Africa. How successful our own liquidation of responsibility in the Philippines will prove to have been is still unpredictable, and Puerto Rico offers yet another sort of unmaturing relationship.

There is no need to multiply cases. Existing and potential variants of the colonial relationship are indefinitely numerous, particularly if one includes the "colonial" aspects of the more limited political and economic relationships that arise between nominally or actually sovereign powers. Such aspects are found in the relationship of Britain to Egypt and, now, of the United States to Japan; in many of the relationships of creditors to foreign debtors; in the relations of foreign-owned enterprises and foreign technicians to the countries in which they operate; and even in the Marshall Plan, Point Four, and NATO. The existing bases of nearly all these relationships, whether inherited from the past or arising out of current requirements for international economic and technical aid, need to be re-examined and reframed in politically acceptable dynamic terms. (The recent arrangement between India and the Socony-Vacuum Oil Company is highly suggestive in the investment sphere).

What is involved here is a special, though peculiarly troublesome, problem in political evolution. The western world has had some success in devising methods for handling the analogous problems presented by the rise to power of new classes within the national polity. The probability of violent action has been diminished by the creation of machinery for the smooth and usually gradual transfer of dominant power from an old to a new group. The transfer usually occurs as an integral part of a process of social change in which the old dominant power group, having lost its dynamism, has begun to turn towards static conceptions, while a new group, with new visions, is demonstrating its capacity to take principal charge of the processes of development. It is one function of a good political system, therefore, to provide that dominant power be vested from time to time in those best fitted to exercise it for social growth. The state, as the pool of social power, acquires characteristics derived mainly from the dominant power group (or groups), and it will perform a dynamic or a static function accordingly. As there is little reason to suppose that any power-wielding group will be sufficiently well-motivated or informed to act primarily in the interest of other groups, the only case in which it will ordinarily be true that "what is good for x-group is good for everyone" is when the x-group is dynamic. Assuming that growth is desirable, society is constrained, in its own collective interest, to provide that the dominant power at any time shall be exercised by one or more groups which, by virtue of being dynamic, can be expected to activate the growth process and, in this sense, further the interests of society as a whole. Societies where the political system does not permit the successive transfer of dominant power to such groups, whether by an orderly or a disorderly process, eventually become vacuums inviting political and economic penetration. Whatever one may think of the ethics of imperialism, it should be recognized as the operation, on an international and highly charged emotional plane, of those processes that have accompanied political

and economic development in the advanced countries. It is an outworn historical phase, and the main issue is how the transition to a new phase shall be effected.

The same pragmatic and ethical justifications that have led western societies to evolve political systems that facilitate orderly internal shifts in the balance of power among groups also exist for external power relations. The required transfer of power in the case of India eventually occurred with a minimum of violence, partly for reasons rooted in Indian cultural characteristics and partly because Britain had learned something from its experiences with its North American and antipodal colonies. The ground was ill-prepared, however, and both Britain and India have paid and are still paying the price. As Mrs. Lamb remarks: "The Indians --- have inherited an economic, social, political and administrative structure which was built for other ends than economic development. They face the gigantic task of transforming this whole structure to meet the needs of development. This task has been rendered even more difficult by the impact of --- partition on the Indian economy."

To avoid similar aggravations in the future we must evolve a more rational approach to the existing problem of colonialism. Unlike other international conflict areas, this one presents difficulties that are wholly of our own making and that are capable of being removed by our own actions. What is required, first, is acceptance of the eventual need to liquidate all colonial relationships, whatever their kind or degree; and, second, solution of the social and technical problems involved in the transfer of responsible authority from foreign powers to native groups. Additional studies like those of the role of the state in Indian development could help us to acquire a better understanding of the dynamics of this latter process.

India

Preliminary: Not for
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CONFERENCE ON ECONOMIC GROWTH IN SELECTED COUNTRIES

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Village Social and Political Organization and
Economic Growth in Modern India

Morris Edward Opler

Most discussions of economic growth deal with national economy and with nation-wide figures and indices of earnings, productivity, trade and the like, as far as they can be secured. Social and local forces are not ignored or eliminated in such an approach; rather it is assumed that they are absorbed and reflected, along with other factors, in the final figures. Where factual information about the general features of the economy is what is wanted such an approach serves the purpose. Where the interest is to stimulate new economic developments in a land of small villages, a much more intimate picture of local social and economic processes may be necessary. This paper is an attempt to suggest ways in which the social organization of the Indian village relates to problems of economic growth which India confronts today.

We may well begin with the largest social and political entity we are considering here, the village itself. Because the village usually contains a number of separate, socially ranked resident castes its solidarity is often greatly underestimated. Each village has its traditions and usually has its own protective godlings. It is fairly standard procedure to "introduce" a new bride who has come to a village to these godlings. Family traditions are closely associated with the village and where, as in India, family consciousness is strong it is difficult completely to sever ties with the place where one's family has lived for generations. Consequently we find city dwellers who have not lived in the village for years, still referring to the village as "home." American urbanites of rural origin are often quite willing to forget their birthplace. But Indians whose education, work or attainments have taken them from the village often visit it and usually keep in touch with it. It is a matter of pride throughout India that the President of the Republic and other high officials continue to affiliate with their villages and to retire to them when their official work is done.

Apparent factionalism in the village is likely to mask underlying unity. In one village where I thought factionalism was rife I was assured that if the village were attacked or opposed from without, the people would close ranks and "even the stones of the village" would resist. The various groups and castes of the village have mutual obligations in respect to one another and what seems like division to the outsider is largely an elaborate system of division of labor for getting the work of

the village done. This is one of the things Indians mean by the phrase "Unity in diversity" which they so often use.

To a considerable degree his village affiliation identifies and anchors an individual. In India the individual has to be placed in terms of family and this family is identified with a definite place of residence. The individual feels this, too, and accepts that he will always find living quarters and friends at the family seat.

Because of these sentiments, rights and traditions the village remains a possible haven even when circumstances take an individual away from it. When conditions are hard in the village, it is often believed they are still harder on the outside. And for the villager who at least has shelter, relatives and friends in the village this usually comes close to the truth.

The solidarity of the village is not merely a matter of sentiment growing out of long residence of people in close proximity. Ordinarily in addition to the integrating forces already mentioned, its population depends on the cultivation of a well defined tract of land, has developed work, wage and other mutual understandings, and has means of adjudicating local disputes. The Government of India and the governments of the Indian States have lately introduced measures and policies designed to augment the importance and unity of the village. Recent land reform laws seek to eliminate the absentee landlord and to vest land ownership rights in the hands of cultivating villagers. The village assemblies have been given legal status and expanded powers and responsibilities. Local courts have been established to settle minor disputes.

This hold, past and present, of the village on the individual is not without its meaning for the modern economic picture. One of the grave problems in industrial centers is to recruit, train, and hold an efficient labor force. If this is to be done, attractions greater than the village affords will have to be offered. As it is now the Indian industrial worker usually refuses to bring his wife and children to the crowded city. When he does bring them he has a most difficult time finding housing of the most elementary kind for them. It is easier for him, especially if he is a member of a joint family, to leave them quietly in the village in the care of his relatives in his absence. This probably means that he will return to the village at times of harvest and sowing, when labor is needed, and will simply endure industrial work in the meantime. Perhaps when he again leaves the village he will return to the same industry and the same job; perhaps not. Since he does not feel finally committed to urban living or industrial work he is not as concerned about work conditions, advancement and industrial reform as he might otherwise be. Basically his attachments and thoughts are still pointed towards the village. Obviously it is difficult to develop a skilled labor force under such conditions. Low wages and poor accommodations for living and eating in industrial centers play an important role in this state of affairs. But the pull of the village and its ability to offer a haven, protection and a sense of identification, needs which the present industrial centers seldom meet, must also be taken into account. In other words, it may be less the defects of industrial and urban life

in India, serious though they be, which slows the development of a trained labor force, than the retention of the values of rural living.

The manner in which sentiments toward the village and approval of the values of village life color plans for the economic development of India is not difficult to see. There is a very vocal and influential segment of Indian opinion which insists that whatever else is done, cottage and small dispersed industries must be fostered, so that more varied work opportunities and prosperity can be brought to the countryside without the disruption of the villages. It has been pointed out by both its friends and critics that the recently announced five-year plan is concerned mostly with food production and rural rehabilitation and will expand much less on industrial and urban sectors of the economy.

Even foreign aid programs which have been proposed have taken on this emphasis. The general plans which Ambassador Bowles has recommended if substantial American aid over a term of years is forthcoming would establish a network of dispensaries, schools and experimental stations to blanket the rural regions and serve the villages.

Dr. Kingsley Davis, in a paper prepared for this conference, has called attention to the relatively slow growth of Indian cities. His demographic observations are not unrelated to the central place that the village has in the social organization of the Indian people. The Indian village is a highly organized social unit within which the individual usually finds work, protection, identification, recreation and leadership. Its economic functions are prominent, for it is identified with a certain amount of arable or grazing land and its population will normally be composed of a certain number of occupational castes whose combined efforts take care of most of the local needs for food, fodder and essential services. The present political, economic, and social plans of the Indian government, and of outside agencies too, are to support and revitalize the Indian village and to increase national income, efficiency and well-being by stricter attention to its needs and greater development of its resources. More water is to be brought to its fields by irrigation works and dams. Its fields are to be enriched by commercial fertilizer and protected by modern contouring. Its people are to be made literate; their elective officers are to have wider powers and heavier responsibilities. It is plain that the village and its problems have become the focus of India's economic planning and effort. Consequently the study of the Indian village today is much more than a technical exercise in sociology or cultural anthropology. It is and will increasingly become, a feeling of the pulse of the national effort, a means of interpreting events and trends, and a basis for reformulating policy.

If it is agreed that much of the effort toward economic growth in India today hinges on making the village a more prosperous and efficient unit it may be useful to examine a few of the social organizational principles of the village which may aid or impede this process.

The panch (arbiter) and the panchayat (assembly of arbiters) are extremely important figures in Indian social life. The present government has fostered the democratic elections of village panchayats and expects

and exhorts these assemblies to be the spearhead in plans for better roads, sanitation, educational facilities, greater agricultural productivity, more appropriate land use, development of marketing facilities, and so on. Many enthusiasts about grass roots movements are extremely optimistic about what the new panchayats can accomplish because they feel that an old institution, understood by the people and recognized as their very own, is being reestablished and used.

There are, however, some important differences between the new panchayats and those which functioned in the past, between the kinds of decisions rendered in the new setting and the old and between the kinds of problems that came to them then and now which require attention.

In the first place the panch or arbiter was used very extensively in the past to settle disputes between individuals or between two families. The disputants would each choose a certain number of panches or respected elders, acceptable to both sides, who would meet and come to what they considered a reasonable solution. Once the decision was put in their hands, their verdict was morally binding upon the rival claimants. Most frequently what they arrived at was concensus or compromise.

Another point to keep in mind is that whenever possible disputes were settled or judgments rendered by the assemblies or local ruling bodies of the castes to which the accused or the disputants belonged. The caste had the greatest hold, economically and socially, on its members. The edict of the caste panchayat might prevent an individual from carrying on his caste work and thus deprive him of a livelihood. If he were outcasted his social and recreational life came to a standstill, for his caste brethren would no longer invite him to their affairs. Worst of all, no families would accept his children in marriage and his line was in danger of extinction. The fine which the caste might levy for reinstatement could be ruinous.

Cases of violation of caste moral or behavioral codes came, of course, to the caste panchayats of a locality. Since occupation is one of the prime bases of caste, violations of work practices or work ethics were placed before the caste assemblies too. This tendency to refer everything possible to the caste assemblies arose from the feeling that harmonious and ordered social life resulted from the willingness of the elements of the population to carry out their respective moral and economic caste obligations faithfully. Breaches of the code, though they disrupted the larger organization, could best be dealt with by the closer-knit unit to which the individual was directly responsible.

Today the use of respected elders or panches is still resorted to by individuals, though not as frequently. Local courts, composed of members elected for a definite term and serving a number of contiguous villages hear cases involving small sums or charges of minor infractions of the law. The new panchayats are expected to devote their energies to issues involving the entire village.

This is a considerable shift of emphasis. It presupposes a central body which will not yield to caste or occupational interests and whose

edicts will be considered binding by the entire population. But formal elections or laws do not automatically bring such things to pass. In many villages caste alignments have been an important factor in the election. In one Indian village about which we know something a number of low-caste groups formed an opposition to a populous, high-caste, land-owning group of the village and obtained political power. The displaced former leaders of the village have adopted a policy of non-cooperation, and, since they are the wealthiest and one of the largest groups, virtually nothing has been accomplished since. Needless to say, the present administration is being discredited. Plans to open up water channels, straighten roads and accomplish other worthy objects have come to naught. Whether these caste rivalries can be reduced in favor of more general aims remains to be seen, and it will be interesting to note whether the second election campaign for assemblymen in this village proceeds along different lines.

In another village where I tried to learn something about the composition and functioning of the village assembly I found that it too, had been organized, though this time without contention, along caste lines. On the basis of population the village was entitled to a certain number of assemblymen. Then, on the basis of the size of its membership, each caste was asked to appoint its proportionate number of representatives. Thus no real village-wide election took place, though this was prescribed by law. In this village the panchayat, perhaps in part because of the manner of its selection, had very little popular support. It has found it hard to raise the small tax it was entitled to levy for its maintenance. Its meetings were poorly attended. When it called a general meeting of the voters of the village it could not bring together a sufficient number of people to transact business. Membership at its own meetings was poor. Some were hesitant about being involved in its deliberations for fear that its activities would prove unpopular. There was some reason for concern about this. At the first meeting the representatives of the "agricultural interests" took the floor and proposed various rules, penalties and ordinances to protect them and their crops. For instance, they wanted severe penalties exacted when the cattle of another strayed into their fields. To prevent theft of standing crops they wanted it forbidden to pull up food plants by the roots; they argued that if the plants were cut a person suspected of theft could show from where he had cut the crop and match top with stalk if need be to prove his innocence. The cattle herders and non-agricultural castes considered these proposals to be nuisance measures aimed at them and quickly lost interest in the panchayat.

There is a contrast, too, between old and new ways of selecting village leaders which has not yet been resolved. The position of headman of the village was often hereditary or of a semi-hereditary nature and was usually a life-time office. Where a large village was broken up into distinct hamlets, each of these hamlets often had its recognized leader also. As respect for a person's wisdom and judgment grew he was likely to be called upon to arbitrate disputes and to give advice on caste or public matters. Generally speaking, then, responsibility and leadership came to the villager gradually and without electioneering on his part. Age, success in managing his own family affairs, personal record, ability to command attention and respect from others and a good many other subtle

attributes operated to give a person standing in village political life. Driving personal ambition and a tendency to thrust oneself forward was a handicap rather than an aid to achieving public esteem and recognition of this kind.

In the present situation the panchayat is an elective body. To belong to it an individual must be concerned enough about public office to campaign and run for it. In some places the people have not yet accepted this noisy and aggressive manner of determining their representatives and still have panchayat members quietly appointed, as in the case cited above. Often, too, when elections are held, the "natural" leaders of the community decline to run. Since recognition had come to them in the past without special striving, campaigning or self-praise strikes them as undignified. Some of the respected elders seem to feel that the new organizations are something for the younger, educated men. Consequently in many places there is for the time being a dual political organization, a headman and group of respected elders, and the formally elected and legally recognized panchayat of today. Ordinarily there is some overlap between these two bodies, but seldom is there complete identity. Dissatisfaction with the program, policies or achievements of the modern panchayat may mean continued or greater dependence upon the advice of the old panches, who may rule the community in fact, if not in name.

The contrast between the former social-organizational situation and present conditions can be summarized as follows. Formerly the social organization and economy of the village rested upon the activities of highly stratified groups, the members of which were each well aware of their duties and responsibilities. Breaches of the moral or work code, unless they were a glaring affront to the entire community, were dealt with by the caste to which the offender belonged. Control was decentralized as much as possible. Community good was achieved by having its component groups take responsibility for the conduct and contributions of its members. The function of officials was to enforce and uphold the tried and accepted, rather than to introduce the new. Health, sanitation, road maintenance, education, enforcement of national or provincial laws were considered the business of subdistrict, district, or provincial officers and so their promotion required no especial political machinery in the village.

Now there is an attempt to establish a much different set of political relationships. There is an effort to decentralize Indian political life, but decentralization is sought at the national, state and district levels. Much more control over taxation, roads, education, health and sanitation, and law enforcement is being delegated to local authorities and much responsibility for its own planning and welfare in regard to all these matters is being vested in the village. This calls for the development of political instrumentalities which can cope with issues that involve all the people, regardless of caste. It also calls for a political body which is oriented toward the promotion of new policies, - experiments in education, in agricultural techniques, in the combating of disease, - rather than in conserving old standards and practices.

The effort to develop a strongly centralized village government which

rises above caste or special group problems and which is prepared to act in the interests of the village at any time parallels a greater fluidity of the population in matters of work, status and movement. New forms of enterprise and the elimination of lessened importance of some old ones have blurred the caste-occupational arrangements. A broadened educational base and more varied vocational training have greatly altered and confused the status of individuals who formerly would have been placed in the social system automatically and without question.

Not so long ago, an untouchable of the Chamar caste would have had no chance for education or any work more dignified than the hardest and most disagreeable tasks of agricultural labor. But in one of the villages to which I have referred a Chamar has received sufficient education to himself become a primary school teacher. Since education, high caste and the teaching profession always went together, there was never any doubt about how to treat the teacher. His attributes, separately, and to even a greater degree, collectively, called for formal signs of respect. But how to treat an educated Chamar, whether to offer him a seat of honor and to speak to him in linguistic forms reserved for equals or superiors, perplexes a good many high caste residents of the village. Even for those who agree that his education and his position of school teacher earn him deference in spite of low caste, the uncertainties are not ended. There is the question, for instance, of how to treat his father, when the two men are together. The father is uneducated and has no exalted post, and there is no reason why those outside of his caste should show him special respect. But because of the honor extended the father in Indian society the son shows him deference; And because of the prerogatives of age in Indian society, it is difficult and embarrassing for others to treat the father, in the presence of the son, with less respect than that accorded the younger man. It is becoming harder and harder to make old rules and criteria apply to such unfamiliar situations, and new social relations.

It would seem from a purely logical analysis of external facts that the legal abolition of untouchability, the widening of educational opportunity, the extension of the franchise and social mobility such as was implied in the case of the educated Chamar, has cleared the way for democratic legislative bodies which can act in the interests of the entire village and which can enlist popular support. The responsibilities and powers which the state and national governments have passed on to the local bodies suggests that this is the view entertained in high official circles.

But this is a very optimistic reading of developments and a reading from formal and outward rather than characteristic and intimate behavior. Though caste does not limit and control a person's occupation to the extent that it once did, its sway is still extremely strong. Its control over marriage relations is unchallenged. The percentage of Hindus who marry out of caste is infinitesimal. And since caste governed educational and economic opportunity in the past, the greater latitude permitted the low caste groups for higher education now is to a large extent only theoretical. Government scholarships may aid somewhat, but very few families of low caste groups can afford to send children to school long enough to insure them of a professional career or a high salaried post.

Even where low caste groups have members on the modern panchayats a close examination may reveal that they do not stand on the same level as other representatives in actual deliberations and can scarcely be expected to exert the same influence that more socially favored members do. To see the differential that still exists between members who are theoretically equal, let us take the example of a particular low-caste panchayat member in the village already referred to where each caste nominated representatives according to its numerical strength. This particular individual was an old and respected member of the Pasi caste, an untouchable group associated traditionally with the raising of pigs and now employed mostly in agricultural day labor. It soon became apparent that he was the messenger-boy of the group, bearing notes from the head-man to other members and giving notice of meetings to members. When the group met he sat quietly on the bare ground to one side; he did not feel free to sit on the cloth with the others. Once when I was about to take a picture of some of the assemblymen a discussion arose as to whether this man should be invited to sit on a cot with some others. It was finally decided that he should squat on the ground in the foreground, and there he appears in the picture. When the legislative body of a village observes distinctions of this kind it is too much to expect that its deliberations will not reflect caste or class bias.

Yet for the tasks which have been delegated to it, it is just this disregard of the special claims of persons and stations that the representative bodies of the villages must demonstrate. There is the knotty matter of the consolidation of land holdings to deal with, for instance. Agricultural experts have been urging that where a family's land holdings are divided into small scattered plots, some scheme of consolidation in the village be worked out so that one economic holding for a family will result wherever possible. The savings that would result from having those with contiguous small holdings share the expense of irrigation, plowing and other agricultural operations has been pointed out any number of times. But the consolidation of land holdings touches some very sensitive spots. The relinquishment of any ancestral land on any pretext whatever, is very difficult for some individuals and families to face. There are those who are loath to give up a small patch of land in a favored area even though this blocks consolidation of a sizable unit. There are those who magnify the worth of the strip of land they would have to relinquish and demand an amount or kind of land in return that others are not willing to grant. There is no book on Indian agricultural problems which does not call for consolidation of land holdings and no Indian or foreign agricultural expert working on the problem of increasing India's food supply who does not recommend it. Yet in spite of the formation of hundreds of thousands of village panchayats and the express obligation of these bodies to deal boldly with questions of agricultural productivity and efficiency, consolidation programs have been effected in scarcely a handful of villages throughout the land.

In the vicinity of many villages land-hungry cultivators have encroached on and cut roads and even old water channels. As a result roads that would aid marketing and communication with neighboring places have fallen into disrepair and disuse and irrigation and drainage have been hampered. Often the very lanes of the village are narrow, crooked and unsanitary because they have been encroached on for building or agricultural

purposes. The village assemblies are now supposed to have ample powers to cope with these matters in the public interest; yet there is a great reluctance to do so.

The impasse can perhaps be summarized something like this. In the past the ruling body of the village acted in respect to traditional matters and matters about which there was little dispute. It was primarily a conservator of the tried and accepted. It might arrange the details of a festival in the village or raise funds for some purpose generally approved. Disputes between individuals were usually settled by the deliberations of a board of arbiters agreed on by the disputants. Consequently the composition of the board changed, though there were respected elders who were often asked to serve in such a capacity. It was caste which regulated work and social intercourse and so violations in these realms were swiftly and decisively dealt with by caste assemblies. Peace and unity in the village, then, was maintained less by central village authority than by mechanisms through which the individuals and groups of the village composed their differences.

Today the expectations are much different. The village, which was essentially an economic unit, has been asked, in the interests of economic transformation, to become a sharp political instrument. Policies and programs which were once decided at district or provincial levels are being placed in the hands of the village for execution. The kind of decision and penalties of which caste assemblies were capable in the past are expected now of the village assemblies. A formal, external apparatus has been given the village. Laws have been passed, election rules pronounced and duties and activities outlined.

But the understandings of the people do not yet correspond to the new forms and formulae. The social organization of the village is still based on the delicate relationship of autonomous groups to one another. The identification of the individual is with the autonomous group, and through it, to the village. Seen through these lenses the task of successful village management is still to keep the component groups satisfied and playing their part, to minimize dissatisfaction and dissention. The way to achieve this, it is still felt, is by compromise and arbitration, rather than by the ukases of centralized authority. That is why the edicts of the village panchayats are so often interpreted these days as attempts of one group or another to seize power or seek its own advantage, and why they have often had a paralyzing rather than a liberating effect, as some of the examples which have been introduced here tend to show. It is true, of course, that where a particular caste owned most of the land, or was wealthy, large in numbers and of high status, it would have a controlling influence in village affairs. But this is treated as a relationship of groups to one another and not as a result of a struggle for central power in village government.

Nor do these remarks about the lack of a strong central government in the village contradict what was initially said about the attachment of the individual to the village and his reluctance to leave the village for the city or to remain in the city any longer than he has to. Part of

the attractiveness of the village to its residents is its informality and its freedom from "officers" and "government." I was with a village headman when he received word from an irate husband who charged that his wife had come to the village in an illicit affair and who wanted her sought out and returned. The distaste of the head man for becoming involved in the matter and his lack of preparation for dealing with such episodes were evident. His first thought was to refer the request to the leaders of the caste of the principals. One of the complaints about the newly introduced panchayats is that with their introduction have come the levying of village taxes, the appearance of signs telling what may and may not be done and announcing this meeting or that. These are taken as the ominous beginnings of "official" and "authoritarian" practices from which the village was until recently free.

The spirit of compromise and watchful waiting in village social and political life, of willingness to delegate problems of discipline and forceful action to the smaller component units, or to wait until larger centers have insisted on action, is ill suited to the role of instigator of new activities and director of programs which the village is expected to play in the present strivings for economic rehabilitation and growth. In the new programs half measures, delay, and reluctance to command are often disastrous. If only part of a village is sown to pure seed, the seed of that part will soon become mixed and deteriorate. The purchase of improved but costly implements may be possible only if the village as a whole accepts a cooperative arrangement. Obvious strong hands on the reins are required and the needs of the village as a whole, quite apart from any of its segments, has to be dramatized.

It is probable that in the future the village will become better organized to carry out such social and economic programs. The hold of the castes has weakened and the joint family has lost some of its vitality. The immediate needs of the village as such and the possibility of achieving objectives through the machinery of village government will undoubtedly loom more important in the minds of the villagers from this point on. Indian villages as a whole are entering upon a transitional stage, moving from an essentially decentralized form of social and political organization to one much more centralized.

But the plans of the Indian government for the rationalization and reorganization of rural economy rests upon the assumption that strong, forceful central governments already exist in the typical Indian village or can easily be brought into being by fiat or legislation. A strong attachment to the village on the part of individuals has been confused with control over the individual by central village authority. Actually, as has been suggested, much of the affection for the village may derive from its unquestioned acceptance on equal terms of persons of any background or status whose ancestors have lived there.

There is today considerable concern over the slowness of the rate of economic growth and rehabilitation in rural India. Various reasons are advanced for this, such as the dearth of agricultural extension programs such as are practiced in this country, the low rate of literacy

and therefore the difficulty in using the written word to win farmers over to superior methods, and the like. What one never hears mentioned, though in my opinion it is the most important factor involved, is the social organizational difficulty of expecting a social structure which was essentially fluid, diffuse and conservative to implement programs which demand decision, dispatch and an experimental frame of mind. The forms of association through which men work are quite as important as the tools and techniques they employ and have to be as carefully investigated and developed. And where these two aspects of the total work situation are out of harmony the processes of economic growth are greatly hampered.

India
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CONFERENCE ON ECONOMIC GROWTH IN SELECTED COUNTRIES

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India's Economic Development since 1850,
as illustrated by statistics
Daniel Thorner

Part I
National Income Statistics

During the decades in which the "industrial revolution" was taking place in Britain, the military forces of the East India Company, were conquering India. By the time that the foundations of the modern industrial system had been firmly laid at home, say by 1820, British armies had consolidated their control of most of India. For a century and a quarter thereafter, from the 1820's to the Indian Independence Act of 1947, India did not shape its own economic destiny. Rather that destiny was shaped for her by her British rulers. This is the cardinal fact in India's economic evolution since the early years of the nineteenth century. It should not be surprising, therefore, that much of India's economic literature has been primarily concerned with the economic relationship between Britain and India, rather than with the development of economic institutions in India, per se. In view of the crucial importance of that relationship we may begin by stating three principal ways in which outstanding writers have characterized it.

(1) Unrestrained exploitation. Great Britain, we are told by writers of this school, became wealthy by exploiting her possessions, particularly India. She rackrented India and "drained" funds out of the country without giving any equivalent in goods or services for them. As a result India was poorer in 1900 than in 1850, and per capita levels of living declined throughout the second half of the nineteenth century. William Digby, a former British civil servant in India, provided the fullest and most vehement statement of this position in his large work, characteristically entitled, "Prosperous British India: A Revelation from Official Records (London, 1901).*

* A less extreme statement of this position is available in Romesh Chunder Dutt: Economic History of India in the Victorian Age (London, 1906).

(2) Britain the Modernizer and Benefactor of India. Most British officials who had served in India, and British writers in general, took a position directly opposed to that of Digby. They held that the Indian people were rackrented and impoverished prior to the British conquest; that Britain brought law, order, and the security in which wealth could be accumulated; that British public health measures, steam railways, and irrigation systems had encouraged agricultural production; given the impetus to factory industry, and started India on the road to modernization. Dr. L.C.A. Knowles of the London School of Economics furnished the most forthright statement of this position in a study entitled the Economic Development of the British Overseas Empire, Vol. I (London, 1924).*

* It is only fair to state that some followers of Dr. Knowles, such as Dr. Vera Anstey (author of the Economic Development of India (London, 1929), and of other works to be cited later), have taken a less unqualified position than that of Dr. Knowles.

(3) India as a dependent, colonial economy, polity, and society. Between the two extremes represented by Digby and Knowles lie many intermediate positions. Among these we call attention, for brevity's sake, to only a few basic contentions. A number of writers have contrasted what Britain did in India with what Britain did not do. They point out that Britain acted vigorously to turn India into a very junior economic partner of Britain. The new railways, ports, and irrigation helped India to become a great supplier of raw materials to Britain and one of Britain's best markets for finished goods. By contrast, so far as concerns the growth of modern industry within India, or the systematic modernization of the country, Britain either acted haltingly, or acted positively to retard development. Thus India's development was lopsided, unbalanced. Where modernization served Britain's own interests, there it was facilitated; where it did not, India's economy remained "archaic." In the process India became a "colonial" economy, "dependent" on Britain.*

* See the concluding chapter (xiv) to the first edition of D.R. Gadgil's Industrial Evolution of India (Bombay, 1924). For a recent restatement see the opening sections of N. V. Sovani, Transition from a Colonial to a National Economy (New Delhi, 1947).

In the works of some writers this economic characterization has gone hand in hand with a similar analysis of British political and social policy in India. Thus Britain, it is stated, brought "law and order" and the "Anglo-American tradition" of justice to India--but not to all of India: 40 percent of the country was left to the arbitrary, personal rule of India's protected princes. This was a political decision adopted after the Rebellion of 1857-58. British policy makers felt their empire would be stronger and last longer if they "created across the length and breadth of India a chain of principalities, nominally independent but in reality subject to them."*

* K. S. Shelvankar, Problem of India (London, 1940), p. 25.

Likewise, in the social sphere, Britain introduced quite a number of modern institutions: public health and sanitation measures, new legal codes, universities, modern journalism. Simultaneously, Britain announced in 1858 that thenceforth it would leave untouched the vast and undefined sphere of "religion," lest action in this sphere serve as a spark for another rebellion. The dual or split character of British political and social policy only served to accentuate the unevenness and lopsidedness of its economic and political impact on India. Kingsley Davis sums this up by terming it a "differential diffusion" of modernization, a process which he considers of crucial importance for the demographic problems of modern India.*

* See Davis' paper submitted to this Conference; also his Population of India and Pakistan (Princeton, 1951), and his chapter in the symposium edited by Frank W. Notestein, Demographic Studies of Selected Areas of Rapid Growth (New York, Milbank Memorial Fund, 1951), especially at pp. 44 ff.

For three quarters of a century then, controversy has flourished about the economic relations of Britain and India. Since early in the game supporters of all viewpoints have employed statistics to give their arguments the solidity of a quantitative basis, or at least the appearance of the same. Chief among the statistical weapons hurled about have been figures of average per capita income. Thus William Digby, in a master stroke of statistical polemic, had printed in gold on the spine of his magnum opus the following table of average per capita daily income in the provinces of British India:

1850 --	<u>2^{d.}</u>
1880 --	<u>1-1/2^{d.}</u>
1900 --	<u>3/4^{d.*}</u>

* From "Prosperous" British India (London, 1901). The term "British India" does not include the areas of the Indian Princes, but refers only to the provinces directly under British administration.

Digby's results, while intriguing, did not represent the first effort to estimate national income. To Dadabhai Naoroji, one of the outstanding Indian public figures throughout the half-century before World War I,* belongs the credit for initiating work in this field.

* Cf. R. P. Masani, Dadabhai Naoroji: Grand Old Man of India (London, 1939).

Naoroji's methods were spartan in their simplicity. In time he confined himself to the single year, 1867-68; in area, to most, but not all, of the provinces of British India, that is, to the parts of India for which at least a modicum of organized data existed. Since the Indian economy was primarily agricultural, Naoroji began by making a rough calculation of the net income from land under crops. In view of the limited supply of agricultural statistics he proceeded by working only with the data on the one or two principal crops for each province. For those one or two crops in a given province he framed a figure of average value of net income per acre. Then he multiplied by that figure the total acreage of all crops under cultivation in that province. The provincial figures were then added together to yield an estimate of net value of agricultural produce, which worked out at 2.6 billion rupees. To this he added an arbitrary figure for the value of meat, milk, fish, and the like: 0.15 billion rupees.

Naoroji used the following procedure to arrive at the figure 0.15 billion rupees as the value of all industrial output: he estimated gross output of industry in the province known as the Punjab at 0.04 billion rupees. He subtracted one-half of this figure as an allowance for value of raw materials consumed, and thus arrived at a net value of industrial output in the Punjab of 0.02 billion rupees. Since the population of the Punjab was then about one-tenth of British India as a whole, Naoroji considering multiplying the Punjab figure by ten to obtain a figure of 0.2 billion rupees for British India. But he decided that manufactures in other parts of India were not so valuable as those of the Punjab. He therefore put down a final figure of 0.15 billion rupees. In assigning mines and commerce a slightly higher value of 0.17 billion rupees, Naoroji presumably had data from government sources on physical output and value of minerals produced; while income from commerce appears to have been calculated by taking a rough percentage of the estimated value of total transactions. Thereby he obtained a total of 3.07 billion rupees, as the value of income from agriculture, industry, and commerce. Naoroji explicitly refused to assign any value to "services," since these in his view did not reflect genuine income. He did, however, put down a figure for "contingencies," namely, 0.33 billion rupees (larger than the combined value of income from industry, mines, and commerce). Thereby he obtained a grand total of 3.40 billion rupees, which, divided by the estimated 170 million population in the area of his coverage, worked out to an annual per capita income of 20 rupees.

One may well ask, why pay attention in the 1950's to a figure put together in such fashion? The answer is that it is a hardy perennial, one of the most commonly cited statistical items in the economic literature pertaining to India.* Nor are the succeeding estimates made before 1914

* As late as 1951 Naoroji's 20-rupee figure for 1867-68 headed the table of income estimates per capita given in Kingsley Davis' Population of India and Pakistan (Princeton, 1951), p. 206; on the basis of Naoroji's estimate and a number of others, Davis argues that during the last eight decades the average level of living has been rising slowly in India.

much better. The Government of India put out an estimate in 1882 based on assumptions which were heroically simple. The authors of the estimate, Major Evelyn Baring (later Lord Cromer of Egypt fame) and David Barbour, calculated that the agricultural income of British India in 1882 was 3.5 billion rupees. The Government of India apparently never revealed the methods used to reach this sum. Presumably Baring and Barbour utilized, among other materials, the data on field crops collected for (1) the extensive Famine Inquiry Commission of 1880, and (2) the comprehensive Gazetteer of India, issued at this time under the editorship of the historian and statistician, William Wilson Hunter. Baring and Barbour put all non-agricultural income at exactly one-half of agricultural income, i.e., 1.75 billion rupees, yielding a total of 5.25 billion rupees.* Taking the

* According to G. Findlay Shirras, the basis for the 2:1 ratio of agricultural to non-agricultural income was the fact that the ratio of those engaged in agriculture to those engaged in non-agricultural pursuits was roughly 2:1. See Shirras, Science of Public Finance, 3rd ed. (London, 1936), Vol. I, p. 245.

population of British India in 1882 as just under 195 million, the average per capita income for 1882 would have been 27 rupees.*

* Cited in Digby, "Prosperous" British India, pp. 364 and 442-43.

The same procedure as that of Baring and Barbour was followed in 1901 by no less a person than Lord Curzon, Governor-General and Viceroy of India. By Curzon's time systematic collection of agricultural statistics was under way in British India; employing this steadily increasing body of data Curzon arrived at a valuation of agricultural production in British India during the year 1897-98 of 4.5 billion rupees. Then, following the Baring-Barbour procedure, he set non-agricultural income at one-half of this, 2.25 billion rupees. The grand total thus obtained was 6.75 billion rupees, which, when divided by the estimated 225 million population of British India in 1897-98, worked out to an average per capita annual income of 30 rupees.*

* Quoted in Digby, op. cit., pp. 370-73.

Curzon was pleased to believe that this 30 rupee figure, compared with the 27 rupee estimate of Baring-Barbour (let along the 20 rupee figure of Naoroji), indicated a rising trend in the level of living in India; for just at this time the great famines of 1899-1900 were leading William Digby to charge Britain with "the great, the dismal, the awful, retrogression, not only in material prosperity but also in other important respects (of India)...."*

* Digby, "Prosperous" British India, op. cit., preface, p. 3. Digby's book, in fact, was dedicated, "without permission," to Lord George Hamilton,

then Secretary of State for India, to Lord Curzon, and to others, "with the hope that the facts herein recorded may lead to the amelioration of the condition of many millions of British subjects who, on every New Year's Day, enter upon a period which is certain, for their country as a whole, to be worse than the years already past."

Digby's investigations led him to believe that in 1899 the average per capita income in British India was 18 rupees, a sum not only 43 per cent less than Curzon's estimate for 1898-99, but even lower than Naoroji's figure for 1867-68. The reason for this lower estimate is that Digby used different methods to calculate both agricultural and non-agricultural income.

On the agricultural side Digby rejected as untrustworthy the official statistics on area under cultivation, yield per acre, and prices, which formed the basis for a money valuation of crops. He felt that the Government of India had no real interest in obtaining accurate data on these subjects, lest knowledge of the pitiful condition of the peasantry interfere with the government's collection of its basic source of income, the revenues obtained from the land.* Digby felt compelled, therefore,

* Digby, op. cit., pp. 381, 443.

to adopt "another mode" of calculation. "The Government revenue (from the land)," he wrote, "is assumed to bear a definite ratio to the assumed (or ascertained) produce of the soil reckoned over a number of years." That ratio varied from one province of India to another. "It is approximately ascertainable," he continued, "and I have ascertained it as nearly as may be. Possessing it, to arrive at the money value, I have multiplied the land revenue the necessary number of times, and have thus reached the result I announce."* By this method Digby arrived at a money value of

* Digby, op. cit., pp. 531-32.

the agricultural production of British India in 1899 of 2.6 billion rupees, which is the lowest of all estimates we have listed so far.*

* Digby, op. cit., pp. 611-14. Digby's method assumed, among many other things, that land revenue was accurately assessed, whereas the contrary undoubtedly was the case.

Although critical of his predecessors' methods of calculating non-agricultural income, Digby's general results were not significantly different. Whereas he estimated agricultural income at 2.6 billion rupees in 1899, he put down for non-agricultural income in the same year the sum of 1.46 billion rupees, which was only 11 per cent higher than would have

been yielded by a 2:1 ratio of agricultural to non-agricultural income. Digby was concerned only with material goods as a source of income, so he excluded the services from his calculations. When his estimate of total income is divided by the estimated population for British India in 1899, the outcome is an average per capita income of 18 rupees.*

* Digby attempts to separate out the share of the one million or so most prosperous Indians from the share of the rest of the population; but he brings so little data to bear on this subject that we shall not pause to consider it. Further, his data on non-agricultural income are so scanty that no effort need be made to discuss them either.

Digby's book constituted one of the strongest denunciations of Britain's Indian Empire ever put in print. Nationalist writers of all schools in India during the fifty years since its appearance have drawn on it repeatedly and heavily. It had to be answered. The reply came promptly, in the form of a paper sent to the Royal Statistical Society in London by Fred J. Atkinson, an experienced British official serving in the Accounts Department of the Government of India. Atkinson was no amateur in the field of statistics. He had been honored by the Royal Statistical Society in 1897 with its Guy Medal in silver, the same award that had been made to A. L. Bowley in 1895 and to Sauerbeck in 1894.*

* Journal of the Royal Statistical Society, Vol. LXV (1902), Appendix, p. viii.

Atkinson began by stating that he was going to avoid the base years used by Curzon and Digby: 1880 and 1897-99. These were too close to the famines of the late '70's and the late '90's. Instead Atkinson endeavored to compare 1875 and 1895, years "which were free from unusual and extraneous influences."*

* Fred J. Atkinson, "A Statistical Review of the Income and Wealth of British India," Journal of the Royal Statistical Society, Vol. LXV (1902), pp. 209 ff.

He estimated total income for the year 1875 in British India to have been 5.74 billion rupees; dividing this by an estimated 188 million population gave an average per capita income of 30.5 rupees. By contrast, total income in 1895 worked out to 8.77 billion rupees, which, divided by the estimated 222 million population for that year, gave an average per capita income of 39.5 rupees. Thus, in contrast to the deep gloom of Digby, Atkinson emerged triumphantly—and to the greater glory of Queen-Empress Victoria's reign—with a 31 percent increase in the per capita figure of 1895 over 1875. How did he do it?

The biggest segment of the increase in income was that of agriculture (1.88 billion rupees in the 20 years). Atkinson's figures show that,

although conceding the incomplete and far from trustworthy character of the agricultural data for the 1870's, he nevertheless operated on the basis that: (1) area under crops increased 33.5 million acres; (2) the average yield per acre of all crops (food and non-food, irrigated and non-irrigated, etc.) increased 4 percent, that is, from 724 lbs. to 753 lbs.; (3) prices of agricultural products rose 31 percent, and money income rose accordingly; and (4) no deductions need be made for seed, wastage, and depreciation.*

* Atkinson, op.cit., pp. 210-19, 260-64.

Later critics, such as V. K. R. V. Rao, have suggested that his estimate of an increase of 1.88 billion rupees in agricultural income be cut in half. And Rao makes this suggestion without even raising the question of the reliability of Atkinson's estimated increase of 33.5 million acres under crops!*

* V.K.R.V. Rao, An Essay on India's National Income, 1925-1929 (London, 1929), pp. 28-36.

Atkinson's procedures in handling non-agricultural income were equally arbitrary, both in small matters and in large. He included in the income of British India the salaries paid to British civil servants, British army officers, and Tommies. He appears to have counted twice the income gained from the commerce in agricultural products. He treated almost a million mendicants as gainfully employed. He further inflated his estimate by making no allowance for depreciation anywhere in the non-agricultural sector. Most important of all was his method of estimating the incomes of those listed (in the decennial Census) as engaged in non-agricultural occupations: "every adult male of 15 and above has been treated as continuously employed and receiving the estimated (average) wage throughout the year."* Atkinson conceded that this was a bold assumption. He knew

* Atkinson, op. cit., p. 230. (My italics--D.T.)

that there were "a large number of women and children" gainfully employed: children's nannies, sweepers, bakers and sweetmeat-makers, factory operatives, village handicrafts, midwives, dancers and prostitutes. He also knew that 15 was no magic age upon the attainment of which all boys got jobs at men's wages; that many men were without jobs, or sick, or too old to work. Yet, "after taking these facts into consideration it seems probable that a reduction of 5 percent from the adult males would be a sufficient allowance for non-employment...."; while presumably the women and children employed would offset the men underemployed or paid less than the estimated average rates.*

* Ibid., pp. 230-31.

The net effect of Atkinson's procedures was to inflate the total income and therefore the per capita income for both 1875 and 1895. At the same time, he failed to provide data to substantiate his arguments; nor did he spell out his method of framing estimates so that some idea of possible range of error could be formed. In short, although his calculations are presented much more neatly than Digby's, they might well have constituted as crude an overestimate as Digby's did an underestimate.

Atkinson's estimates were the last important ones made before 1914. India's national income became a hot political question in the aftermath of the first great Civil Disobedience campaign under Gandhi in 1920-22. Since the middle of the 1920's a number of attempts have been made to calculate India's national income. Despite the political touchiness of the subject, the outstanding of these attempts have been more careful and more scientific than their pre-World War I predecessors, and have been composed with considerable knowledge of the progress of national income research in Western Europe and America. The first of these efforts was the study by K. T. Shah and K. J. Khambata, Wealth and Taxable Capacity of India (Bombay, 1924). Several features of this work are distinctive. It dealt with the whole of India, both British India and the territories of the princes. It covered a time span of more than two decades, 1900 to 1921-22 inclusive. It was explicitly confined to material production, material commodities; the services were excluded on principle--lawyers and merchants being dismissed by Professor Shah as parasites. "All services," wrote Professor Shah, "have to be and are rewarded ultimately from the same dividend (yearly total) of material commodities produced in the nation...When we have measured the material commodities, we must necessarily be taken to have included also the services--not only those which are actually, obviously, directly, involved in the production of those commodities, but also those which are ancillary or incidental to that production (such as the government official or the soldier)."*

* K. T. Shah and K. J. Khambata, Wealth and Taxable Capacity of India, Professor Shah's preface, p. vii. Professor Shah explains in this preface that Khambata did the actual computation of the national income estimates, but is not associated with Shah's own interpretations and judgments based on them.

For such an approach the nineteen-twenties offered advantages which were not present in the pre-World War I period. Thus in the agricultural sector, constituting the overwhelming bulk of the economy, there became available in the post-war period better statistics, more statistics (i.e., for more crops), and statistics for hitherto non-reporting areas, such as Hyderabad, one of the largest, most populous, and most important of the princely territories. Shah and Khambata began by putting together in systematic form the scattered, uneven, and, at times, misleading data on India's total agricultural output for 1900-1921-22. Their efforts in this direction constituted the most valuable part of their work. An outcome of their labor was a figure of value of agricultural output for the year 1921-22 of 21 billion rupees (in current wholesale prices, after

5 percent had been deducted for seeds).*

* Ibid., p. 163. They claimed, perhaps sanguinely, that their estimate of physical output for any single year might "be taken to be correct within a margin of error of 5 percent." P. 88n.

As soon as Shah and Khambata moved away from field crops, they found the going much rougher. Thus, working with very scanty data, they concluded that India had no net income from its cattle. Their argument was that the value of hides and skins, bones, manure, meat, milk, and accretions to livestock, on the one hand, was offset, on the other, by cost of upkeep and by depreciation. They conceded that livestock contributed animal power for working the fields and for hauling, but considered the value of these services as included under other heads. Income from forests and fisheries they put down at 0.31 billion rupees (in prices of 1921-22).*

* Ibid., pp. 145-47, 200. For criticism of their calculations of net income from cattle, especially milk, see V.K.R.V. Rao, An Essay on India's National Income, 1925-1929, pp. 41-2.

The work of Shah and Khambata has been most sharply challenged in the non-agricultural sector. Their estimate of the non-agricultural income amounted only to 2.35 billion rupees, compared with 21 billion rupees for agricultural income; thus their ratio of agricultural to non-agricultural income was roughly 9:1. This was a striking disproportion since, as the book itself states, the percentage of those gainfully employed in agriculture was roughly 70, as contrasted to 30 percent gainfully employed in the non-agricultural sectors.

This disproportion, however, was an inevitable consequence of Shah and Khambata's approach to national income. They contended, that "the wholesale prices that we have taken really include a portion of the profits of middlemen and transport agencies...." They saw no practicable way of estimating the remainder of the value added by these groups--which, in any event, they felt to be small--so they passed them by. For retail traders they set down an arbitrary figure of 0.26 billion rupees. Whereas commerce and transport dealt with the handling of material commodities, the same could not be said for government and for the professions; these, therefore, simply were not counted. Similarly, they rejected as "immaterial" the concept of "income" from rent of houses; but they did allow 0.2 billion rupees for the net cost of new houses erected in 1921-22 (this sum being taken to be the profits of building contractors and the wages of all others in the building trades).*

* Ibid., pp. 172, 191.

The last three categories with which Shah and Khambata dealt were minerals, manufactures and power, and handicraft products. Minerals were relatively easy to calculate from the reports of the Geological Survey of India and of the Inspector of Mines: they put down under this heading for 1921-22 a sum of 0.28 billion rupees. New data were also available for power and for factory-produced manufactures. Since 1915 the Government of India had been issuing a new statistical series of Large Industrial Establishments in India (and also in the states of some of the princes). On the basis of data from this and other sources, Shah and Khambata put down a figure for manufacturing industry of 1.46 billion rupees. The final item left to be dealt with was handicrafts and cottage industries. Here Shah and Khambata first put down 0.25 billion rupees for net income from handloom weaving, following the figures of the Report of the Indian Industrial Commission of 1916-18; while for all other income from handicrafts, cottage, and domestic industry they put down a mere 0.15 billion rupees.*

* Ibid., pp. 186, 180, 187-89.

Their procedure in dealing with handicrafts underlines one of the central weaknesses of Shah and Khambata's study: their failure to check their results by utilizing alternative methods or by analyzing their data in the light of other data with which it should fit. Thus on the face of it the ratio of agricultural to non-agricultural income is much too high. Partly this was because the income from handicrafts was set so absurdly low. There was one relatively easy method which Shah and Khambata could have used to check the handicraft figure: the year 1921-22 was a census year, and the census collected data on urban and rural occupational groupings. While the reliability of some of these occupational data is open to serious question, the data available in the census are better than no data. By taking the total number of handicraftsmen in 1921 and dividing their own crude figure for income from handicrafts, Shah and Khambata might have seen that their guess did not make sense. Yet Shah and Khambata, working primarily for a census year, 1921, failed almost completely to make use of the census itself. In short, except for their results on agricultural income, Shah and Khambata's methods, concepts, and omissions make their data and conclusions suspect. Their average per capita income figure of 74 rupees--based on a total income of 23.64 billion rupees and a population in 1921 of 319 millions--is not comparable with any of the earlier estimates nor, as we shall see, with any of the later.

Three studies remain for consideration: the national income estimates elaborated by V.K.R.V. Rao for 1931-32; R.C. Desai's analysis of consumer expenditure during the 1930's; and the booklet recently put out by the National Income Unit of the Ministry of Finance of the Government of India: First Report of the National Income Committee, April 1951.* Turning first

* We do not take up the recent publications in this field by the New Delhi economic weekly, the Eastern Economist, because they are thoroughly tendentious; their mode of compilation is concealed, apparently for political effect.

to the work of Rao, we have to note that he is responsible for two studies. The earlier of these was a sketch entitled: An Essay on India's National Income, 1925-1929 (London, 1939). Interestingly enough, Rao was invited to undertake this work, by the trustees of the memorial fund set up in honor of Dadabhai Naoroji, whom we have previously mentioned as the compiler of India's first national income estimate. Both of Rao's studies dealt only with British India, (i.e., excluding the territories of the princes), but whereas the first treated a quinquennium in the 1920's, the second was based, as its title tells us, on a census year: National Income of British India, 1931-1932 (London, 1940). Aside from noting that Rao's Essay contains some discussion of previous work in this field, we shall pass on to his second study, which, as he tells us, was based on more data.

The distinctive feature of Rao's second study--perhaps the most widely cited account of India's national income in recent years--is its claim to greater precision than its predecessors. In the successive stages of his work Rao goes to some trouble to indicate what margin of error he believes to be involved in his estimates of the components of national income. His conclusion indicated, for example, that the national income of British India in 1931-32 lay between 16 billion rupees and 18 billion rupees (in current prices of that depressed year); or, alternatively, that national income was 17 billion rupees with a margin of error of plus or minus 6 percent. Divided by the population of British India in that year, 271.5 million, this worked out to a per capita average of 62 rupees, plus or minus 6 percent.

According to Rao's calculations there were in India in 1931-32 something like 91.3 million actual earners. Of their 17 billion rupees of total income, about 9 billion (or about 53 percent) came from agriculture, livestock, and related pursuits; about 3 billion rupees (or roughly 20 percent) came from industry, including handicrafts and modern-style factories; all the rest (trade, communications, Government, the professions, and domestic service), accounted for the remaining 25 percent. In making his estimates Rao used both the "inventory" (or value of net product) method and the "income" method. The former he employed for the agricultural sector, that is, he calculated the value of total output, subtracted certain costs of production, and reached a figure of net value of output - 9 billion rupees.

For the remaining sectors of the economy he proceeded by the "income" method, that is, his chief problem was to calculate "average earnings by workers in each major occupational group."* In addition, of course, he

* Rao, National Income of British India, 1931-1932, op. cit., p. 122.

had to ascertain how many (non-agricultural) individuals were wealthy enough simply to live off their income without being gainfully employed. The total number of principal earners with whom Rao dealt by the "income" method was roughly 26 million. After taking some pains to avoid trouble counting (i.e., to avoid counting, in the "income" method, value of output already included in the 9 billion rupees of agricultural output), Rao came

to the conclusion that these 26 million earners received some 8 billion rupees of income in 1931-32.

Rao's claim that his margin of error in his overall estimate was only 6 percent fails to stand up under analysis. The largest item in his estimate is the value of all field crops, 6 billion rupees in 1931-32 prices. In the body of his text Rao puts down for this no margin of error.*

* It is true that in his concluding chapter Rao intimates that agricultural output may have been underestimated 10 percent; but he gives no indication of the grounds for choosing this particular percentage, nor for preferring it to a figure of, say, 20 percent underestimate or 20 percent overestimate. Op. cit., p. 185.

This might have been unobjectionable if there existed a superb mechanism for the collection and refinement of Indian agricultural statistics. But such has not been the case. There has long been very considerable uncertainty about three principal features of India's rural economy: the area under crops, the quantity of output, and the money value of output. Rao's failure to indicate a margin of error for the value of crop output tends to give his estimate an air of undue precision.

Second only to value of field crops in Rao's estimates was the figure for value of livestock products (milk and milk products, meat, hides and skins, and the like). Rao put these at 2.7 billion rupees, that is, 16 percent of his total income of 17 billion rupees. He conceded that his livestock products figure was subject to an error of plus or minus 10 percent. Rao himself, however, furnishes grounds for suspecting that this margin of error is too small. Of the value of livestock products, milk and its derivatives make up almost ninety percent, 2.4 billion rupees out of a total of 2.7 billion rupees. In making his estimate of milk from cows and buffaloes available for human consumption, Rao explicitly stated that "it possibly contains an error of 20 percent."* At another

* Rao, op. cit., 91-2.

place he indicates that the margin of error may be 25 percent. Yet in making his final calculation he cuts this down to 10 percent. A brief passage from Dr. Rao's analysis of milk yields from cows and cow-buffaloes will illustrate the tenor of his discussion:

It appears that according to non-official estimates, the milk yield per cow varies between 100 and 1000 lbs. (a year), and that for the buffalo from 400 to 2500 lbs.

It is easy to see how difficult it is to compile any estimates of average yield; and much will depend upon the investigator's judgement. With a courage possibly worthy of a better cause, the writer proceeded to assume that on the whole, and perhaps erring on the optimistic side, the average

yield of milk per cow may be placed at 500 to 750 lbs. a year, and that per buffalo at 1500 to 2000 lbs.*

* Rao, op. cit., p. 91.

Rao's account of income originating in the non-agricultural sectors of the economy is similar. Thus in the body of his text he indicates no margin of error for the largest of his non-agricultural components of income, "incomes assessed to income-tax;" according to official data these amounted to 2.16 billion rupees, or more than 25 percent of the 8 billion rupees of non-agricultural income. In his conclusion, Rao suggests the possibility of evasion of income taxes; perhaps "the consequent under-estimation of incomes assessed to income-tax was not less than 5 percent..."*

* Rao, op. cit., p. 185.

India's business men have shown themselves to be at least as talented as their peers in many other lands, so far as the techniques of tax avoidance and tax evasion are concerned. To limit their under-payment of income taxes to the very modest dimensions indicated by Rao (and thus the consequent underestimation of income), seems ungenerous, not to say uncomplimentary.*

* Cf. Government of India, Report of the Income-Tax Investigation Committee (New Delhi, 1949).

The category involving a large share of income for which Rao indicates the greatest margin of error is that of workers occupied in industry. Leaving aside the small minority of workers who paid income-tax, Rao listed 14.2 million principal earners in this category; these, together with dependents and the like he estimated to have earned 2.1 billion rupees, subject to a margin of error of 18 percent. In dealing with industrial workers Rao proceeded with some confidence, so far as those employed in the larger establishments were concerned. For the 1.4 million employed in them were listed in government publications, and some fair guesses could be made as to the wages they were paid. Still to be accounted for in the towns, however, were 2.3 million unskilled workers, independent artisans, and other skilled workers. And in the countryside Rao estimated there were 4.2 million unskilled workers and 6.3 million independent artisans and other skilled workers.

It is no discredit to Dr. Rao to say that his discussion of the income levels of these groups is quite unsatisfactory. Both the exact numbers of these groups and their wages were quite uncertain.

No census of industrial wages was available. The occupational statistics of the census unquestionably contained serious errors.

Organized data on urban independent artisans and other skilled urban workers were remarkably few; while, as in many other countries, the mass of urban unskilled workers were peculiarly difficult to pin down. The basis on which Rao felt able to say that the margin of error of his guesses about the earnings of these groups was plus or minus 10 percent remains unclear. For his data on the 6.3 million rural skilled workers (village craftsmen) Rao himself indicated the largest margin of error cited in his study, plus or minus 25 percent; while for the amorphous mass of rural unskilled labor he reduced his margin of error to plus or minus 15 percent. Considering the vast mass of individuals involved, the many occupations listed, the discrepancies involved in enumeration of those employed, and the tiny scraps of data available to him about earnings, it seems strange that Rao did not apply to this entire sector of the economy at least the same margin of error as for the largest single group involved, the rural skilled workers, viz., 25 percent.*

* For further criticism of Rao, see the concluding paragraphs of the important article of R. C. Desai, "Consumer Expenditure in India, 1931-2 to 1940-1," Journal of the Royal Statistical Society, Vol. CXI (1948), pp. 297-98.

As its title indicates, the approach from which R. C. Desai's study treats national income is that of "consumer expenditure." Desai described his aim as to account for all expenditure by families and individuals on current goods and services, during the 1930's. Not included in Desai's treatment, therefore, were net capital formation, public and private, and government services to ultimate consumers. If suitable approximations could be made for these items, however, we could add them to the estimates of consumer expenditure (assuming these were well-founded) and thereby arrive at national income figures for the years under consideration. This was admittedly Desai's ultimate aim. His study is important in its present form, however, because consumer expenditure undoubtedly has long accounted for the overwhelming bulk of India's national income.

Desai's results were strikingly different from the last set we considered, that of V.K.R.V. Rao. Among the reasons why this difference is worth exploring, is the fact that both Desai and Rao treat in detail the same year, 1931-32: this was the year upon which Rao's larger study was focussed, while for Desai it constituted the initial year of the decade which he investigated. Whereas Rao emerged with an average per capita income figure of about 62 rupees, Desai held that in the same year per capita consumer expenditure alone amounted to about 82.5 rupees. Nor is this the only important difference between Rao and Desai. Rao concluded that national income per capita was slowly rising in India, whereas Desai asserted, "it is quite probable that national income per capita has not been rising..."*

* Desai, loc. cit., p. 282; Rao, National Income, op. cit., p. viii; and Rao, An Essay on India's National Income, 1925-1929, pp. 154-163.

In looking somewhat more closely into these differences between Rao and Desai it is necessary to bear in mind that Rao dealt only with British India (which then included Burma), whereas Desai treated both British India (excluding Burma) and the Indian States. Rao's figure of total income for British India in 1931-32 was about 17 billion rupees (for a population of some 271.5 million). Desai arrived at a figure of total consumer expenditure for all of India in 1931-32 of 28.1 billion rupees (for a population of 340.5 million). In detail, Desai's figure of 28.1 billion rupees was made up as follows: all foodstuffs, 18.8 billion rupees; housing, household goods, fuel, light, and power, 2.6 billion rupees; textiles for clothing and furnishings, 2.0 billion rupees; tobacco, alcoholic drinks, and drugs, 1.4 billion rupees; services, 2.1 billion rupees; while the remaining 2 billion rupees covered such items as transport, reading matter, amusements, and a wide variety of "personal effects."

Both Rao and Desai, in the last analysis, had to resort to similar procedures, even though one was primarily concerned with income received and the other with consumer expenditure. In point of fact both Rao and Desai fell back primarily upon the output method. As one commentator on Desai's paper has put it, "Mr. Desai's estimates are really estimates of output, rearranged so as to add up to estimates of consumer expenditure."*

* E. F. Jackson, Journal of the Royal Statistical Society, CXI (1948), p. 299.

Three groups of items which bulk large in the estimates of both authors are cereals, milk and milk products, and fruits and vegetables. These are shown in the following table:

Table 1. Output of Selected Foodstuffs, 1931-32. Current Values
(Billions of Rupees)

<u>Item</u>	<u>Rao's Estimates</u> (recalculated for British India, excluding Burma)	<u>Desai's Estimates</u> (British India and the Indian States)
1. Cereals	3.1 net	5.1 net
2. Milk and milk products	2.3	4.0
3. Fruits and vegetables	1.6*	4.8

* Including also a series of other miscellaneous crops.

As they apply to a larger area and population, Desai's estimates for each item may be expected to be higher than Rao's. The difference in each case, however, is much greater than the difference in population or in area.* Partly, the difference arises from the fact that Desai went

* British India (as covered by Rao, but excluding Burma) had a population of roughly 255 million, whereas all of India (as covered by Desai) had a population of 340.5 million and thus had a population one-third larger than British India.

somewhat further than Rao in imputing values to commodities retained by producers for their own use. Thus where Rao put down a figure of 2.3 billion rupees for milk and milk products, Desai argued that this did not allow sufficiently for the characteristic Indian process of turning butter into ghee (by boiling, to obtain a clear fluid); thus Desai put down a figure for milk and milk products of the same order of magnitude as Rao's, but allowed an additional 1.4 billion rupees for ghee (making a total of 4 billion rupees).

Even more striking is the difference between Rao and Desai on the handling of fruits and vegetables. Rao assigns quite a minor place to fruits and vegetables, which he lumps in with five other categories to make up a total value of 1.6 billion rupees. Desai, on the other hand, arrives at a valuation of 4.8 billion rupees for fruits and vegetables, which is within 10 percent of the value he assigns to the basic Indian crops of rice, wheat, millets, and the like. Desai's figure rests primarily on estimates of acreage devoted to fruits and vegetables (roughly 5 million acres). His procedure assumes that the crops are harvested in toto, without any allowance for the percentage of these highly perishable items that is spoiled. The percentage retained for producers' use, presumably the bulk, is then valued at the relatively high prices of the small percentage which is actually marketed.

Desai's study includes an important discussion of the problem of pricing (i.e., imputing value to), goods which are consumed by the producers without passing through any market. These include peasants' retention of their own products and payments in kind to agricultural laborers and the like. The problem is further complicated by the fact that many of these goods are processed in greater or less degree within the families of the producers or recipients. What values are to be assigned to such products and their processing? After weighing a series of pros and cons that we cannot enter into here, Desai decided to value the retained quantities at the "net" prices realized for the supplies of the same commodity that were sold on the market. This involved a series of intriguing assumptions:

- (1) "retention was a choice, i.e., the producers would have bought the quantities if they had not retained them...;"
- (2) "this purchase is effected at the ruling prices (net of selling costs) in the market, implying thereby that these are the prices they would have realized per unit if they had chosen to sell the out-turn instead. We are here assuming an optimum distribution of supplies, with the ruling prices 'net' of selling costs equating 'utilities' at a margin."*

* Desai, loc. cit., pp. 269-70.

Whether this or some alternative procedure is sound is a difficult question for which no clear-cut answer is available.* But the procedure

* See the penetrating discussion of this and related problems of procedure in Simon Kuznets' article, "National Income and Industrial Structure," Proceedings of the International Statistical Conferences, 1947, Vol. V., pp. 205-41, esp. at pp. 210-15.

which Desai followed is responsible, in part, for the strange ratio of value of cereals consumed to the combined value of milk, milk products, and fruits and vegetables. According to Desai (see Table 1 above), this is of the order 5.1 (for cereals) to 8.8 (for milk, fruit, etc.). Thereby Desai implies that the value of the rice, wheat, and millets consumed in India (out of the 60 to 70 million tons of food crops produced annually) is not even 60 percent of the value of the annual consumption of milk, fruit, etc. This seems hard to believe. The striking disproportion involved here appears to have arisen because of imputing a high level of prices to what would seem to be exaggerated quantities of milk, milk products, fruits, and vegetables consumed.

Desai also discusses at some length the question of reliability and margin of error. He goes to great pains to indicate where he believes his data to be "good estimates," where they are "fair estimates," where they are "rough estimates," and where they are sheer "conjectures." To these four reliability categories Desai attributes the following values of mean error percent: 3, 10, 20, and 50, respectively. Desai himself tells us, however, that the basis of assignment of these mean values is "arbitrary" and "involves the operation of the subjective element to a significant degree." In fact, his discussion of reliability is in terms of a series of guesses and is pitched, therefore, on a speculative level. Desai thrusts forward the problems of reliability more pointedly and more elaborately than Rao; but he furnishes no evidence to indicate the extent to which his own estimates of consumer expenditure are any more reliable than Rao's national income estimates.

In short, Desai's study is a milestone in this field, but it is more significant for the questions and problems it raises than for the answers it furnishes.*

* In a subsequent part of this paper I propose to discuss Desai's views on "general trends" in consumer expenditure during the 1930's.

The most recent income estimate was prepared by the National Income Unit of the Government of India and published in the First Report of the

National Income Committee, April 1951 (Government of India, 1951). As the document makes clear, this estimate is not comparable with any of its predecessors. The area with which it is concerned is neither all-India (as covered by Desai and by Shah and Khambata) nor British India (as treated by Rao); rather it is the area of the new Union or Republic of India as it has existed since the partition of the older India in August, 1947, to make possible the new separate nation of Pakistan. The period with which the First Report is concerned is the year 1948-49 (April 1 - March 31). The treatment is frankly provisional. The methods used are sketched, not spelled out in full; basic data are given in summary form; many important details are not included. These deficiencies are scheduled to be overcome by the summer of 1952, by which time it is hoped to issue a much more ample document dealing with the national income of the Union of India for 1949-50, and also providing revised estimates for 1948-49.

Despite these limitations the First Report is the most valuable document which we have so far on India's national income. This is because it faces more directly than any of its predecessors the range of problems involved; indicates more explicitly the variety of methods of estimation and conjecture employed; and draws on a considerably enlarged body of data. The results embodied in the First Report may be summarized briefly. The Report puts national income for 1948-49 at 87.1 billion rupees; since the population of the Union of India for that year is estimated at 341 million, per capita income works out to 255 rupees. (A rough correction for changes in price level can be made on the basis of the index number of wholesale prices in Calcutta; according to this index the price level in 1948 was 425 percent of the price level in 1931. This difference in price level should be borne in mind by those who compare Rao's 1931-32 estimate with the National Income Committee's recent estimate.) The dominant position of agriculture emerges clearly from the data: the share of agriculture (and animal husbandry, forestry, and fishing) in national income was estimated at 41.5 billion rupees, or 47.6 percent of the total. Mining, manufacturing and hand-trades accounted for 17 percent; commerce, transport, and communication for 19.5 percent; and other services for 16 percent.

Among the interesting features of the First Report is the effort to calculate provisionally the relative shares of small and large enterprise in net output. The First Report indicates that this may well have been in the rough ratio of 5:1, that is some 50 billion rupees of output are attributed to small enterprise (largely household enterprise), while only 10 billion rupees are attributed to larger enterprises (factories, railways, plantations, and the like). Furthermore, the Report essays a rough calculation of net output per occupied person in different sectors of the economy: agriculture works out at 500 rupees per head, factories and mines at 1,700 rupees, and railways and communications at 1,900 rupees.

The authors of the First Report repeatedly warn the reader against attaching undue precision to these crude estimates. Thus they state explicitly that estimates of output for many crops and many parts of India "contain an unknown element of error." On the much-controverted subject of domestic capital formation they declare that "there are no data which would permit an estimate of capital formation except for the hope extended

by further analysis of production statistics."*

* First Report, op. cit., pp. 19, 15.

We may conclude these discursive notes on India's national income by asking what statistical data were available, as of 1951, to the analyst of the Indian economy; and what basic data were lacking. Following the language of the First Report, we may list five types of data in existence, pertaining to (a) gross volume of agricultural and mineral production, together with some material on prices; (b) activities of modern factories, and of banks and insurance companies; (c) income and expenditure of government and government enterprises; (d) limited amounts of data on occupational groupings; and, (e) foreign commerce and other data pertinent to balance of payments.

In comparison with the data that are available, the gaps in our knowledge of the current scene and the past are staggering: (a) so far as concerns the basic industry of the country (agriculture and animal husbandry), we have only the scantiest data on its economic structure—costs, consumer expenditure, and extent of savings; (b) similarly, so far as concerns the urban population as a whole, information on consumer expenditure and savings is highly inadequate; (c) no comprehensive census of manufacturing has yet been taken, nor has a census of distribution ever been attempted; (d) data on handicrafts, unorganized trade, and private transport are very severely limited, a statement which is equally true for the professions and the liberal arts.

In conclusion we may observe that there is more to be lost than gained by trying to combine in a single list the national income estimates of Naoroji, Baring-Barbour, Curzon, Digby, Atkinson, Shah and Khambata, Rao, Desai, and the Government of India's National Income Committee. These estimates employ dissimilar concepts and methods of computation to put together scanty and unreliable data for different areas of coverage. They furnish, therefore, no basis for saying whether India's average per capita income since the close of the nineteenth century has remained the same, has risen, or has declined.*

* Presumably, if India's per capita income had fallen 50 percent, or had doubled or trebled over the years from the 1870's to the 1940's, then such a change would have been reflected in the national income estimates, no matter how crude, unreliable, or noncomprable they may be. As a matter of fact, the basic data on India's production, which will be cited in the second part of this paper, indicate that no change of such magnitude occurred. Whatever real change there has been, has taken place within such smaller limits. And it is the cardinal weakness of the existing national income estimates that they are hopelessly inadequate to indicate these less drastic changes, and thereby to tell us whether total national income increased proportionately with the rate of population growth, slightly exceeded it, or lagged somewhat behind.

As of 1952, in short, we remain without reliable and comparable national income estimates for any substantial phase of India's economic development. Analysis of India's evolution still has to proceed without that comprehensive view of the country's changing economic structure which a series of satisfactory national income estimates would provide.

English
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Preliminary: Not for
publication or quotation

CONFERENCE ON ECONOMIC GROWTH IN SELECTED COUNTRIES
April 25-27, 1952
Sponsored by the Committee on Economic Growth
of the Social Science Research Council

India's Economic Development since 1850,
as illustrated by statistics
Daniel Thorner
with the assistance of George Blyn*

Part II
Rural Economy, Trade, and Industry

The first organized groups of Britons in India were traders who journeyed there in the seventeenth century. Their successors in the eighteenth century discovered that they could take over parts of India. Conquest proved to be both adventurous and profitable. It went ahead rapidly at the close of the eighteenth century and was completed by 1849, with the destruction of Sikh power in the Punjab, a large province in northwestern India.

As conquerors and rulers, the British had to set up their own style of administration and obtain the funds with which to support it. Like their predecessors, the British drew their chief source of revenue from the land, i.e., from the peasantry. But the basic land revenue arrangements made by the British were sweepingly different from those of their predecessors. So far-reaching was the effect of the British innovations that we may term them revolutionary, for such was their impact upon the traditional patterns of control of land. They disrupted the older framework of Indian rural society, and led to a profound re-organization in the relations among the principal groups on the land.

*Mr. Blyn, Harrison Fellow of the University of Pennsylvania for 1952-53, served as my Research Assistant from the Spring of 1950 to the Spring of 1952. With statistical counsel from Simon Kuznets, Mr. Blyn investigated, under my general direction, a series of topics in the field of India's modern economic development, including agricultural production and real values in India's foreign trade. In the part of my paper which follows, I have drawn heavily upon the results obtained by Mr. Blyn in these studies. But I alone am responsible for the actual drafting of this paper, and for all its errors, whether of emphasis, omission, or commission--D.T.

[Because of the pressure of time, it was not possible to reproduce herewith the charts referred to in the body of this paper. It is intended, however, to have copies of them available at the Conference on Economic Growth, April 25-27, 1952.]

At the same time, they left virtually unaffected the technical side of farming, crop production methods and the like. Perhaps the single most striking feature of the British period in India's history is this differential impact upon India's rural life: transformation of the social fabric of agriculture, while productive technique continued in ancient, time-honored paths (i.e., remained "undeveloped"). This contrast constitutes one of the central themes of the present paper; we will not be in a position to bring out its significance adequately, until we have proceeded a good deal further with our analysis.

In the formulation of British land policy in India two considerations were foremost: (1) getting allies in India, so as to consolidate their rule; and (2) securing maximum amounts of revenue from the land. The influence of the first consideration was paramount in the huge area of eastern India known at the close of the eighteenth century as the Presidency of Bengal. Here the British brought into being a strange group of great landlords, -a class whose annual payments of land revenue to the state were fixed in 1793 at sums which were to remain unchanged for all time to come--hence the name for this arrangement, the Permanent Settlement.

The new landlords were assured the benefits of gains from bringing additional lands under cultivation, from improvements in the yield of lands already under cultivation, and from upward movements in the price level. Simultaneously, the cultivating peasantry were left to the mercy of the new landlords. Since the income and security of the new landlords depended, in the last analysis, upon the strength of the British regime, the landlords as a class were expected and turned out to be strongly pro-British.

The disadvantages of this type of land revenue arrangement soon appeared. The British administration found that its receipts from the chief source of revenue, the land, were limited, fixed by the Permanent Settlement.

As they conquered other parts of India, therefore, the British tried out other land revenue systems. In the southern parts of Madras they made settlements on a field by field basis with the individual cultivating peasants (the ryots--hence the name, ryotwari settlement). In the central parts of India they later made settlements on an "estate" basis with groups of leading families in the villages. Both these individual and "estate" settlements were for periods of 20, 30, or 40 years each, at the end of which they were to be re-assessed. Generally speaking, the original settlements were pitched at levels calculated to yield very high returns to India's new rulers.

If this was all the British had done, the advent of their rule would scarcely have had the striking impact that it did. After all, the Indians had been used to demands by their rulers for a very large share of the returns from the soil; and many different ways of obtaining high returns had been devised. The British added three things: a demand throughout the areas they ruled directly, for payment in money; for payment in full each year (i.e., a relatively inflexible demand); and within

the context of a private property structure of landholding. A word or two of comment is in order on each of these. While the demand for payment of land revenue in money was not unprecedented, it had never before in Indian history been established over so wide an area as that ruled by the British. It resulted in great pressure on the peasantry, as we shall see below, to produce cash crops for the market, as well as the older subsistence crops for personal consumption.

The relatively inflexible demand for high payments to the state each year meant that in times of bad crops or low prices the peasantry either had to default or had to borrow from moneylenders. Either alternative could soon lead to ruin. Only a small percentage of the peasants who fell into dependence on rural moneylenders ever escaped. Defaulting meant speedy ruin in the new structure of land relations which followed the application to India of British concepts of private property in land.* In the new British order land became private property,

*Whatever may have been the structure or structures of agrarian relations in pre-British India, we may say categorically that it was not a private property structure.

mortgagable, transferable, alienable. Landlords in Bengal, holders of rights in "estates" in Central India, ryots in Madras, and the like, found that they could borrow against the value of their "property." But they also soon found that a mechanism of courts, warrants, and decree had come into being, whereby their creditors or the state could dispossess them if they did not pay up on their loans or mortgages, or did not make the land revenue payments owed to the state. In short, in place of the older, traditional, relatively settled forms of Indian rural society, the new British order made mobile both the land and the peasant.

These new land arrangements were introduced primarily during the first two-thirds of the nineteenth century. By the middle of that same century, efforts were under way to link India to England by fast steamers and to open up India by means of steam railways. British manufactures poured into India, while India's raw materials were collected, moved to ports, and shipped to Europe. With this expanding business activity, and with the relative peace and stability that prevailed in India during the last three or four decades of the nineteenth century, the price of land rose, population grew, and pressure on the land began to rise. Modern industry developed but slowly, and absorbed only a small percentage of the country folk who sought better employment in the towns.

The economic circumstances of the second half of the nineteenth century were most favorable to the growth of the landlord and money-lending groups. Since India had been joined to the world market by the new steamships and steam railways, Indian prices became dependent on world prices and their notorious cyclical fluctuations; immense famines occurred. More and more land of the peasantry was taken over by the landlords and moneylenders. The condition of the peasantry was characterized more and more by chronic, extreme capital deprivation. Sub-leasing of the land became widespread; the number of layers of intermediaries between cultivating peasant and landowner increased steadily.

The above black picture of the changing agrarian structure of India is the kind of account which is commonly given in the textbooks dealing with India, (including my own). Further reflection on this subject leads me to wonder whether such accounts do not unduly oversimplify certain vital but complex questions. Perhaps the most important of these questions is that of multiple rights, plurality of rights in the same tracts of land. Let me illustrate what I mean.

As of 1947, in the eastern part of the U.P. (formerly United Provinces, today called Uttar Pradesh), the highest level of rights in the soil was that held by great landlords who each might own the land on which many villages were centered. But these great landlords or zamindars were only the first of many levels of holders of rights in the soil. Below them could stand under-zamindars; under them, in turn, sub-zamindars; lastly there could be what have been called temporary proprietors of the soil, Thekadars. These rented the land from those immediately above them and might in turn rent out the land to cultivating tenants (generally for a period not greater than ten years). In this area of India, then, it was by no means uncommon to find four levels of proprietary interest above the tenant who actually tilled the soil.

This kind of layering of rights in the soil is of peculiar significance for the question of concentration of landed property. At the highest level in the eastern United Provinces, this concentration is not new. The top zamindars were placed in the position more than a century ago, under the British land settlements. What would appear to have been happening is that classes of intermediaries which did not exist a century ago, or existed only in rudimentary form, have expanded rapidly. These newer groups, I suspect, have been the driving force for concentration of property at the intermediate levels, and, of course, at the expense of the actual cultivating peasantry. In recent years two out of three cultivating tenants in the eastern United Provinces have had less than three acres of land each to work. Primarily, the intermediaries have been able to do this by their control of land, which they obtain by what is loosely called "sub-infeudation" from the zamindars proper.

A quite different process has been occurring in parts of southern India. Here the decisive question would appear to have been not so much the control of land as the control of credit and marketing. The original land settlements, as has been said above, were made directly with the cultivating peasantry. Would-be intermediaries were by-passed. In the second half of the nineteenth century, moneylenders and rural traders came forward, who advanced credit to the peasantry against mortgages. Land concentration began as early as the 1860's and 1870's, and in the twentieth century has become quite marked. Today parts of this area have the highest percentage in India of landless laborers to total agricultural population.

From these general considerations about agrarian relations we may turn our attention to the trends in Indian agricultural production since 1850. There is not much that we can say here about the first half-century after 1850, because comprehensive data are not available for that period and such data as are in existence have never been put

together systematically. We may proceed, therefore, by provisionally accepting the position in the standard manuals on India's modern economic development, which runs to the following effect: in the half-century after 1850 the area under cultivation increased considerably, new cash crops were developed, and total output rose. Of particular importance in this process were new irrigation works, such as those which came into being in Madras, in the United Provinces, and in the Punjab.

It is not until the 1890's that we begin to get a usable series of data on the "net area sown" in British India (excluding Burma and the Indian "Native" States). These are available in the Agricultural Statistics of British India, and refer to the total area under crops, without allowance for double-cropping. The data available for 1893 to 1945 indicate that at the opening of this period net area sown was somewhat less than 190 million acres and at the end of this period was somewhat more than 210 million acres. More precisely, if we calculate the average rate of increase (in net area sown) from cyclical level to cyclical level (i.e., between averages of the cyclical values, cycles being taken from trough to trough), we find that it was one-third of one per cent per year. For purposes of rough comparison, we may note that for the period 1871 to 1941 the average rate of increase of India's population was approximately 0.60 per cent per year; while for the twenty years from 1921 to 1941 it was 1.2 per cent per year.*

*Davis, Population of India and Pakistan (Princeton, 1951), pp. 26 and 28.

When we scrutinize the data more closely, we see that it shows two major movements, one of relatively rapid increase from the cycle of 1896-99 to the cycle of 1918-20, the other of relatively less rapid increase from the cycle of 1920-23 to the cycle of 1934-38. The dividing point here is in the aftermath of World War I. This is a fact of considerable interest, because when we turn from the data on net area sown to the data on agricultural output we note again that in several fundamental respects World War I is a basic dividing point.

A first glance at the official data on agricultural production in the subcontinent, however, does not appear to confirm this impression. World War I does not immediately stand out as a point of particular significance. Thus the data on all-India food crop output (constituting the overwhelming bulk of all agricultural production), indicate that over the years from 1893-94 to 1945-46 total annual production of all food crops has remained at a constant level, or even decreased slightly. The virtual dead level around which gross annual output of all food crops centered was 70 million tons.

Chart 1, "All-India Food Crop Output" [See Appendix I], indicates the level of annual production in gross tons, and also shows decennial

averages.* It will be noted that with the decennium beginning in 1921

*This chart, and the six which follow it, are taken from George Blyn's analysis of "The Agricultural Crops of India, 1893-1946: A Statistical Study of Output and Trends." A copy of this will be available for examination at the Conference on Economic Growth, April 25-27, 1952. Suffice it to say, for the present, that the central feature of this study is the effort to utilize the incomplete historical data on acreage under crops and on estimates of output as a basis for estimating total output of all agricultural production in all of India since the early 1890's. It is recognized that this is a hazardous undertaking and that its results are provisional. Doubtless still more refined statistical treatment of the available agricultural data is possible; but we may wonder whether such refinements would lead to results different in major respects from those of Mr. Blyn. It is hoped that Mr. Blyn's study will be published in revised form, perhaps by the end of 1952. In Chapter II of his manuscript (pp. 21-41), Mr. Blyn has given a detailed account of the methods he has employed. I do not propose to go over that ground here.

In using Blyn's study, the assumption is made that the agricultural statistics are fairly reliable. This is a large assumption. By and large, for British India, and perhaps for India as a whole, I think it can be defended, no matter what the defects in the data may be for such important areas as Bengal and Bihar. In any event, at the present stage of our knowledge of India's economic evolution, I think it is a wiser assumption to adopt than the opposite, nihilistic assumption, which involves throwing out the older agricultural statistics altogether.

(i.e., the postwar period from which we have more and better agricultural statistics than from the pre-World War I period), the tendency in total food output is downward.

The relation of the output of food crops to the output of all agricultural crops (both food and non-food), is shown in Chart 2, entitled "All-India Indexes of Annual Output of all Crops, and Food Crops: 1893-94 to 1945-46" [See Appendix II]. This chart is based upon an index of production made by weighting the quantity of each crop by the average prices prevailing in the quinquennium 1924-25 to 1928-29; and by setting at 100 the value in index units of the average output of all crops for the quinquennium 1924-25 to 1928-29, so weighted.* Chart 2

*This index utilizes, in part, the data on agricultural prices in Table X of P.J. Thomas and N.S. Sastry, Indian Agricultural Statistics (Madras, 1940).

shows that whereas food output fell off after 1921, the output of all crops increased slightly. This difference arises from the fact that, while food production was declining, non-food production was rising.

Chart 3--"All-India Indexes of Average Decennial Output of All Crops and Food Crops: for the period 1893-94 to 1945-46" [See Appendix III]--utilizes the same data and indexes as Chart 2, but puts them in terms of decennial rather than annual averages. Thereby the difference in the trends in food crops and in all crops is made to stand out.

Charts 4 and 5 have been made to show the difference in rates of growth of population as compared with (1) output of all crops, and (2) output of food crops, respectively. For this purpose familiar data on the growth of population have been compared with decennial figures for average weighted output of all crops and with decennial figures for average gross food crop output, all for the period from 1893-94 to 1945-46. In these two charts, however, the base period is not set in the quinquennium 1924-25 to 1928-29 (as on Charts 2 and 3), but rather in the early 1890's: thus for population the base year of the index used with index value at 100, is that of the census of 1891 (average population in 1893-94 to 1895-96 is taken as that of 1891), while for crop output (both food and non-food), the base period of the indexes, equal in value to 100, is the three-year average of 1893-94 to 1895-96.

Chart 4, "Comparison of the Rates of Growth of Population and Decennial Average Weighted Output of All Crops, 1893-94 to 1945-46" [See Appendix IV], shows that from the 1890's to 1921 output of all crops kept pace with growth in population; but that after 1921 population growth sharply outdistanced output of all crops. Chart 5, "Comparison of the Rates of Growth of Population and Decennial Average Gross Food Crop Output, 1893-94 to 1945-46" [See Appendix IV] indicates that output of food crops paralleled the movement in population from the 1890's down to 1921; but that after 1921 the rate of growth of population sharply increased while that of food crop output actually decreased.

Charts 6 and 7 endeavor to restate the above results in per capita terms. Although it has a formidable title--"All-India Ratio Indexes of Weighted Output of All Crops and Food Crops Per Capita, Decennially, for the Period 1893-94 to 1945-46" [See Appendix V]--the aim of Chart 6 is simple. It starts with the average annual value of all agricultural production for the base period 1893-94 to 1895-96, using average prices for individual crops in the quinquennium 1924-25 to 1928-29. The total sum so obtained is divided through by the population of India for the census year 1891 (a population figure which for working purposes is also assumed to hold for 1893-94 to 1895-96), which results in a value figure of all crop production per capita in 1893-94 to 1895-96 of 46.1 rupees. In terms of index units per capita, this figure of 46.1 rupees is equated to 100. Following the same procedure, figures in prices of 1924-25 to 1928-29 are obtained for decennial average per capita production of all crops. These figures are then compared with 46.1 rupees (as 100) to obtain comparative values in index units. The results are shown in the heavy line on Chart 6, which indicates that, in terms of index units, per capita output of all crops held steady from the 1890's to 1921, but declined sharply thereafter. The thin line on Chart 6 indicates the results of the same procedure when applied to the largest component of all crops, namely, output per capita of food crops.

Chart 7--"All-India Ratio of Pounds of Gross Food Crop Output Per Capita, Decennially, for the Period 1893-94 to 1945-46" [See Appendix VI]--is the most somber of all the charts in this paper. It starts from the fact that, for the study of output, all food crops can be combined into a single figure of gross tonnage (whereas it would be virtually meaningless to combine in terms of tonnage, output figures for all crops, say tons of tea with tons of rice, cashew nuts, castor seeds and the like). When we take the average decennial output in gross tonnage of all food crops and divide through by the population figures for the census years, we get the ratio of pounds of gross food output per capita per year. In this way Chart 7 shows that absolute output of food crops per capita per annum has decreased from nearly 600 lbs. in the early 1890's (587 lbs., to be precise) to less than 400 lbs. in the 1940's (394 lbs., to be precise).

Our survey of trends in agricultural production, particularly since the 1890's, has shown that total output of all crops has risen, but unimpressively; that total output of food crops has fallen off; and that per capita output both of all crops and of food crops has declined impressively. By and large, these trends signify stagnation in India's rural sector, not only in the interwar period, but for the last 60 years. Our next task is to try to account for this long-term stagnation.

We may begin by directing attention to some of the observations on this subject in the paper on "Indian Economic Organization," submitted to this Conference by D. R. Gadgil. He points out that the typical unit of agricultural "enterprise" in India is the small peasant family. These families have extremely limited resources, so far as concerns working capital or resources available for capital development. The institutional framework within which they function keeps them subordinate to and highly dependent on landlord, moneylending, trading, and processing groups, (not to mention the effect of land revenue payments to the state, which, in the last analysis, also come from the cultivating peasantry). It should occasion no surprise, therefore, that the cultivators themselves have been and are today left without resources for major improvements in agricultural production.

This does not mean, Professor Gadgil warns us, that we have a right to term the technique which the working peasants actually employ "backward." India, after all, has long been a settled country with a large population on the land. "Such development of land resources," Prof. Gadgil writes, "as can be carried out with family labour and with the equipment of implements and draught cattle available to the average peasant, has...proceeded very far....The technical level at which productive activity is carried on varies; but in the more settled and developed areas the traditional technique is fully exploited and ordinarily, no marked improvement could be brought about without a considerable increase in the capital resources available to the peasant family." We have to conclude, therefore, that the level of technique is high, in relation to the capital resources available.*

*Nor should we credit too quickly that other old chestnut about the

Indian peasant, that he is averse to change and uninterested in new crops or agricultural innovations. We may cite here observations made two decades ago by Dr. Harold H. Mann, author of a number of works on India's rural economy and Director of Agriculture in Bombay from 1921 to 1927:

...the cultivators of the land in India are supposed to be extremely conservative, to refuse change when the advantage of change is clear, to refuse to take advantage of methods which have proved their value in other parts of the world.

After long experience of Indian farmers in many parts of India, I think that this idea of innate conservatism among the rural classes is not correct, and possibly they are really less averse to change than a very large proportion of the farmers of western countries. I have seen, again and again, within twenty years an old but less efficient implement replaced almost entirely, over large regions, by one more efficient, or an improved type of seed replace that in use for a hundred years, or the employment of artificial manure become general. And it would really seem to be true that readiness to adopt new methods is the characteristic of the Indian cultivators, provided they are proved, to their own satisfaction, to be of advantage, and provided they give a return which will warrant the borrowing of capital at high interest. To put it another way, economy of capital or out-of-pocket cost is more important than economy of running expenditure, where the labour is a man's own and has to be provided with food and maintenance in any case.

Hence, throughout India, implements will be found to be crude, rough, less economical in working than those which might easily replace them and which are available at a higher capital cost. The manures and fertilisers used are generally those which can be obtained locally, and with little or no cost except for labour. The most welcome improvements are those which, like an improved type of seed, will provide increased returns with little capital outlay, even if much more work is required in raising the crop. If the result is good and the returns are increased, then other improvements immediately become acceptable.

From Harold H. Mann, "The Agriculture of India," Annals of the American Academy, Vol. CXLV (September, 1929), Part II, p. 80.

The real question which remains is: granted the special position and large income of India's landlords, moneylenders, marketers, and processors, what do they do with their incomes? One part of the answer is clear, whatever they may do, they do not make investments in agricultural production. Landlords may try to gain control of more land; moneylenders, marketers, and processors may expand the range of their existing business operations; but they do not invest capital for the

purpose of making profits of enterprise in agricultural production. Leaving aside the tea and other plantations (as highly atypical phenomena in India), the rarest bird in the modern Indian countryside has been a genuine capitalist producer--that is, a producer who invests capital in agriculture and strives to secure a maximum profit from the efficiency with which he handles his labor force and his land in the productive process. By contrast, India's rural economy has been and remains primarily a non-capitalistic commodity production economy. In such a setting it would be folly to expect a capitalistic style or pace of development in the Indian countryside.*

*I am aware that this paragraph involves many oversimplifications. If I were to spell out what I have in mind here, I would have to indicate what I mean by every term in some such definition as the following: modern India's rural economy has been a colonial-style combination of a village-oriented semi-subsistent peasant household economy with a predominantly non-capitalistic commodity production economy, functioning within a developed structure of private property relationships and featuring perhaps the world's largest class of virtually landless agricultural laborers.

I do not wish to imply here that a capitalistic style of development is the only one by which marked agricultural progress can be attained. Clearly, Japanese agriculture has not been capitalistic in the sense in which that term characterizes agriculture in the United States. The typical Japanese producer presumably has been the small peasant family. Yet, despite the heavy burdens which the state placed on the Japanese peasantry, Prof. Lockwood indicates that agricultural output in Japan rose by something like 50 per cent in the thirty years from 1905 to 1934.* Now however modestly Prof. Lockwood may assess the

*W. W. Lockwood, "The Economic Growth of Japan, 1868-1938" (a paper submitted to this Conference), pp. 12-13.

economic role of the state in Japan, it has to be said that, contrasted with what the "state" did or did not do to raise agricultural output in India, the Japanese state played an extraordinarily large role in the agricultural development of Japan.*

*From the Indian viewpoint, see the glowing tribute to the role of the Japanese state in the development of Japan's agriculture since the end of the nineteenth century, in "Features of Rice Work in Japan and How They Differ From Those in India," by K. Ramiah and M. V. Vachhani, two agronomists in the Central Rice Research Institute, Cuttack, Orissa, India. This article appeared in Indian Farming, issued by the Indian Council of Agricultural Research, Vol. XI (February, 1950), pp. 54-59. For the relatively small role of the "state" in stimulating agricultural production in India, see the

remarks by Dr. Helen Lamb, in the paper on "The 'State' and Economic Development in India," which she has prepared for this Conference, especially at p. 12.

To return to the question of what the landlords, moneylenders, etc. do with their income from agriculture in India, we can say in general that they find rent and usury, as opposed to capitalistic profit, easier, safer, more congenial, and more lucrative.* Thus,

*Cf. the ms. by Dr. Chen Han-seng, Agrarian Regions of India and Pakistan (Philadelphia, 1950), ch. i. p. 24 and note 61.

for example, in testifying a quarter of a century ago before the Royal Commission on Agriculture in India, Mr. M. A. Momen, Director of Land Records and Survey in Bengal, asserted:

"I have got sufficient lands and do some cultivation myself. I find however that letting them out on half the produce [sharecropping] is more paying than cultivating the lands with my own cattle and by hired servants."*

*Dr. Chen, as cited above; see also the remark quoted by Dr. Chen from Ramkrishna Mukherjee: "The arrangement of sharecropping gives the non-cultivating owners a greater margin of profit than that which they could obtain by employing the landless or the small peasantry as agricultural laborers on a daily wage basis." Cited in Dr. Chen, idem.

The above remarks on India's agrarian structure are in no sense exhaustive. They are intended to suggest several considerations. First of these is that the agrarian problem in India has its roots deep in the nineteenth century, to say the least; second, that the stagnation in Indian agricultural production is not simply a twentieth century problem (let alone merely an interwar problem), but is clearly visible, in retrospect at least, from the last decade of the nineteenth century; third, that there is some value in examining the bearing of the framework of land relations on India's population question, rather than accepting the common assertion that the population problem overshadows everything else in India. } 2

The pertinence of these considerations can perhaps be illustrated by a quotation or two from one of the outstanding authorities on the British phase of India's history:

"After a minute comparison of rural India at present with the facts disclosed in the manuscript records, I am compelled to the conclusion that throughout large tracts the struggle for life is harder than it was when the country passed into our hands.... The sad result seems to

be, that whether we give over the land to a proprietary class, as in Bengal, or keep it in our hands, as in the Southern India [ryotwari system], the struggle for life grows harder to large sections of the people.

"In provinces where, a hundred years ago, there was plenty of land for everyone who wished to till it, ...human beings [are] so densely crowded together as to exhaust the soil, and yet fail to wring from it enough to eat. Among a people whose sole means of subsistence was agriculture...a landless proletariat [is] springing up, while millions more [are] clinging to their half-acre of earth apiece, under a burden of rack-rent or usury,... More food is raised from the land than ever was raised before; but the population has increased at even a more rapid rate than the food supply....

"The permanent cure for over-population rests with the people themselves, and consists in those restraints upon marriage to which all nations of small husbandmen have sooner or later to submit. But we cannot wait till that compulsory lesson is learned, for meanwhile millions will perish. Overpopulation in India is the direct product of British rule. We have taken on ourselves the responsibility by removing the previous checks upon the increase of the people--checks which, however cruel, are the natural and inevitable ones in Asia, and which take the place of the prudential restraints practised by the peasant-farming races of Europe. We must now discharge that responsibility, and as our own civilised rule has created the difficulty, we must meet it by the resources of civilisation. These resources may lighten the pressure of the population on the soil in three ways-- first, by withdrawing large numbers to non-agricultural industries; second, by distributing the pressure over new or underpopulated tracts; third, by increasing the produce of the existing area of cultivation."

These observations were made by Sir William Wilson Hunter, in a brilliant series of lectures which he gave in Edinburgh in 1879-80.*

*The India of the Queen, and Other Essays (London, 1903), pp. 138, 147, 99, and 152-53.

The strikingly contemporary ring of Hunter's remarks would seem to underscore the need, in analysing India's economic development, to have our generalizations extend back far enough in time to take account of the phenomena which left so sharp an imprint on Hunter's mind.*

*There is a massive amount of data available on British economic policy and economic development in India from the 1850's to the 1890's; the trouble with the data is that the overwhelming bulk of it is on the local or district level. For example, there are land settlement inquiries for the bulk of the districts of British India, made every successive 20 to 40 years, to recalculate the state's land revenue demand from the landholders. These inquiries contain invaluable material on India's agrarian evolution and village structure. But the task of analyzing them is one of monumental dimensions. Until it is accomplished, however, our understanding of India's economic development in the last 100 to 150 years perforce has to rest on an inadequate basis.

We may now turn our attention away from the rural sector to a brief analysis of modern industry and trade. We do not aim to treat these subjects comprehensively, but rather summarily and in relation to only a few considerations. Chief among these is the question whether India's progress since 1900 in the non-agricultural sectors of her economy has been rapid enough to keep pace with or even outdistance population growth. Dr. Vera Anstey, one of Britain's foremost authorities on India, would have us believe that the latter has been the case. She cites with apparent approval indexes prepared by Sir David Meek which purport to show that,

"since the beginning of the century agricultural, mineral, and industrial production and foreign trade have grown at a rate slightly greater than that of population in the case of agriculture and trade, and substantially greater for mineral and industrial production."*

*Vera Anstey's chapter on "Economic Development," in L.S.S. O'Malley (ed.), Modern India and the West (London, 1941), pp. 291-92.

Arguing to the same effect in 1952, Kingsley Davis calculates that in the territory of what is the Republic of India today, population increased by 110 million between 1921 and 1951, an increase of 44 per cent. From this Davis surmises:

Such a rise in total population tells us at once that the national product has risen sharply. The great expansion of numbers could not have come as a result of a simple reduction in average consumption, because the level of living was already so low in 1921 that little reduction was possible. A rise in national product was involved, and this

can be substantiated in other ways. But the increase in total production, per contra, did not mean a rise in per capita product.*

*Davis, "Social and Demographic Aspects of Economic Development in India," submitted to this Conference, p. 21.

In assessing these assertions we have to bear in mind Mr. Blyn's data on agriculture, presented earlier in this paper. They show that agriculture has been stagnant, to say the least. Mineral output has not bulked large in India's national product and we will not go into it here. We come next to modern industry. Since agricultural output was stagnant, let us assume, for purposes of argument, that the increase in the value of the output of modern industry alone was such in the 1930's, for example, as to have been equivalent in value to the total income required to sustain the increment in population. How large an increase would that have amounted to? We know that population increased 50 millions between 1931 and 1941. Now let us use, for argument's sake, V.K.R.V. Rao's estimate of per capita income for 1931-32 of 62 rupees. By 1941, simply to keep at the same level of per capita income as 1931, an increase of rupees 62 x 50 million would have been necessary, or 3.1 billion rupees.

Now it so happens that, in terms of Indian economic literature, we are relatively well posted, so far as concerns data on modern industry in the late 1930's. We know that the value of all capital employed in modern industry as of 1938-39 was roughly of the order of 6.75 billion rupees, while the value of total output in modern industrial establishments in that year was roughly 3.3 billion rupees.* Thus the total annual out-

*These estimates are taken from the study by M. V. Divatia and H. M. Trivedi, Industrial Capital in India, 1938-39 (Bombay, 1946), pp. 71 and 88.

put of modern industry in the late 1930's barely exceeded the figure by which the value of annual industrial output should have increased, by 1941, if it was to offset the growth in population.*

*And this calculation is made without allowing for the extent to which modern industry was making progress in India by weakening or destroying handicraft occupations. In this connection we have to bear in mind Mrs. Anstey's own warning about the importance of that "counterbalancing, but unmeasurable, factor...the decline in the indigenous industries." Anstey, as cited above, p. 291.

Let us pass, therefore, from modern industry to trade. In terms of real values, has there been an increase in India's foreign trade since 1900 at all commensurate with the rate of growth of population? At first glance this seems well within the range of possibility. In her paper for this conference Dr. Lamb cites figures in current prices to indicate that the value of Indian exports rose from 187.5 million rupees in 1845-55 to 1.3 billion rupees in 1895-1905, and to 3.3 billion rupees in the decade 1921-31. We all know that these figures do not mean very much, however, unless they are deflated for price changes. In recent months Mr. George Blyn has made a provisional study of the quantity levels in India's foreign trade (deflating current values by 1913-14 based price indexes). He has covered so far the period from 1913-14 to 1937-38. His tentative results indicate that, aside from the effects of World War I and the 1929-33 depression, there have been no really major changes in the general quantity levels of either India's exports or of India's imports. The data, or at least those so far available, simply do not support the kind of assertions made by Anstey and Davis.

R. C. Desai, in the conclusion of his study of "Consumer Expenditure in India, 1931-2 to 1940-1" (Paragraph 9.7), makes a related, but much more guarded, assertion. In the decade which he studied he finds that "clothing, household goods, personal effects, reading matter, private motoring, communications, and private expenditure on education--all are increasing more rapidly than the population."* Desai's discussion makes it plain that the commodities

*R. C. Desai, "Consumer Expenditure in India, 1931-2 to 1940-1," Journal of the Royal Statistical Society, Vol. CXI (1948), pp. 282-83.

to which he refers are mostly (but not exclusively) those consumed in the cities, particularly by the urban middle and upper classes. This implies that if any improvement in the level of living took place in India in the 1930's, it was limited to relatively privileged strata of the city-dwellers. Such an assertion, or implication, fits well with other known facts of the modern Indian scene.

The analyst of India's economic evolution cannot help but note the glaring contrast between the role of the government in India's economic development and in that of Japan. All the power of the state was used in Japan to bring into being a respectable sector of modern industry. On the basis of that sector--originally cradled and nursed by the state, no matter what the state's subsequent economic role may have been--Japan later became an industrialized nation. In India, as Dr. Lamb has indicated so forcefully, the power of the government was never really deployed to get an industrial sector going. India has remained an overwhelmingly agricultural economy. We may highlight this contrast by stating that the first stretch of railway was opened in India in 1853, after which India's railway network expanded until it was the largest in Asia and one of the five largest in the entire world. Yet throughout the century from 1853 to 1952 not one complete railway locomotive and boiler has ever been manufactured in India. One can imagine what the Japanese economic position would be if the same kind of assertion were true of Japan.

India has lacked and still lacks a broad and balanced industrial sector, and no substantial urbanization has taken place. India's cities have not served as a safety valve for rural-discontent. All indications are that the peasantry in India are no longer prepared to support the burdens they have borne so long. This appears to be one of the principal facts behind the instability which has become so pronounced a feature of the recent history of India and its neighbors in southern Asia. One may expect that, as in the case of true love, the course of future efforts at modernization in India will not be smooth.

APPENDIX I

ALL-INDIA FOOD CROP OUTPUT: GROSS TONNAGE

<u>Year</u>	<u>Gr. Tons (000's)</u>	<u>Year</u>	<u>Gr. Tons (000's)</u>
1945-46	65,300	1920-21	61,776
	72,675		80,767
	73,541		57,115
	73,541		81,684
	67,121		83,166
1940-41	65,903	1915-16	78,123
	68,616		74,673
	64,278		65,327
	69,913		75,115
	71,874		77,683
1935-36	65,834	1910-11	82,285
	69,102		81,688
	69,018		68,372
	70,748		63,168
	73,095		73,306
1930-31	72,516	1905-06	70,362
	72,176		73,081
	68,586		76,237
	65,698		77,267
	69,712		67,725
1925-26	69,190	1900-01	72,162
	70,257		67,221
	71,301		78,130
	79,313		75,952
	78,204		56,395
			69,269
			77,437
		1893-94	74,848

Source: George Blyn's study, cited above, pp. 90-98.

APPENDIX II

ANNUAL INDEX OF ALL-CROP OUTPUT, AND ITS FOOD COMPONENT
(Aggregates Weighted by Average Price of each Crop, 1924-25 to 1928-29)

Year	Food Component		All Crops	
	Rs. Millions	Index	Rs. Millions	Index
1945-46	9,486	70	13,579	100
	10,440	77	14,533	107
	10,655	78	15,153	112
	10,386	76	14,596	108
1940-41	9,599	71	13,620	100
	9,280	68	13,927	103
	9,814	72	14,227	105
	9,222	68	13,507	99
	10,076	74	14,704	108
1935-36	10,343	76	15,285	113
	9,344	69	13,833	102
	9,894	73	14,034	103
	9,883	73	14,245	105
	10,115	75	14,378	106
1930-31	10,522	77	14,178	104
	10,375	76	14,309	105
	10,314	76	14,428	106
	9,913	73	13,941	103
	9,323	69	13,202	97
	9,884	73	13,535	100
1925-26	9,886	73	13,537	100
	10,009	74	13,678	101
	10,037	74	13,571	100
	11,292	83	14,890	110
	11,126	82	14,426	106
1920-21	8,839	65	11,881	88
	11,448	84	14,858	109
	8,116	60	10,864	80
	11,715	86	15,022	111
	11,864	87	15,280	113
1915-16	11,132	82	14,477	107
	10,470	77	13,599	100
	9,403	69	12,607	93
	10,679	79	13,803	102
1910-11	11,214	83	14,201	105
	11,859	87	14,794	109
	11,760	87	14,782	109
	9,543	70	12,212	90
	8,863	65	11,403	84
	10,382	76	13,403	99

APPENDIX II -- Continued

Year	Food Component		All Crops	
	Rs. Millions	Index	Rs. Millions	Index
1905-06	10,015	74	12,617	93
	10,485	77	13,038	96
	10,887	80	13,623	100
	11,142	82	13,821	102
	9,627	71	12,173	90
1900-01	10,290	76	12,816	94
	9,731	72	11,578	87
	11,370	84	13,926	103
	10,978	81	13,484	99
	7,829	58	10,082	74
	9,948	73	12,379	91
	11,222	83	13,537	100
1893-94	10,770	79	13,141	97

Note

Formula used for index, weighted relatives of aggregates,
 $100 \times \frac{\sum q_1 p_0}{\sum p_0 q_0}$

Base for both indexes, 1924-25 to 1928-29, sum of all crops, $q_1 p_0 + 5$,
 Rs. 13,579 millions equals 100.

q_1 , from our tables of all-India crop output, pp. 90-110 of Blyn's
 study.

p_0 , from average village market prices, 1924-25 to 1928-29, see
 Appendix XVIII, p. 115 of Blyn's Study.

'Rs. Millions,' from $\sum q_1 p_0$.

Food component - rice, wheat, barley, jowar, ragi, maize, gram,
 other foodgrains and pulses.

APPENDIX III

DECENNIAL INDEX OF ALL-CROP OUTPUT, AND ITS FOOD COMPONENT

Year	Food Component		All Crops	
	Rs. Millions	Index	Rs. Millions	Index
1945-46 to 1936-37	9,666	71	14,313	105
1935-36 to 1926-27	9,957	73	14,007	103
1925-26 to 1916-17	10,533	78	13,801	102
1915-16 to 1906-07	10,530	78	13,528	100
1905-06 to 1896-97	10,235	75	12,734	94
1895-96 to 1893-94	10,646	78	13,019	96

Note: Decenniums centered approximately on census years.

Base, 1924-25 to 1928-29, Rs. 13,579 millions, equals 100.

Source: Appendix XVII, pp. 113-114 of Blyn's study.

APPENDIX IV

ALL-INDIA INDEXES OF POPULATION, GROSS FOOD CROP OUTPUT, AND
WEIGHTED OUTPUT OF ALL CROPS, FOR THE PERIOD 1893-94 TO 1945-46
(Decennial averages; initial period as base)

Years	Population		Gross Food Crop Output		All Crop Output	
	Thousands	Index	Thousand Tons	Index	Rs. Millions	Index
1945-46 to 1936-37	388,988	138	68,276	92	14,313	110
1935-36 to 1926-27	338,171	120	69,648	94	14,007	108
1925-26 to 1916-17	305,679	108	73,277	99	13,801	106
1915-16 to 1906-07	302,985	107	73,974	100	13,528	104
1905-06 to 1896-97	285,288	101	71,453	97	12,734	98
1895-96 to 1893-94	282,134	100	73,851	100	13,019	100

Note: Decenniums approximately centered on census years.

Average population in 1893-94 to 1895-96 taken as that of 1891.

For other decenniums it is assumed for working purposes that the population in the census year is an approximate average of nearly equivalent periods prior to, and after, the census.

Source: Appendices XXI, XX, XXIII; pp. 118, 117, 119 of Blyn's study.

APPENDIX V

DECENNIAL INDEX OF ALL-CROP PRODUCTION, AND
ITS FOOD COMPONENT, PER CAPITA POPULATION

Years	Food Component Rs.	per Capita Index	All Crop-Production Rs.	per Capita Index
1945-46 to 1936-37	24.8	54	36.8	80
1935-36 to 1926-27	29.4	64	41.4	90
1925-26 to 1916-17	34.5	75	45.1	98
1915-16 to 1906-07	34.8	75	44.6	97
1905-06 to 1896-97	35.9	78	44.6	97
1895-96 to 1893-94	37.7	82	46.1	100

Note: All-crop production per capita, 1893-94 to 1895-96, Rs. 46.1, equals 100.

Source: Appendix XX, p. 117;
Appendix XXI, p. 118 of Blyn's study.

APPENDIX VI

DECENNIAL AVERAGES OF GROSS FOOD PRODUCTION,
AND PER CAPITA FOOD PRODUCTION, CENTERED
APPROXIMATELY ON CENSUS YEARS

Years	Population ^a (Thousands)	Food Production ^b (Thous. Tons)	Production Per Capita (Pounds)
1945-46 to 1936-37	388,988	68,276	394
1935-36 to 1926-27	338,171	69,648	461
1925-26 to 1916-17	305,679	73,277	538
1915-16 to 1906-07	302,985	73,974	547
1905-06 to 1896-97	285,288	71,453	560
1895-96 to 1893-94	282,134	73,851	587

Source: ^aAppendix XXI, p. 118;

^bAppendix XVI, p. 112 of Blyn's study.