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THE POPULATION PROBLEM OF INDIA

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INTRODUCTION

For the purposes of this paper the political changes in India during the past two or three years are largely disregarded for two valid reasons: first, such changes have not as yet measurably affected the problem to be treated, which is virtually the same throughout the entire sub-continent, and second, until the next decennial census is taken, in 1951, and its results made available, the latest figures we have (those of 1941) apply to the whole peninsula as it existed just prior to World War II. So "India" in this paper means the Republic of India, the Dominion of Pakistan, and all the fragments which may have constituted some of the 562 native Indian states.

Nowhere in the world, perhaps, is the population problem present in a more acute and imperious form than in India—a land of teeming, spawning millions, with their perennial hunger, misery, and pestilence and their everrecurring famines. For this reason, and because of his abiding interest in the country and its people, the writer of this paper has chosen to treat of "The Population Problem of India."

This paper is the fruit of personal observation in a number of sections of India, including Bengal during the famine of 1943 and 1944, conversations and interviews with countless Indians of every social, economic, and intellectual level, including some of the outstanding statesmen, business men, educators, etc., reading of a number of newspapers, periodicals, and books published both in India and in this country. In his reading he has taken cognizance of the fact, soon learned by any student of India, that it is virtually impossible to find strictly objective writing on India. Practically all writers on any phase of the country have a bias for or against the nationalistic aims of the Indian people and are unable to prevent that bias from intruding into discussions of the seemingly most neutral subjects.

THE COUNTRY

Bounded on the north by the insuperable Himalayas, on the east by the Bay of Bengal, and on the west by the Arabian Sea, the blunt-angled triangle that is India has been properly called a sub-continent, both because of its size (1,623,015 sq. mi.) and its isolation. This peninsula, 2,000 miles from east to west and the same distance from north to south, is about three fifths the size of the United States and as large as all of Europe, less Russia. It is all situated north of the equator and therefore theoretically in the temperate zone, but only a superficial acquaintance with the country will convince one of its predominantly tropical character. Actually, however, there is every type of topography and climate in India—geographically, as otherwise, it is a land of contrasts. Altitudes range from sea level to the peak of the highest mountain in the world, Mt. Everest (Alt. 29,141 ft.), temperatures from the arctic cold of the Himalayan heights to the scorching 130's of the desert regions, rainfall from 3 inches or less per year in the Sind desert to the unbelievable 500 inches at Cherrapunji.

Seasons in India are different from those in other lands. Instead of the usual spring, summer, fall, and winter the Indian knows the hot (March-May), the rainy (June-October), and the cool (November-February), seasons. Most of the rainfall in the productive regions comes during the monsoons when, for weeks, heavy rains fall every day.

Topographically India is divided into the Himalayas, the high mountain barrier to the north, the lower hills (called ghats) along the east and west of the peninsular portion, the deserts of the northwest, the vast Indo-Gangetic plain watered by the Indus, Ganges, Brahmaputra and other rivers, and the Deccan table land in the south. The Indo-Gangetic plain is most important agriculturally.

THE PEOPLE

The 388,997,955 human beings who people India (in 1941) present an amazing variety of racial types, religious patterns, and linguistic strains. In its colorful history successive waves of settlers and invaders have come and left their impress upon the people, producing a blend of racial strains— Dravidian, Indo-Aryan, Mongol, Turkish, Persian, and perhaps others.

Religion is much more influential in the lives of the people of India than among westerners, affecting as it does the dietary habits, vocations, political allegiance, marriage customs, social position, etc. of the people. One cannot understand modern India without a comprehension of the meaning of the religious situation in that land. Over 255 millions of the population are Hindu, 91.7 millions are Muslims, 25 millions are animists, 6.3 millions are Christians, 5.7 millions Sikhs, and others, including Buddhists, Jains, and Parsis, number 4.7 millions.

The ten rupee note with which the Indian pays his landlord is printed in eight languages besides English. This only hints at the multitude of tongues spoken here, for the census lists some 225 languages and dialects in use in India; however, only a dozen or so are in wide use and a majority of the people speak the principal language, Hindustani. English is widely used in the cities and is the language of education. Unfortunately, most Indians must determine the denomination of their currency by its size, for approximately 90% are illiterate. The figure was 95% for women prior to the last census. During the decade 1931-41, female literacy increased 150%.

Most of India's millions (87%) live in the 655,257 rural settlements, and 72 out of every hundred persons depend for their livelihood on the land. The productivity of the soil is low, holdings are small and fragmented, rainfall is uncertain, interest rates, rents and taxes are excessive, farming methods are primitive, and the income of the farmer is microscopic. Other occupations, largely hereditary, are followed in the villages, some common-

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place and of obvious function such as blacksmith, carpenter, barber, and weaver, others unique such as those listed in the census: "Pourer of water on gods," "Ear wax remover," and "Sucker of bad blood."

There are a number of industries, centering largely around the cities, which employ some 10% of the population. The jute mills around Calcutta, textile, sugar, and cotton oil mills around Bombay, and elsewhere, coal mines and steel mills are among these prominent industries. The plant of Tata Steel at Jamshedpur, which before independence was the largest steel mill in the British Empire, boasts of paying the highest laborer's wage in India, \$13. per month.

Wherever he lives and whatever he does the average Indian receives a per capita wage of about five cents per day. Some investigations have revealed village incomes as low as \$4. per year per person.

All this adds up to chronic misery, want, and disease that is so eloquently present everywhere in India in normal times and accounts for the mass starvation that takes place when minor economic dislocations or crop failures occur. Disease is rampant and death strikes often and early in the homes of India. Nearly $1\frac{1}{2}$ millions die of malaria alone each year; smallpox, another preventable disease, takes 48,000 lives annually. Other hundreds of thousands are taken by cholera and the dysenteries, ailments that could be eliminated by proper measures. The Indian has one of the shortest life expectancies, 27 years at birth, compared to 62 for the American or Englishman, and one of the highest infant mortality rates, 162 per 1,000 while that of the United States is 54.

Perhaps more tragic than the high incidence of death is the practically universal malnutrition, misery, lethargy and lassitude of the chronically starved millions who average a caloric intake of 600 per day against a need of 3600. It has been estimated that had the food supply of 1935 been distributed among the people of India, giving each an adequate diet, as far as it would go, there would be no food at all for 48 million Indians.¹ Actually of course, instead of 10 to 17 per cent of the people going without food each year and rapidly starving to death, the lack is shared by many millions of the poorer who are thus condemned to slow starvation, misery and inefficiency.

THEIR RESOURCES

In view of the foregoing dismal picture of the poverty and distress of the vast majority of India's millions it may come as a surprise that this is a land of considerable natural wealth and productive potentiality. Nevertheless, the proverbial wealth of India, to which so many brave voyagers sought a shorter route in the 15th century, is not all in the realm of fancy. These explorers were not following a will-o'-the-wisp, but searching for treasures, the reality of which had already been established.

Not inaptly India has been described as a rich country inhabited by poor people. In spite of the handicaps mentioned earlier, the Indian farmer has

¹Mukerjee, The Food Supply, p. 11, Oxford Pamphlets on India, Bombay, 1942.

been able to reach a position second only to the U. S. A. in the growing of raw cotton, to lead the world in the production of tobacco, sugar, castor seed, linseed, copra, hides, and jute. Of this latter named product the country has a monopoly. India has abundant wool supplies, and her forest resources are ample. In minerals there are large resources of coal, iron, and manganese and the coal supply has been estimated as adequate to last for centuries. The iron ore is not only abundant, but of the richest kind. Three-fourths of the world's mica is in India and numerous other important minerals are found in significant, if varying quantities.

Needless to say, the supply of manpower-of cheap labor-is inexhaustible and increasing.

That the many, abundant, and varied resources of India, agricultural, mineral, and human have received far less than optimum development is obvious and tragic. In more adequate use of these riches lies some help, at least, in the solution of the pressing population which vexes this land and its people.

THE POPULATION PROBLEM

The chronic and widespread misery of the Indian people is due to the existence of too many people for the available means of subsistence—and the situation gets worse instead of better. Here the means of livelihood have run a poor second in the mad race with the increase of population. The population problem in its most acute form is present in India and is complicated more than elsewhere by the existence of millions of uneconomic cattle which are protected by religious taboos against the killing of cows and the eating of meat. A third of the world's 690 million cattle are in India where there are 60 of them for every 100 human beings competing for the produce of the land. With cattle so prominent, India nevertheless has the world's lowest per capita milk production and consumption. Sam Higginbottom, a leading agricultural educator of the country, declares that the surplus cattle alone are enough to keep India poor.

Though India covers only 3.4 per cent of the land surface of the globe, it contains one-fifth of the entire human race. The density per square mile varies from section to section, dependent upon factors which help or hamper food production. It is 5 per square mile in arid Baluchistan and 646 in humid and fertile Bengal. The mean density is relatively low, 195 per square mile compared to 684 for England and 41 for the United States.

In 1881, India had a population of 259 millions. In the ensuing sixty years her population increased by about one-half, amounting to 389 millions in 1941. Of these six decades two showed almost no increase in numbers, due to famine and disease, the two natural checks that are operative here.

There has been little change in the birth rate, it ranging within the narrow limits of from 34 to almost 37 per thousand.

Food production has not kept pace with the phenomenal population growth; in fact, the production of rice, the principal food crop, in 1941 was over 3 million tons less than it was seven years before, the earliest year for which figures are available.

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That the Indians themselves are aware of the existence and gravity of the problem and the need for prompt constructive measures to meet it is apparent in the writings of their own scholars and leaders. Sir Datar Singh, member of the Imperial Council of Agricultural Research, wrote:

The steady rise in population has greatly affected the standard of living. It is well known that the population of India has doubled within the last few decades... The long spell of peace, the high birth rate, and modern scientific discoveries for fighting epidemics and infectious diseases have contributed towards this phenomenal rise. But multiplication in population without enhancement of the sources of income has the natural effect of reducing the standard of living. Where four instead of two persons share the same income the level of income is sure to fall.²

Mentioning unfavorable influences upon the economic life of the country, Sir Jehangir Coyajee, prominent Indian economist, writes:

Easily the first place is occupied by the rapidly growing pressure of an uncontrolled growth of population upon the means of subsistence...it is obvious that even if, in a future condition of economic development, India can support a larger population, under existing conditions the rapid increase in numbers is doing immense harm. We are witnessing a race between the growth of population and the rise of the standard of living in which the former presses the latter very hard indeed.³

Another economist, Radahakamal Mukerjee of Lucknow University, declares:

India's population has been growing faster than her capacity to produce food, and in 1935 the total food supply was only sufficient for six-sevenths of the population.... The rate of increase of total food production in India is being increasingly outrun by the rate of population increase.⁴

The writer of a charming little book for the children of India has even said, in reference to the problem of surplus cattle:

Like ourselves, there are too many of them.⁵

With the means of subsistence never remembered adequate and scarcely increasing from year to year, with the population growing at the rate of some five millions a year, with the prospect of scientific medicine cutting down the death rate, (Imagine the picture if their death rate should be reduced to ours—from 22.4 to 11.2 per 1,000, and the life expectancy increased from their 27 to our 62!) making the disparity between need and means still worse, the population problem in India is a critical one indeed.

POSSIBLE METHODS OF AMELIORATION

Agricultural Extension and Improvement

The extension and improvement of agriculture offers practical temporary help in the solution of the problem of population pressure in India. In the first place, there are over a hundred million acres of land listed as "culturable waste other than fallow." This is more than a third as much land as

²K. T. Shah, et al., The Economic Background, p. 46, Oxford Pamphlets Bombay, 1942.

³Ibid. p. 54. ⁴Mukerjee, op. cit. pp. 2, 10.

⁵Minoo Masani, Our India, p. 79, Bombay, 1940.

is usually in cultivation. Undoubtedly a large part of this area, by irrigation, draining, terracing, or other suitable treatment could be made productive and could take care of the deficit in the feeding of the present population.

More scientific methods of agriculture, involving the use of better seeds, fertilizer, etc., need to be instituted to increase the productivity of the soil under cultivation. There is no reason why the acre of land in India that produces 690 pounds of grain cannot grow 2,000 pounds as does an acre in England. Why shouldn't an acre of land in India produce 40 tons of sugar cane as it does in Java instead of the 10 that it now produces? It is not a matter of differences in natural fertility, but in intelligence and efficiency of usage. India's acres produce very low returns in comparison with those of virtually every other land. It has been shown that the grain yield of some land in India can be trebled with the use of natural and chemical fertilizers.

A forty per cent increase in land under cultivation and any reasonable gain in productivity, occasioned by the use of more scientific methods, would certainly brighten the food picture in this hungry country.

Many reforms will be necessary before such a desirable consummation can come about. The size of agricultural workings must be increased, and the economic level of the farmer improved by protecting him from the landlord, the money lender and others who victimize him, and by other measures. Because of his grinding poverty the Indian peasant is unable to apply scientific means and materials to his farming operations even if he knows and wants them.

The excessive cattle population must be cut down and the quality of those remaining should be bred up. About 125 million head at present are surplus and uneconomic. How to accomplish this without offending the sensibilities of the nearly three hundred million who worship the cow may present a problem of some magnitude, itself.

The wasteful habit of burning cow dung for fuel instead of using it to replenish the soil should be discouraged, and forest resources, which are ample, should be relied upon to furnish cheap fuel.

Further improvement in the nutritional situation can be accomplished by encouraging the planting of fields now growing less nutritive foods in the more nourishing grains.

Undoubtedly, by educating the farmer, by helping him with land reform and wise state aid, the food situation can be improved for those now living there. This program is not adequate to meet the needs of a fifty million growth per decade continued indefinitely.

Industrialization

Industrialization is often offered as a solution to the many economic and gastronomic shortcomings in India. It is frequently pointed out that in the United States pursuits unrelated to agriculture provide a livelihood for three-fourths of the people, while in India the situation is reversed.

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with a view to harnessing industry to the task of improving India, eight prominent industrialists of the country worked out and published in January, 1944, what has come to be known as the Bombay Plan. This ambitious program, the product of no theorists, but the planning of hard-headed business men, is a colossal scheme for the industrialization of the nation, calling for an expenditure of 30 billion dollars, and envisioning the doubling of the present per capita income in fifteen years. On account of population trends this would call for the trebling of the present national income. It would require by the end of fifteen years a 130 per cent increase in agricultural output, a fivefold increase in industrial output, and a 200 per cent increase in the service industries. Industry will then contribute 35 per cent to the total national income instead of the present 17 per cent, agriculture 40 per cent instead of 53 per cent, and the service industries 20 per cent. The plan also calls for a gigantic program of education, research, and the elimination of illiteracy. This all indicates that industrialization looms large in the thinking of intelligent and powerful groups concerned over India's future. It is not clear what fate this plan is having under India's changed situation.

India has shown a capacity for successful industry. Already the great steel mills of Jamshedpur and the hundreds of textile mills have been mentioned. There are also a number of paper, cement, aluminum, glass, ceramic and other factories of note. A few years ago India imported quantities of sugar; now she has an exportable surplus and is the largest producer of that commodity among the nations.

A note in the front of a little book already mentioned and quoted, "Our India" by Minoo Masani, is a testimonial to India's capacity for industrialization:

Printed...at the Baptist Mission Press, Calcutta—Bound by Hartson & Co., Calcutta—Paper manufactured in Calcutta...from bamboos grown in Orissa—Binding cloth handwoven from cotton grown in Jaipur and handprinted at the New Swastik Dye Works, Bombay.

This same author, though, perceives a weakness in industrialization as a solution to the population problem, as is evident when we read:

We are increasing so fast in numbers that, even if industries and cities grow very fast, we shall find it very hard to absorb even our extra population.

When we realize that in 1939 all industry in India employed not over 3,000,000 persons, and that the population of the country is increasing at the rate of 5,000,000 per year we cannot afford to be too optimistic over the ability of a conceivable degree of industrialization employing and supporting the surplus people of India. Some help and alleviation, yes, but as a solution, it is only partial and temporary.

Political Independence

During India's arduous struggle for independence, her patriots were prone to blame Britain for anything bad in the country from the infertility of the soil to the failure of the monsoon rains and to declare that once the galling yoke of foreign rule was gone an era of peace and plenty would be ushered in.

The British are not responsible for the failure of the rains, but by their own admission they have, in the past, throttled Indian industry by various means and kept the country a source of raw materials and a market for the factories of England. War time needs and, perhaps, a more enlightened view have caused somewhat of an about face in this connection, and recent years saw a growth of industry in India.

Undoubtedly, too, the British ruler has not been particularly zealous in advancing the interests of the common Indian.

Whatever the merits of the now won cause of Indian independence, and this writer heartily endorses it, it seems obvious that political freedom, *per se*, can hardly be expected to solve the population problem. That a considerable body of sentiment in India today is aware of this is borne out by an article in the January-February 1950 issue of *March of India*, a periodical published in Delhi. In this journal Mr. C. Jagannathan, prominent Indian journalist, explaining why the new Indian constitution is not as socialistic as many expected it to be, writes:

The framers of the Constitution have not been lacking in socialistic fervour but they were justifiably unwilling to mention such a right (to be fed, clothed and housed by the state) among Fundamental Rights because they are aware that for a long time to come low productivity and the rapidly swelling population of India would make those objectives difficult of realization.

National independence may, however, provide the setting in which feasible solutions may be more freely sought and tried.

Planned Inter-Provincial Migration

As in other areas, there are in India considerable sections of territory that with land reclamation of one kind or another can be made productive and able to care for large additional population. A suggested solution that offers some promise as a temporary measure and a means of easing the hardships of present conditions is large scale land reclamation projects, where these are possible, and the transfer of surplus families from crowded areas to them, all to be financed and directed by the central government as an all-India program.⁶ Such a plan might present considerable psychological and sociological difficulties in the matter of making those in the crowded areas willing to migrate and those in the host areas willing to receive them. The heterogeneity of the Indian population would be no help in this.

Birth Control

There is little doubt that the only measures that will actually solve the population problem of India are those which will have the effect of reducing the birth rate. So long as the birth rate remains at 34.5 per 1,000 and the

⁶Mukerjee, op. cit. p. 6.

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death rate at 22.4, there is no solution to the problem of such overwhelming population increase, whatever may be done agriculturally, industrially, politically, or otherwise. R. Mukerjee, the authority on food supply already quoted, expresses the belief that:

More than the diversification of employment or industrialization we have to look towards birth-control as the remedy for the present unbalance between population and food supply.⁷

Certainly birth-control has the virtue of attacking the problem where it must ultimately be beaten, at the birth rate.

While there is in India as elsewhere some opposition on the part of conservative religious groups in India to the practice of contraception, it seems less than in the United States. Certainly the advocates of birthcontrol there will not have to encounter opposition to publishing their ideas because the newspapers carry many columns of advertising dealing with contraceptives, and their purpose is not half-concealed in the timid expression "feminine hygiene." From a copy of the "Daily Gazette" of Karachi a two column, four inch display advertisement extols the virtues of "Pregno Latex Paragons," the use of which enables one to have "children by choice and not by chance." "The Sind Observer" of the same city carried an ad on the masthead offering "Birtho, a hygienic, guaranteed harmless oral contraceptive" at \$1.00 for a two year supply. Indian publications and signboards freely advertise such products but, of course, 90 per cent of the people cannot read and 95 per cent do not have the dollar, and the chances are the product is worthless.

Serious ideological handicaps, as well as others, stand in the way of India's acceptance of the help offered by planned parenthood. The masses of India prize fertility and abhor barrenness. On the grounds of the Kali temple in Calcutta stands the "Barren Tree," a tree of most magical powers. Hindu women who have not borne children and desire to do so may go to the temple and, after appropriate ceremonies, tie a piece of brick or stone to a branch of this tree. This is said to insure the conception of a child. After the child is born it is brought to the temple, its hair is cut and placed at the foot of the tree as a thank offering. There are always dozens of stones hanging from the tree and on occasional visits one sees freshly clipped hair at its base.

Aside from the religious opposition, the influence of the cult of fertility, and the vast amount of ignorance that would have to be offset for birthcontrol to have appreciable effect, other apparently insurmountable obstacles are set forth by a woman writer, Laxmibai Rajwade, who reminds us that "Present devices are too costly for the Indian masses" and "The domestic conditions are such that the remedies cannot be freely used.""

Millions of Indians are born, live, breed, and die on the sidewalks and never have a roof over their heads. They eke out a bare living by begging or visiting garbage cans, and all that they own they can carry in a small

^{&#}x27;Mukerjee, op. cit. p. 22.

⁸Shyam Kumari Nehru (Editor) Our Cause, p. 88, Allahabad (Undated).

kerchief. Modern contraceptive techniques are certainly out of reach of such women, fiancially, intellectually, and practically.

In spite of these handicaps, the contribution that birth-control can make to the solution of the population problem should not be minimized or overlooked. Given the proper conditions, it is obviously the most promising of the remedies considered, and it is undoubtedly already being practiced increasingly by the more favored classes in India.

Education and General Uplift

In the foregoing section some doubt has been expressed as to the applicability of birth-control methods to the masses of India due to their poverty, ignorance, homelessness, and generally unstable status. It is the opinion of the writer, which is in accord with the findings of published studies soon to be quoted, that birth-control will have to be brought to the Indian indirectly. He will be able to understand it, desire it, and practice it as the result of education and a general elevation of the level of his living.

Studies by Whelpton and Kiser⁹ show that industrialization results in lowered birth rates, that fertility varies among countries with the date and degree of industrialization, and that sharpest declines in fertility have taken place in those countries which had the highest birth rates prior to industrialization. This is all encouraging when applied to the Indian population problem.

They have also shown that the prevalence and effectiveness of contraception tend to vary directly with the socio-economic status. This finding underlines the importance of education and general uplift as an indirect and long range approach to the problem. Through general improvement in the social and economic condition of the people, through industrialization, education, and otherwise, they will be indirectly led to the practice of family limitation and the consequent easing of population pressure on the resources of the country, for these authorities say:

One may say that international variations in fertility have developed from differences in the date and impact of modern civilization, involving industrialization, urbanization, and a complex of cultural patterns conducive to the individualistic point of view.10

CONCLUSION

The population problem of India has been explored and discovered to be acute and speedily growing more serious. The situation is patently critical when a 5 per cent failure in food supply will cause 1,500,000 starvation deaths, as happened in Bengal in 1943-44.

A number of possible solutions of the problem have been considered, offering remedies of varying degrees of thoroughness, permanence, and practicability: agricultural extension and improvement, industrialization,

P. K. Whelpton and Clyde V. Kiser, Trends, Determinants, and Control in Human Fertility, Annals of the American Academy of Political and Social Sciences, January, 1945. ¹⁰P. K. Whelpton and Clyde V. Kiser, op. cit.

political independence, planned inter-provincial migration, birth control and education and general uplift.

Most promise of permanent relief would seem to come from a linking of the promotion of the practice of birth control with a program of educational, social, and economic uplift of the masses.

It is difficult to avoid the pessimistic conclusion that for some time to come those "natural checks" of Malthus, famine and pestilence will continue to be the chief forces restricting the tendency to overpopulation in India. It is hoped though, that the mind and spirit of the new, free India may find some means less freighted with human misery and more productive of human good.

LITERATURE CITED

Daniel, Howard, and Minnie Belle. Bombay Plan, Asia and the Americas, August, 1944.

Grant, John B., 1943. The Health of India, Oxford Pamphlets on India, Bombay.

Higginbottom, Sam, The Cattle Drain of India, Asia, August, 1938.

Hocking, William Ernest. Famine Over Bengal, Asia and the Americas, August, 1944.

The House of Tata, Fortune, January, 1944.

Industrial Development of India, Science, November 24, 1944.

Industrial India, The Rotarian, November, 1943.

Lokanathan, P. S., 1943. Industrialization, Oxford Pamphlets on India, Bombay.

Lorenzo, A. M., 1943. Atlas of India, Oxford Pamphlets on India, Bombay.

Lorimer, Frank. Issues of Population Policy, Annals, etc., January, 1945.

Masani, Minoo, 1940. Our India, Bombay.

Moraes, F. R., and Robert Stimson, 1942. Introduction to India, Bombay.

Mukerjee, Radhakamal, 1942. The Food Supply, Oxford Pamphlets on India, Bombay. Nehru, Shyam Kumari (Editor), (Undated). Our Cause, Allahabad.

New Economic Blueprints for India, Monthly Labor Review, February, 1944.

Ranadive, B. T., (Undated). Will it Work-the Tata-Birla Plan? Bombay.

Sarkar, S. C., 1942. Hindustan Year Book, Calcutta.

Shah, K. T., et al., 1942. The Economic Background, Oxford Pamphlets on India, Bombay.

The Taj Mahal Atlas, Calcutta, 1941.

Thompson, Warren S. Population Prospects for China and Southeastern Asia, Annals of the American Academy of Political and Social Sciences, January, 1945.

Vaswani, B. J., 1942. India Explained, Karachi.

Vijayaraghavacharya, Sir T., 1943. The Land and Its Problems, Oxford Pamphlets on India, Bombay.

Whelpton, P. K., and Clyde V. Kiser, Trends, Determinants, and Control in Human Fertility, Annals of the American Academy of Political and Social Sciences, January, 1945.

Williams, L. F. Rushbrook, 1940. India, Oxford Pamphlets on World Affairs, London World Almanac, New York, 1945.

