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THE WEALTH OF INDIA

THE
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MACMILLAN AND CO., LIMITED
ST. MARTIN'S STREET, LONDON
1925



MACMILLAN AND CO., LIMITED
LONDON · BOMBAY CALCUTTA · MADRAS
MELBOURNE

THE MACMILLAN COMPANY
NEW YORK BOSTON · CHICAGO
DALLAS · SAN FRANCISCO

THE MACMILLAN CO. OF CANADA, LTD.
TORONTO

PREFACE

THIS book sees the light of day at a peculiar conjuncture. The West is bewildered with itself; a slowly awakening Europe is dimly realising the "sickness" of an "acquisitive society"; the institution of "property," "the natural rights of the individual," including the right or the freedom of production, the system of free competition associated with capitalism, are all being challenged by reflective humanity; and we have a hundred different prescriptions for the social and economic ailments of modern industrial civilisation. But underlying all these prescriptions—State Socialism, Marxism, Communism, Guild Socialism, Bolshevism—is the common desire to examine the foundations of social and economic life, and we in India cannot shirk this problem. This book is an attempt at formulating a definite economic policy for India based on a careful study of economic principles and facts. At a time when our leaders seem bewildered between rival economic programmes we need clearness of vision and comprehensiveness of outlook; and though the conclusions of this book will not be accepted by all, we shall be content if the attempt that we have made to reach to the root of things in the discussion of

economic problems, and to follow the truth in a disinterested manner no matter where it leads, helps students of economic problems in India, stimulates further discussion, and bears witness to the oneness of the human spirit, in whose refulgence all distinctions of East and West pale and disappear.

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CHAPTER I

INTRODUCTORY

INDIAN ECONOMICS: A DEFINITE AND POSITIVE STUDY

THE study of economics deals with the production, distribution, and consumption of those things which satisfy man's desire for material objects and personal services. We generally use the term wealth to include material possessions which are not to be had free but require an effort to produce. The purpose of economic activity is not so much the production of wealth in itself as the production of such forms of wealth as will satisfy social wants—the production of wealth must be judged in reference to the wants of the people who consume it. Further, as wants involve a valuation, the study of economics cannot be divorced from questions of ideals and cannot be regarded as a merely positive science dealing with facts as they are.

Indian economics is thus a definite and positive study of the wealth of India in relation to the peoples of India. This study aims at ascertaining and surveying the factors —actual and potential—which contribute to the production and increase of wealth, its distribution and consumption, ultimately resulting in the welfare of all sections of the community. It also presupposes or assumes at the least a definite conception of welfare of the Indian peoples by which such production and consumption of wealth are to be judged. The ultimate object of the study of Indian economics is not wealth in itself or

economic goods in the strict sense, but the well-being of Indians in relation to this wealth.

Human Life an Organic Whole

We propose to undertake a study of the problems of Indian economics on certain fundamental assumptions. The first and most fundamental of these assumptions is that human life is an organic whole, a complex of impulses, which can blossom into a perfect personality. Among these impulses is the economic motive, the desire to preserve life by the satisfaction of the elemental needs for food, clothing, and shelter. But this economic motive in human life is never to be found working by itself. It is organically associated with other impulses, such as the impulse to reproduction, which in the earlier stages of life expresses itself in the desire to have children, and which in its developed form blossoms out into the instinct of creativeness, man's desire to reproduce himself in his work, in media other than his flesh. It is also connected with the impulse of association, the desire for fellowship, for sympathy, affection, love, and finally with the impulse of reflection which fructifies in the lives of our prophets and seers, our poets and philosophers. The economic man actuated by the single motive of satisfying his physical needs is an abstraction, justifiable for the purposes of scientific observation and study, but he is a myth in this concrete world of living humanity to which economic principles are to be applied.

Wealth

Thus when we speak of Indian economics as a study of the wealth of India, we might remember that wealth does not consist of material things or economic goods only, though material or economic goods stand for wealth in the present organisation of social life. Wealth we take in its etymological sense as a condition of well-being, and what-

ever contributes to it may be regarded as wealth. In modern society unfortunately we have come to attach a narrower signification to the word, understanding by it the power over material goods and indirectly a power over the more purchasable types of human activity—hand labour, professional services, advertisement and commendation in newspapers, and so on. And yet it is not difficult to realise that this social estimate of wealth may be fruitful of mischief, that it is a legacy from an early society founded on castes, that failure to obtain wealth in this sense is not failure in life. The main need of men is life; it is "more life and fuller that we want"; He came that we might have life and "might have it more abundantly." For this fuller life all things are wealth and have value, from the odour of a flower in spring, the sight of a glorious sunset, or a mother's kiss, to the possession of a motor car or of a few acres of land. For all things are ours; "whether Paul, or Apollos, or Cephas, or the world, or life, or death, or things present or things to come." It is significant that recent economic theory takes account of this larger meaning of wealth. Thus we are told in a recent work that economic goods and commodities which constitute wealth "in and of themselves would be worthless unless they contributed to the satisfaction of the needs and wants of men. Hence the stream of commodities belonging to a people constitutes also a stream of satisfactions of human wants," "a stream of welfare." [1] When wealth is thus viewed as welfare, it should be viewed from the standpoint of producers as well as consumers. Clothing of excellent quality may bring real welfare to the consumer, but if the producer was sweated

[1] *Principles of the New Economics*, by L. D. Edie (New York, 1922), pp. 188 following. Cf. H. Jones, *Principles of Citizenship*, pp. 161 and following. "Wealth is not wealth but only its unrealised possibility, apart from the spending of it; and the spending of it means its application to the satisfaction of desire and the transmutation of it in the process of that application."

Also *Social Purpose*, by Hetherington and Muirhead, pp. 194 and following.

on inadequate wages and worked under harmful conditions the clothing is wealth only to the consumer, not to the producer.

We all recognise that men must live before they can live well; that in a sense bread and the things symbolised by bread must remain the first care of men. All culture and civilisation in the past have been based upon an abundance of the things of this world. If the East thought more of the things of the spirit and of the life beyond in the past, it was because the valleys of the Ganges and the Indus, of the Euphrates and the Tigris, were extraordinarily fertile, and made the necessaries and comforts of life easily available to the people. India in the past knew no struggle for existence in our sense of the term. Freed from the struggle on the physical plane, the people had leisure to think; they could look before and after, instead of being absorbed in the present. The tragedy of modern economic life in the West is that it implies a complete denial of the principle that "man shall not live by bread alone." Economic interests to-day in the West absorb virtually the whole of life; and things spiritual, if they are not lost altogether in the economic motive, are consigned to the odds and ends of time which men can spare from the supreme business of making a fortune and getting a living. The kitchen is indispensable to the home; but the West has made it the most important part of the home, instead of assigning to it a strictly subordinate part. But the country which in the past could leave a message for humanity is to-day differently circumstanced. The question with people in India to-day is how to live at all, not how to live well. To live well they must first make life possible; and there cannot be life unless there is an adequate supply of economic goods, or wealth in the narrower sense. The fundamental question for the student of Indian economics is the search for and discovery of methods and measures which will secure an abundance of economic goods distributed so as to secure the decencies of subsistence for all; so that on

this basis of life each may rise to the level of the fuller life of which he is capable. And it is as well to remember that the problem before the student of Indian economics is not different from the problem before the student of Western economic life. The West has not solved the question because it produces more; the century that has seen the greatest increase in productivity since the fall of the Roman Empire is also the century that has seen the acutest form of economic discontent.

Interrelation between Consumption, Production, and Distribution

Our second assumption in this study of Indian economics is that the general problem of economic science is also an organic whole, that the production, exchange, distribution, and consumption of wealth are closely interrelated questions, that as all these alike subserve the purposes of a larger human life, so each of these divisions of economic science in turn is an organic part of a single whole, and must be judged in reference to that whole. The economic life of the later Middle Ages, however deficient from an economic point of view in other respects, was founded on this fundamental assumption — that prices, wages, commerce, constituted an organic moral structure based on the consumer.

Thus in judging of the well-being of the Indian people, writers too often adopt as their sole measure the total production of wealth in the country; this production must be taken in conjunction with the distribution of the wealth of India. A large production may prove a misleading measure of well-being, if the wealth is unequally distributed. So also in discussing problems connected with commerce and production we might do well to remember that production is always for consumption or use.

Hitherto economic theory has been grounded on the assumption that what matters most is the production

of wealth, and that consumption of wealth is a personal affair with which society is not concerned. The productive processes have been so absorbing in their claims on the energies of mankind that economic life has come to be identified with these processes. The discovery and development of the productive arts have absorbed men's time and energies, have had so much more publicity and have involved such wide organisation, whilst consumption on the other hand has been passive and so little associated with social purpose that it has been scarcely regarded as an art by itself. Hence in the past all economic questions, whether those connected with the progress of agriculture and manufacture, or those connected with money, taxation, and population, have been judged from the standpoint of production alone. Problems of value have been hitherto exclusively problems of cost as measured by money; things have been regarded as valuable even though they may be injurious to the individuals who consume them, commodities have been looked on as having equal value because they sell for equal sums. So also the question whether consumption goods can be regarded as capital has hitherto been judged from the point of view of production in a narrower sense. It has been forgotten that it is the benefit or satisfaction arising from the destruction of forms of industrial wealth that constitutes the economic goal. Work is a means to live, to consume; and life is more than meat and the body more than raiment.

We are now coming to recognise that economics as a science should begin with a study of the needs of human beings in the aggregate, and the means of satisfying them. This would involve a radical change in outlook; if needs are the primary factor then the organisation of production must be adapted to the satisfaction of these needs, instead of the needs being subordinated to the organisation of production. Economic theory in our times is changing the emphasis from production to consumption. Thus we are now told: "The importance of the consumption of wealth is emphasised by the consideration that as many

and as dire calamities have overtaken peoples because of their irrational habits of consumption as because of inefficient systems of production, exchange, or distribution" . . . "a few are beginning to discover that consumption is more important than production, exchange, or distribution—possibly more important than all three combined."[1] During the past few years the war attracted the attention of men to the necessity of eliminating waste and extravagance, to the healthy principle that in times of distress the consumption of individuals is not their private concern but the concern of the nation, and that unwise consumption has a direct bearing on national strength and prosperity.

And yet the lessons of the war have not materially affected the current of economic life; the real driving force of modern production and commercial activities is not the desire to meet a social want in which all productive activity originates—that men shall be fed, clothed, sheltered, provided with heat and light—but the motive to make profits; we produce not to feed and clothe one another, but to make money. The civilised countries to-day produce and manufacture not the things which men need most, not the things which would ensure to all men a reasonable sufficiency of physical subsistence, but the things which bring the largest profits and which can be consumed by the few who live in luxury. It is not consumption that guides and controls production, but production that determines what men shall consume and how much they shall consume. Misdirected production—the result of an economic organisation founded on profit-making—attracted notice during the war. Everybody then recognised that the army contractor who set several hundred men to dig a lake in his grounds was not adding to the wealth of the nation. We have now returned to times of peace, but it does not strike us that hundreds of thousands of men are engaged on foolish and wasteful work, to the neglect of work which would add to the welfare

[1] Carver, *Principles of Political Economy*, pp. 11, 455.

of their fellow-men. This more useful work is neglected, because there is always a small minority of men with large incomes who wear several men's clothes, eat several men's dinners, live several men's lives. The late German minister Rathenau denounced in unmistakable terms these features of modern economic production: "The years of labour requisite for the production of some delicate embroidery have been filched from the clothing of the poorest among us; the carefully mown lawns of a private garden could with less expenditure of labour have grown wheat." The world is a union of producers, and whoever squanders labour, labour-time, or the means of labour is robbing the community. "The superfluous, the null, the harmful, and the contemptible are heaped up in our shops. We find there the useless gauds of fashion, destined to glitter for an hour with a spurious light; intoxicants; worthless imitations of industrial and artistic models. Season after season the show-cases are refilled with these most futile of latest novelties. The manufacture, transport, and sale of such articles require the labour of millions of hands; demand raw materials, coal, machines, and factories, occupy nearly a third of the industry and commerce of the world . . . Were but half of this squandered labour directed into suitable channels, it could provide food, clothing, and shelter for every impoverished wight among the dwellers in civilised lands."[1] So also Sidney Webb, writing in 1923, speaks of this globe of ours as the lunatic asylum of the solar system, judging by the consumption of commodities and services by the civilised communities of our times.[2]

[1] *In Days to Come*, pp. 76 following.

[2] We are confronted with a "state of things in which a vast amount of labour is lavished on the most futile luxuries, while tens of thousands of infants are perishing for lack of milk, innumerable children are growing up without adequate nurture, millions of men and women find themselves condemned to starved and joyless lives, and the most urgent requirements of the community as a whole—to say nothing of the essentials to the well-being of the future generations—remain unprovided for" (*Decay of Capitalist Civilisation*, by Sidney and Beatrice Webb, p. 23).

Applications to India

In India we have all the evils of misdirected production. Our production is entirely unorganised, determined by individual views, without any reference to the needs of the country; and the evils of unorganised production are accentuated by those of an unorganised system of distribution. India produces at any rate enough agricultural produce from year to year to satisfy the demands of her total population, and yet every year thousands die of starvation or are on the verge of death through starvation. The consumption of a society is very largely a product of customs and traditions built up across the span of ages. Such social habits of consumption may often be sound and efficient, and where that is the case production must be adapted to these habits of consumption. But it is part of the study of Indian economics to ascertain customs and habits based on a satisfaction of desires which lead to moral and physical weakness, and to suggest methods of criticising and counteracting them.

It must also be recognised that you cannot have a bad system of distribution without fatal consequences to the amount of production; and that organised production without an organised system of distribution may result in a hard and hateful world in which the vast majority of men live in conditions from which all beauty and joy of living have completely disappeared.

The Criteria of Economic Progress

So again it would be misleading to talk of the economic prosperity of India by urging in justification the increase in the volume of her trade or productive efforts. If this increase in productivity is an increase in raw materials exported in increasingly larger quantities abroad to be imported back into the country in the shape of finished goods for consumption, and if this is achieved by drawing

away into the fields or plantations artisans and craftsmen by whose sweated labour the increased productivity is made possible, one may well raise a note of warning against such superficial optimism. The economic value of such production measured in terms of money may be altogether different from its real value measured in terms of the human welfare of producers and consumers alike. A ten-rupee box of tea or coffee or a ten-rupee lump of manganese or iron ore brought into existence by Indian labour to be exported for the profit of a foreign shareholder cannot have the same value measured in terms of human welfare as ten rupees' worth of rice or wheat crop to be consumed by the needy within the country.

Economic life in India has hitherto been dominated by ideals of human welfare very different from the economic welfare measured in terms of a monetary standard which the nineteenth century in Europe evolved for the West. In the past India was comparatively free from the incubus of "vested interests" which Veblen in one of his books defines as "a prescriptive right to get something for nothing." The result of a century of British rule has been to introduce into the country some of the fundamental features of the economic organisation that characterises life in Great Britain—capitalism, the substitution of a cash nexus and competition for custom and social regulation, factory production with its attendant problems, and the creation of vested interests. Production for profit and not for use, measurement of welfare in terms of money, provision for the protection of legal rights for the individual and the corporation—these have all been gaining strength in the country under the settled government of the foreign rulers. The peace which Great Britain has brought into India has fostered these new economic tendencies; and the tragedy of the situation may be said to lie in the fear one may reasonably be allowed to entertain that the national government which may enter on the stage as the successor of the British rulers in the years to come may inherit the legacy of the

last hundred years, and pride itself on being a settled government with legal and military power to maintain the sacredness of contracts at home and to enforce the claims of its business men abroad, defending the privileges of the vested interests and the value of their paper securities, and neglecting the larger interests of the country, the production of goods and services, valued in terms of human costs and human utilities. Whilst the West is talking of economic reconstruction and transvaluation of costs and utilities, our national government may look upon such attempts as a subversion of the economic order, as a destruction of the country's wealth, and as a disorganisation of industry. Will our thinkers and political guides rise above these environmental influences and restore to India her old-world ideals of welfare, her former contempt of mere money-making as the supreme business of life? Shall we lazily accept the new conditions of life imposed upon us by others in these last hundred years and allow our life-blood to be drained by a commercial civilisation which turns out "goods" at the cost of happiness? Or shall we rise into the vision of a more glorious life of beauty and creative work, turning the wheels of Western mechanism into the instruments for the realisation of this life? Shall we barter our higher aspirations of life for profit and power, thriving upon a mutilated humanity, or shall we hold fast to our trust in God, and, rising above the anaesthetic effects of Western nationalism, proclaim once again the message of a perfect humanity that has learnt to regulate its appetites and to subordinate them to the higher purposes of life? This is the larger problem that faces the Indian student of economics and the statesman who translates his ideas into the realities of life.

So also it should be remembered that the physical wants of a country are relative to the climatic conditions and the outlook on life and culture of the people. If the Indian labourer working six hours a day can satisfy his normal physical wants, he need not be considered less

efficient than an English labourer who has to work eight hours a day. The Greek artisan in the days of old was not the less efficient because he could afford the leisure after a few hours' work to take part in the deliberations of the Ecclesia, and witness the plays of a Sophocles or a Euripides. The economic production of India must be judged in relation to its economic development and its economic needs. India is sufficiently endowed with material resources and powers to render not only life, but a good life, possible for her entire population. Nature is bounteous in her gifts; the conditions of living are easier than in other countries; food can easily be obtained with a little work, and clothing need not be difficult to obtain where the extremes of weather are unknown save in the north. And though a tropical climate may be unfavourable to the development of physical vigour, the population can readily satisfy all its physical wants. If in spite of all these favourable conditions millions go without clothing and live on the poorest of food, the fault must lie with the human factor—in want of organisation in production and distribution, in the absence of co-ordination between production and consumption, in the lack of sympathetic guidance and inspiration from those who have hitherto been charged with the sacred trust of the well-being of the population. It is for the student of Indian economics to observe and rivet attention on these desiderata, on these shortcomings in the human factor, and to outline a broad-minded policy which blends all economic considerations into a larger vision of the welfare of the people.

Factors of Production

It is a familiar fact that, however kind nature is to man, there is a scarcity of desirable things. The economic activities of a society are directed towards the supply of such desirable things which are scarce. The supply of these desirable things can be ensured by the production

of material goods by human labour, or from the accumulation of goods produced in the past. The production of material commodities depends upon two fundamental factors :

(1) Natural environment — the gifts of nature — or opportunity to produce ; and

(2) Labour—the capabilities of the individuals composing a society.

In the last resort man is dependent on nature for what he is and what he can be. Without favourable environment, however gifted a nation may be, it will not flourish and grow ; for man is a part of nature, and his origin, development, and efficiency are determined by his surroundings. There is a deal of truth in the proverb, "we cannot make bricks without straw." Natural conditions such as climate, geographical position, the flora and fauna of a district, largely determine the economic life of society, and through it the character of its activities and institutions. Though Marx may have been guilty of one-sided exaggeration of statement in his economic interpretation of history, it is quite possible to trace the influence of place in the determination of work, and therefore of social and economic organisation. It has even been said that so far as production is concerned man is becoming more dependent on his geographical environment than ever before. The roving tribe is hardly more attached to the land than the tumble weed of the prairie. But civilised men strike root deep into the earth. They clear, level, drain, fence, plant, bridge, cut roads, sink shafts, build canals, dam rivers, and attach themselves in a thousand different ways to the land they dwell in. Every locality to-day concentrates its labour on the one industry in which it has the greatest advantage, and the community gives itself up to it.

But while all this is true, it is also true that progress in knowledge involves a mastery by man over nature, and every fresh discovery in science spells a step in his

growing freedom. As society works its way into a fuller life, the influence of the environment diminishes in importance. The influence of land, climate, and food supply, salient as it is even to-day, tends to be increasingly modified by mind forces, by the growing consciousness of purposes and aims on the part of society and its members.

CHAPTER II

THE PHYSICAL ENVIRONMENT

THE wealth of India depends on the magnitude of her natural gifts and resources and on the efforts of the people in utilising and improving them. The natural environment of a country from an economic point of view includes the sum total of all those external factors that affect economic life and development.

1. CONTOUR AND LOCATION

In an early stage of the economic life of a nation geographical location does not play so important a part as climate, the geological features, and the flora and fauna. As soon, however, as a country enters into commercial and trade relations with other countries location acquires importance. Thus the prosperity of Byzantium in early days, that of Venice in the Middle Ages and Great Britain (London) in our times can largely be ascribed to favourable location. Standing in the centre of the Eastern hemisphere, India occupies a commanding position for trade. As she is bounded both by land and sea, her trade routes radiate in all directions. Like Great Britain, India is fitted by nature to be a good distributing and clearing centre of trade, and if properly utilised these advantages of location might make her one of the principal carrying countries of the world. Nature has, moreover, marked out India as a politically independent and an economically self-sufficing country.

It has a total area of 1,773,000 square miles, is full of contrasts in physical features and climatic conditions; it is a continent in itself, bounded on the north by the Himalayas and on all other sides by the sea, with potentialities for a many-sided life for its people.

India has a coast-line of about 4500 miles in length, but remarkably devoid of indentations, and the deltas of the rivers are not navigable. On neither coast of the peninsula are there many good harbours. The Indian Ports Act has a schedule mentioning 236 ports—including 11 in Bengal, 7 in Burma, 6 in Bombay, 146 in Madras, and 19 in non-British territories. Most of these ports serve the purposes of internal trade; the only ports of importance being Karachi, Bombay, Murma-gao, Nova-Goa, Cochin on the west, and Madras, Calcutta, and Rangoon on the east. Nearly six-sevenths of the foreign trade is concentrated in five ports, Calcutta, Bombay, Rangoon, Madras, and Karachi.

The country has a large number of rivers, some of them very wide and long. With the exception, however, of a few—the Ganges, the Indus, the Brahmaputra, the Irrawadi, and the Kristna—all these rivers are deficient in a constant and regular supply of water. In times of flood they are converted into impetuous torrents, at other seasons they are dried up, or have a water supply insufficient for irrigation or navigation. Most of them pass through hilly tracts rendering navigation out of question.

While the foreign trade is centred in five ports, the internal trade of India is centred in a number of inland towns far from the sea, most of them not even situated on rivers. Calcutta is the centre of the jute, coal, and tea industry, the chief industry in Bombay is the cotton-spinning and weaving industry; both owe their importance to their geographical position. We may also include among the inland centres Nagpur, Jubbulpore, Cawnpore, Amritsar, and Dacca.

2. Climate

Being a vast country, India possesses a variety of climates; we have a remarkable mixture of tropical and temperate region conditions—tropical heat, frequent rains and cyclones at one period of the year, and moderate temperature and scanty rains at another period. For meteorological purposes the country is divided into two zones: (*a*) Northern India, beyond the tropic of Cancer, with its extremes of heat and cold, and (*b*) Peninsular India, falling within the tropics, with less extensive variation of temperature.

The Indian year is divided into three well-marked seasons, viz. the rainy season (June to October), the cold season (November to February), and the hot season (March to May). The seasons determine the nature of the crop and affect the social life of the people. From the meteorological point of view we have the period of the south-west monsoon, lasting from June to September, and accounting for nearly 90 per cent of India's annual rainfall; and the period of the north-east monsoon, from October to December, which brings rain mostly to the southern districts of the Madras Presidency. More than five-sixths of the agricultural products of the country depend on the regularity and favour of the south-west monsoon. The rainfall varies from a normal of 460 inches at Cherrapunji in the Assam Hills to 3 inches in Sind. A deficiency of 25 per cent in the rainfall produces what is classified as a dry year, and a deficiency of 40 per cent means severe drought. For the purposes of rainfall the country is divided into (*a*) protected areas, or areas of abundant rainfall, including Burma, Assam, Eastern Bengal, and the Western Ghauts; (*b*) precarious areas, or tracts of uncertain rainfall, including Bombay, Udaipur, and Ajmer; and (*c*) regions of drought, *e.g.* Sind, Western Rajputana, and Western Punjab.

There is no country in the world where the importance of rainfall is as great as in India. It is not merely the

amount of rain, but also its equal distribution and timely arrival, on which depends the abundance or otherwise of agricultural produce. The amount of precipitation from year to year varies within remarkably large limits. A month's delay in the arrival of the south-west monsoon, or the abrupt termination of the monsoon at an early date, or the freaks of the current that result in an abnormally large quantity of rain, lead directly to the failure of harvest, to famine, and a heavy diminution in Government revenue. The complexity of the factors that determine the strength and distribution of the current makes it difficult to secure evenness and uniformity of behaviour on the part of the current, with the result that there is scarcely a year in which some part of the vast continent does not suffer from failure of harvest.

Next in importance to rainfall is temperature. The amount of vapour present in the air determines as much as the rainfall the character and abundance of the crop. It also affects the health and physique of the people, and thus the efficiency of labour. The temperature in North India varies from a maximum of 130° in summer to a minimum of 26° in winter. Endowed with munificent gifts, with an abundance of food for little work, the people of the country rapidly evolved into civilised life; but these very bounties of nature and a tropical climate produced an enervating effect on the physique of the people and checked the continuous progress which results in cooler climates from the stimulus to work. Buckle points out how nature in India seems to have impressed man on all sides with a sense of his own helplessness—with the noble mountains touching the skies, the mighty rivers which no bridge has spanned, the interminable forests and jungles, the vast sandy tracts and deserts.

3. Geological Composition

(*a*) *Composition of the Surface Soil.*—The surface soils of India may be broadly divided into alluvial, trap,

black cotton soil, and crystalline soil. Economically the most important tracts are the alluvial. Besides the courses of the various rivers we find these tracts in Bengal, Assam, Burma, the United Provinces, the Punjab, Rajputana, Gujarat, and the districts of Tanjore and the Godavari area. These vast alluvial plains composed of mud and sand are easily worked by ploughs and easily permeated by water. The soil is chemically rich, having among its ingredients phosphoric acid, potash, lime, and manganese. There is, however, a striking absence of nitrates. Most of the rabi and kharif crops are sown in these soils. The trap soils cover the whole of the Deccan and a large part of the Central Provinces, Hyderabad, and Kathiawar. They are porous, light, and poor. Millet, pulses, and at times cotton are grown on them. The Deccan soil is known as black cotton soil, from its colour and its remarkable adaptability to the growth of cotton. It is compact, tenacious, and retentive of moisture. This soil is also found in some parts of the Madras Presidency. Cotton, wheat, linseed, and millet are generally grown on it. The rest of the soils of India may be described as crystalline; they are lacking in chemical ingredients. They are sometimes utilised for raising rice crops, and are to be found in all parts of the country. The characteristic feature of all these soils is their relative dryness; and it has been said epigrammatically that the object of an English farmer is to get rid of superfluous water from his soil by drainage, while the Indian farmer strives to retain moisture in his land.

(*b*) *Mineral Resources.* — With regard to mineral resources, which in our days have come to be regarded as the most important factor in a country's wealth, Megasthenes pointed out as early as 300 B.C. that India has "underground numerous veins of all sorts of metals, for it contains much gold and silver and copper and iron in no small quantity, and even other metals." This observation is confirmed by a geologist of our own

days who says: "Were India wholly isolated from the rest of the world, or were her mineral productions protected from competition, there cannot be the least doubt that she would be able from within her own boundaries to supply very nearly all the requirements, in so far as the mineral world is concerned, of a highly civilised community." [1] The Holland Commission (1918) stated that the mineral deposits of the country are sufficient to maintain most of the "key" industries.

Economically the most valuable mineral product of India is coal. The coal deposits, though undistributed and not of high quality, are sufficient in quantity. The most productive coal-fields are those in Bengal, Behar, Assam, and the Central Provinces. The total output of coal increased from 12,700,000 tons in 1911 to 22,600,000 tons in 1920. With improved mining operations India can meet from within her own borders the growing demand for coal.

Iron ores of rich quality are widely distributed over the country. The total output of two leading iron-fields in 1920 was 311,000 tons of pig iron and 145,000 tons of steel and castings. If the promise of rich iron ore in Singhbhum (Orissa) fructifies, India's resources of high-grade iron will be more than sufficient to meet her own requirements.

Rich deposits of lead and zinc exist in Burma, the total output of lead being 23,800 tons in 1920. Copper ores are chiefly found in Burma, Bengal, Orissa, the Central Provinces, Rajputana, and in some districts of Southern India. Manganese ore is extracted in large quantities in the Central Provinces, Bombay, Mysore, and Madras. India is second in the production of manganese in the whole world. The total production in 1920 was 716,000 tons. Amongst the mineral resources not yet successfully utilised may be mentioned chromite, tin, and antimony.

India stands first in the production of mica in the world,

[1] Ball, *Economic Geology of India* (1881).

and turns out more than half the total annual supply. In 1919 the total output was 4,360,000 cwts. Amber, graphite, petroleum, platinum, gold, and salt may be mentioned among the other mineral deposits of India. Petroleum is found in Assam and Burma, and gold in Mysore. India is rich in building stones of excellent quality. She is also rich in mineral springs of all kinds, most of which are as yet unexploited.

4. Flora and Fauna

The richness of the flora of India can be seen from the fact that there are 1700 species of flowering plants. Vegetable life may be grouped under five heads:

(*a*) *Food*: rice, wheat, barley, millet, pulses, maize, bajra, gram, rabi, sugar-cane, potatoes, pine-apples, etc.

(*b*) *Fibres*: cotton, silk, jute, hemp, and flax.

(*c*) *Oil-seeds*: ground-nuts, cocoa-nuts, linseed, rape, mustard.

(*d*) *Drugs*: tea, coffee, opium, tobacco, cinchona.

(*e*) *Miscellaneous*: Indigo, india-rubber, gutta, forest products (timber, cane), etc.

The importance of animal life is twofold: first, animals serve for food, and secondly, animals have been the helpmates of men before the era of machinery. In an agricultural country like India their importance can be easily realised. Blandford in his *Fauna of British India* mentions 1229 genera and 4100 species of vertebrates. Among the wild animals may be included monkeys, wild cats, foxes, weasels, bears, elephants, lions, tigers, leopards, rhinoceroses, etc.; among domestic animals the bull and the cow, the buffalo, sheep, goats, horses, donkeys, mules, and camels. The country is rich in fisheries, whose vast potentialities have not yet been realised.

The Environment modified by Man

The material welfare of society depends not only on the gifts of nature but on the utilisation of these gifts by men, on the transformation of unfavourable surroundings and conditions into the conditions of a good life.

A. Physiographical Features and Physical Location

The disadvantages of location and of adverse physiographical features have been met in all civilised countries by scientific advances in methods of transportation and communication. India still lags far behind other countries in the utilisation of these methods.

1. *External Transportation*

Under this head comes the improvement of harbours and shipping facilities. As already observed, India's foreign trade is concentrated in five harbours connected with inland centres through main railway lines. Of the few natural harbours that the country possesses only Bombay and Karachi have been developed, with an eye to the development of foreign trade, whilst other harbours have been neglected, and the potentialities of a brisk trade along the coast through smaller harbours have been ignored, if not smothered, in favour of railways. One need only point in illustration to the neglect of harbours like Surat and Broach on the western coast, once flourishing centres of commerce. As to shipping, only a century ago the dockyards of Bombay could supply to the English mercantile navy and to the royal fleet frigates and ships to match the work of the best English craftsmen. In 1800 the port of Calcutta alone contained 100,000 tons of shipping built in India. At present the country practically possesses no shipping except small indigenous craft for coasting trade. When the foreign trade was negligible in quantity she had a large number of ships;

to-day, when the volume of the foreign trade has risen to Rs. 534,76,00,000 (1919–20), it is entirely carried on in foreign vessels, and this in face of the fact that the country possesses all the resources for the successful development of a shipping industry.

2. *Internal Transportation*

(*a*) *Railways.*—Internal communications are conducted through railways, roads, and canals. Some seventy years ago India had not a single mile of railway ; in March 1920 it had 36,375 miles of railway of different gauges—about 18,000 miles of standard or broad gauge (5 feet 6 inches), 15,000 miles of metre gauge, and 3000 miles of narrow gauge (2 feet 6 inches). The variety of gauges, the adoption of differentiating rates which favour the foreign exporter at the cost of even and rapid internal distribution, the lack of uniformity and co-ordination, are the most salient amongst the defects of railway administration in India.

(*b*) *Navigation and Irrigation Canals.*—All irrigation canals in India are not navigable. Irrigation canals must pass through agricultural tracts, while navigation canals must pass through as many industrial centres as possible. Amongst the irrigation canals which also serve the purposes of navigation may be mentioned the Godavari and the Kristna canals in the Madras Presidency, with a total mileage of 878 ; the Orissa canals, 280 miles, the Upper and Lower Ganges canals, and the Kurnool-Cuddapah canal in Madras. Amongst the purely navigation canals may be included the Buckingham canals near the Coromandel coast, 262 miles, the Godavari works, 168 miles, the Calcutta and the Nadia river canals, 288 miles.

In this connection we may note that the civilised world is reaching a crisis in transportation by water for purposes of internal communication. In England railroads are being more largely used. The Mississippi and the Missouri, a wonderful navigable system of nearly 6000 miles, are becoming less and less used to-day, and this in

spite of the relative advantage of cheapness for transportation of heavy material.

(*c*) *Roads.*—Considering the vast area of the country and the colossal magnitude of its internal trade, one might well complain of a culpable neglect of the problem of road construction in India. In 1920, out of a total mileage of 20,523,800, 5,662,000 miles were metalled roads (mainly for military purposes) and 1,489,000 unmetalled. During a century of British rule there has been no appreciable progress in the making of roads; the main metalled roads now in existence were constructed by the Moghuls; and if new roads have been constructed, many of the old roads have been neglected.

3. *Transmission of Power*

All economic production to-day in some way involves the use of natural power. Such power may be generated out of coal, wood, oil and alcohol, wind and water. The output of coal in India increased from 5,000,000 tons in 1899 to 22,600,000 tons in 1919. The total coal resources of India from deposits known to geologists amount to 79,000,000,000 tons. This low annual output may be ascribed to antiquated methods of work, lack of proper machinery, and the lower efficiency of the miner. Fuel (wood) is used for domestic purposes, and in a few minor industries. But the fuel supplies of India are limited. The forests are far away from industrial centres; they are being rapidly exploited, even though managed and controlled by the Government; afforestation is not systematically carried out, and vast tracts adapted to afforestation are left unutilised. This process of impoverishment of the earth in the matter of forests is not confined to India. Owing to facilities for the transportation of timber, the civilised world, more especially the north temperate zone, is gradually being denuded of forests, and this in spite of the growing economic importance of timber for mines, for railroads, for posts for telegraph wires, for pulp for making paper, and so on.

As regards oil India's potentialities are not definitely ascertained as yet. The oil-fields which exist in the Punjab and Assam have not been worked. The total quantity of petroleum obtained mainly in Burma was 293,000,000 gallons in 1920. The potentialities of water power in India are equally unexplored. The rainfall being seasonal, there is a tremendous waste of water which could be prevented by the construction of storage works for the generation of electric power. Prof. Shiva Narayan observes: "The rainfall and snowfall over India could provide potential energy equivalent to some thousand million kilowatts."[1] It has been estimated that for years to come, even with intensive industrialisation, India will not require more than 10,000,000 kilowatts a year. Amongst the hydro-electric plants now working in India may be noted the Mysore plant at Shivasamudram, which supplies power to the Kolar gold-fields and the city of Bangalore, and the Tata plant, which supplies power to a number of mills and to the Bombay Electric Supply and Tramway Company. But there are enormous reserves of water-power in the Himalayan watersheds which, if properly tapped, might convert the Punjab into an industrial district with a flourishing trade unrivalled in the rest of the world.

4. *Transmission of Intelligence*

The transmission of intelligence reduces any handicap of physical location. The different methods of transmitting intelligence have revolutionised modern industrial structure and have made the whole world one market. India is not left untouched by these changes. The isolated life of a village or a district is now a thing of the past. The whole of India is now one market, closely connected with the world market. These facilities for transmitting intelligence are provided by posts, telegraphs, telephones, and aviation.

(*a*) *Posts and Telegraphs.*—In 1921 the total number of

[1] *Hydro-Electric Installations in India*, 1922, p. 2.

post offices in India was 19,496; and the total number of cards, letters, newspapers, etc., dealt with amounted to 1,375,261,000. The total number of telegrams, inland and foreign, was 19,000,000 in the same year.

(*b*) *Telephones.* — In 1921 the number of telephone exchanges established by the Department was 255, with 10,000 connections. The number of telephone exchanges established by companies was 11, with 20,000 connections.

The distribution of commercial intelligence in advanced countries is undertaken by Governments, and intelligence is supplied to the public by Boards of Trade and Commercial Intelligence Bureaus free of charge. In India very little has been done in this direction. There are a Commercial Intelligence Bureau and a High Commissioner in London, but they are channels for communication of information about Indian markets to English merchants rather than for spreading information in India about foreign markets. The work done by the Directors of Information in the provinces and the Central and Local Publicity Bureaus is disappointing; and the Indian Chambers of Commerce have not yet realised the need for work along these lines.[1]

There are, further, no facilities or opportunities for trade open to Indians in foreign countries. India has no consular system, no commercial agents or representatives in foreign countries to safeguard Indian interests or supply information. Finally, such commercial information as is available in Government reports and blue books and bulletins is issued in a foreign language, and does not reach the mercantile population for whom it is intended.

[1] Cf. Sir Sankaran Nair's minute of dissent attached to the despatch of the Government of India on the Reforms: "We know now that there are trade commissioners whose business it is to find out the natural resources and facilities for trade—English trade in particular —that exist in the country. The results of their observations are to be made the basis of expert advice as to the best mode of utilising those natural resources in the interests of the English trade."

B. Climate

From an economic point of view the unfavourable effects of adverse climatic conditions can be counteracted, or at any rate modified, by the preservation and plantation of forests and by the supply of canals and other means of irrigation in tracts which are dry or deficient in water supply.

1. *Forests*

The chief direct effects of forests upon climate are: (1) screening the soil from the rays of the sun; (2) exposing an immense leaf surface for the cooling process of radiation; and (3) giving off moisture in evaporation. Indirectly we gain through forests greater equability of temperature, humidity, and rainfall; thus they regulate the flow of rivers, prevent floods, and furnish springs with a perpetual supply of water. Thus nature maintains, through forests, the moisture necessary for the life of men and beasts. Forests, moreover, supply timber, fuel, material for paper, and a variety of valuable substances such as cork, bark for tanning, gums, dyes, drugs, and articles of food. The short-sighted policy of the Government in the early days of British rule resulted in the destruction and exploitation of forests in India, very many parts of the country once covered with forests being now bare and treeless. Even to-day the Government is not alive to the need of a vigorous forward policy of arboriculture and sylviculture. Of the total area of British territory in India (622,468,000 acres) only 14 per cent is covered by forests, 23 per cent is not available for cultivation, 18 per cent is cultivable waste other than fallow, 9 per cent is current fallow, and 36 per cent is actually cultivated land. Thus about 41 per cent of the total area is available for afforestation. Of the total forest area (241,000 square miles) less than a quarter has been brought under scientific management; 100,000 square miles are classified as reserved, whilst 141,000 square miles of forest area are unclassed.

2. *Irrigation*

Irrigation has been practised in India on a large scale from time immemorial. Irrigation regularises and economises water supply. In India the rainfall is extremely uncertain; and it has been assumed that cultivation is safe only where the average annual rainfall is more than 70 inches. In other areas irrigation has considerable economic value. The Famine Commission of 1903 estimated that a tract of nearly a million square miles could not in the absence of irrigation works be deemed secure against the uncertainties of the seasons and the scourge of famine, and yet no attempts have hitherto been made to insure these tracts against the danger by irrigation works. Most of the main canals now in working order were in existence before the advent of our British rulers. There are three classes of irrigation works in India: (*a*) lift wells; (*b*) storage tanks or reservoirs; (*c*) river works or canals—either perennial or inundation, the former seldom getting dried, whilst the latter are full of water only at flood time. The total area irrigated in 1919–20 was 48,963,000 acres, or 21 per cent of the total cropped area; of this, 41 per cent was irrigated from Government canals, 5 per cent from private canals, 16 per cent from tanks, 25 per cent from wells, and 13 per cent from other sources of irrigation. If the recommendations of the Famine Commission of 1880 and the Irrigation Commission of 1902 had been carried out, India would now have an area under irrigation twice as large as she actually has.

Irrigation by tanks has also been considerably neglected. The economic importance of tanks was sufficiently realised in the past. Every village has to-day traces of a tank. In the Madras Presidency alone there are about 50,000 tanks, irrigating from two to three million acres. Many of the largest of these are allowed to go out of use; new ones are not constructed; and the local boards, for lack of funds, cannot keep old ones in repair.

Wells are in a still more hopeless condition of neglect. Whilst old wells are going out of use, new ones cannot be constructed by the impoverished agriculturists.

C. Geology

1. *Surface Soil*

Improvement in surface soil can be brought about in two ways: (*a*) by improving the fertility of cultivated land, and (*b*) by the reclamation of hitherto uncultivated land.

Soils differ in fertility and possess different chemical ingredients; and the fertility can be preserved by manuring and scientific methods of cultivation. Owing to the controlling influence of manuring and scientific culture land has come to be regarded as a product of human effort and not merely as a gift of nature, so much so that in civilised countries the tenants are allowed to take away a certain depth of the soil on the expiry of the lease. Chemical manures are unknown in India. Even the manures that were in use a hundred years ago are now falling out of use—firstly, owing to a lack of capital on the part of cultivators; secondly, owing to the increasing export of oil-seeds, cotton, and other products which remove a considerable amount of the soil constituents; thirdly, owing to the increasing use of cow-dung as fuel —a natural manure once largely used for agricultural purposes. Hides and bones are exported instead of being used as manure. Straw, stalks and leaves are the only constituents of the soil that are returned to it, and of these only a portion, and a very small portion.[1] Under these circumstances it is not surprising to find that the history of Indian agriculture in the last hundred years is a history of progressive and continuous exhaustion of the soil. The alluvial soils of the north and the black

[1] Cf. Dr. J. A. Voelcker, *Report on the Improvement of Indian Agriculture*, pp. 39 and following.

cotton soils of the Deccan have preserved their fertility in spite of a lack of manure; but the soils in Peninsular India have been undergoing exhaustion.[1] It has been suggested that the law of diminishing returns has already come into operation in India, and that there has been an organised robbery of the soils.[2] Messrs. Norris and Sampson reported in 1919 that "India suffers from soil exhaustion due to want of manure, and also due to the export of seeds, bones, etc.," and they advocated the stoppage of these exports.[3] It has been stated that the present production does not amount to one quarter of what the land ought to produce.

The fertility of the soil is also kept up by the methods of cultivation. The Indian cultivator was familiar with the principle of rotation of crops, practised mixed cropping, and in Peninsular India where there is no congestion of population he still allows cultivated land to be fallow for years, to enable it to recuperate its powers. These methods have now been falling out of use owing to changes in economic conditions—amongst others, the substitution of commercial crops for food grain.

The reclamation of areas on a large scale for the purposes of cultivation has never yet been seriously resorted to in India.

2. *Mineral Resources*

The potentialities of India's mineral wealth are enormous. It is only during the last three or four decades that her mineral resources have begun to be worked up. In 1919 the value of the minerals produced amounted

[1] Dr. J. A. Voelcker, *Report on the Improvement of Indian Agriculture*, p. 37.

[2] "To continue indefinitely taking any of these life-forming elements from the soil, without adequately replacing them, is robbery, not merely of the soil itself, but of the future generations which have to live upon it. Thus the damage done in the district of Birbhum and over large parts of India to-day is irreparable" (L. K. Elmhirst, "The Robbery of the Soil," *Modern Review*, October 1922).

[3] *Proceedings of the Board of Agriculture at Pusa* (1919), p. 84.

to Rs. 21,85,00,000; the quantity of coal produced was 22,000,000 tons; of manganese ore, 538,000 tons; of wolfram, 3577 tons; of mica, 47,984 cwts.; of copper, 32,000 tons; of rubies, 158,000 carats. The mineral resources of India include coal, gold, petroleum, manganese ore, salt, saltpetre, lead, mica, tin, jade stone, rubies, iron ore, silver, copper ore, alum, potash, chromite, agate, gypsum, amber, graphite, antimony, etc.

D. Flora and Fauna

Flora

So far as the improvement of flora is concerned we have made but slow progress. The Agricultural Department in India was brought into existence on the initiative of Manchester firms with a view to improving the quality of Indian cotton. With the help of the Department striking results have been achieved with both Cambodia cotton and other exotic varieties, and improvements have been secured in the types already grown. Wheat also has been the subject of prolonged experiments, and it has been demonstrated at Pusa that varieties with milling and baking qualities similar to those of the best wheats on the English market could be grown to perfection in Bihar.[1] The cultivation of ground-nut, which was falling off owing partly to the prevalence of a fungoid disease and partly to deficient rainfall, is now kept up and extended owing to the introduction of exotic varieties in Bombay and Burma. Though there are experimental farms for improving the quality of sugar-cane, no substantial results have yet been obtained. India is the largest producer of sugar-cane, and yet the yield per acre

[1] "It has been calculated that a safe estimate of the gain to Indian wheat-growers, if the crops were replaced by varieties like Pusa 12, would be Rs. 15 per acre per year. . . . This means an increase in the near future in the value of agricultural produce of India of 750 lakhs of rupees or five million pounds" (James Mackenna, *Agriculture in India*, p. 45).

to-day is less than one-third that of Cuba, one-fourth that of Java, and one-fifth that of Hawaii. Whilst other countries are growing new varieties of crops with increasing returns, in India even the staple indigenous crops are not grown to their fullest capacity.

Fruit-growing, once carried on on a sufficiently large scale, has now fallen off owing to the increasing poverty of the masses. Good results in fruit-growing have, however, been obtained in Baloochistan and on the Himalayan slopes, and exotic varieties have been introduced, *e.g.* strawberry, oranges, pine-apples. Fodder cultivation is entirely ignored; only in the Bombay Presidency do we find attempts made to utilise cactus as fodder in famine years.

Fauna

The wealth and welfare of a country like India largely depend on the maintenance of a good stock of cattle; and yet it has been admitted on all hands that there has been a decrease in the amount of cattle and a deterioration in their quality. No attention is being paid to their breeding and selection. On the Pusa agricultural farm experiments in cross-breeding and selection have resulted in the breeding of cows that yield 40 to 51 lb. of milk per day in the lactation period. No improvement either in quality or yield of other domestic animals has been recorded. Horse-breeding is unknown, in spite of the demand for horses for army purposes and the prospective demand for agricultural purposes with the introduction of machine ploughs. Hay-making is not practised, and forest grass is allowed to rot. Natural grass is used as cattle food, though no attempt is made to increase the quantity or improve the quality. There is no storage of grass. Even oil-cakes, once used as cattle food, are not now available owing to exportation of oil-seeds.

Finally, it may be noted that rinderpest is working havoc, in spite of the efforts of veterinary hospitals, taking a heavy toll from year to year.

General Reflections

It has been repeatedly observed that as on the one hand niggardliness on the part of nature may by compulsion make men industrious, so on the other the bounties of nature, by making for leisure and plenty, foster invention and discovery and lay the foundations of all progress. The inventive genius of man awakes only in leisure and plenty. Poverty stunts the intellectual life; where body and mind are absorbed in the procuring of the bare needs of physical existence, as among primitive men, there is no room for the play of the sportive instincts. It was in a leisure moment that a human brain accidentally discovered the impetus of a coloured stone as it fell to the ground, and invented the hammer. It was probably the charm and the fascination of the glowing red of fire, and not a perception of its potential utility, that led man to undertake all the trouble of kindling it and keeping it burning in the cause of progress and culture. Even to-day our children, like humanity in its childhood, manifest an ancestral reminiscence in the delight which they experience in kindling bonfires. So also it was the desire for ornamentation, the eye for colour, that led to the use of clothing, and not the need for protection against the effects of climate. The superabundant vocabulary of savage life may be the expression of the fondness for chattering and gossiping, the instinct of communicativeness which marks even the gregarious animals. The discovery of agriculture may be the result of a sudden revelation of the fructifying powers of seeds left to rot on the ground by a tribe supplied with abundance.

It is not difficult to understand, therefore, the conditions which fostered the development of Indian civilisation in the past. Our rapid survey of the natural environment in India has already exhibited to us the vast potentialities of her natural resources. With a soil exceedingly fertile and extensive in area, and with mineral resources of a varied character and rich in quality, India

combines the advantages of large river systems and a sea coast favourable for commerce. But the bounties of nature which thus foster the growth of culture and civilisation may also enervate and emasculate and contribute to national decline. Whereas in the West man has dominated over nature and has converted the most unfavourable and niggardly conditions into the pliant instruments of progress, in the East we have been content to live upon the gifts of nature—nay, we have failed to make the best use of what kindly nature has given. Man has by his inventions modified the effects of unfavourable climate; he has used chemical agencies to make infertile soils fertile; he has multiplied vegetable and flesh foods through agriculture, stock-raising, and the preservation of game and fish; he has levelled hills, filled valleys, drained marshes, built roads and canals, planted forests or cut them down, made and imported stone and metal, and saved his muscular energy by utilising coal and fuel, oil and water for generating power. "He has made the ether carry his messages; he can hear from afar the cry of the ship in distress upon the sea; he can make Niagara drive mills and illumine cities hundreds of miles from the falls." Where in the West nature's limited gifts are supplemented by the production of artificial goods, our country is content only to import and use these goods though nature supplies the potentialities of the natural articles in abundance.[1] There is a criminal neglect of

[1] "If the natural conditions of production are decisive Italy would be forced to restrict itself to the cultivation of wine, tropical fruits, and the like, while as a matter of fact it has manifested a notable growth in prosperity only since the time when by the aid of foreign coal, cotton, wool, etc., it has secured for itself large-scale manufacturing industries. . . . Even in technical consumption, that is, in the use of goods for purposes of further elaboration, the place of natural substance is constantly taken by artificial; examples are coal-tar dyes, artificial indigo, synthetic camphor, cryolite, Norwegian saltpetre, celluloid, galalite, artificial silk, etc. By this change the supply is rendered independent of the frequently scanty deposits of the natural materials, the quantity which can be produced is unlimited and can be adjusted to any demand, the quality is pure and uniform, while in

the natural resources available in India. In the iron and steel industry, for example, in spite of the recent developments, the remark which Ranade quoted from Captain Townshend still holds true: "Endowed more richly in iron ore than any other country in the world, India has in a commercial sense no iron industry at all." From year to year her raw products in the shape of grain, wheat, hides and skins and bones, yarn and wool are exported only to return to her in the shape of high-priced manufactured goods.

Man has hitherto egregiously failed in India to respond to those opportunities which bounteous nature has offered unto him. Now that Western science has been brought to his doors, will he achieve the victory that this knowledge places within his reach? It behoves the rising generation in this country to invoke the aid of scientific knowledge and mechanical appliances for conserving and developing the natural resources of the country. Natural forces have to be harnessed; electrical energy has to be more extensively employed; scientific manures have to be applied to land; mining operations have to be extended and improved; industries have to be organised for the supply of a hundred different articles of daily use. Intensive farming, rotation of crops, improved methods can enormously increase the produce of land; climatic conditions can be turned to serve human purposes by the reclamation of land, by a policy of afforestation, by the construction of canals and the sinking of wells. This is the promise which the future holds out to the present generation if only it can respond to its opportunities; but it is well to remember that increased production and abundance of material wealth are not the end-all of Indian social life. Increased productivity has often meant "a black country and a short drab life." Increased efficiency has often brought with it a diminution of

Nature numerous foreign substances cause difficulty, and finally a considerable cheapening of the raw material supply is usually possible" (Grunzel, *Economic Protectionism*).

freedom of the spirit. Let us remember that man does not live by bread alone, and that increased material resources and increased economy in using them are valuable only in proportion as they foster the realisation of the good life in man and promote the spiritual vitality of society, and make for whatsoever things are true, beautiful, and good.

CHAPTER III

POPULATION

Population and Wealth

The wealth of a country depends as much on the human factor, on the original and acquired qualities of the people, as on the gifts of nature. Much as soil, climate, food, and air affect human activities, the influence of the environment grows less as man advances in civilisation, and this for two reasons. Man is no longer restricted to a single habitat. If he is not satisfied with his environment, he may transfer himself to another climate; and secondly, by his achievements he has been able to acquire a mastery over nature. Thus it is the qualities of the population that determine in every country the extent to which its material resources are converted into wealth. Races differ in the strength of their native propensities. Thus the Northern peoples of Europe are known to be more intemperate than Southern races like the Portuguese, the Spaniards, and the Italians. The emotional susceptibilities of the Italians stand out in relief against the stolidity of the Slavs and the lack of imagination amongst the Scandinavians. And yet many of these traits ascribed to race may have their origin in social history: the Jew's distaste for farming may have been the product of centuries of confinement in the Ghetto; the thriftlessness of the Irish peasant may be traced to centuries of alien landlordism and rack-renting. The dirty habits of

the masses in Italy are ascribed to lack of water in the hilly districts.

As society progresses man becomes less and less dependent on his physical environment and more and more dependent on the human factor. With the best natural advantages a country will make a poor show in wealth production if the people are lacking in energy, enterprise, imagination, and foresight. Thus there is a close relation between population and wealth. Increase of an industrious population directly involves an increase of wealth; but on the other hand, from the standpoint of distribution, an increase of population, *caeteris paribus*, is an increase in the number of people who share in a given sum total of wealth; and if the number of shares is large, the share of each will be relatively small. Thus though from the point of view of production an indefinite increase of population may be desirable, from the point of view of distribution such an indefinite increase, under static conditions, may bring poverty and misery. In every country there is an ideal magnitude of population, a point marked by the highest amount of wealth production combined with a distribution that secures to all classes a sufficiency of the needs of physical existence, a point never reached in practice, but one towards the realisation of which all the complex machinery of our social and economic and political life might well be directed.

The Malthusian Law

All discussions of the population question start with the classical principle of Malthus. Malthus wrote his *Essay on the Principle of Population* as a reply to the equalitarian dreams of writers like Godwin, who pictured a society of men governed by reason, living in plenty, inspired by a spirit of benevolence, dividing the produce of their labour amongst themselves according to their wants. Malthus was struck by the tendency amongst

plants and animals to increase beyond the means of nourishment provided by nature. He pointed out that even if such an ideal condition of social life as Godwin dreamt of was secured, it would not last long, for, whereas to secure its continuance increase of food must in reality precede the increase of population, as a matter of fact population invariably increases beyond the means of subsistence. While population increases in a geometrical ratio, food can only increase under progressive conditions in an arithmetical ratio. This tendency to increase can be prevented by such checks as increase in the death-rate, wars, overcrowding, vice, and misery; or by such preventive checks as diminish the birth-rate, like moral restraint and prudential considerations which can be made more and more operative with the spread of education among the masses. Education alone will raise the standard of comfort and quicken the sense of responsibility. Thus Malthus contended that the pressure of population on subsistence would effectually preclude the realisation of equalitarian schemes of social regeneration. It was also seriously asserted that economic progress was constantly menaced by the danger of over-population. Malthus believed that the ultimate check on the growth of population is want of food, and he traced the distress of the lower classes in England in his times to this tendency to increase.

Increase in Production

It has already been pointed out by critics of Malthus that the ratio or mathematical terms in which he spoke of his law can only be taken as a rough indication of relative rapidity of increase. With regard to the question of food supply the limits are more elastic than Malthus thought. The remarkable development of scientific knowledge and its application to agriculture during the last few decades have vastly increased the food resources

of the world ;[1] the world has become one international market for food ; there are still enormous areas of cultivable land to be utilised, and a still larger extent of land which can be reclaimed for cultivation.[2] Recent scientific developments — the fixation of nitrogen, the experimental study of heredity, the conquest of microbic and parasitic diseases—open up still larger hopes and visions for the future food resources of the world. The war, moreover, demonstrated in the most striking of manners, in the few years that have passed, how enormous is the wastage of productive efforts that results from an individualistic system of production, and how a proper organisation of production can multiply fivefold the wealth that should supply the genuine requirements of a comfortable existence, and not the wealth that satisfies the morbid thirst of an over-refined and softened minority.

Magnitude of Population

Malthus, moreover, had argued on the assumption that agriculture is governed by the law of diminishing returns, whereas in his times the potential resources of manufacturing industries had not yet been sufficiently probed. Even granting this assumption for a moment, a

[1] The following table, though not including all the food grains, gives us an approximate idea of increase in food production during 1895–1918 :

Year.	Corn	Wheat.	Oats.	Barley.	Potatoes.	Rye.	Sugar.
	Million Bushels.	Million Bushels.	Million Bushels.	Million Bushels	Million Bushels.	Million Bushels.	Million Bushels.
1895	2835	2593	3008	916	..	1468	17,779
1915	4213	4175	4389	1560	3044	1586	41,572
1917*	3483	2224	2975	914	2734	434	37,729
1918*	3038	2818	3084	1077	..	529	38,375

* Owing to the effects of war.

[2] Taking out the mountains, the deserts, and the irreclaimable swamps, there is left a total area of 13,000 million acres of land available for cultivation : out of this total about 5000 million acres are already under cultivation. Cf. E. M. East, "The Future Food Products," *World Agriculture*, vol. ii., 1921, pp. 130-32.

surplus population in the agricultural industries in any one country can be easily absorbed by manufactures. A country can be said to be over-populated, from this point of view, only when the returns from all industries taken together — agricultural and manufacturing — are diminishing—that is, when the diminishing returns from agriculture are sufficiently large to wipe off all increasing returns from manufacture. But this reasoning can hardly be regarded as sound. In every industry there is a point of maximum return, up to which increase of capital or labour or both is attended by increasing returns; beyond this point further increase of capital or labour or both is attended by a decreasing proportionate return. It is possible in every country to locate with approximate certainty this point of maximum production in all its industries. If the magnitude of the population in any country does not come up to this point of production, the returns will be less, and the remedy is to increase the population. If on the other hand this point is passed, returns will again be less, and the remedy may lie in a decrease of population.[1]

Further, when judging of the magnitude of the population of a country we must never lose sight of the fact that the distribution of the wealth produced is as vital a factor as the total amount of the wealth. The same amount of wealth more equitably distributed will support a larger population than when its distribution is marked by gross inequalities.

Finally, it has been observed that during the last century countries like Great Britain and Japan have been

[1] Cf. Cannan, *Wealth*, pp. 69 and following. Owing to control over Nature acquired by the application of new scientific ideas the world to-day supports "a vastly increased population in a degree of comfort far surpassing that enjoyed by any generation of our ancestors" (Ramsay Muir, *Liberalism and Industry*). Moreover, the marvellous increase in production is not confined to articles of food. The world's coal and pig-iron production has increased during the last century and a quarter by a hundredfold; cotton production has increased twentyfold, shipping eightfold, railway mileage three thousandfold, and the telegraphs three hundredfold.

able to maintain a disproportionately large population with a relatively high standard of living by exploiting industrially backward countries. With the growth of nationalism (already assuming a somewhat hysterical form) this process of exploitation of approximately a billion souls will sooner or later cease; the backward countries will build up their industries, and Great Britain and Japan may find it increasingly difficult to support their enormous populations, and may be faced with an acute problem, with the shutting up of foreign markets, and the falling off in emigration.

The Fall in Birth-rate

In the fifty years that followed the warnings of Malthus the population of the civilised world much more than doubled in number, and yet it was better fed than in the beginning. This was due to giant strides in the art of cultivation, to the extension of cultivated areas, and the introduction of steam transportation. From the 'seventies of the last century, however, a fall in birth-rate manifested itself in France, England, Belgium, Holland, Switzerland, and other countries. In the United States the proportion of children under five years to women of child-bearing age shrank 35 per cent between 1860 and 1910. The birth-rate in England sank from 36 per thousand in 1876 to 24 per thousand in 1920. The causes of this declining birth-rate may be many and various: [1]

[1] Cf. Marshall: "On the whole it seems proved that the birth-rate is generally lower among the well-to-do than among those who make little expensive provision for the future of themselves and their females and who live an active life, and that fecundity is diminished by luxurious habits of living. Probably it is also diminished by severe mental strain: that is to say, given the natural strength of the parents, their expectation of a large family is diminished by a great increase of mental strength" (*Principles of Economics*, p. 264). Compare also Bertrand Russell: "Malthus's statement of the population question had been true enough up to the time when he wrote. But it has become false as regards the more civilised half of the population

(*a*) The selfish who desire to rise in life may find children an impediment, and the unselfish will not desire more children than they can well equip for the battle of life.

(*b*) The craving for luxuries and the rise in the standard of comfort may also lead to restriction.

(*c*) A heightened appreciation of the value of human life may make parents unwilling to bear the responsibility of many children.

(*d*) The emancipation of the gentler sex may have resulted in making them unwilling to bear the burden of maternity.

(*e*) A diffusion of the knowledge of means of birth control as it filters down from stratum to stratum of society may also increase the proportion of limited families.

The world is thus witnessing to-day an increase of population much less rapid than Malthus imagined; and as Malthus and his immediate successors looked with alarm at the continuous rise in birth-rate in the early Victorian period, so in our times wise men look with alarm at the declining birth-rate. But a declining birth-rate may often make for national strength and stability by lowering the death-rate and raising the health-rate. It has been often pointed out that one of the conditions which make a nation a menace to others is a high birth-rate accompanied by a low death-rate. To-day the decline affects all nations alike, and makes no difference to the numerical proportions of the European rivals. But the alarm is not confined to the lowering of the general

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in Western Europe and America. Among them instinct no longer suffices to keep numbers even stationary. We may sum up the reasons for this in order of importance as follows: (1) The expense of children is very great if parents are conscientious; (2) an increasing number of women desire to have no children, or only one or two, in order not to be hampered in their own careers; (3) owing to the excess of women a large number of women remain unmarried. . . . The war has opened many employments to women from which they were formerly excluded, and this change is probably only in part temporary" (*Principles of Social Reconstruction*).

birth-rate; it is a differential decline; it affects certain sections of the community more than others. The less desirable—the thriftless, the unsteady, the careless—tend to be the most prolific, while the thrifty, the educated, the self-restrained, tend to be the least prolific. Here again the situation may not be so bad in reality; the high birth-rate amongst the thriftless may be accompanied by a high death-rate, and it is not so easy to distinguish between the socially desirables and the socially undesirables as the argument assumes.

J. Arthur Thomson sums up the issue in words which we think well worth quoting:

> It may be that the period after a terrible war is a time for recuperating, and not for further reduction of the population. Moreover, not marrying at all, or not marrying till late, or not having a family, seems on the average a very regrettable policy, both biologically and ethically. But it is quite another thing to say that the decline of the birth-rate within limits of safety is altogether a bad sign. The following considerations on the other side must be kept in view.
>
> The diminished birth-rate may tend to improve the health of children and mothers. It may tend to substitute quality for quantity. It may make life less anxious, more secure, and with greater possibilities of fineness. Associated with birth control, it makes earlier marriages more feasible. The control of the birth-rate makes for the independence of women and increases their opportunities for self-development. If the decline of the birth-rate proceeds more or less uniformly it will work against war; and if war still persists, a restriction of numbers will keep it from being still more terrible than now in its wastage of human life.[1]

Population in India

Magnitude and Distribution

It may be difficult to locate in precise terms the point of maximum returns for all industries in this country, or in any one country; and on this depends our estimate

[1] J. Arthur Thomson, *The Control of Life*, ch. vii.

of the magnitude of population that the country can support. Every country from an economic point of view is groping its way towards the determination of these limits by a process of experimentation, of trial and error; no country can arrive at it scientifically by reasoning and calculation. In the second place, if the ideal magnitude of the population depends on an estimate of the point of maximum returns for all industries, we have to take into account the distribution of the population according to vocations.

Now the main industries of a country may be divided into the primary and the secondary.[1] Primary industries are either genetic or extractive, and secondary industries may be divided into manufacturing, transporting, storing, and merchandising. In addition to these there are personal and professional services, *e.g.* those of doctors, teachers, clergymen, soldiers, actors, etc.

The comparative table on the following page is based on the Census figures of 1911 (the detailed Census figures of 1921 are not yet available).

The figures, so far as they relate to France and the United States, bear witness to the even distribution of the population, and to the many-sided economic activities

[1] Carver in his *Principles of Political Economy* (p. 192) gives us the following classification of industries:

- Ways of acquiring Economic Wealth.
  - Primary Industries.
    - Extractive.
      - Hunting.
      - Fishing
      - Grazing.
      - Lumbering.
      - Mining.
    - Genetic.
      - Agriculture.
      - Forestry.
      - Fish culture.
  - Secondary Industries.
    - Manufacturing.
    - Transporting.
    - Storing.
    - Merchandising.
  - Personal and Professional Services.
    - Healing.
    - Teaching.
    - Inspiring.
    - Governing.
    - Amusing, etc.

Occupation.	India. Percentage of Total Population.	France. Percentage of Active Population *	U.S.A. Percentage of Active Population.	England. Percentage of Active Population Figures of 1901.
Production of raw materials (exploitation of surface of the soil and extraction of minerals) . . .	72·44	42	44	10
Preparation and supply of material substances (industry, transport, trade)	18·56	44	36	58 + 16 (Trade)
Public administration (public services, liberal arts, professions, persons living on income) . . .	3·48	14	20	16
Miscellaneous (domestic service, unproductive and unspecified) .	5·52			

* That is, people between the ages of fifteen and sixty-five.

which secure a relative stability of economic life. No one country in the world to-day need endeavour to lead an insulated, self-sufficient economic life, even if it can; but as in the case of an individual relatively better endowed with natural gifts a many-sided life is the expression of the full life, so in the case of a country endowed with natural resources a many-sided, well-balanced economic life is but the expression of its rich national existence. As the late Justice Ranade observed: "A due co-ordination of the threefold forms of industrial activity, even if it be not most immediately advantageous to individuals in any one period, is a permanent national insurance against recurrent dangers, and as such is economically the most beneficial course in the interests of the community."[1] The figures with regard to India, with 72 per cent of the total population dependent on agri-

[1] *Essays on Indian Economics* (1906), p. 28.

culture, point to the necessity for a redistribution of the population, especially in view of the vast potentialities for industrial development which the country possesses..

Magnitude of the Population and Agriculture

The most important industry of India is agriculture, on which nearly three-fourths of the total population are dependent. One might suppose that with such a large proportion of the population engaged in agriculture, the industry must have already reached the point of maximum production. But both from the point of view of intensive as well as extensive cultivation, there is still a vast scope for increased production. From the point of view of extensive cultivation we find in 1919–20 that out of the total land area in India 28 per cent is covered with forests, 23 per cent is classified as not available for cultivation, 18 per cent as cultivable waste other than fallow, 9 per cent as current fallow, while the actual net area under cultivation is 36 per cent. Excluding the forest area and the area not available for cultivation, we have 27 per cent of the total area still available for extending cultivation without any difficulty. If this entire available acreage were brought under cultivation, we should require approximately double the number of agricultural labourers. Even assuming the truth of the contention that the present agricultural population is in many places in excess of what is required for the thorough cultivation of the land, all the surplus population could be easily absorbed if the 63 per cent of the cultivable area is to be brought under cultivation.[1]

From the point of view of intensive cultivation there is unlimited scope for increased production. Intensive cultivation is still unknown in this country. The existence

[1] It is officially stated that the probable increase of produce from the Sukkar Barrage scheme alone will be over 32 million maunds, made up as follows: rice, 3,700,000 maunds; wheat and barley, 23 million maunds; cotton, 4 million maunds; and oil-seeds, 2 millions and a quarter.

of small holdings and the subdivision and fragmentation of land make scientific farming very difficult. Manures are hardly used, and the farmers simply exploit the gifts of the soil. Whereas the yield of wheat per acre in Bombay and the United Provinces is only 1250 lb., in the United Kingdom the yield per acre is 1973 lb., and in Switzerland with its rocky soil it is 1358 lb. So also the average yield per acre of barley in the United Provinces in 1921 was 1300 lb. as against 2105 lb. in the United Kingdom, 2935 lb. in Belgium, and 2198 lb. in Switzerland. The average yield of rice in this country is only half of what it is in Japan. The average production per acre of sugar is one ton, whereas in Java it is 4 tons, and in Hawaii 4½ tons. There are thus vast potentialities of growth in production with improved scientific methods, with the help of manures, improvement in seeds, and rotation of crops.

With regard to genetic industries like forestry and fish culture we can safely assert that they are still in infancy and have vast potentialities before them. And much the same observation may be made with regard to the mining industries. It has been pointed out that the annual production of timber and firewood could easily be doubled, possibly trebled, under intensive management. The Industrial Commission speaks of the large supply of food which can be obtained from deep-sea fisheries by trawling, netting, or line fishing.

Magnitude of the Population and Secondary Industries

When we turn to the secondary industries the same phenomenon strikes us. With regard to manufactures the Indian Industrial Commission sums up the situation in the following terms: "The industrial system is unevenly, and in most cases inadequately developed; and the capitalists of the country, with a few notable exceptions, have till now left to other nations the work and the

profit of manufacturing her valuable raw materials, or have allowed them to remain unutilised." As regards transport, transportation facilities in the country are not adequate when we consider its vast area and its ever-increasing trade. Facilities for inland transportation are provided by railways and roads. About railways the Acworth Committee (1920–21) state: "For years past, even long before the war, public opinion in India has constantly complained of the entire inadequacy of the Indian railway system to meet the needs of the country," and the Committee endorse this opinion. In the case of roads, as we have pointed out before, only a beginning has been made. As for external transportation India has no mercantile marine, with a total foreign trade amounting to 60,000 lakhs of rupees (1920–21).

With regard to personal and professional services, whilst in the United States nearly 20 per cent of the active population is engaged in these services, in India the proportion is 5 per cent of the total population.

In view of the large scope for increased production in every direction, and in view of the increased demand for men in the personal and professional services, it is safe to assert that we have not yet reached, nay, that we are still far below the ideal magnitude of population that the country can support.

The Cry of Over-population

In the face of these facts it is amusing to be told that India is over-populated. We are informed by Harold Cox that "it may reasonably be inferred that India is already overfull of human beings."[1] The official view

[1] "Overcrowded India," *Asia*, October 1922. Cf. P. K. Wattal, *The Population Problem in India*. See also Masterman, *England after War*. The theory of geometrical progression in race increase and arithmetical progression in products "still prevails by the operation of the law of diminishing returns in such regions as Malthus saw it working in, Ireland and India, where an increasing population is limited to a definite piece of ground which cannot be tilled and fertilised into unlimited productivity."

supports this idea, and even Indian economists share the view. The Fiscal Commission of 1922 observe that in normal times there is a considerable export both of rice and wheat from the country. "It is not asserted that people who have money to buy food are unable to procure it. It is not really the insufficiency of the total food supply so much as the fact that certain classes of the population are too poor to buy all the food they require which is urged by these critics." If the people have not money to buy food, the country cannot be said to be necessarily over-populated. Even with a considerably reduced population the same poverty may exist if causes like a continuous drain of wealth continue to exist. If as a matter of fact people are too poor to buy the necessary food, the remedy may lie, not in reducing the numbers of the population, but in the conservation and extension of food resources, in the development of industries, and in stopping the continuous drain of wealth that has marked the relations of Britain with India during a century and more—the drain in the shape of direct tribute on the one hand and in the form of exports of raw materials on the other.[1]

[1] Cf. Dadabhai Naoroji ("Condition of India," Correspondence with the Secretary of State for India): "There is the stock argument of over-population. They talk, and so far truly, of the increase by British peace; but they quite forget the destruction by the British drain. . . . As long as the English do not allow the country to produce what it can produce, as long as the people are not allowed to enjoy what they can produce, as long as the English are the very party on their trial—they have no right, and are not competent to give an opinion whether the country is over-populated or not. In fact, it is absurd to talk of over-population, *i.e.* the country's incapability, by its food or other produce, to supply the means of support to its people, if the country is unceasingly and forcibly deprived of its means or capital. Let the country keep what it produces, and then can any right judgement be formed, whether it is over-populated or not. Let England first hold hands off India's wealth, and then there will be disinterestedness in, and respect for, her judgement. The present cant of the excuse of over-population is adding a distressful insult to agonising injury. To talk of over-population at present is just as reasonable as to cut off a man's hands and then to taunt him that he was not able to maintain himself or move his hands."

Strange sidelights are sometimes thrown on a question like this—as to the relation between population and food resources—by representative British economists and spokesmen themselves. For example, Mr. J. A. R. Marriott, writing in January 1923, in an article in which he criticises communistic proposals says:

> It is imperative to face facts, and as we face them a suspicion gains ground that in this country (England) we have reached, if we have not passed, the limits which nature has set to population. Mr. Pringle, who can hardly be regarded as a representative of hard-faced capitalists, gave expression to this suspicion in the debate on the Address. "The problem before this country, to-day," he said, "is not the solution of the old problem of unemployment, it is the question of whether this country is going to be able in future to support its population." That indeed is a question of supreme moment. But for this "hideous capitalistic system" it is doubtful whether this country ever could have sustained at the outside more than about 15 million people. The excess of that number, numbering more than 35 millions, are maintained by the imports which are purchased by the exported produce of the British industry.[1]

Judged by food resources alone England to-day can maintain scarcely a third of her present population; judged by food resources alone India can maintain a considerably greater population. But the difference between the two lies in the simple fact that the people of Great Britain depend to some extent on the food produced by India and on the industries maintained by India's raw produce, whilst the people of India, impoverished by this process and deprived of what nature has granted to them, have to listen to the platitudes about over-population inspired by capitalistic Imperialism.[2] Nothing again

[1] J. A. R. Marriott, "Capitalism, Communism and Unemployment," *Fortnightly Review*, January 1923.

[2] We have a typically frank confession of faith of this capitalistic Imperialism in a speech by Joseph Chamberlain: "The empire . . . is commerce. . . . It was created by commerce, it is founded on commerce, and it could not exist a day without commerce. . . . For these reasons, among others, I would never lose the hold which we now

can be more foolish than the contention that the British rule has removed many of the checks to the growth of population in India, and that therefore the effect of a single failure of harvest is to precipitate famine conditions. In a recent work on Population Mr. Harold Wright observes, for instance :

> In India, too, the population has been increasing with disquieting rapidity owing to the removal by British rule of many of the checks to population which formerly prevailed ; and it is probable that the recurrence of famines in that country is partly attributable to this increase. In large parts of India people are entirely dependent upon agriculture, and the harvest is so completely destroyed by a single monsoon failure that the labourer is thrown out of work for a whole year. It is clear, therefore, that an increase in population which absorbs the whole surplus of a normal harvest may transform the effect of a monsoon failure from unemployment into famine. . . . It is only suggested that the growth of population may account for the fact that famines still occur in India in spite of the measures which have been taken to prevent them.[1]

There can be nothing so misleading as this suggested analysis of economic distress in times of famine in India. The increase in production of food-stuff during the last three decades is more than proportionate to the increase in population in the same period ; and if this excess remained in the country it would feed a much larger population than at present. And secondly, even if the population is increasing, as under normal conditions it should increase, the increase is due not so much to the spread of prosperity and peaceful development, as Mr. Wright suggests, but to the growing poverty of the masses which makes them indifferent to all prudential considerations. The history of Ireland, with a dominant

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have over our great Indian dependency—by far the greatest and most valuable of all the customers we have or ever shall have in this country" (*Foreign and Colonial Speeches*, by the Rt. Hon. Joseph Chamberlain, 1897, pp. 101-2, 131-33).

[1] *Population*, pp. 66-7.

agricultural population, bears witness to the same tendency fostered by a desperately low standard of living.[1]

To be brief, the problem of population does not depend upon the relation between population and food as Malthus thought; but between population and total wealth of the country. As Seligman says, it is not a question of mere size, but of efficient production and equitable distribution. In India we have neither efficient production nor equitable distribution—what is worse, the wealth produced in the country is not all distributed within the country. In view of the untold natural resources of the country still awaiting development, India can maintain an enormously larger population than at present, and it is foolish to argue from the assumption of an over-populated India as cause to the prevailing poverty and misery as effect.

Growth and Density of Population

The total population of India, according to the census returns of 1921, is 318,942,000, as compared with 315,156,000 in 1911; thus there has been an increase of less than 4,000,000 or a rate of increase of 1·1 in the decade. The following comparative figures will speak for themselves:

[1] Cf. George O'Brien, *Economic History of Ireland* (1921), pp. 72-73: "In a country where diet had been reduced to the simplest compatible with the maintenance of life, there were to be found no prudential checks to a reckless multiplication of the race. The general standard of subsistence was so low that it could not be further reduced except by actual starvation. In such a state of affairs there was no motive which could operate to discourage early marriages and the propagation of an abundant offspring."

"The rapid increase (of population) in India, as in some of the other Oriental countries, is due partly to economic conditions, to low standards of living and the exceedingly harsh economic exploitation of the people, to the social subjection of women and the resultant lack of education, and perhaps, most of all, to the religious doctrines which enjoin marriages" (Lydia de Vilbiss, *Birth Control*, p. 83).

PERCENTAGES OF INCREASE OF POPULATION

Name of Country.	1881–91.	1891–1901.	1901–11.	1911–21.	Total.
England and Wales .	11·7	12·1	10·5	4·8	39·1
U.S. of America . .	25·5	20·7	21·0	14·9	82·1
India	13·2	2·5	7·8	1·1	24·6*

* The real increase is hardly 15 per cent, because of the large additions of territory made during these years. Moreover, the census returns of the early decades were far from accurate. It is stated officially that between 1872 and 1911 there was an increase of only 19 per cent.

In Japan the population increased from 42,708,000 in 1896 to 77,961,000 in 1920, an increase of 83 per cent in twenty-four years. It is stated that the population in Japan increases by 600,000 to 700,000 every year. In Russia the population rose from less than 100,000,000 in 1890 to about 150,000,000 in 1914, an increase of 50 per cent in twenty-four years. It is clear that the increase of population in India is not as great as in other countries —it is not even normal.

The number of people a country can support per square mile depends on the natural resources and the use made of these by the people. A highly industrialised country with intensive agriculture has the largest density of population, as will be seen from the following table:

NUMBER OF PERSONS PER SQUARE MILE IN 1921

Belgium . . .	658	Germany . . .	311
England and Wales .	649	Japan . . .	320
Netherlands . .	536	Switzerland . .	236
Italy . . .	316	India . . .	177

Judged by food production alone England and Wales have a density of population infinitely beyond what the soil can maintain; this population is supported on the imports of foreign food-stuff which the country obtains in exchange for her exports, and we might well argue that England is over-populated: yet we are often faced with the warnings and fears of Imperialist organs and enthusiasts that Great Britain is falling off

in the rate of increase of her population and that she may be crowded out of her world empire " by Jews and Chinamen and Indians, and the various races at present deemed uncivilised." [1]

Though the average density of population in India is 177 per square mile (223 per square mile in British territories, 100 in native states), the variations in density range from 551 per square mile in Bengal to 72 in the North-West Provinces and 39 per square mile in Upper Burma. The determining factors are fertility of the soil, rainfall, irrigation, systems of land tenure, and, of late, to some extent, industry and commerce.

Distribution of Population between City and Country

In a country with a many-sided economic life the population is fairly distributed between the towns and rural areas. The over-concentration of population in rural or urban areas gives rise to serious problems of an economic, social, and political character. Before the influx into the country of cheap machine-made goods the population in India was evenly distributed as between the towns and rural areas.[2] The fundamental basis of economic life was the self-contained village which supplied all the needs of the villagers. The urban centres possessed more or less the same features—they were villages on a larger scale, with this difference, that they obtained their food-stuffs from the rural districts in exchange for their manufactured products. The Industrial Revolution in Europe brought with it far-reaching changes of a social and economic character, and affected the distribution of population. The artisans and craftsmen who were deprived of their means of livelihood by the introduction of machinery were absorbed in the cities into the rapidly multiplying factories ; and these factories attracted large

[1] See Masterman, *England after War*, p. 165.

[2] *I.e.* about 40 per cent in towns, 60 per cent in rural areas.

numbers from the rural areas besides, who added to the congestion of cities. The application of mechanical power to transportation, and the introduction of machinery into farming, tended towards the same result. In India, on the other hand, the introduction of machine-made goods and imports of cheap commodities from abroad destroyed the native industries and undermined the prosperity of the towns which were the seats of Indian arts and crafts, and compelled the urban population to take to the land again as a means of livelihood. Thus while in other countries the era of machinery and capitalistic production resulted in the urbanisation of population, in India it led to increasing ruralisation. India was transformed from a manufacturing and industrial country into a predominantly agricultural country. This progress of ruralisation in modern India "means its rustication, that is, a loss of power, of intelligence and self-dependence."[1] This harmful process was accelerated by the fiscal policy of the British Government, inspired by the idea of converting India into a market supplying raw materials for British industries and into a dumping-ground for British manufactures. Thousands of artisans thrown out of occupation were driven to the villages, with a lowering of the standard of life and the destruction of economic equilibrium.

In a country dominantly agricultural there is a tendency to stagnation and lack of enterprise and persistence in antiquated methods of production. Progress comes from towns where corporate life is developed by active social intercourse and contact of mind with mind resulting in mental keenness and elasticity.[2] At present only 9·5

[1] Ranade, *Essays on Indian Economics* (1906), p. 29.

[2] "A country industrially undeveloped tends to suffer from a certain intellectual deadness. The outlets for diversity are few. Those who might have shone in a wider sphere have their energies and ambition cramped in the mould of uniformity. It is hardly too much to say that a certain measure of industrial life and opportunity is an essential condition for building up a vigorous national character. And with regard to India the effect on the national character is likely to be

per cent of the population in India are found in towns as compared with 78 per cent in England and Wales, 51·4 per cent in the United States of America, 42·2 per cent in France, and 45·6 per cent in Germany. There are only 30 cities with a population of over 100,000, with an aggregate population of 7,075,000 or 2·2 per cent of the total population, as compared with England which has 44 cities with 45 per cent of the total population and Germany with 47 cities containing 21 per cent of the total. The number of towns containing populations varying from 5000 to 99,000 is 2224, while the number of villages is 730,000. The introduction of machinery, the establishment and multiplication of factories, the development of trade, and improvement in the means of communication and transportation have to-day resulted in an influx of people from villages into towns. Old manufacturing centres are reviving, new centres are being formed; towns in India are bound to grow with the growth of industries and trade. These towns will create their own economic problems; but it is of the utmost importance that we in India who are on the very threshold of industrial development should gain by the experience of the West, and steer clear, as far as we can, of the evils —social and economic—that have marred and defaced industrialism in the West with its congestion, slums, unemployment, and destitution. Large-scale production and machine-made goods must constitute the basis of all economic life in the present day; these of themselves are not linked with unemployment and slums; and if the country can adjust itself to these conditions without

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particularly marked and particularly beneficial" (*Report of the Indian Fiscal Commission*, 1922, p. 28).

Cf. Ross who, speaking on American conditions, says: "The city drains from the country the young unencumbered adults, leaving an excess of children and aged. A third of our city dwellers are in the age group, twenty-five to forty-four years, but only a quarter of our country dwellers. No wonder the growing city throbs with energy and hope, while the traits characteristic of the depleted country-side are deliberateness, reserve, and conservatism" (*Principles of Sociology*, p. 23).

the accompanying features of individual unorganised production and capitalistic gambling, it will be laying the foundations of a healthy national development.

Distribution on the Basis of Sex

The distribution of population according to sex has economic bearings, in so far as it affects the labour supply through marriages and fecundity. With the exception of the depressed classes and women in the lower social strata, women in India can scarcely be said to be producers of material wealth. Not that they are parasites. They perform most valuable social service—specially in nursing the living wealth of the country, the infants. Of the total female population of 152,642,000, the number who belong to the working age 15-40 are 61,908,000. 47,000,000 are returned as actual workers, but these include girls below 15 and women above 40. Where the earnings of the male members of a family are not sufficient, they are supplemented by the earnings of women.

Throughout Europe there is an excess of females. The number of females per 1000 males varies from 1093 in Portugal, 1068 in England and Wales, to 1013 in Belgium and Ireland. In India there is an excess of males over females. In 1921 there were 945 females to every 1000 males; in 1911, 954 to every 1000; while in 1901 there were 963 females to 1000 males. There has thus been a progressive decrease in the number of females. Various reasons have been urged in explanation of these figures —early marriage, neglect of female life, death consequent on child-birth, hard work, and sometimes even errors in making up census returns. There is no doubt that early marriages are responsible for a high rate of female mortality. Girls of tender age and of delicate constitution, before they have attained a mature physique, become mothers, with the result that their health is shattered, their constitution undermined, and their vitality impaired. They come to an early end. Their

children are weaklings, and especially if they are female children they are neglected, not through any lack of human sympathy, but on account of social customs and institutions which make parents look upon girls as a burden, and upon sons not merely as means of support, but as instrumental in the preservation and promotion of the spiritual welfare of the family. It is also true that in some cases women die of overworking. It is a common sight amongst the poorer classes in this country to find a woman big with child working till the last day, sometimes till the last hour before delivery, with the result that after delivery she is a physical wreck. Moreover, the lack of proper treatment and nourishment after delivery impairs health and often results in death. Woman in the East is a thing rather than a person with a human soul.[1]

In Europe the proportion of females is larger in towns than in the population as a whole; in India it is considerably smaller, and the number of females per 1000 males is 847 as compared with 954 in the population as a whole. There are very many reasons for this phenomenon. As yet the cities in India contain an element of migratory population; the labourers in industries and manual workers are mostly agriculturists who come to the cities for a temporary stay and thus do not bring their females with them. Many persons leave their families in the villages, as it is difficult to find living-room in cities except on prohibitive terms, and as the cost of living in cities is greater than in the villages. These facts have a bearing on the health of the labouring classes, as under the circumstances they contribute to the spread of venereal diseases which are then brought to the villages.

[1] We have here again an illustration of the manner in which normal tendencies governing distribution of population in the West are counteracted in the East with its different social and economic institutions. In Europe the excess of females over males in the total population is ascribed to the greater mortality among males due to the dangers of their occupations, as soldiers, sailors, miners, railway and factory hands, etc., and also to vice and other excesses which shorten life. See Mayo Smith, *Statistics and Sociology*, pp. 41 following.

CHAPTER IV

POPULATION (*continued*)

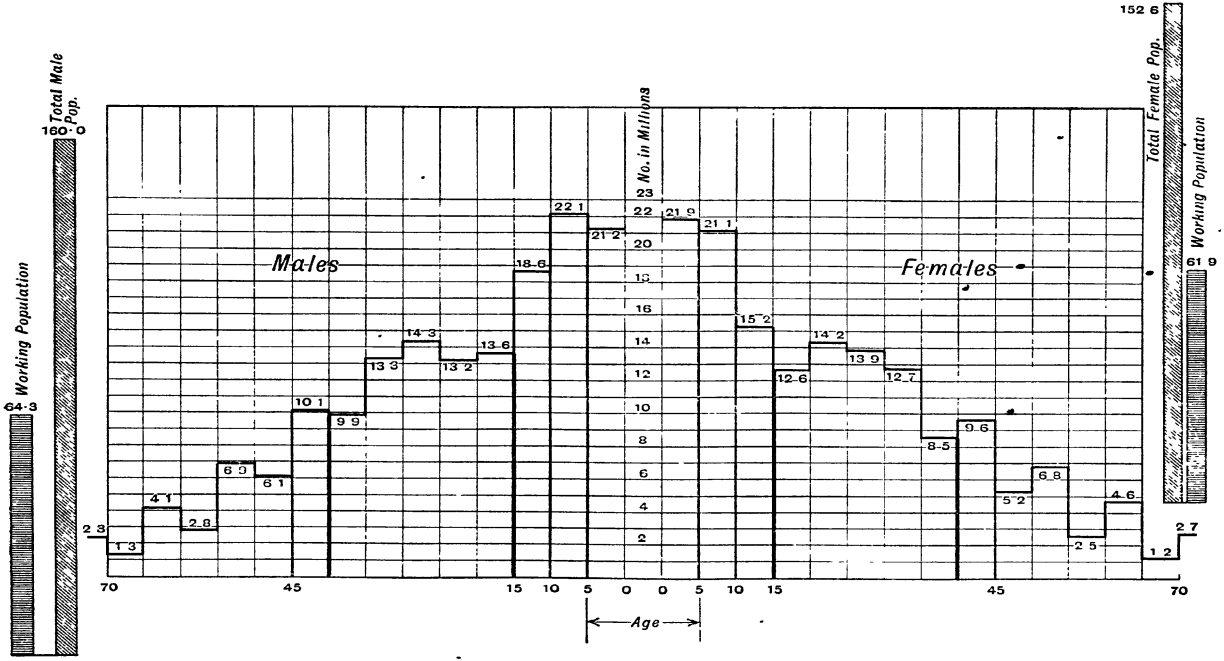
AGE COMPOSITION

CLASSIFICATION of the population by age has important social, political, and economic influences. There may be an excessive number of children and old people in a country, which will involve a heavy burden on the working classes. Or in the case of a deficiency of children, population will be stationary for some years. The growth of population is dependent on the number of women of child-bearing age. The military or voting strength in a country will be measured by the number of males above a certain age. Questions like the rate of mortality or the prevalence of disease will largely be determined by the age composition of the population.

In India the strength of the working population depends on the proportion of the population between the ages of 15 and 40.[1] The effective or working population of India, that is, males and females between the ages of 15 and 40, is 126,173,000 (64,265,000 males and 61,908,000 females), or only 40 per cent of the total population, as compared with 53 per cent in France and over 60 per cent in England.[2] Of the males of reproductive age, namely 64,265,000, 43,147,000 are married; of the

[1] Cf. *Census Report*, 1911, p. 149: "I have taken 15-40, instead of 15-50 as Sundbarg has done, partly because old age comes on quicker in India and partly because they correspond more closely to the reproductive period of life."

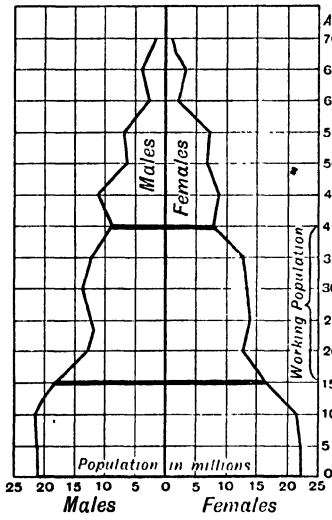
[2] Taking the productive population between the ages of 15 and 60.



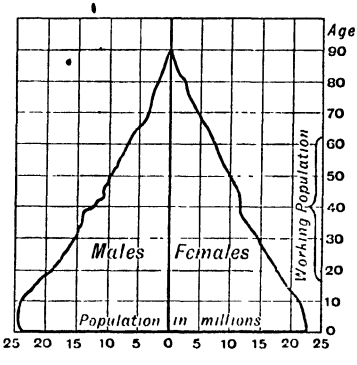
I.—Diagram showing Distribution of Population of India according to Age.

The total population of India, according to the census of 1911, was 315,156,000, but the above figure shows the distribution of population according to age of only 312,644,000, as age was not recorded in the case of 2,512,000 people.

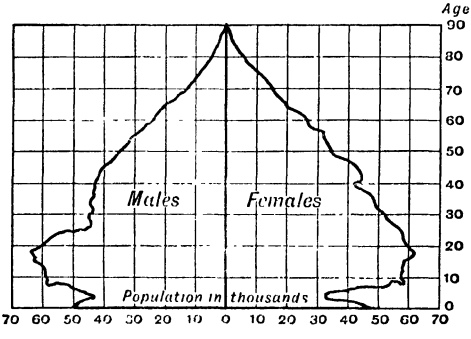
females 52,000,000 are married. There are 9,000,000 widowers and 26,000,000 widows. From the diagrams which we give of the age composition of population in India, Germany, Austria, and the United States of America, it will be clear that the working population in the three last-named countries is greater than in India, and this may be one reason for their greater economic power. According to Sundbarg, in all Western countries



II.—Diagram showing Age Composition of Population of India in 1911.

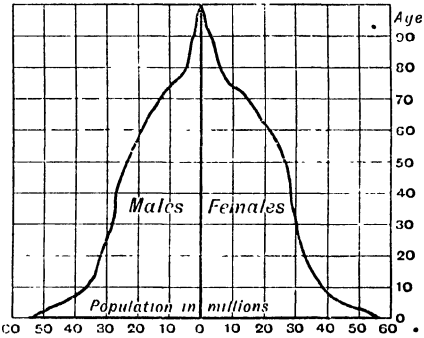


III.—Diagram showing Age Composition of Population of Germany in 1910.



IV.—Diagram showing Age Composition of Population of Austria in 1921.

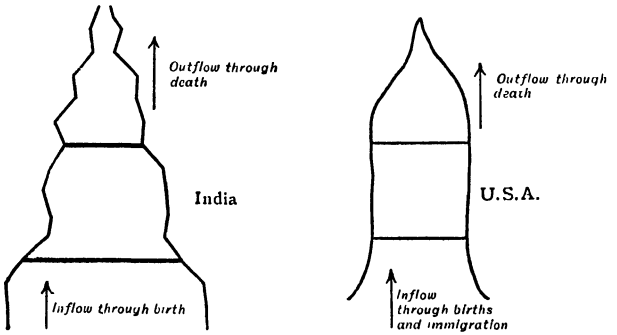
the number of persons between 15 and 50 is uniformly about half the total population, and the variations which occur take place in the other two groups of persons below 15 and aged 50 and over. The mortality in these two groups is far greater than in the intermediate group. The theory that the age group 15-50 (in India 15-40) contains about half the total population does not appear to hold true of India, in spite of what our Census authorities maintain. The mortality of persons in the intermediate group is much greater in India relatively, owing to the shorter average life; so also the mortality of persons above 40 is greater than that of those below 15. The mortality amongst very young children in India is extraordinarily high.[1] The proportion of persons of working age is affected not only by the difference in the distribution of age-limits of the working population, but also by the excess of births over deaths. This excess does not affect the productive power for fifteen years. If the increase in numbers, as the result of this excess, is rapid, the intermediate group will feel the cumulative effect in course of time. In India there is a slow increase of population (almost insignificant when considered in the light of her high birth-rate), but a large proportion of the total population hardly lives up to the full working age.



V.—Diagram showing Age Composition of Population of U.S.A. in 1921.

[1] According to the vital statistics of the decade 1901–10 in British territories, except the Central Provinces and Berar, the death-rate for males at age 0-1 is 291 per mille, it is 52 per mille at age 1-5; 17 at age 5-10; 16 at age 15-20, and rises steadily to 28 per mille at age 45-50. It is 42 at age 50-60, and 84 amongst persons over 60. The female mortality follows the same general curve, but it is lower than that of males at the ages 10-30 (*Census Report*, 1911, p. 149).

For a country like India it is desirable to have a slow increase in population, and to have a longer life for those who are in the intermediate group. It is of greater importance, from an economic point of view, to prolong by a couple of years the lives of those who are in the intermediate group than to multiply and increase the number of children who die before they reach the age of 15. It is the quality of the population and not the quantity which counts in the production of wealth. A country desiring to be economically great should see that its efficient population is stable and continuously increasing, and the inflow into this stream must be regular and



VI.—Diagrams showing Inflow and Outflow of Population in India and U.S.A.

of approved quality. In a country like the U.S.A. there is a regular inflow either by the natural increase of population or by immigration, and this inflow is of efficient quality; whilst the outflow at the other end keeps the equilibrium of the intermediate section stable. In India the inflow at one end is very great, but the outflow through death begins at an earlier stage in the middle section. The following table, showing comparative expectation of life at different ages in India and England, will speak for itself.

The Indian expectation at birth is only 22·59 for males and 23·31 for females, while the corresponding

Age.	India.				England.			
	Males.		Females.		Males.		Females.	
	1901.	1911.	1901.	1911.	1901.	1911.	1901.	1911.
0	23·63	22·59	23·96	23·31	44·07	46·04	47·70	50·02
10	34 74	33·36	33·86	33·74	49·65	52·35	51·98	55·02
20	28·59	27·46	28·64	27·96	41·04	43·67	43·45	46·36
30	22·90	22·45	23·82	22·99	33·06	35·29	35·43	37·84
40	17·91	18·01	19 12	18·49	22·65	27·27	27·81	29·65
50	13·59	13·97	14·50	14·28	18·89	19·85	20·63	21·87
60	9·53	10·00	10·02	10·11	12·90	13·38	14·08	14·81
70	5·80	6·19	5·98	6·22	8·02	8·25	8·74	9·13
80	3 07	3·06	3·12	3 06	4·40	4·64	4 84	5·10
90	1·23	1·15	1·64	1·10	2·32	2·37	2 68	2·55

figures for England are 46·04 and 50·02. This situation makes a world of difference in the economic strength of the respective countries. There is, moreover, a progressive decrease in the estimated expectation of life at all ages in India since 1891, while there is a corresponding increase in the expectation of life at all ages both for males and females in England. This is a matter of grave concern for India; if this progressive deterioration in the physique and vitality of the people is not arrested, all talk about economic and industrial development will end in smoke. There can be no economic development without a sufficient, efficient, and continuous labour supply.

There is thus a tremendous wastage of economic power in this country, owing to the shorter duration of life. Again the population in the intermediate group is not physically what it might be. Bad nourishment and undeveloped constitution, due largely to poverty, undermine the health of the worker, cutting him out before he completes his full term of the efficiency limit. It is almost shocking to notice the general indifference on the part of the thinking public, as well as of Government, to this incalculable wastage of life in an age which prides itself on the wonderful achievements of medical science in saving and prolonging human life. It is a unique mani-

festation of public apathy, to which no other country to-day can offer a parallel. From an economic point of view we might speak of an actual progressive decrease in the wealth of the country, owing to the consumption of wealth by people who, by their early death, are cut off from enormous potentialities of wealth production.

Thus, if the functional distribution of population in India is one-sided, the age distribution is equally one-sided. And this is all the more regrettable when one reflects that this age distribution is not an inevitable product of geographical or climatic conditions, but is largely the result of modifiable social and economic influences.

Vocational Distribution

The classification of population by occupations gives us considerable insight into social and economic conditions. It is an index to the stage of economic development a country has reached. The nature of the occupations, which is partly determined by physical conditions and natural resources, and the character of the people act and react on each other. The most striking feature which in this connection is brought to our notice by the census returns of 1911 is the predominantly agricultural character of India's economic life. In 1911, out of the total population 72 per cent were supported directly or indirectly by agriculture. The remaining 28 per cent were distributed as follows: industry, 11 per cent; transport, 1·6 per cent; trade, 5·6 per cent; public force, ·77 per cent; public administration, ·84 per cent; professions and liberal arts, 1·7 per cent; persons living principally on their income, ·17 per cent; domestic service, 1·47 per cent; persons with insufficiently described occupations, 2·95 per cent; unproductive, 1·1 per cent. We have already quoted comparative figures of the functional distribution of population in other countries. These figures are based on the plan which includes all dependents in the class of the persons on whom they are dependent.

A many-sided economic life, with the population evenly distributed between agricultural and industrial occupations, is the foundation of national wealth and prosperity, and renders possible the leisure which fosters culture and civilisation. And if India is once again to attain to her former eminence, contributing her share to the common stock of human civilisation, she must first aim at restoring that balanced and many-sided economic life among her people which nursed her Rishis and inspired her thousands in the task of embodying their visions in stone and marble and rock.

Movement of Population

The population of a country is constantly losing by the death or withdrawal of certain individuals and constantly gaining by the addition of others. The two determining factors in the movement of population are the birth-rate and the death-rate on the one hand, and the volume of immigration and emigration on the other. The population increases if there is an excess of births over deaths; it decreases if there is an excess of deaths over births. It is interesting to note that in India, in taking account of the birth-rate, we have to consider mostly legitimate children, the number of illegitimate children being insignificant. In Western countries the percentage of illegitimate children varies from 3 to 14, reaching a maximum of 24 per cent in France. These statistics may be indicative of the conceptions of social morality; but they must be handled with caution, as they may be equally a result of special laws and customs rather than of vice.

The Birth-rate among Hindus

The birth-rate of a people is a complex phenomenon, dependent on the interplay of human motives and desires and instincts operating through institutions; it is also dependent on the age composition of the population, on the number of wives of child-bearing age, on marital

fidelity, on the opportunity of satisfying sexual passions without the obligation of parentage, on prudential considerations, on religious sanctions and beliefs, and on material conditions. There are thus two sets of causes affecting the birth-rate, natural and psychological—the influence of the physical and that of the social environment.

Compared with other countries, both the birth-rate and the death-rate in India are remarkably high :

Name of Country.	Birth-rate per Mille	Death-rate per Mille	Excess.
United States	35·1	17·4	17·7
England and Wales . . .	22	12	10
France	18·9	19·6	—·7
Japan	34·2	21·9	12·3
Germany	29·8	16·2	13 6
India	43 9	38·5	5·4 *

* According to Ackland, who also gives an alternative estimate of the birth- and death-rates in the decade 1901–1911 as 51·3 and 43·1.

According to Professor Taussig, in a normally constituted population a birth-rate of 45 may be regarded as normal and satisfactory. In India the census figure shows the birth-rate as almost approaching the normal standard ; and if Mr. Ackland's alternative figures are accepted, it is even above the normal. This rate is, of course, the crude birth-rate, not calculated in relation to the females of child-bearing age. It must be remembered, however that this high birth-rate in India is not a natural result of material prosperity in a normally constituted population, but the outcome of abnormal conditions to be regretted.

The birth-rate in India depends on the social conditions and customs associated with marriage. Owing to the warm climate, puberty begins at an earlier age, and women marry at an earlier age. A girl of 12 is believed to be fit for entering on married life, and often becomes a mother soon after marriage. A girl who has arrived at womanhood without being married is considered to be a disgrace

to the family. The earlier conception of married life, which permitted of marriage at a relatively later age when boys and girls had attained mature physical development, was subordinated to the social exigencies of later times, with the result that infant marriages are a common feature to-day. In the population of all ages about half the males and one-third of the females are unmarried; 46 per cent of the males and 48 per cent of the females are married, and 5 per cent and 17 per cent respectively are widowed. The great majority of the unmarried of both the sexes are very young children, boys under 15 and girls under 10. Only 1 bachelor in 24 is over 30 years old, and only 1 spinster in 14 is over 15. According to Mr. Sundbarg, of the population in Western Europe below the age of 20 only 1 male in 2147 is married and 1 female in 142. In India, on the other hand, 10 per cent of the males and 27 per cent of the female population below that age are married. The number of males below the age of 5 who are married is small; but of those between the ages of 5 and 10, 4 per cent are married, of those between 10 and 15, 13 per cent, while in the West the proportion is hardly 1 per cent. At 15-20 the proportion rises to 32 per cent, and at 20-30 to 69 per cent. Of the females under 5, 1 in 72 is married, of those between 5 and 10, 1 in 10, between 10 and 15 more than 2 in 5, and between 15 and 20, 4 in 5. In the whole of India there are $2\frac{1}{2}$ million wives under 10 and 9 million wives under 15 years of age.

Thus the proportion of girl mothers is relatively considerable in India. Now, early marriages on the part of women may be favourable to fecundity.[1] But it is a familiar truth, on the other hand, that early intercourse is injurious to the general health. In the Punjab Census Report "it has been shown that the states which practise

[1] Thus, according to Dunlop's observations on marriage in Scotland, "the effect of one year's delay of marriage is to reduce the average family by fully one-third of a child; so that three years' delay may be expected to result in the family being one child less" (*Journal of the R. Stat. Society*, vol. lxxvi. p. 266).

early marriage on an extensive scale have generally a smaller proportion of females at the age period 12-15. Inquiries into a large number of cases show that when the marriage of young people is consummated at an early age a fairly large number of wives die of phthisis or some other disease of the respiratory organs, or from some ovarian complication within ten years of the consummation of marriage." It is also known that when, of two races both living a similar kind of life, one practises early marriage and the other does not, as, for example, Hindus and Mahomedans, fertility is higher among the latter than among the former.[1]

In India marriage is almost universal, especially amongst Hindus. Out of the total population of 319 millions in 1921, 217 millions were Hindus. Marriage, according to Hindu law, is a sacrament, and social and religious sanctions accentuate procreation. The most important function of a wife is that of bringing into the world a son who will perform the necessary funeral rites for his father and continue the race. Lack of a son is regarded as the greatest of evils. According to the traditional authorities, it was sinful on the part of a father to allow his daughter to attain puberty without being married. The date of marriage is placed earlier and earlier as the authority is later in date. And even to-day, in spite of the efforts of reformers, the prevailing practice among Hindus is to marry their daughters before puberty ; and the practice has spread even among Mahomedans. In Bengal girls of the higher castes commence their married life before the age of 10, and become mothers at the earliest physically possible age.

And yet the early Vedic literature is said to contain no definite statement with regard to the age of marriage. The authors of the Gṛhyasutras are silent with regard to the age of the bride ; marriage of mature girls may have been the prevailing custom in those days. Neither in the dramatic nor in the epic literature of the Hindus does

[1] *The Population Problem*, by A. M. Carr-Saunders, p. 104.

child marriage play an important part. The custom and institution of child marriage have been the product of later times; and if they were the outcome of changing conditions of social and economic life, there is no reason why a fresh reconstruction of ideas with regard to the age of marriage in the light of advancing knowledge may not be possible to a society like that of the Hindus. It has been in the past exceedingly plastic; it has hitherto adapted itself readily and spontaneously to changes in surroundings; and if Hindu society to-day is to avoid the danger that threatens it—a gradual degeneration of the population, due to early marriages enfeebling the constitution of the mother and entailing a heavy death-rate—it can only do so by moving further along the lines of the Age of Consent Act, by abolishing child marriage, and by raising by a couple of years at least the average age at which girls may enter married life. This change, while it will meet a serious danger, will also mean a return to the early past, and not a complete divorce from the spirit of Hindu civilisation.[1]

The sanctity that the Hindu attaches to married life is intrinsically sound, reminding the normal man and woman that marriage is not merely a physical necessity but a social obligation. Not that every individual member of a society must enter wedded life for the full development of his potentialities; God fulfils Himself in many ways; and it may be possible for individuals to serve society and attain to the fullness of existence without knowing the joys and trials of wedded life. But the alarming tendency in Western life to-day for the better

[1] "It is interesting to note the development of early marriages in India. In ancient Aryan India the average marriage age was around 18 or 19. From 320 B.C. to A.D. 800, due to invasions of India and a desire to protect girls, earlier marriages at 15 or 16 became established. With the Mahomedan influence the life of the Hindu woman became more secluded. About 1900 the average marrying age was around puberty. With the revival of the nationalist movement in 1905 there came a tendency to check this early marriage age, and the tendency is still to raise it" (Note, p. 84, Lydia de Vilbiss, *Birth Control. What is it?*).

classes of society under the stress of economic circumstances to abstain from marriage, manifests a lack of social responsibility from which Hindu society is exempt by its traditions and organisation. The joint family system, which guarantees the maintenance of a numerous brood with the corporate resources of the family, and the sanctity attached to the marriage tie, may well be preserved from the destruction with which the ferment of ideas and ideals threatens all social institutions; the readjustment which is needed is a readjustment of social life which would permit the shifting of the average age of marriage for girls to a later date than at present. Such a readjustment may be rapidly brought about by the legislature helping public opinion; it is one of those cases in which the law, representing enlightened and sympathetic foresight, may educate the masses into a better social life.

Birth-rate in other Communities

Of the Mahomedans it is interesting to note that they are increasing in number more rapidly than Hindus during the last few decades owing to various causes: the result may be partly due to the larger proportion of married females at the reproductive age period, partly to their marriage system; it may also be due to the practice of marrying at a comparatively later age than the Hindus. The Parsi community added 20,000 in the last decade to their numbers. The community offers material for interesting investigations to students of Indian population. The evils from which other communities in India have been suffering in the shape of the caste system, and the custom of early marriages, are not to be seen amongst the Parsis. Though reliable statistics are not available, there is reason to believe that the birth-rate as well as the death-rate amongst Parsis is lower than in other communities; hence the greater relative increase in their numbers. The spread of education and the high standard of life adopted by the Parsis may also account for this

increase; but a high standard of life without adequate means for its realisation may have serious consequences.

The Death-rate

Like the birth-rate, the death-rate in India is abnormally high; hence the net addition to the aggregate population is small. It is better to beget few children with the prospect of a healthy existence than to multiply like rabbits without the chance of keeping them alive. As much importance attaches to the quality as to the quantity of the population of a country from an economic standpoint. Infant marriages and early marriages alike are responsible for the high death-rate. The following figures with regard to the death-rate per 1000 of children under one year will speak for themselves (average 1902–12):

European Countries.		Indian Provinces.	
Sweden	84	Madras	199
Scotland	116	Bengal	270
England and Wales	127	Behar and Orissa	304
France	132	Punjab	306
Germany	186	Bombay	320
Hungary	207	United Provinces	352

It is well known that a high birth-rate and a high death-rate go together. The normal death-rate in a normally constituted population with a birth-rate of 45 is 15. In the case of India it is more than double the normal standard of Professor Taussig. Amongst the causes of the high death-rate, in addition to infant and early marriages, we may include the poverty of the people, the low standard of life, economic pressure, bad nourishment, low vitality of mothers, overwork on the part of mothers with children, sometimes till the last day before delivery. When all has been said the one potent cause is the poverty of the teeming millions. It is well known that the tendency to multiplication is greatest where men have no stake in existence,[1] where they have no prospect

[1] "Where people lose heart, reckless excessive birth-rate may follow just as from opposite causes" (J. A. Thomson, *The Control of Life*).

of improving their condition, and where children if born would not be more miserable than the parents, but may, on the other hand, be sources of earnings. Poverty accentuates the process of multiplication; multiplication intensifies poverty. The ordinary margin of subsistence of the cultivating classes is probably smaller in India than in any other country with an equal claim to civilisation. That the large majority of the people of India live on the verge of starvation has been repeatedly noticed by writers of all shades of opinion.[1] "The extreme destitution of the people is principally responsible for the devastations of plague. The loss of life from this terrible scourge is startling. It reached 272,000 in 1901; 500,000 in 1902; 800,000 in 1903; and over 1,000,000 in 1904. It still continues unchecked. The vitality of the people has been reduced by long semi-starvation."[2] The death-rate in 1918 was 62 per 1000 as compared with 17 per 1000 in England. With all the marvellous achievements of medical science, from 70 to 84 per cent of the deaths of India are due to fevers and other preventable causes. Cholera, small-pox, plague, dysentery, malaria, and influenza are most deadly, because people have low vitality. Health is the primary condition on which wealth can be built up, as in turn wealth determines health; and even what wealth India produces is not used in the country. Poverty, misery, high birth-rate, and high death-rate all go together, and we cannot alter one of them without altering the rest. If we desire to

[1] "That the mass of the population of India is poor is a proposition that would be denied by no one" (*Report of the Fiscal Commission*, p. 113). "Their existence is a constant struggle with starvation, ending too often in defeat. Their difficulty is not to live human lives —lives up to the level of their poor standard of comfort—but to live at all, and not die" (*India and its Problems*, by W. S. Lilly, p. 285). "Poverty, grinding poverty, is a tremendous fact of our economic and therefore national position. . . . This poverty exposes us to the havoc of disease and pestilence, famine and plague, and it makes advance at every step difficult" (Manohar Lal, *Indian Journal of Economics*, July 1916).

[2] Dr. Sunderland, article on "Famines," *Asiatic Review*.

decrease the death-rate we must decrease the birth-rate as well. With the spread of education, orientation in social customs and religious beliefs, diffusion of well-being, there will ensue an automatic limitation of births and decrease in the number of deaths.

There is no reason why the death-rate in India should not be reduced to the same extent as in other civilised countries. We want a low death-rate for two purposes, to save the wastage of human life and to spare a large number of children. We are not afraid of more mouths, but we want to improve the present quality. According to Havelock Ellis, "The chief cause of the superiority of a highly civilised state over lower stages of civilisation is precisely a greater degree of forethought and self-control in marriage and child-bearing." The lowering of the birth-rate will tend to improve the health of the mother and children, will allow women more opportunities to realise their higher nature, will lead to the enhancement of the value of human life. The health of many a mother in India is undermined by a rapid succession of childbirths; and it is foolish to expect mothers to look after their children when they follow one another so rapidly. The spread of education, with the resulting rise in the standard of life, will alone solve the problem.[1]

Birth Control

The birth control movement is gathering strength in civilised countries, for there is no alternative for them with their increasing population and limited sources of wealth. "I do not suppose," observes Mr. John Brownlee, "that any one considers that this population is a safe population for England and Wales. It is a population

[1] "When some chance of better conditions is visible, when a better occupation, education, some savings and some accumulation appear within reach, when it is seen that more mouths to feed mean a lessening possibility of utilising such an opportunity—then the propensity to multiplication is more and more held in check" (*Principles of Economics*, Taussig, vol. ii. p. 231 (1918)).

demanding a much greater food supply than the present population, and the present population is admitted to be probably higher than even an industrial country like England can stand." [1] Viewing the situation with alarm, but deprecating the restriction of births, he seeks a solution in emigration, but according to Professor Keynes this expedient is only an expensive palliative. Hence the solution for England lies in birth control. So with Japan. Baron Keikishi Ishimito holds that the only way in which Japan can meet the difficulty of its population growing faster than the supply of food is by the restriction of births. "In England, America, France, and Germany the stage of argument is already past; and these countries are now entering on the stage of practice." Birth control is preached in the West to safeguard the existence of the people and to maintain and improve the standard of life. In India we desire a limitation of births, not through such fears as face Western countries, but for the conservation of human life and for the prevention of the tremendous wastage of human energy. It is possible that the motives that operate in the West will also operate in India, that with the adoption of a higher standard of life, with increasing opportunities for satisfying sexual instincts outside the marriage ties, with relaxation of rigid social customs, we shall have birth control practised on a larger scale; and there need be no objection to an automatic restriction of births, provided it is natural and rational and does not involve the use of contraceptive methods. No society that tolerates and regulates prostitution should object to the methods of birth control which a rise in the standard of life brings with it.

But under present conditions a rise in the standard of life seems too remote. There was a time when, with material well-being evenly distributed among the masses, the country fostered a many-sided life and excelled in

[1] *Manchester Guardian Commercial Reconstruction Supplement*, Section VI.

offering the conditions of free and full development to every one according to his potentialities. To-day the large majority in India are absorbed in the struggle for bare existence, living on an irreducible minimum, with no hopes of improving their condition, living a life of despondency and distress, with their mentality stifled in an atmosphere of inferiority created by foreign domination. If the ultimate purpose of a society is to render possible the development of a many-sided existence, to give to every one who belongs to the society the opportunities for a full and rich life according to his capacity, to foster art and literature, moral and spiritual growth, the social life of India may well give rise to a kind of blank despair! Where 99 per cent of the population are struggling for bare life, it is a mockery to speak of a full and free life. Where life is low and obsessed by the gnawing anxiety as to necessaries, there can be no vigour, no enterprise, no spirit of adventure, no initiative, nor spontaneity. The very sources of growth in culture, in art, in science, are lacking; and let no one mistake the exotics of a surface culture for the fruition of a natural and free growth from within.

CHAPTER V

POPULATION (*continued*)

THE QUALITY OF THE PEOPLE

THE economic efficiency of a people depends on its endowment—on its strength, vitality, and energy on the one hand, on its mental equipment on the other. The strength and efficiency, physical and mental, of any people are related to their requirements. The nature and extent of such requirements cannot be precisely and rigidly fixed, as they change from time to time.

Owing to prolonged semi-starvation under alien rule, the physique of the people has been considerably undermined; children start in life ill-nourished and with little of equipment; and the process of deterioration continues from one generation to another. We do not possess as yet in India statistics with regard to sickness, or weight and height of the population. These might be and have been used in Western countries as indirect methods of measuring vitality.

The primary distribution of the population according to vitality is into the normal and the defective. In 1911 there were about 200,000 deaf mutes, 443,000 blind, and 109,000 lepers. The physically normal population may be divided into three vitality classes—high, medium, and low. The high vitality class consists of those individuals who have a high birth-rate, low death-rate, high vitality, and long life. The second class comprises those who have low birth-rate, low death-rate, good vigour, and

long life. The low vitality class includes those who have a high birth-rate, a high death-rate, low vitality, and a shorter average length of life. Statistics regarding the classification of population on the basis of vitality are not available in India ; though they would be valuable from an economic point of view. The economic efficiency of a people may be roughly measured by the proportion of population in the high, medium, or low vitality class. Apart from economic efficiency—which is a means to an end—people of high vitality have the opportunities for the full life promised to every man in a world blessed by God's presence. It may be stated without exaggeration that in India nearly 85 per cent of the population belongs to the low vitality class, while the remaining 15 per cent may be distributed among the first two classes. From statistics of longevity the population in India has generally a high birth-rate, a high death-rate, low vitality, and short life, while the populations of England and the United States have a fairly high birth-rate, low death-rate, high vitality, and long life. In France we have a population with a low birth-rate, a low death-rate, good vitality, and long life. It is not surprising that the people of India should compare unfavourably with Western peoples in economic efficiency. Brevity of life in our country curtails production in a vital way ; for it means that people of wisdom and experience are snatched away by death just at a time when their gifts might most profitably be utilised for the promotion of national welfare. The bad nutritive conditions of the mother in India may vitally affect from generation to generation the physique of the offspring subjected in turn to the ravages of poor diet, of disease, of neglect, and all the incidental stress of poverty. It is these factors of poverty, bad nourishment, the depressing influences of social customs and religious beliefs, and not any inherent differences in " racial vitality," that account for the comparative inefficiency of the population.

Mental Endowment

According to mental equipment the population of a country may be divided into normal and abnormal. The mentally abnormal comprise those who are emotionally unbalanced, hysterical, intellectually unbalanced, insane, and idiotic. We have no separate figures for these classes, but in 1911 there were 81,000 insane as compared with 66,000 in 1901. These figures give us no true indication of facts, owing to the difficulties of accurate census operations in connection with these classes. In the United States, for example, the total number of the patently feeble-minded, insane, and epileptic is estimated to be about 1,000,000. Competent investigators have suggested that over 30 per cent of the entire population of the United States carry some form of mental defect. The problem of the mentally abnormal is a serious problem the world over—especially when one remembers that a high percentage of mental defect has been traced in many countries in paupers, tramps, criminals, prostitutes, and chronic drunkards.

In India the normal mentality of the population is not and cannot be expected to be very high. Where the entire energy of the individual is absorbed in the work of keeping the body alive, there is no room for mental development. Add to this the ignorance of the vast majority of the population, the stunting of self-respect and self-assertiveness under the stifling atmosphere of a caste-ridden society, and the long subjection to foreign rule. However stiff the native backbone of a race, a few generations under the yoke will make them stoop; and insult is added to injury when it is suggested that this mental and moral type is due to racial inferiority and inborn weakness. In the days long past, when the collective thought and will of the people were not depressed by an alien domination, when economic development had fostered a leisured class which by its creative work diffused culture and civilisation, the Indians might well

have been characterised as a people with a high mentality. To-day it is quite otherwise. Under the overwhelming pressure of the Government the sense of personality disappears; its vigilance is that of a machine "which has not the human power to overlook or discriminate." "With a population larger than that of any other civilised country in the world, India is, to-day, in respect of intellectual equipment, the poorest of them all. Its contribution to the world's progress in these days is practically negligible."[1]

Eugenics and Population

Eugenics is the science of race betterment founded by Francis Galton about twenty years ago. It has for its basis the idea that heredity and not environment is the primary factor in the improvement of the human race. Its programme has been thus formulated: "The problem of eugenics is to make such legal, social, and economic adjustments that (1) a larger proportion of superior persons shall have children than at present; (2) that the average number of offspring of each superior person will be greater than at present; (3) that the most inferior persons will have no children, and (4) that other inferior persons will have fewer children than now."[2]

Racial impoverishment, so says the eugenist, is the plague of civilisation. Physically, the human species seems equal to all the demands which are likely to be made upon it. But mental superiority is comparatively rare; the recent American army intelligence tests revealed the fact that, out of 1,700,000 young men examined, only one out of 20 possessed high intelligence. This mental superiority perhaps tends in civilised life to grow rarer; universal education, high standard of life, preventive medicine, and birth control have worked in the direction

[1] Sir M. Visvesvaraya, Presidential Address, 10th Science Congress, 1923.

[2] Popenoe and Johnson, *Applied Eugenics*, p. v (preface).

of social decay by speeding up the social sterilisation of superior individuals and the multiplication of inferiors. While the superior elements are extirpated, "the inefficients, the wastrels, the physical, mental, and moral cripples are carefully preserved at public expense. The criminal is turned out on parole after a few years to become the father of a family. The insane is discharged as cured, the feeble-minded child is painfully educated, often at the expense of his normal brother or sister." [1] The war has aggravated the situation; not only did it destroy immeasurable racial values, but the bad social conditions and the high cost of living that have followed continue to depress the birth-rates of all save the most reckless and improvident elements.

It is the problem of this racial impoverishment that eugenics proposes to solve. It proposes to replace "natural selection" by a rational selection in which fitness for survival would achieve its legitimate meaning, and the development of the race might be guided by reasoned conceptions of social value. The movement is in the first instance educative, and so far as its guidance can be relied on must be entirely healthy. It insists that careful study should be made of the conditions and principles underlying the production of a vigorous racial stock, that this information be taught as widely as possible, emphasised as a part of morality and enforced by a powerful public opinion. But eugenics is also legislative; it lays down a definite legislative policy, negative and positive, to be worked out, if not immediately, at any rate gradually, when public opinion is educated to an increasingly higher level. The negative policy consists in the elimination of the unfit; it "includes segregation of the feeble-minded, epileptic, insane, hereditary criminals, and prostitutes throughout the reproductive period and the education of the moral normal people as to fit and unfit matings." [2] We do not want insanity, the eugenists tell

[1] Popenoe and Johnson, *Applied Eugenics*, pp. 148-149.

[2] Davenport, *Heredity in Relation to Eugenics*, p. 259.

us; we do not want feeble-mindedness; we do not want alcoholism; we do not want syphilis; we desire to extinguish these stocks as evil in themselves, and as liable to infect sound stocks. We want to prevent them from bringing into the world children in their own image.

Even with regard to this negative programme, which the eugenists propose to carry out by segregation and sterilisation, two considerations must be borne in mind.[1] In the first place, we must be certain that the stock which we seek to eliminate is so vicious that its removal is a net gain. Liability to tubercular infection involves no mental or moral turpitude; it may coexist with the highest qualities on this side; and in stamping out tubercular tendencies we may be stamping out moral and mental potentialities of human development. In the second place, we must be certain that the vice in question is irremovable and not dependent on conditions which it is within our power to modify. It is quite possible that with the development of scientific hygiene instead of eliminating the tubercular stock we may succeed in eliminating the tubercle. There is a stronger case in this connection for the proposal for the segregation of the permanently feeble-minded; even under present conditions they are not free; they lack the self-control which freedom requires. They continually drift to the gaol or the workhouse, and they are known to be fertile. But even in this case, if legal action is to be taken, it must not be legislation at the cost of human self-respect and dignity, and it must not involve a control of the poor by the rich.

When we pass from the negative side of eugenics to the positive aspect, that of encouraging proper matings, we find ourselves on still more uncertain ground. Purposive breeding with a view to improve the stock is not a new idea; it was known to Plato; it appears in certain phases of the custom of loaning or exchanging wives among primitive tribes.[2] Nobody knows much about human

[1] Hobhouse, *Social Evolution and Political Theory*, p. 45.

[2] "We are told that the Eskimos are very willing that the Angekoks

heredity, at least with sufficient definiteness to serve as the basis of social arrangements. Any such application of eugenic methods will carry with it a diminution of that element of spontaneity in life to which we attach such enormous value. To marry for health, though in itself something nobler than marrying for money, would directly militate against this spontaneity. Von Hartmann, in an interesting study of the higher forms of affection, points out how their action is not to be accounted for on mechanical or rational grounds; they owe nothing to calculation of benefits, nothing to physiological necessity. He saw in their working the manifestation of a cosmic reason, producing results which are in the true interests of the race and of the mass of individuals. Whether this speculation be true or false, there can be no doubt as to the loss to human life involved in the substitution of calculation for uncalculating affection. Even Galton himself recognises the futility of legislation in the elevation of the race, and believes that the hope of the future lies in rendering eugenics a part of religion. Health certificates as preliminary to marriage, and segregation or sterilisation of the unfit, he thinks, may be excellent when wisely applied, mischievous and ridiculous in the hands of fanatics.

If racial improvement is to be accomplished through the agency of female choice in marriage, as Wallace points out, whatever will make women freer to choose their mates will release them from the necessity of taking the first comer in order to escape from bondage to their family, from the contumely of spinsterhood and the uncertainty which surrounds getting a living in a "man-made" world. The political and economic equality of women is the most effective eugenic measure to Wallace.[1]

(medicine men) should have intercourse with their wives, since in this way they believe that they shall obtain sons who will excel all others. The same thing is said of the Kelaz of Paropamissus" (Starcke, *Primitive Family*, pp. 123-124).

[1] "Human Selection," *Fortnightly Review*, September 1890.

But there is a question of a more radical character that remains to be considered. The eugenic proposals rest on the fundamental assumption that heredity and not environment is of basic importance in racial progress, and that the race deterioration with which we are faced is not degeneration caused by geographic and social environment, but a deterioration due to congenital conditions, to the rapid multiplication of inferior stocks. It is assumed that environment as such has no direct effect upon the development of the stock. In the present stage of biological knowledge the effect of the environment cannot be so completely dismissed as the eugenists suppose.[1] Secondly, we should be risking a good deal if at the present stage we were to proceed on the assumption that no degree of unhealthiness in the conditions of life would promote any permanent tendency to deterioration. The Duke of Devonshire's Committee on Physical Deterioration in 1903, while noting incontestable evidences of degeneracy in England, found nothing to warrant a belief in general and progressive deterioration. Dr. Eichholz affirmed that there was every reason to anticipate a rapid physical improvement as soon as exterior conditions improved. Among these he included bad housing, filth, drunkenness, poor food and clothing, crowding, and slack domestic management. The English race was sound, but English social arrangements diseased. Positive eugenics means, when divested of its extravagant claims, the socialising of opportunity, the maintenance of an environment in which any new mutation of promise may thrive and grow, the securing of equal opportunities for all so that every one capable of adapting himself to a social life shall prove what is in him. An ignorant, unskilled proletariat is a drag on racial progress, not because of its innate depravity, but because of its misery; and wise social adjustments may in the dim vistas of the future

[1] Cf. J. A. Thomson: "It is generally admitted that when parents have healthy occupations their offspring are likely to be more vigorous."

eliminate the proletariat, not by sterilising and segregation, but by the uplifting of the socially depressed.

Now when we turn from this general discussion to the specific problems of India, the first observation that strikes us as essential is a protest against the assumption of racial superiority either in intellect or in character of the British rulers over the population governed by them.[1] The products of human evolution are not and cannot be transmitted by way of physiological reproduction. Every successive generation must acquire them *de novo* during its lifetime; and it acquires them only through the human environment in which it is born and develops. The evolutionary grade of development of any generation is determined, not by its place in the genealogical tree of the race, but by the nature of the human world as a whole and by the influences brought to bear on it by the entire race. Aptitudes and predispositions may be psychologically transmitted; but an English baby put out to nurse with Red Indians would grow into a savage, and a nigger

[1] Here are two specimens from McDougall's *National Welfare and National Decay*, pp. 85, 125: "Now the more or less orderly and successful government of the 300,000,000 of India by a mere handful of British men, during more than a century, is one of the most remarkable facts in the history of the world. It is a marvellous achievement and English men have marvelled over it. And when they have sought to explain how it has been possible, they have always come to the same conclusion. They have recognised that the natives of India, or very many of them, have much intellectual capacity; that they are clever, quick, versatile, retentive; that some of them have brilliant intellects. But such observers have frequently expressed the opinion that, as compared with their British rulers, the natives of India are relatively defective in character or will-power; and they have found the explanation of British ascendancy in this fact. . . . If this conclusion is well founded, might we not infer from it that if the qualities of Indians and British had been reversed—if the Indians were as innately superior in will-power as they seem to be inferior—then a few Indians would at the present time be ruling over the affairs of all Europe and perhaps of all America as well?" "It is this greater dose of self-assertiveness in the Briton which leads other people to complain that he goes about the world as though it belonged to him. . . . It is this which in spite of his subtlety and sympathy and intellectuality has enabled him to subdue and govern the 300,000,000 of India."

baby brought up by English parents would grow into a civilised man. The British government of India is not a marvellous phenomenon to be explained on the assumption of racial superiority in will-power, but is a product of the environment amenable to human forethought and control.

In the second place, the poor physique, the low vitality, the economic inefficiency of the people of India are, it must never be forgotten, very largely the product of their environment. The one potent remedy is improvement of this environment. But education forms an essential part of this improved environment; and the direction in which education is most urgently needed is in matters of marriage customs. If the evils of child marriage are realised, if the desirability of postponing by two or three years at least the age at which the girls are married is brought home to parents, an enormous wastage of life may be avoided, even if the stock is not improved. The laws of natural selection operate perhaps with much greater effect in India than in the West; this operation of nature's laws may be modified as in the West by measures of social amelioration, but we may trust that as social institutions and legislation take away the burden of race continuance from the individual and transfer it to the community, individuals may be restrained from exploiting their children, and public opinion may be awakened to the social responsibilities attaching to married life. In a country where religious traditions have sanctified marriage for ages, the sense of corporate responsibility is already present, and the individual may the more readily be made to realise that the size of one's family is not altogether a private affair. It has been pointed out by eugenists that "there exists amongst the poor subjects a certain quantity of individuals of a higher sensibility and amongst the leisured subjects a certain quantity of subjects of an inferior sensibility . . . and what is true of sensibility is also true of the other characters. One can therefore demonstrate the existence of a little group of superiors in the inferior classes, and a

little group of inferiors in the superior classes."[1] Any organisation of society that rests like the Indian on a basis of castes is, then, from the eugenic point of view, economically and spiritually wasteful, as caste prevents the free social exchanges which permit the better and more clever to ascend from below and which force the degenerates from above to fall to a lower level.[2]

In the next place, it must also be remembered that there is no definite standard of racial superiority or class superiority which can be safely relied on. It is for every society to lay down its own standard of social fitness which it desires to foster; and the classes who in Western countries dominate social life and whose success is the only tangible evidence of their fitness are the selfish, the unsocial, the predatory. Is it these men whom the eugenists would multiply and whose extinction they look on with alarm? It is for India to determine by her social organisation the classes whom she desires to multiply; and for aught we know the classes that are marked by misery as paupers may often contain her potential super-men.

Finally, it is true that poverty is the outstanding character of the Indian population as a whole; and poverty is unfitness not in a biological but in a social sense. It means that feeding, housing, family life, education, and opportunity are below the standards that the social type calls for, and that their existence endangers the latter in a manner analogous to that in which inferior cattle in a herd may endanger the type. They threaten and bring

[1] A. Niceforo, "The Cause of the Inferiority of Physical and Mental Characters in the Lower Social Classes." Paper read before the First Eugenics Congress, *Problems in Eugenics*, vol. i. (1912).

[2] It has also been suggested that caste marriages produce a progressive degeneration. The example of the Swedish nobility is adduced in which degeneration is said to manifest itself in "frequent celibacy, much delayed marriage of the male sex, large and increasing proportion of sterile marriages, small and decreasing fecundity, increasing mortality of youths under 20 years of age, deaths of the children before that of the parents" (Paper read by Prof. A. Loria before the First Eugenics Congress). We hesitate to apply these principles to the social subdivisions of India.

about to some extent the general degradation of the community, through disease, ignorance, inefficiency, vice, servility, and arrogance.[1] But since the unfitness is social, and not biological, the method of elimination must also be social—care for improving the environment, better food, better water, air, housing, medicine, care for the elimination of disease, above all care for the securing of greater liberty, greater justice, more equal opportunity, less unequal rewards.[2]

Migration of Population

The movement of population is affected by migration either casual or periodic or permanent. The most striking fact in the case of India is the small volume of migration. In 1911 the whole population except 8·7 per cent were born in the districts in which they were resident at the time of the census. This is due to two causes: the caste system renders migration difficult, and the agricultural occupations of the large majority favour stability of residence. We must also add to these causes the conservative and home-keeping habits of the people. But with the growth of large industries, the cultivation of commercial crops, the

[1] Cf. Prince Kropotkin (*Report of Proceedings of the First Eugenics Congress*, 1912): "By avoiding the consideration of the influence of surroundings the Congress conveyed a false idea of both genetics and eugenics. Separation between surroundings and inheritance was impossible. . . . Sir John Macdonell was right in maintaining that the criminal was a product manufactured by society itself. . . . To create these perversions and then to punish them by sterilisation was one of the greatest of crimes. . . . If children slept till the ages of 12 or 15 in the same rooms with their parents they would show the effects of early sexual awakening; these effects could not be combated by sterilisation. . . . By destroying slums, building healthy dwellings, abolishing that promiscuity between children and adults to which he had alluded, they would improve the germ plasm of the next generation more than by any amount of sterilisation."

[2] "Many by improvement of their environment may have that restoration of vital energy which is essential for will-power and the exercise of an unborn sagacity which chance, opportunity or ill-fortune has denied them" (Dr. F. W. Mott, *Heredity and Eugenics in Relation to Insanity*).

working of mineral resources and improvement in the means of communication, there has arisen an increasing demand for labour which is attracting the landless classes to industrial centres; and this movement will grow, though as yet the migration is of a temporary and irregular character.

In 1911 there were in India 504,000 persons born in other Asiatic countries, and the total number of immigrants from non-Asiatic countries was 146,265. Of this 131,918 were from Europe, the majority (122,919) being from the United Kingdom.

The census figures tell us practically nothing of the emigration from India to other countries. Roughly, the number of emigrants across the Indian frontier to adjacent territories may be taken to be about 200,000. Of the emigrants to distant countries a small number goes to the Dutch and French Colonies. The total number of emigrants to other parts of the British Empire exceeds one million. The question of the emigration of Indians to other parts of Europe and their status is not a pleasant topic. The position of Indians in other parts of the British Empire is simply that of labourers; they have no political rights, not even in places like Kenya developed by their sole labour. When they are not free men in their own land they have not much chance of being recognised as free men in the world outside.

CHAPTER VI

THE INCOME OF BRITISH INDIA

The National Income or Dividend

The "real" income of any individual or nation consists of the goods and services which are at the disposal of the individual or nation from time to time. The amount of these goods and services is assumed to be measurable in terms of money. But, as Pigou points out, in the actual estimation of the national income or dividend a number of goods and services are left out, because they are not bought and sold in the market. Thus if a man hires a house and furniture belonging to somebody else, the services he obtains from them enter into the national income, but if he receives these as a gift or owns them himself, they are not included in the valuation.[1] So also the work done by unpaid agencies like that of Sunday school teachers or visitors to hospitals, and that of members of the House of Commons before the Act providing for payment, was not included in the estimation of the national income in England. No value is set on the services rendered by wives to their husbands and homes. If these services were rendered by a housekeeper in exchange for wages they would be treated as part of the national income.[2] Assuming that it is difficult to put a money valuation on such services, we may accept the interpretation of Dr. Marshall and Pigou of the concept of the national income: "The labour and capital of the

[1] Pigou, *The Economics of Welfare*, pp. 30 *et seq.*
[2] Sir Josiah Stamp, *Wealth and Taxable Capacity*, p. 49.

country, acting on its natural resources, produce annually a certain net aggregate of commodities, material and immaterial, including services of all kinds. This is the true net annual income or revenue of the country, or the national dividend."[1] It has been pointed out that in estimating the *net* annual income of a country we have to take into account the amount spent in the year, not on consumable goods or services, but on the purchase of more instruments and materials of production. It has been ascertained, for example, that $\frac{3}{20}$ of the total annual income of the United Kingdom on an average goes towards the purchase of capital goods and has to be deducted from the gross valuation in order to arrive at the net income of goods and services at the disposal of the country. While accepting this interpretation of the national dividend, we are not oblivious of the dangers involved in the habit of regarding wealth and income in terms of money. When British statesmen point with pride to the fact that the income of the nation has risen from £1,200,000,000 in 1870 to roughly £2,000,000,000 in 1912, they assume without questioning that this rise of money income involves a corresponding rise in national welfare. It requires some effort of mind for the normal individual to realise that such obvious things as increase of population or changes in the level of prices may seriously affect the bearings of the money income on national welfare. It requires a still greater effort of mind to realise that an estimation of the national income in terms of money contains no information as to the nature of the goods and services included in it, and that it would place precisely the same value on one rupee's worth of country liquor and one rupee's worth of bread or of a book on Indian economics, or of hand-made lace sweated out of ignorant women by rapacious middlemen.[2]

[1] See Marshall, *Principles of Economics*, p. 523. Marshall adds, however, that in estimating the income of a country we must allow for the depreciation of the sources from which it is derived.

[2] See *Work and Wealth*, J. A. Hobson, pp. 28 and following.

But whilst we realise these imperfections of an attempt at estimating the income of a country, we must recognise the value of such an estimate for economic purposes. If economic welfare is that part of total welfare which can be brought into relation with a monetary standard, the national income may be taken to be that part of the total income of a community which can be measured in money. A measurement of this income from time to time may enable us to determine the growth or diminution of some part of national welfare as measured by this income, allowing for growth of population and changes in price level, and assuming that the relative portions of this income as distributed between different classes have remained unchanged. An estimate of the national income and of the way in which it is distributed is also of use in determining the taxable capacity of the people.[1]

Methods of estimating National Income

Three main methods of evaluating the income of a people have been indicated by economists. The only really satisfactory method, as pointed out by Sir Josiah Stamp, especially for determining the income of the wealthier sections, is that of following the income tax returns, in countries where all incomes are taxed at the source. The extent to which this method can be applied in arriving at a total valuation of the national income depends upon the exemption limit, or the point at which the tax starts. The Prussian limit of £47 per annum enabled the method to be applied to cover the bulk of the population; whereas the limit of £160 in the United Kingdom did not account for as much as one-half of the total income or more than one-eighth of the people. The American exemption limit, being still higher, compelled resort to other methods to a greater extent than in Great Britain.

[1] See an exhaustive discussion of this subject in *Wealth and Taxable Capacity*, by Sir Josiah Stamp.

A second method employed for ascertaining the national dividend is the occupational census method, used more especially in connection with wage-earners and people with smaller incomes not liable to income tax. These classes have little income beyond their earnings, and the average earnings of each class being determined multiplied by the number of wage-earners in each class as supplied by census returns, give us the total income of these classes. The value of this method will of course depend upon the accuracy of wage statistics.

Thirdly, another method may be employed as an independent method for verifying such results as may be arrived at by the joint employment of the first two methods. This method is characterised as the "net output" or census of production method. If the total value of work done or goods produced in any year can be determined and the value of the raw materials used deducted, the remainder or the added value may be taken to be the national dividend. In the British Census of Production taken in 1907 the "net output" was the gross output (selling value) less the cost of materials used. The results of this production census of 1907 largely confirmed the estimates of the British national income obtained in other ways.

The Problem of the National Dividend in India

When we turn from these general considerations to the specific question of determining the income of the population of British India, we find that the first of the three methods can scarcely be worked to any purpose. Where 90 per cent of the total population earn an income too small to come within the reach of the income tax, the income tax returns cannot be of help in arriving at the amount of the national dividend. Added to this is the further difficulty that all incomes are not taxed at the source, and that much of the income liable to taxation

evades the tax, especially in the case of individuals. The only methods available in India are, therefore, the occupation census and the census of production. The census of production can be roughly relied on for estimating the total annual value of the agricultural and mineral production of the country. But the task becomes difficult when we have to undertake a valuation of the annual production of live stock, poultry produce, fisheries, and manufactures. We have in the case of fisheries, hand industries, and cottage industries, resorted to an occupation census, estimating the average earnings and multiplying by the number of people engaged in them as given by the census returns. In the case of manufactures we have taken the figures of the gross valuation of commercial crops, mineral production, and other products, and calculated the added value in manufacture at a fifth of the gross value. We believe this to be a safe estimate, when we remember that much of the raw material is exported and that industrial development has hitherto been exceedingly limited.

We have in the next place to note the extremely unreliable character of price statistics as supplied in Government publications. Some of these prices are wholesale prices ruling in the ports, others retail prices. Some are quoted in pounds sterling, others in rupees.; there is, moreover, no uniform standard of quotation; some prices are quoted in maunds, some in tons, some in pounds, some in hundredweights, and some in candies. The retail prices are determined by those ruling in district headquarters, and sometimes show amazing variations. With all their defects, we have adhered to the statistics of prices as furnished by Government reports.

Using whatever resources have thus been available, we have endeavoured to arrive at an estimation of the total annual national dividend of India on the basis of the value of her production. Out of this total amount, we have then made various deductions, the reasons for which we have explained in some detail under the table.

The year that we have selected for the purpose is

1913–14, the year immediately preceding the outbreak of the war. The extraordinary rise in prices which followed on the outbreak and which has continued after the close of the war with but few exceptions, makes it difficult to select any later year than 1913–14 for our purposes. This rise in prices has been felt most directly by the poorer classes, but it has reacted on all sections of the community. The agricultural classes, who might be expected to have benefited to some extent by the rise in prices of agricultural produce, have seen these profits disappear by the simultaneous rise in prices of other necessaries of life. In the war years, moreover, statistics of prices would have been an exceedingly unreliable guide in the work of evaluating the total annual production, as the control over the exports of food grains brought about enormous variations between the internal prices of the commodities and their external prices. Thus in 1918 the Government of India found that whereas £60 a ton was paid for rice imported into Ceylon from Siam, rice exported from Burma at controlled rates could have been landed at Ceylon at less than £14 a ton. Under these circumstances we have preferred to select the year immediately preceding the outbreak of the war, a normal year, unaffected by any sudden changes in prices, for the purposes of our investigation.

TABLE I

DISTRIBUTION OF POPULATION ACCORDING TO OCCUPATION OR MEANS OF LIVELIHOOD (CENSUS OF 1911).

Occupation or Means of Livelihood (Classes and Sub-Classes).	Total supported.	Provinces.	States.	Actual Workers.				Dependants.	Percentage of supported to Total Population.
				Total.		Partially Agriculturists.			
				Males.	Females.	Males.	Females.		
A. Production of Raw Materials									
I. Exploitation of the surface of the earth .	226,550,483	179,529,352	47,021,131	72,122,268	34,078,164	455,208	121,066	120,350,051	72·27
II. Extraction of minerals	529,609	418,777	110,832	210,555	97,894	15,136	6,887	221,160	0·17
B. Preparation and Supply of Material Substances									
III. Industry . . .	35,323,041	26,791,864	8,531,177	11,503,467	6,011,763	1,401,566	299,777	17,807,811	11·27
IV. Transport . . .	5,028,978	4,336,054	692,924	2,156,943	237,939	139,229	11,120	2,634,096	1·60
V. Trade	17,839,102	13,409,310	4,429,792	5,464,141	2,637,265	507,354	120,263	9,737,696	5·69
C. Public Administration and Liberal Arts									
VI. Public force . .	2,398,586	1,553,589	844,997	1,059,399	10,025	178,420	1,039	1,329,162	0·77
VII. Public administration .	2,648,005	1,503,812	1,144,193	927,599	42,922	133,759	7,649	1,677,484	0·84
VIII. Profession and liberal arts	5,325,357	3,881,670	1,443,687	1,851,053	402,586	235,313	20,012	3,071,718	1·7
IX. Persons living principally on their income	540,175	336,972	173,203	143,456	62,614	17,065	1,278	334,105	0·17
D. Miscellaneous									
X. Domestic service .	4,599,080	3,416,992	1,182,088	1,733,112	992,744	78,347	25,046	1,873,224	1·47
XI. Insufficiently described occupations . .	9,236,217	6,575,606	2,660,611	3,057,818	2,009,882	113,657	36,505	4,168,517	2·95
XII. Unproductive . .	3,451,381	2,405,718	1,045,663	1,295,610	775,784	61,929	19,011	1,379,987	1·10
Total . . .	313,470,014	244,159,716	69,280,298	101,525,421	47,359,582	3,336,983	669,653	164,585,011	

N.B.—Occupation was not recorded in the case of 1,686,382 persons.

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TABLE II

AGRICULTURAL PRODUCTION AND ITS VALUATION IN 1913–14.

		Crops.	Area under Cultivation.	Yield per acre in lbs.	Total Production in lbs.	Average Price per lb. in Rupees.	Total Value of Production in Rupees.	Total.
Food Crops A	1	Rice	76,908,000	1005	77,292,540,000	0 0 11	442,82,18,437	
	2	Wheat	22,685,000	814	18,465,590,000	0 0 9	86,55,74,531	
	3	Barley	7,206,000	877	6,319,662,000	0 0 6	19,74,89,437	
	4	Jawar	21,405,000	904	19,350,120,000	0 0 7	70,54,73,125	
	5	Bajra	15,385,000	1147	17,646,595,000	0 0 8	73,52,74,791	
	6	Ragi	4,376,000	728	3,185,728,000	0 0 7	11,61,46,333	
	7	Maize	6,167,000	986	6,080,662,000	0 0 6	19,00,20,687	
	8	Grain	9,297,000	688	6,396,336,000	0 0 6	19,98,85,500	
	9	Other food grains, and pulses	28,149,000	600*	16,889,400,000	0 0 6*	52,77,93,750	
								796,58,76,591
	10	Sugar	2,712,000	2719	7,373,928,000	0 0 8	30,72,47,000	
	11	Other food crops	8,188,000	600	4,912,800,000	0 0 8	20,47,00,000	
								51,19,47,000
Non-food Crops B	12	Oilseed, linseed	2,264,000	360	815,040,000	0 1 1	5,51,85,000	
	13	Sesamum	4,279,000	273	1,168,067,000	0 1 6	10,95,15,656	
	14	Rape and mustard	4,083,000	467	1,906,761,000	0 1 1	12,91,03,609	
	15	Ground-nut	463,000	1550	717,650,000	0 1 2	5,23,28,645	
	16	Other oil-seeds	3,564,000	350	1,247,400,000	0 1 2*	9,09,56,250	
								43,70,89,160
	17	Cotton	15,844,000	98	1,552,712,000	0 0 6	63,07,89,250	
	18	Jute	3,136,000	1263	3,960,768,000	0 2 8	66,01,28,000	
	19	Other fibres	915,000	950	869,250,000	0 2 0*	10,86,56,250	
	20	Indigo	169,000	18	3,042,000	1 14 3	57,51,281	
	21	Opium	170,000	13·5	2,295,000	13 12 0	3,15,56,250	
	22	Coffee	86,000	350	30,100,000	0 7 0	1,31,68,750	
	23	Tea	572,000	306	175,032,000	0 6 0	6,56,37,000	
	24	Tobacco	1,002,000	1400	1,402,800,000	0 2 6	21,91,87,500	
	25	Fodder crops	5,910,000	800*	4,728,000,000	0 0 2	4,92,50,000	
	26	Other non-food crops	1,651,000	600*	990,600,000	0 0 6*	3,09,56,250	
								181,50,80,531
							Rupees	1,072,99,93,282
							Deduct 20%	214,59,98,656
								858,39,94,626

* These figures are overestimated.

TABLE II.—Out of the total figure of Rs. 1,072,99,93,282, which we have arrived at as the total annual agricultural output of India, we have deducted one-fifth or 20 per cent as the amount invested or set apart for seeds, manure, etc., and therefore as not available for distribution. This deduction is an under-estimate when we remember that we make no separate deduction for the exhaustion of the soil which in a country like India, unaccustomed to scientific methods of culture, is considerable from year to year. Thus, writing of the United States, Prof. Carver observes: "Taking the country over, it is probable that, other things being equal, if the farmers had been compelled to buy fertilisers to maintain the fertility of their soil without depletion, the whole industry would have become bankrupt. . . . The average farmer had never (up to about 1887) counted the partial exhaustion of the soil as a part of the cost of his crop." [1]

TABLE III

MINERAL PRODUCTION AND VALUATION IN 1913–14.

Name.	Total Production.	Total Value in Rupees.	Total.
1. Coal . . . tons	16,208,000	5,70,00,000	
2. Iron ore . . ,,	366,180	6,00,000	
3. Manganese ore . ,,	815,000	1,80,00,000	
4. Wolfram . . ,,	1,688	19,00,000	
5. Chromite . . ,,	5,600	36,000	
6. Tin ore . . ,,	170	2,00,000	
7. Gold . . . oz.	595,000	3,43,50,000	
8. Silver . . . ,,	125,000	2,30,000	
9. Lead . . . tons	5,800	10,72,000	
10. Mica . . . cwt.	45,000	17,30,000	
11. Salt . . . mds.	1,473,000	81,21,000	
12. Petroleum . gls.	277,550,000	1,55,10,000	
13. Jade stone . cwt.	3,602	5,42,000	
14. Rubies, sapphires, etc. } carats	278,706	8,33,000	
15. Monazite . . tons	1,235	6,30,000	
16. Saltpetre . . cwt.	301,000	32,00,000	
17. Graphite . . tons	4,048	1,41,000	
			14,40,95,000
	Deduct 20 per cent		2,88,19,000
	Net valuation .		11,52,76,000

[1] *Sketch of American Agriculture*, p. 70, quoted in Pigou, *Economics of Welfare*.

TABLE III.—In this table we deduct from the gross valuation of the mineral production 20 per cent to arrive at the net figure. This 20 per cent includes depreciation in value, and also the working cost so far as it affects wages, as we have included mineral production side by side with commercial crops in Table VI. in estimating the value of manufactures.

TABLE IV

VALUATION OF VARIOUS PRODUCTS NOT MENTIONED IN OTHER TABLES IN 1913–14.

Name.	Value in Rupees.	Remarks.
1. Hides and skins .	4,00,00,000	Assuming that exports constitute 80 per cent of the total production.
2. Manures . . .	1,18,00,000	,, ,, ,,
3. Wool	3,11,00,000	,, ,, ,,
4. Silk	30,90,000	,, ,, ,,
5. Poultry products .	25,00,000	
6. Fisheries . . .	5,94,68,750	At four annas per head for 275 days for 865,000 persons.
7. Valuation of products worked by artisans, and earnings of labourers engaged in trade and transport . . .	139,50,00,000	At four annas per head per day for 310 days for 18,000,000 persons.
	154,29,58,750	

TABLE V.—Censuses of cattle have been taken at different times in different provinces. Accurate statistics for 1913–14 not being available, we have taken the figures for 1917–18. The difference between the number of cattle in 1913–14 and in 1917–18 cannot be appreciable; and the error, if any, will be found to be on the side of over-estimation, the number in 1917–18 being greater than in 1913–14. Our estimation of the annual value of the produce of different kinds of cattle again errs on the side of exaggeration, as there is a proportionately large number of animals under each head that are old and unfit for

TABLE V

VALUATION OF THE PRODUCE OF THE LIVE STOCK, 1917–18.

Kind.	Numbers.	Value per Day.	Value per Year.	Total Annual Value.
		Rs. A. P.	Rs. A. P.	
1. Bulls and bullocks	49,332,000	0 1 6	25 12 6	161,87,15,625
2. Cows . . .	37,471,000	0 1 6	25 12 6	96,60,49,218
3. Bull buffaloes .	5,583,000	0 1 6	25 12 6	14,39,36,718
4. Cow buffaloes .	13,653,000	0 1 6	25 12 6	35,19,91,406
5. Young cows and buffaloes .	43,073,000	..	..	..
6. Camels . .	500,000	0 2 0	34 6 0	1,71,87,500
7. Sheep . .	22,894,000	0 0 4	5 11 8	13,11,63,542
8. Goats . .	33,166,000	0 0 4	5 11 8	18,86,69,854
9. Donkeys . .	1,534,000	0 0 6	8 9 6	1,31,82,812
10. Horses and ponies	1,681,000	0 2 0	34 6 0	5,77,84,375
11. Mules . .	71,000	0 1 6	25 12 6	18,30,468
				349,05,11,518
Deduct total of Nos. 1, 3, 6, 8, 9, and 10				203,94,76,884
			Net valuation	145,10,34,634

work, preserved through a respect for animal life amongst the people, and also a large number of young cattle. We have included all these in our total valuation. The total estimate of Rs. 349,05,11,518 includes the services of cattle for agricultural purposes; as the services are already included in the value of agricultural production in Table II., we have deducted their value, thus arriving at the net figure which represents the produce of cows, cow-buffaloes and sheep, and the service of mules. For the most part the figure represents a roughly estimated consumption of milk, butter, ghee, and other produce.

Mr. Lupton in his book on *Happy India*, discussing this very problem, does not make any deduction of the produce of cattle for agricultural purposes. He observes: "In making that value in addition to the value of the production of the land, I am not valuing that production twice over, because the bulk of the value given by the production of the soil is for grain and other things which the cattle do not consume in a very large proportion."

This does not seem to us quite accurate. The services of cattle in agricultural production take the shape of help in ploughing, carrying produce, etc. They become embodied and crystallised in the value of the crop; and therefore these services are already included in the value of the agricultural produce. We are justified, therefore, in deducting this valuation of the services of cattle in agriculture in Table V.

It should also be noted that there are no Government statistics available for the valuation of cattle produce. We have taken a rough figure in each case suggested by actual conditions of village life, and confirmed to some extent by the selling price of different kinds of animals in the market.

TABLE VI

VALUATION OF MANUFACTURES IN 1913–14.

Nos.	Name.	Value in Rupees.
1	Commercial crops*	181,50,80,000
2	Mineral production	14,40,95,000
3	Other products used for manufacture (Table IV.)†	8,84,90,000
		204,76,65,000
	Net valuation of manufactures at 20 per cent of the gross total of raw materials, etc.	40,95,33,000

* See Table II. for this figure, made up by non-food crops items, Nos. 17-26.

† We arrive at this figure by means of Table IV., taking into account the figures for hides and skins, manures, wool and silk.

TABLE VI.—In estimating the value of the manufactured commodities produced in British India we have taken into account in the first place the gross value of all the raw materials in the shape of commercial crops, mineral production, and other products mentioned in Table IV., like wool, hides and skins, silk, and manures, but excluding poultry products, fisheries, and the work of artisans and craftsmen not employed in factories. On

the basis of this gross valuation we have proceeded to an estimate of the added value in the manufactured products by taking it at a fifth or 20 per cent of the gross value. It must be remembered that we have no means of directly estimating the value of the manufactures except in a few cases like cotton and woollen manufactures. It must also be remembered that we have very few industries in this country, and that most of our raw materials are exported. Even in the most developed industry, viz. the cotton industry, the local consumption of cotton is only 50 per cent of the total production. In the case of the opium, indigo, coffee, and tea industries, moreover, the added value is fairly represented by the earnings of unskilled labour and interest on capital involved. That we are erring on the safe side, in other words, overestimating the annual net added value of manufactures in India, will be clear from a single instance—say, that of wool. The value of the total production of wool in 1913–14 was roughly Rs. 311,00,000. On the 20 per cent basis we have therefore assigned to woollen manufactures in 1913–1914 a net added value (after deducting cost of raw materials) of Rs. 65,50,000, whereas we find that the gross value of all woollen manufactures in 1913–14 amounted to Rs. 56,00,000 only.

It is also to be noted that in 1902 Mr. Atkinson endeavoured to arrive at a valuation of the income of British India in 1895 in the pages of the *Journal of the Royal Statistical Society*. He proceeded on lines similar to ours in estimating the annual agricultural production ; but in estimating industrial production he took somewhat different lines of investigation and put down the total industrial income in 1895 at Rs. 150,43,64,480. He arrived at this figure by taking the average rate of wages under different classes and multiplying this by the number of workers. Now Mr. Atkinson's figure supports our estimate of the net value of manufactures, because this valuation of roughly Rs. 41,00,00,000 added to the valuation of fisheries and products worked by artisans, etc.

(see Table IV.)—Rs. 145,00,00,000—gives us a total of Rs. 186,00,00,000 ; and we can well believe that between 1895 and 1913–14, that is in an interval of about twenty years, the annual production should have increased by about Rs. 36,00,00,000.

We cannot help referring to Mr. Lupton's figures under the head of manufactures. He puts the figure of the gross value of manufactures at £317,000,000 or Rs. 475,50,00,000,[1] and he arrives at this figure by the following reasoning : " Of the working population that produce new things, 9 out of 10 are engaged in agriculture, or kindred work ; the tenth is engaged in manufacture. Well, those who are engaged in manufacturing have the aid of the steam-engine and of science to help their produce, and therefore it is highly probable that as regards pecuniary value their work per head is twice that of an agriculturist. Therefore this one-tenth can do work of the value of one-fifth, and therefore if the production from the land worker is £1,585,000,000 I give one-fifth of that or £317,000,000 as the value of the production of the manufacturing worker." The difference between Mr. Lupton's figure and our figure is a difference of over Rs. 300,00,00,000 ; and we can easily account for this difference. Mr Lupton assumes that nearly 24,000,000 of the Indian population out of 240,000,000 are labourers who have " the help of the steam-engine and of science " ; we find that the number employed in factories where mechanical power is used is at the outside 2,000,000 ; the rest of these labourers, viz. 22,000,000, never take advantage of science, and in their case it cannot be said that the value of their work is twice that of an agriculturist.

TABLE VII.—In this table we have endeavoured to specify the sums which must be deducted under various heads from the aggregate annual production of British India to arrive at a proper estimate of the total income in 1913–14 available for distribution among the people.

[1] *Happy India*, p. 98.

TABLE VII

STATEMENT SHOWING SUMS TO BE DEDUCTED UNDER DIFFERENT HEADS FROM THE AGGREGATE NATIONAL INCOME IN 1913–14 (IN £ STERLING).

1. Home charges	£20,000,000
2. Investment of foreign capital on behalf of Government	8,000,000
3. Profits on foreign capital invested in India	39,000,000
4. Investment of new foreign capital in India	5,000,000
5. Remittances of money from India on private account by Government officers, European employees in Banks, Joint-Stock Companies, etc.	10,000,000
	£82,000,000
	(Rs. 123,00,00,000)

TABLE VIII

TOTAL ANNUAL INCOME OR NATIONAL DIVIDEND OF BRITISH INDIA IN 1913–14

Name.	Total Valuation in Rupees.
1. Agricultural production, Table II.	858,39,94,626
2. Mineral production, Table III.	11,52,76,000
3. Miscellaneous products and earnings of artisans, etc., Table IV.	154,29,58,750
4. Produce of live stock, Table V.	145,10,34,634
5. Manufactures, Table VI.	40,95,33,000
Total net valuation	1,210,27,97,010
Deduct as per Table VII.	Rs. 123,00,00,000
Net annual income	Rs. 1,087,27,97,010
Dividing this net income by the total population of British India, viz. 245,189,716, we get as the annual income per head *	Rs. 44.5.6 or £2 19 1

* The population of British India according to the census of 1911 was 244,189,716. We take an increase of 1,000,000 as representing the possible increase in numbers in three years.

(1) In the first place we deduct the amount of the home charges from the aggregate production; as ultimately the home charges are paid by the export of commodities from year to year for which no tangible returns are obtained by the country, either in the shape of precious metals or material commodities; to the extent of the home charges, in other words, the total annual production available for distribution in this country is reduced.

(2) We similarly deduct the amount of foreign capital invested in the country on behalf of Government. On the

trade balance the investment appears in the shape of imports into India of machinery, rolling stock for railways, and other articles which may be regarded as fixed capital, and these imports are met by the export of commodities from India. These imports of fixed capital, however beneficial they may be taken to be in the long run, do not add to the annual income of the people as other imports of commodities may be said to do. They thus decrease by this sum the total production available for distribution.

(3) We deduct in the third place the profits on foreign capital invested in India by private individuals and joint-stock companies. We find that the amount of paid-up capital of companies incorporated elsewhere than in India but working in India was, in 1913, £200,000,000, and the amount of debentures raised by these companies was £60,000,000; in 1915 the figures stood at £294,500,000 and £116,400,000 respectively.[1] It is not possible to estimate the amount of capital invested by foreigners in India through other means than shares of joint-stock companies. But even taking this figure of £260,000,000 roughly, made up of paid-up capital and debentures, and assuming that the profits earned by these companies and distributed as dividends average 15 per cent on the outlay—and this is

[1] That these figures are an understatement need not be expressly noted. Findlay Shirras, in his note on capital investments in India (Industrial Commission Report, Minutes of Evidence, vol. ii. pp. 851 *et seq.*), gives the figure £509,000,000 as the amount of total capital investments in India in 1913–14, and £528,000,000 in 1914–15. These figures do not include the capital of exchange banks and companies like insurance, navigation, and general trading companies; and the total capital of these he estimates at another £240,000,000. These figures further do not include the capital invested in numerous businesses which do not come within the provisions of the Indian Companies Act. It is impossible even to guess at an approximate figure with regard to the last. But even taking the first two totals together, we have a total of £768,000,000 as capital investments. Even deducting at a rough estimate £200,000,000 as the amount of investments held in India by Indians, we arrive at the figure £568,000,000 as representing the amount of foreign investments in India. On this basis the amount we have stated as profits on foreign investments, viz. £39,000,000, works out at a return of 7 per cent, a figure obviously below the actual rate of profits of very many of the companies run with foreign capital.

an under-estimate, looking to the actual dividends declared by some of the joint-stock companies—we arrive at our figure of £39,000,000 as the amount of profits drawn away from the country by foreign capitalists in 1913. The amount is paid by the export of commodities or transfer of money through the banks from India to England and decreases to that extent the national dividend of India available for distribution.

(4) With regard to the investment of new foreign capital in India every year, we have taken the average figure suggested by Prof. Keynes.[1] This amount again appears on the trade balance as imports of machinery and fixed capital, and is paid for by the export of commodities, diminishing to that extent the aggregate amount available for distribution.

(5) As regards the remittances of money from India on private account the amount we have suggested is conjectural. We have no statistics available for tracing the remittances made abroad by foreigners resident in India and also remittances sent to Indians living abroad. These foreigners include about 1500 high-salaried officials in the Civil Service, also officials in the Army, the police, the Medical and other Government departments, bankers, traders, engineers, barristers, and employees of industrial concerns. In these remittances are included expenditure on Indian students abroad, whose numbers are increasing, and expenditure incurred by tourists and Indian rajas. We have estimated these remittances at £10,000,000.[2] They do not appear on the trade balance, as they are effected mostly through the exchange banks by means of cheques. We have deducted this amount from the

[1] See *Economic Journal*, September 1911, review of Morison's *Economic Transition in India*, by Prof. J. M. Keynes.

[2] That the amount we have suggested is ridiculously low will appear from the fact that as early as 1873 Mr. J. M. Maclean, a witness before the Committee of the House of Commons on East Indian Finance, suggested that the amount of the annual earnings of Englishmen connected with India which are transmitted home could not be less than £20,000,000. That was in 1873. Shall we not be nearer the truth in taking the figure at £40,000,000 in 1913 instead of £10,000,000 ?

aggregate annual income, as this annual income available for distribution is decreased to that extent.

The Income per Head in British India

The result of our investigations is thus to reveal to us the fact that the average annual income per head in British India is Rs. 44.5.6 or £2 : 19 : 1 as calculated on the net aggregate production of 1913–14. If we take into account the rise in prices that followed on the outbreak of the war, the average to-day may work out at Rs. 70 or 75 per head, but the figure would be misleading if we took it as indicating an increase in real income; for as regards the large majority of the agricultural population the rise in prices has made their condition worse than in the pre-war days. The cultivator in India lives from hand to mouth; he grows his own food; he sells his surplus with a view to obtain a few necessaries of life; agricultural prices have not risen in these last few years to the same extent as the price of oil and cloth, salt and sugar, with the result that, with a larger nominal income, his purchasing power of whatever little he can afford to have has fallen. It has also been repeatedly pointed out that wages in India have not risen to the same extent as the prices of the necessaries of life. Taking this average of Rs. 44.5.6 per head, we find that it does not differ substantially from the average calculated by Mr. Atkinson in 1902.[1] Mr. Atkinson puts this figure at Rs. 35 per head in 1895, and at Rs. 27 per head in 1875.

In the next place, assuming Mr. Atkinson's calculation of 1895 to be correct that the average income per head in British India was Rs. 35, the rise in that income per head from Rs. 35 to Rs. 44 in 1913–14 was a rise in nominal income which was more than counterbalanced by an accompanying rise in the interval of the prices of the necessaries of life. Taking 100 as the index number for

[1] *Journal of the Statistical Society*, June 1902, "Income and Wealth of British India," by F. J. Atkinson.

1895 of the income per head as calculated by Mr. Atkinson, the index number in 1913–14 would be 125. But taking the index number of cotton cloth at 100 for 1895, we find the index number in 1913–14 was 143 ; similarly the index number for kerosene oil rose from 100 to 135 in 1913–14 and for oil seed from 100 to 130. In view of these facts it is impossible for us seriously to entertain the theory that the condition of the population of British India has improved during the last twenty years or thirty years.

Returning to our figure of Rs. 44.5.6 per head or roughly £3, we reproduce for comparative purposes the following estimates of the income per head in other countries :

INCOME PER HEAD IN OTHER COUNTRIES IN 1914

Name of Country.	Income per Head.	Name of Country.	Income per Head.
U.S. of America .	£72	Germany . . .	£30
United Kingdom .	50	Italy . . .	23
Australia . . .	54	Spain . . .	11
Canada . . .	40	Japan . . .	6
France . . .	38	India . . .	3

Prof. Pigou, writing of the British average income per head of £50, says that after allowing for payment of rates and taxes and also providing for new investments the surplus income that is left over, viz. about £25 per head, makes it " literally impossible by any manipulation of distribution to provide for all the citizens a really high standard of living." [1] So also Chiozza Money, writing in 1914, observes about the British income per head: " It is equally clear that the national income is not large enough, even if better distributed, to confer the conditions of a comfortable and cultured life upon the whole community." [2] What shall we then say of an average income of £3 per head, not allowing for taxation and the provision for new investments ? In his Memorandum written for the Indian Currency Commission of 1919, Prof. Stanley Jevons refers to a professor of the Indore Christian

[1] *Economics of Welfare*, p. 793.
[2] *The Nation's Wealth*, Chiozza Money, 1914, p. 111.

College who calculated in a striking manner the average wage of the Indian labourer. We refer to this calculation as bearing out our estimate of the national dividend. He took the scale of diet of the jails of the United Provinces as officially prescribed in the Manual, and he worked out the cost of the diet for an average family of a man, his wife and two children. On this basis he found that if the labourer spent his whole wages on food he would only be able to purchase for himself and his family 81 per cent of the diet prescribed for prisoners in the jails. He would have nothing to spend on clothing, house rent, and other necessities required by even the poorest. So far with regard to the wage-earner. Is the cultivator any better off? Rising prices of food produce do not benefit the cultivator; mostly the cultivator is in debt, and long before the crop is gathered it is handed over to the grain dealer, who is also his banker, in liquidation of his account. He is unable to deal directly with the agents of exporting firms. So far as the cultivator consumes his own produce the price level makes no difference to him, and for that part of the produce which he sells, if he sells at all, he gets with difficulty just a few of the necessaries of life. With an income estimated in pecuniary terms of barely Rs. 4 per month per head we can well imagine the condition of the cultivator. With these four rupees he can scarcely supply himself with the food that he needs, and to talk in his case of buying with the surplus the other necessaries of life is little short of mockery.

Finally, the method that we have adopted of arriving at a valuation of the total national dividend in British India is a safer guide to follow than the methods of estimating it in civilised countries based on income tax returns or on the occupation census. The danger underlying the other methods is that of confusing the aggregate of individual incomes with the national income; in the aggregate of individual money incomes the same real incomes may be counted again and again as they circulate from hand to hand within the year. The real national

dividend can be much more approximately measured by the money value of goods produced and consumed within the country added to the money value of the goods imported for consumption. And this is the method that we have endeavoured to follow, with all the disadvantages that are incidental to an inquiry conducted with inadequate materials, imperfect statistics, and in some matters a complete absence of all information.

The analysis of figures which we have resorted to for the purposes of our inquiry forces on our attention one more topic which has given rise to considerable bitterness of expression amongst critics and writers—we refer to the "potential drain" which according to our estimate amounts to Rs. 60,00,00,000 a year excluding the home charges and capital investments. We have no desire to refer to this drain as a bleeding of India for the benefit of Great Britain. We only note this—that about Rs. 60,00,00,000 every year go out of the country in the shape mainly of raw materials and food produce, for which there is no adequate return in money or commodities. This figure represents the remittances from India by foreigners living in India or remittances of profits earned on foreign capital invested in the country. In any one year these outgoings may be negligible in their effects, making as they do perhaps a difference of two rupees per head in the average income of the population. It is possible to maintain that India profits by the development of industries with the help of foreign capital. But on the other hand it must be remembered that, so far as this capital is invested in mines, it may mean the rapid exploitation of the resources of the country by companies outside of India whose interest need not coincide with the best interests of the country itself. Even with regard to other industries their development by foreign capital may mean at the best an absorption of a certain percentage of the population into the wage-earning classes.[1] But more than all this it must be remembered that the cumulative

[1] "A capitalist may be a benefactor to Society, but only if he help

effect of a regular drawing away of Rs. 60,00,00,000 from year to year may be fatal, so far as the economic condition of the people is concerned; for it means the drawing away from the country of wealth which as a surplus, if it were allowed to remain within the country, might be distributed for consumption, or might form the nucleus of savings for investments and further industrial expansion. We are arguing on the assumption that indigenous capital would be readily available to take the place of foreign capital invested in these industries; we need not go to the length of suggesting that India might have been better off with her industries undeveloped than with her industries developed by foreign capital. It might have been impossible for the country without the aid of such capital and expert knowledge of a technical character to have secured the growth of tea and coffee and indigo plantations or of the jute industry. But it is equally difficult if not impossible to believe that an autonomous self-governing India will hereafter look with approval upon a policy involving railway freight regulations, free export, cheap maritime transport, calculated to deprive her of her potential savings for the sake of securing handsome dividends to foreign shareholders.

Low Productive Capacity

Connected with this analysis of the total national dividend is the reflection that thrusts itself on almost every student of economics, that the productive capacity of India is remarkably low as compared with that of other countries, more especially so in view of her vast potential resources, both material or physical and moral

to increase production or to avoid waste. Similarly, the unemployment of nature's capital represents no loss of wealth so long as it does not deteriorate, as it can be brought into use at a later date, perhaps even to better advantage." "A nation should economise as far as possible its coal, or indeed any other irreplaceable raw material, which is of intrinsic value to man" (*The Real Wealth of Nations*, by J. S. Hecht, pp. 33, 34).

or social. This is the natural outcome of conditions that we have already noticed. Production under modern economic conditions depends *inter alia* upon the employment of capital. Now "capital is wealth withheld from consumption mainly in order that it may be used for the production of further wealth." Capital in this sense is indispensable for the conduct of industry. "Roughly, in a complex society, like ours, we have to set aside year by year about one-fifth of all the wealth we create for the purpose of keeping our industries going and expanding them. If we failed to do so, we should be faced by ruin, just as the whole world would die of starvation if all the farmers used up all their crops instead of keeping back a part for seed." [1] This is what Prof. Ramsay Muir observes about economic life in the West. Thus in Great Britain, for example, "in the year before the War the value of the total wealth produced or earned by the British people was estimated at about £2,000,000,000 per annum at the then value of money. Out of that there had to be somehow set aside about £400,000,000 to form new capital and keep the machinery of production going. The remainder available for distribution would have been enough to provide, if divided out equally, about 13 shillings a week per head of the population. Out of that the taxes, etc., had still to be taken. Of course it was not divided out equally, but even if it had been equally divided, the national product of wealth was quite insufficient to do all that zealous reformers of whatever school of thought desire."

Large productive capacity is thus associated with conditions which make an increasing surplus available for industrial expansion and secure a healthy and happy life for the mass of the producers. If these conditions are far from being adequately realised in a country like Great Britain, with the 13 shillings a week per head as estimated by Prof. Ramsay Muir, what shall we say about the condition of this country, with an average annual income per head of Rs. 44 according to a liberal

[1] Ramsay Muir, *Liberalism and Industry*, pp. 44 and following.

estimate? The large majority of the people have to live on starvation rates, even when we make all sorts of allowances for the smaller demands for the necessaries of life and easier conditions of tropical existence; out of this income of Rs. 44 the demands of the Government have to be met, with the result that the surplus left is scarcely adequate for procuring the scanty food with which an Indian is satisfied, leaving aside the provision of the conditions of physical efficiency. What savings can be expected from a population living under these conditions? Even to talk of savings for the large mass of the population is a mockery. Where savings are impossible, where there is no surplus available out of the national dividend for expansion, one can well understand the low productivity that marks the country in spite of its vast resources.

But there is another fact revealed to us by our present analysis which throws light on this very question, and that is that, from year to year during the last fifty years and more, considerable sums of money, or more accurately commodities to this extent, have been exported for which there is no adequate return.[1] This surplus wealth, if it

[1] Writing in 1896, Mr. Hyndman observes: "The Englishmen who are working in India are remunerated for their labour by a proportion of the produce of the soil of that country. This remuneration is paid to them in money, but the money to pay them with and the money which they send to us here at home to keep their wives and families, to provide for the future, and to increase their pension—which is another remittance already provided for in the home charges so far as officials are concerned—is originally taken, of course, from the pockets of the people whom they govern or whose business they transact. Englishmen do not take up their abode in the country, do not now even live there very long together. In this we differ from all the foreign conquerors who have been in India before us, and the distinction is becoming more marked every year. Soldiers, civilians, engineers, all European agencies of every sort and kind, are not only paid out of the produce of India at a rate from three to eight times—people who have spent their lives in the country say, in some cases, from twenty to twenty-five times—as much as would have to be paid to natives, but the greater portion of this produce so paid for work done is sent to be used and expended in a foreign country, and thus India loses every way. This is an ordinary process going on every day" (*The Bankruptcy of India*, p. 55).

remained within the country, would be distributed among the people, thus enabling men on the margin of subsistence to increase in efficiency and add to the annual production, or it might serve as a stock of wealth available for further production. This annual drain of wealth, which now amounts to Rs. 60,00,00,000, represents when taken in its cumulative aspect a vast stock of available capital of which the country has been deprived as an unfortunate consequence of her connection with Great Britain; not that India would have been better off under any other foreign rulers spending their income abroad and governing by an administrative machinery with no settled interests in the country itself. All that needs emphasising is the fact that, where, with all resources remaining inside the country, the *per capita* income is so low, with all available surplus produce drawn away to meet the dividends of foreign shareholders and the expenses of a top-heavy administration, it is perversity to speak in plaintive tones of the retardation of industrial development in India. The situation becomes still worse owing to the huge borrowings of the Government at a relatively high rate of interest to make good the recurring deficits and for capital expenditure. The Finance Member (Sir Basil Blackett) acknowledged this in his Budget speech (1923). "India," he observed, "is a country where, as it seems to me, there is an almost unlimited field for new capital expenditure or new development. Every one admits, however, that India is only at the beginning of her industrial development, and it is out of her capital resources, *i.e.* out of her accumulated savings and her new savings, that capital to develop India industrially must be found. We have borrowed all that we could borrow in India and in England during the last few years for capital expenditure purposes. Yet we have spent 100 crores out of capital in the last five years in financing deficits, thereby diminishing to a corresponding extent the resources available for developing India." When the Government is the greatest borrower at a tempting rate of interest

it is but natural that the few who could invest would not invest in industrial concerns. Where the masses are so conservative they prefer a low but safe and present rate of interest to an uncertain higher and future rate of interest.

Germany in the beginning of the nineteenth century presents a striking parallel to India under the British rule, in some respects. It was a dominantly agricultural country, with a handicap when it entered into the concert of industrial communities ; there was a lack of capital in Germany, the habit of investment in industrial enterprise was unknown ; banking facilities were equally lacking. There was also a lack of experience and knowledge in industrial matters. And yet within a few decades Germany acquired the machine technology of her neighbours. Endowed with natural gifts and intelligence, her people rapidly acquired proficiency in new industries ; the natural resources which had hitherto been idle were worked up at slight cost; the State fostered industrial enterprise by an adequate banking system and financial help, lending the credit of the nation for the requisite industrial capital. If India under British rule has not been similarly transformed into an industrial country supplying her own needs, if not the needs of other countries, it is because her Government is not a national Government directing national resources for her own industrial development, as that of Germany was. Her fiscal policy is determined by the interest of English producers abroad, her currency is trifled with and experimented upon without reference to her interests, her borrowings are not for industrial development ; the resources of the Government are not pledged for attracting capital on reasonable terms ; and profits, which if they remained within the country would fertilise and multiply the means of prosperity, are drawn away to be enjoyed by absentee shareholders abroad, leaving the people denuded of the means of expansion and development. The economic problem of every country is the problem of increased production and

increased well-being as the result of a judicious distribution of the product, and in India as in other countries increased production is dependent on capital, on the ability of the masses to save. Where the powers of self-direction are wanting, it is futile to cast the blame for low productivity on any one class or any one cause. Politics is not the only game of human life, and political changes will not of themselves bring the millennium, as the European nations are slowly learning to realise. But there must be some excuse for a people whose thoughts, saturated with traditions of philosophy and mysticism for ages, are now overwhelmingly absorbed in the game of politics. For the shadow of an alien domination, unsympathetic and unimaginative, if not animated by a conflict of interests, withers and causes stagnation throughout the whole social organism with its aspiring economic and social and religious activities.

CHAPTER VII

SOCIAL INSTITUTIONS AND ECONOMIC LIFE

Interaction between Social and Economic Life

Fifty years ago the idea that all social life has been a product of economic factors, that the final causes of all social changes are to be sought in changes in the modes of production and exchange, was widely held, and familiar to thinkers as the doctrine of the economic interpretation of history. This view stated by Marx and Engels in its modern form is only a phase of the wider theory that social life in its origin and development is determined by and subordinated to environmental forces including climate, geographical position, the flora and fauna and the mineral resources of different countries. Now there can be no doubt, as we have already indicated, that the life of early society is very largely dominated by factors like the nature of the land, the climate, and food supply, and the resulting modes of work or industry. The kind of occupation forced upon a people tends to determine not only the size of the group but the constitution and organisation of the society, the relations of the members to one another, the feelings, the customs and ideas of the people. But the influence of economic forces tends to be increasingly modified by the growing operation of conscious purposes and aims of the society itself. As society makes its way into a fuller life the operation of physical and economic forces may diminish, till we come to times when it makes its climate and food supply and soil what

it desires them to be, instead of accepting them as nature provides them.

In the second place, social life is an organic whole; no factor in human life can exist for men except as it is merged in the organic system and becomes an effect as much as a cause of the total development. This system is to be understood only by studying its total working; in this total working economic institutions act and react upon social and political institutions and religious customs and beliefs. Though, for the purposes of scientific study, division of work is a necessity, and every special science can only deal with one aspect of social life and study it from its own angle of vision, when we are studying the concrete problems of the life of any individual people we must keep in mind the interactions of social and economic institutions, and in general the interactions between one phase of social life and all others. Life, we repeat, is an organic whole; and no fullness of life is possible for individual members of any society or for humanity unless its social and economic, educational and political and religious institutions are adjusted to one another for the realisation of a single purpose or system of purposes. If political democracy to-day has proved an illusion, it is because no political institutions in themselves can bring the millennium unless they are founded on an appropriate economic organisation; the right to vote and the right to share in political life are a mockery under an economic system which permits the slavery of the masses, and economic democracy may fail as political democracy failed if those who work it in Russia to-day and those who may work it hereafter in other countries believe that a reshuffling and reconstruction of economic life by itself can make fullness of life possible for humanity. The kingdom of heaven will not come by a proletarian capture of economic power any more than it could come from universal suffrage and the referendum.

But to come to the more specific question of the action and interaction between social and economic life, social

customs which contain the seeds of law correspond to demands of group welfare, which means more than mere food, clothing, and shelter. But custom, on the other hand, decides what inventions shall survive, and determines what shall be produced and how, and also determines the distribution of the product. Tradition tends to perpetuate economic institutions and may act as a serious drag on present and future economic movements. On the other hand, the rivalries of industrial life may end in turning men and women into impersonal machines and lead to the moral degradation of the workers. Social institutions foster a corporate life, provide the conditions for advance, in knowledge, in arts, in industries ; and every advance in economic prosperity, if properly utilised, may lead to an expansion of social life. But, on the other hand, the commercial spirit and the worship of the dollar which mark the economic institutions of our times may affect the social relations between class and class and may breed a spirit of organised selfishness. Economic inequalities breed social inequalities, and the individual who refuses to follow the creed of organic selfishness embodied in economic life is regarded as a futile fanatic or a dangerous revolutionary. Our economic institutions to-day, like property, inheritance and succession laws, and the wage system, may react upon our social ideas and may be responsible for that complete disregard in public life, whether national or international, of that healthy principle now regarded as sentimental cant, that nothing is really possessed till it is shared. The one thing we all surely possess is the sky ; and if we had to choose between the roof-tree and the open heaven, the roof-tree would have to go. And yet the roof-tree is cherished, and the more men cherish it, the less is the share of each. The problem before the economist, the politician, the social servant, the educator, and the priest is the evolution of a well-adjusted social order in which institutions will foster a healthy many-sided life for the individual, making it possible for every one to live the highest life of which he is capable.

Life is greater than institutions, and our institutions must be adapted to life instead of life being sacrificed to institutions.

Indian Social Institutions: the Caste System

Are Indian social institutions as they exist in the country to-day favourable to the development of personality? Are they more specifically favourable to economic development? For the individual must live before he can live well; the conditions of physical existence must be secured to him before his life can blossom in fullness. Nay, leisure, as we have said, is the product of wealth; and leisure is the condition for all progress, moral and material and spiritual.

The social life of India is marked by two peculiar features: the caste system and the joint family organisation. These dominate the lives of 219 out of 319 millions of the population; even the Mahomedans have been brought under the influence of these institutions. Social distinctions exist among all nations, but nowhere are they so rigidly observed as amongst the Hindus. The Hindus are divided into a large number of separate social groups or castes, the members of which cannot dine with or marry persons belonging to other groups. There are to-day in India more than 3000 castes of different types. There are the functional castes representing the occupations that were followed in earlier times; they include groups of cultivators; artisans such as weavers and cobblers, carpenters and potters; village servants such as cowherds, barbers, washermen, and members of other occupations like bards, astrologers, fishermen, cattle-breeders, actors, dancers, etc. There are the race castes like the Rajbansi and the Chandal in Bengal; the Koli and the Mahar in Bombay; the Nayar in Madras. There are the sectarian castes like the Lingayats of Bombay, which originated from sect. Most of these castes are split up into sub-castes, the members of any one of which may eat with

those of other sub-castes, but are not allowed to intermarry with them. Caste discipline is maintained through recognised leaders or through a standing committee or Panchayat which deals with all matters affecting the community. The decisions of the Panchayat are final and their authority unquestioned. Minor breaches of caste rules can be expiated by a ceremony of purification and a feast, but for more serious offences the penalty is excommunication. A man who is excommunicated is cut off from all intercourse with his caste fellows, who will neither eat nor associate with him; he is shunned as a leper, and his life is made so miserable that he soon becomes eager to accept any conditions that may be imposed upon him.

Caste in Early Days: Evolution of Caste

In the earliest writings of the Aryans who migrated to India we find no trace of caste. The invaders were divided into a number of tribes each under its own chief. Every householder was a soldier as well as a cultivator, and even the sacerdotal office does not appear to have been hereditary; even the prince could sacrifice for himself and his people. Later on, with increasing social complexity, the community was divided in much the same way as in Ancient Persia into four classes, viz. Brahmans or priests, Kshatriyas or warriors, Vaisyas or merchants, and Sudras or cultivators or servants. The last-mentioned of these castes included half-breeds and the aborigines who had been conquered. This division into classes was the natural result of the principle of division of labour; but the three classes had not assumed as yet the nature of castes.[1] The last of these classes did not form a part of

[1] Cf. Macdonell and Keith, *Vedic Index*, vol. ii. p. 257: "There is little trace in Vedic literature of one of the leading characteristics of the later system, the impurity communicated by the touch or contact of the inferior castes, which is seen both directly in the purification rendered necessary in case of contact with a Sudra, and indirectly in the prohibition of eating in company with men of lower caste. It is

the community; they were enemies of the conquerors, separated by difference of colour and race. The Brahman of the early days devoted his life-time to learning religious rites and performing religious ceremonies; and though he was supposed to take his wife from his own class there was no binding rule to this effect. They often chose brides from among the people, but maidens of priestly houses never gave their hands to men outside their circle.[1] A Kshatriya could become a Brahman, and a Brahman a Kshatriya. But as kings and warriors became more addicted to the forms of royalty, as the people became more submissive and loyal, it was not considered correct for maidens of the military classes to marry men from the ranks, although warriors might still choose brides from the people. Thus, whereas the first three castes were elastic, there were rigid rules about the inferiority of the fourth caste; and the principle of exclusion and isolation once admitted into society permeated the entire social structure. As society advanced and expanded, division of labour was carried further; the castes began to multiply with the multiplication of professions and occupations; each functional group first organised itself for craft purposes under a Panchayat; the primary duty of the Panchayats was to settle all questions connected with the craft, but with the lapse of time they arrogated powers to themselves, finally taking cognisance of all breaches.

Thus the evolution of caste in India is the normal extension of ancient Aryan institutions, as determined by the conditions and the environment under which these institutions grew in India. The Hindus shared with the Greeks and Romans and the Persians and Medes the same

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true that prohibition of eating in company with others does appear, but not in connection with caste; its purpose is to preserve the peculiar sanctity of those who perform a certain rite or believe in a certain doctrine. Vedic literature does not yet show that to take food from an inferior caste was forbidden as destroying purity."

[1] "Satyakama, son of Jabala, was accepted as a pupil by Haridrumata Gautaṁa, though he could not name his father" (Macdonell and Keith, p. 259).

family organisation, the same clan and tribal organisations ; with their advent into India they found themselves in the position of conquerors confronted by a conquered population, differing in colour and race, which retained its primitive organisation. The sacerdotal caste among the conquerors strengthens its power and extends its privileges, and thus commences the crystallisation of the caste system of India—a system " which is neither a purely economic organisation of occupations, nor a chaos of tribes and conflicting races, nor a simple hierarchy of classes, but a mixture of all three unified by the common inspiration which dominates all the groups in their functioning." [1] Three broad determining conditions seem to have favoured the growth of this system. (1) Differences due to race and conquest and the unlikeness between different strata of the population due to the differentiation of social functions. In the America of our own times the universal feeling among the whites that the negroes must be held apart and subordinate as a race is a typical illustration of a caste institution. Many of the negroes may be superior to the majority of the whites ; but to dine with a negro, to work or play by his side, or to associate with him in any relation in which the superiority of the white man cannot be asserted is held to be degrading. The extent to which differences in social function may develop and foster a caste organisation is also witnessed in the development of the feudal system with its two well-defined castes, the knightly and servile, between whom marriage was impossible and intercourse of any kind scanty. In the case of India account must also be taken of the reaction of the theory on the system. When the idea that caste is natural had become prevalent and sanctified, it tended to create caste where it would not otherwise have existed.[2] (2) A settled state of society is favourable, and change hostile, to the growth of caste, because it is necessary that functions should be con-

[1] Senart, *Les Castes dans l'Inde*, p. 252.
[2] Cooley, *Social Organisation*, p. 225.

tinuous through several generations before the principle of inheritance can become fixed. This settled state of society prevailed in India for nearly a thousand years. (3) The low state of communication and enlightenment—the ignorance of the masses and the difficulties in the way of free intercourse between the different sections of society—confirmed caste organisation. Caste is an organisation of the social mind on a biological principle; and this means that functions should follow the line of descent instead of adjusting themselves to individual capacity; it means the subordination of reason to convenience, of freedom to order.

Caste in Hindu Religious Speculation

The fourfold scheme of the caste system as embodied in Manu and the Bhagwad Gita may be the reflection of the early history of the four classes in India. The early teachers had classified man's powers into three—*brahma*, or the power of giving knowledge, *kshatram*, or the power of swaying men; *vittam*, or the power of handling wealth. All powers belong to the common self, and imply duty to the common self. Whoever exercised his power in organic co-ordination with this greater self was *twice-born*, *dvija*. He was called *brahmana*, *kshatriya*, *vaisya*, according to the power dominant in him. The once-born irresponsible man was called *Shudra*—earth-coloured, not to be despised as later degeneracy would have it, but the very material for upbuilding, the food-giver without whom the powers of the higher castes would be vain. The *Shudra* is simply the soul not yet clever enough, or strong enough, or wise enough to share the responsibilities of the three real (twice-born) castes. The ideal of the Bhagwad Gita was the ideal of a social organism with differentiation of functions and activities to be discharged by each class according to its capacities, the place of every individual in society to be determined not by birth or wealth or rank but by worth, and every class linked to the rest by the

law of mutual service. The myth that the four castes came from four organs of the supreme principle of all life and reality—Brahma—may be an allegorical representation of this profound ideal. This ideal of philosophical Brahmanism formulated a theory of society as a living organism, not a static aggregate of units broken up into water-tight castes, each excluding the rest, but a growing unity of social life, in which the harmony and welfare of the whole were to be secured by co-operation between the different classes, with the Brahmans at the top, whose privileges were made proportionate to their duties and services, with fluid classes linked to one another by free social intercourse. It is this old-world conception to which modern political philosophy is gradually reverting; and the highest ideals of social life and progress to-day are reaching back to these old-world ideals.

Castes: their Relations to Economic Life

But this original conception was soon forgotten; the institution became rigid, stereotyped, and inelastic with the lapse of time. In the centuries that followed, the caste system may have preserved the wonderful mechanical skill and dexterity of the artisan classes in the face of foreign competition. Like the guilds of the Middle Ages in Europe the castes may have developed and fostered art and industry. They may have preserved Hindu culture and civilisation, and may have contributed to the spirit of contentment and resignation which marked the outlook of the people. But, on the other hand, as the system exists to-day it makes for social disruption, lack of solidarity, and splits up society into isolated, self-dependent, and sometimes conflicting units. The absence of struggle, by which the caste system has enabled races with different ideals and cultures to exist side by side, and which has developed into a ready acquiescence in any position assigned by the social system, "has crushed individual manhood and has accustomed us for centuries

not only to submit to every form of domination but sometimes actually to venerate power that holds us down." Political slavery is characteristic of a caste-ridden society.

In the second place, the system prevents the free mobility of labour and capital which economic life demands. It renders large-scale production difficult. The low castes especially were bound to the village of their birth; they could never be more than strangers in another. In times of famine and distress the people could not leave their ancestral village lest they lose the hold on bare existence which their village assured to them. The normal operation of the laws of supply and demand which connect communities of people with natural resources has been rendered difficult in a country where the individual finds himself under caste restrictions. The finest art and workmanship, in India as in other countries, have been produced at times when individual ideas have had freedom to work without restraint from system or tradition in style and method. Copyists are never efficient craftsmen; they can never produce an original idea in design or execution; and the tendency of caste can only be to produce generations of imitators and copyists. The individual born in a caste can never find his place in society for which he is fitted by his ability; there is an enormous wastage of talent and ability from an economic point of view. Caste has a deadening effect on individual and social life. There is no scope for the development of individual genius and individual taste. In a caste-ridden society each man's lot and function are fixed; he cannot change them; he cannot rise above them. The want of initiative, spontaneity, and enterprise, of the spirit that dares and dies, is only the natural result of centuries of caste repression and caste domination. A society dominated by caste crushes out all life and soul, hampers all growth and progress, and makes economic development impossible. Caste as it exists to-day is the worship of an idol; the life which it once symbolised has disappeared

from view ; and the only remedy is to free ourselves from this bondage, to divest the past of its purple, and to realise that what matters is not the form and the shadow, but the substance.

But more than all this is the curse that affects Indian life in its attitude to the depressed classes. These are mainly aboriginal castes of the tribal type ; they are regarded as unclean. Washermen will not wash for the lower castes nor barbers shave them. In some cases the touch of a low-caste man makes it necessary for a man of higher caste to bathe and change his clothes. In others his entry into a house defiles all the water therein. Some low castes are regarded as so unclean that they may not enter the courtyards of the great temples ; and in extreme cases they are compelled to live by themselves on the outskirts of the village. These untouchables, over 50,000,000 in number, are kept in a state of abject submission and helplessness. Such a condition of affairs involves not only the economic waste and the moral degradation of the low castes themselves, but the moral degradation of the society as a whole. The mentality that tolerates this system is fitted only for that abject slavish condition which has been its lot for centuries under foreign rule. A society that deliberately depresses millions of its members deprives itself of the power to develop and grow economically and spiritually.

" In all civilised societies, except those founded upon a rigid caste system, the social ladder exists ; and every step forward in democratic organisation, every thing that throws the world more completely open to talent, that finds the right man for the right place and the square peg for the square hole—educational facilities, scholarships, personal agencies—all such things contribute to the perfection of the social ladder by which the ascent of merit and the descent of inaptitude are made easy.

" Now an effective social ladder in any nation is a most important agency for the advancement of its civilisation. In its absence talent will not find due scope ; the men who

by reason of superior endowments are its natural leaders will not come to the front. And that such men should be produced by a people and should achieve a due influence upon and leadership in every form of activity, in government, in science, in art, in commerce and industry, is the most essential condition in national prosperity and national progress. Hence the nation with the best social ladder, other things being the same, will for a time progress most rapidly."[1] These observations require no comment.

Already under the influence of Western civilisation and under the stress of economic circumstances the barriers of caste are slowly breaking down. High castes and low castes are necessarily thrown together in tram-cars and railway carriages and in the crowded streets of big towns. It is difficult, if not impossible, for a man of high caste on a railway journey to preserve that aloofness which he maintains in his own village, or to purify himself every time he comes in contact with men of low caste. With the growth of commerce and the introduction of machinery in production the old social organisation has become unsuitable and is bound to be subordinated to the exigencies of economic life. Many of the old village industries have become unprofitable, while a great demand has sprung up for labour in mines and factories and workshops of all kinds.[2] In all directions people are giving up their traditional means of livelihood in favour of new vocations, and a man's caste is no longer a fairly certain index to his occupation. It is a common phenomenon in industrial centres to find a person belonging to the depressed classes teaching the sons of Brahmans. Brahman cooks are to be seen in Bunyas' houses, and Brahmans serve in Government offices side by side with Pariahs. Much has yet to be done before the rigidity of castes finally disappears. As yet the villages have not been affected; the masses in their villages are just as particular as ever

[1] W. McDougall, *National Welfare and National Decay* (1921), pp. 155-156.

[2] Article "Caste," *Encyclopædia of Religion and Ethics.*

they were. The uneducated and illiterate women of the family are as tenacious as ever before of the old observances and restrictions. Nor is it likely that even the educated classes will for many years to come make much progress in the direction of emancipating themselves from the tangled matrimonial restrictions which are the essence of the caste system. All that we can hope for is that under the guidance of wise leaders who can inspire confidence in the masses the country may be gradually led to throw off the shackles of caste. Much depends on the teachers of the youth of the country; a right emotional guidance might make it possible in two or three generations for the country to outgrow its traditions and enter on a larger life. Much may also depend on the extent to which the legislature resting on a broad electoral basis and enjoying public confidence may stimulate and educate the habits and customs of the masses by well-devised laws. Caste in its growth has spread downwards from the higher ranks and the higher functions to those that are lower. May we not hope that if regeneration is to come it will also come from the higher ranks of Indian social life, ready to understand their responsibilities and prepared to uplift the depressed and the inferior classes into a life of co-operation and service?

The Joint Family: the Ideals underlying the Institution

One fundamental character in which the family organisation of India differs from Western family organisation is the joint family system. Its main principles were embodied in Sanskrit legal works, the Dharmashastras or Smṛtis. Hindu law is still applied throughout British India with regard to inheritance, succession, and marriage. This family organisation which has survived the vicissitudes of time in India, has close analogies to the early Greek and Roman families. The head of the family enjoys the power of a Roman pater-

familias, the manager of the family estate, without whose consent or knowledge nothing of importance can be undertaken; he is the guardian of the spiritual as well as the material interests of all the members, and can check irregularities of all kinds. The extent of his power may be gathered from the fact that married sons in India remain under the paternal roof with their wives and children, and that adopted and illegitimate sons are very often added to the legitimate sons. Very often a respectable Hindu had to support indigent relatives together with their families as well as the hereditary family priest and other servants. The oldest Hindu lawgivers lay down the rule that the members of a united family have a joint continuity of worldly and spiritual interests. Hence their income and expenditure are also conjoint.[1] The system is based on a rational, economic, and moral principle. It is essentially an altruistic organisation. Family life of any type involves sacrifice and is founded on a policy of mutual give and take. But in the joint family where the wishes of all, young and old, males and females, have to be consulted and reconciled the sacrifice is infinitely greater. It is an association that guarantees the minimum of subsistence to every member, which supports the old and the infirm, looks after the widow and children, stands responsible for the defectives, whilst at the same time it provides opportunities for the development of individual potentialities. The head of the family is not necessarily a tyrant, but a trustee endowed with privileges and with corresponding responsibilities. The joint family secures all the advantages of division of labour; all the members can be of some use, each according to his ability. There is no need for an institution like the Poor Laws and the workhouse when the family undertakes the duty of supporting the cripples, the widows, and the orphans. The family is a training ground for the young, a field for service and work for adults, and a refuge for the old. It affords scope for the play of sympathy and affection.

[1] Goldstucker, *Literary Remains*, p. 184, Appendix.

From an economic point of view the joint family involves conservation of economic resources—it means saving in time, saving in labour, and saving in money. Every member of the family works for the family as a whole; and every member enjoys the amenities of life made possible by the work of all. The member who has greater powers, intellectual or physical or moral, uses these powers for the welfare of the family, as the deficiencies of another are supplemented by the joint resources of the whole. The ideal underlying the joint family organisation is one to which Western economists in our own times look forward in a spirit of revolt against the selfishness and indifference that mark social life in Europe. Thus: "We can conceive a state of things where children were always sufficiently trained and educated by their parents, and where the sick, aged, and infirm were always properly taken care of by the members of the family who were strong and well. But the actual has not come up to the ideal." [1] The joint family expresses the ideal of a group which realises definite social aims: it serves the purpose of teaching respect for authority and order; of inculcating habits of co-operation; of educating the young in the virtues which are required of them as adults. It reminds us of the fact that society grew out of the family, the nursery of social feelings and aptitudes; and even to-day society in this country may be said to be the family writ large, as in the West society is the individual writ large.

The Joint Family as it is

But this old-world ideal of a family organisation in which economic interests based on co-operation and division of labour were duly subordinated to the larger aims of human life, to the cultivation of affection and social virtues, has very largely disappeared in the joint family of our own days. The link between the family and the society is lost sight of, and the family has fallen

[1] Cannan, *Wealth*, p. 95.

back into a peculiarly isolated condition. It is wrapped up in its own doings, stands on a footing of its own, and exists for its own private ends. This is illustrated in the common attitude of parents to children: the question uppermost in the minds of parents is what do *we* want the children to be, not what *society* wants them to be. In the second place the conception of the family as an economically self-sufficient unit serving the purposes of a larger life has degenerated into the conception of the family as a property-accumulating unit amongst the rich, and amongst the poor to the use of all the members primarily as wage-earners without regard to their development as many-sided human personalities. The general concentration of attention on economic ends has thrown rather too much into the background the ends of health, morality, and religion. The joint family as it exists to-day dwarfs individuality and checks initiative.[1] The sons brought up in a state of dependence on the father lack the necessary freedom and enterprise when they step into the father's shoes. The equal division of property amongst the sons encourages the breeding of drones.[2] The old feelings of affection, the spirit of mutual service and tolerance and sacrifice, have given way to economic motives.

The domination of economic motives in its turn is helping forward a process of disintegration of the joint family. Modern individualistic tendencies are already asserting themselves. The decline of settled traditions

[1] Speaking of the English law of property Sir Sankaran Nair observes: "The one (English) law is individualistic, and based on the inviolability of contract, with the result that success attended energy and labour. The other (Hindu) was rooted in communistic and family bondage and was one of status,—fostered indolence and stifled all energy" (*Contemporary Review*, August 1911).

[2] In Hindu law the head of the family is either absolute owner of all the ancestral property or all property is vested in him as trustee. But as every member of the family has a claim for maintenance on the ancestral family property, whether he works or does not, the system fosters social parasitism; the divorce of work from reward encourages irresponsibility, inflicts burdens on the conscientious, and gives a premium to idleness and indifference.

runs concurrently with the larger play of individual choice, and the demand for freedom of opportunity. The tyranny of the mother-in-law, the high-handedness of fathers, the bickerings between daughters-in-law, in a group inspired by no larger purpose than that of economic gain, have contributed their share in this process of disintegration. We are not likely to have in India for a long time yet the disruptive social and economic forces which in Europe are breaking up the family organisation as it exists to-day ; but we may have in the immediate future the substitution in the place of joint families of the simple families of Western countries. Such a substitution may mean larger opportunities for a full life on the part of the separated units ; because at present the joint family has lost its spiritual meaning. But it may also mean a loss if the family is degraded as it has been to-day in the West into an institution for selfish enjoyment and economic efficiency. In both the East and the West alike the true meaning and the ethical purpose of family life seem to have been lost ; in the East, because of the unwilling subordination of individual purposes to social, maintained by the force of custom and tradition, in the West because of the transfer of certain functions, like the care of the health, education and nutrition of children, from the family to the State, and because of the new economic order which offers increasing scope to the economic personality of women outside of family life. What we need is a realisation of the necessity for change ; some change in the family organisation is needed both in the East and in the West. But in the East we may well beware of the danger of losing with the disappearance of the joint family the spirit of co-operation, mutual service and fellowship that the organisation can provide.

Ultimately, however, the survival of the family as an institution for the promotion of a full life for the human individuals who belong to it depends on the extent to which the obsession of the economic factor is removed. If the family has the guarantee of an adequate income,

education, equality between parents, a decent house and leisure for its members, it may progressively realise the potentialities of a larger life.

The Laws of Property, Succession, and Inheritance

The economic life of every country rests upon certain fundamental conditions—amongst these being the institution of private property. In early times real property was held by the group, which might be a fishing group, a hunting group, or a pastoral group; the only form of property rights recognised in the individual being his personal ornaments or the bow and arrow with which he hunted. With the development of agriculture land became of importance, and the rights once exclusively vested in the group came to be transferred to families, and subsequently in the West to individuals. But in Greece and Rome, in the earlier period of economic development, the unit was the family owning the hearth and the land around, which afforded means of offering sacrifices to the household gods, the ancestors of the family, and thus the only means of securing the continuity of the family life with the help of the deities of the hearth. It is this conception that has survived in Hindu law in our own times. The right to succeed in a Hindu family depends upon the successor's capacity of benefiting the deceased by the offering of funeral oblations. A son must present funeral oblations to the father even though he inherits no property. And even the widow who succeeds to her husband's property on failure of male descendants has to see that regular oblations are offered to him at stated times.

The property of a joint family is inalienable: it is the material instrument on which the solidarity of the family depends; because through it is secured the material and spiritual welfare of the members of the family. It furnished the opportunity for the exercise of industry, service, mutual affection and mutual help; to-day, however, the ideal has vanished and a process of dis-

integration to which we have already alluded has set in, making the individual the centre of property rights.

In the West the individual became the centre of property rights even long before the Christian era. Before the rise of capitalism the form in which property rights existed was the ownership of land and tools by those who used them. Ownership was a condition precedent to effective work in the field or the workshop. Property was regarded as a sacred right, as it was indispensable to the performance of the active functions of providing food and clothing. The land of the peasant or the tools of the craftsman were the condition of his rendering the economic services which society required ; personal possessions like a man's furniture and clothes were also the subject of property rights, as they are indispensable to a life of decency and comfort. The mass of the people were generally masters of the holdings which they ploughed and of the tools with which they worked. Now this theory of property and property rights adapted to the conditions of an earlier age has survived into an age in which the whole structure of society is radically different from that in which it was formulated. The industrial revolution in Europe brought with it large-scale production in factories run by steam or fuel or electricity ; it brought with it concentration of population in cities ; it brought with it the concentration of the national wealth in the hands of a few hundred families. It has absorbed the small master, the little shop-keeper, the country bank, and has turned the mass of mankind into a proletariat working under the agents and for the profits of those who own.[1] But the characteristic fact that differentiates modern property from that of the pre-industrial age is that in modern economic conditions ownership is passive, that property to most of those who own it to-day is not a means of work, but an instrument for the acquisition of profit or the exercise of power : and this profit bears no relation to service nor this power to responsibility. In

[1] R. H. Tawney, *The Acquisitive Society*, pp. 34 *et seq.*

modern societies the great mass of property consists neither of personal acquisitions, such as household furniture, nor of the owner's stock in trade, but of rights of various kinds such as royalties, ground rents, and, above all, shares in industrial undertakings. Ownership and use are normally divorced. Such property may be called passive property, or property for acquisition, for exploitation, for power. It is rarely realised how extremely modern are those forms of property in which the world is interested to-day—for example the share. The share is a product of the joint-stock company, but even as late as the beginning of the last century the law in England looked with suspicion on the transferable share. In 1837 it could still be held that a joint-stock company with shares assignable at the will of the holder was illegal.

Whereas in earlier ages the protection of property was normally the protection of work, the relationship between the two has come to be very nearly reversed in our own times. The mass of mankind are living to-day under laws imposed to protect the interests of the property owners. A mill-owner may poison or mangle a generation of operatives ; but the law will let him off with a caution or a nominal fine to poison and mangle the next. A landowner may draw rents from slums in which young children die at the rate of 200 per thousand ; but he will be welcome in society. For property has no obligations and can do no wrong. Urban land may be held from the market on the outskirts of cities in which human beings are living three to a room, and rural land may be used for sport when thousands are starving for bread.

It is this phase of economic life that is coming to India to displace its village economy, its joint family organisation, its laws of inheritance and succession. It is a phase of life in which the individual asserts his right to unlimited acquisition and an unlimited income, in which business is a means of making wealth for individuals and not a social service to the community, in which while the shareholder has the confidence that his investments will be returned

to him, the working man has no security of his job. The social and economic basis of life in India has hitherto been essentially communistic. Her social institutions, her laws of inheritance and succession are the manifestations of a communistic spirit. With the exception of the zemindari estates and the estates of princes, the law of primogeniture does not govern succession to property. A son has a right in the ancestral property as soon as he is born and he can demand a partition at any time. Under the Dayabhaga system a son obtains a right in the property on the death of the father. No direction to prohibit a partition is valid. Joint possession, joint enjoyment, and a right to demand partition are the usual rights of a Hindu under the Mitakshara law. The widow and the daughters till they are married have a right of maintenance. The spirit of Hindu law was essentially democratic, based on the idea that the use of property should be common. The concentration of wealth in the hands of an increasingly small minority, which laws of property and bequest have made possible in the West, with the resulting inequalities, was unknown in this country. The underlying principle of the Mahomedan law of succession is practically not different from that of the Hindu law. The joint effect of these laws and institutions has been an even distribution of wealth, with no wide gulf between the rich and the poor. Such a condition may not be favourable to the accumulation of wealth and capital, may make large-scale production difficult, may prevent large savings; but it has its redeeming features. It secures an equal start in life to every member of the social organism, and in days when the country had a many-sided economic life, it offered diverse outlets for economic activities. To-day, owing to the decay of indigenous industries, and under the obsession of an alien government, the pressure on the soil has increased and has resulted, in combination with the operation of inheritance and succession laws, in a process of subdivision and fragmentation of holdings, thus making cultivation uneconomic. But a mere change in the law of inheritance

will not by itself solve a problem which has been created by the joint operation of social and political causes of a far-reaching character. And those who are to-day responsible for the moulding of public opinion on these matters may well raise a note of doubt and alarm against the tendencies in favour of a rapid transition to an economic organisation resembling the Western, with its swollen capitalism, its exploitation of the masses, its divorce of property rights from the true uses and function of property.

CHAPTER VIII

SOCIAL INSTITUTIONS AND ECONOMIC LIFE—*continued*

Social Evolution and Competition

Society creates for itself an environment of customs, traditions, and institutions within which it lives. Its life is determined largely by its social environment, which consists of this complex of customs and institutions and traditions. From an economic point of view, as from the point of view of wider human activities, as is the case with individual development, so is the case with social development. As the adult individual enters wider social relations than the child, so does a developed form of society find itself more intimately linked with the world than a primitive society. As the child's life and activities are dominated and controlled from without, so is society in its earlier stages of development dominated by custom and tradition. Prices and wages in earlier phases of social development are determined by custom ; economic relations between master and servant are controlled by moral and spiritual factors ; but as the child grows into manhood he becomes more self-determining, so, as society develops, opportunity for individual development is widened, and the domination of custom is replaced by the more reflective and conscious domination of law, which embodies the crystallised social experience and provides for the free expression of individual life. A more developed form of social life also implies the process of liberating social energy from the stress of economic needs for the pursuit of art and science and culture.

It has sometimes been maintained that in the transition from the economic life of earlier times to the economic life of our own, competition has played a large part, that competition has gradually replaced custom in the determination of wages, prices, rents ; that it is only a phase of that struggle for existence which dominates animal life ; and that the present organisation of society rests on a basis of competition. Now it has been repeatedly pointed out in the first place that even amongst the animals, but still more amongst men, it is the group as a whole rather than the individual which becomes the unit of the struggle ; the individual can preserve himself only by preserving his group. Then again by co-operation alone does the individual secure himself against his enemies. Man forms alliances, enters into compacts, selects leaders, arranges devices for division of labour—all this secures the advantages of collective action and replaces the single-handed struggle of the individual. The unit here again is not the individual but the group. Finally in the struggle against the physical environment we can equally trace the principle of solidarity resulting in group survival ; the buffaloes of the Western plains of America stand close together when caught in a violent storm. Scattered, all would perish ; united, all escape except the few most exposed. This shifting of the point of incidence of the struggle has two consequences : in the first place the individual must be fit to live a social or collective life, not only in order that through him it may be saved, but also that through its salvation he may be saved. The struggle for existence in human evolution directly applies to the struggle of group with group ; war may still subsist between nation and nation ; but "an eye for an eye" is not the method of individual competition in social life.

The Middle Ages

The economic order under which the civilised world is living to-day has been brought into existence compara-

tively recently with the beginnings of the nineteenth century. The organisation which the industrial revolution replaced was an organisation dominated by the Christian ideals of the Middle Ages, an organisation in which social institutions and economic activities were related to common ends which gave them their significance and served as their criterion. The whole structure of society in the Middle Ages was built on the idea that the things of the spirit are of supreme importance, that the true aim of all training is to fit a man not merely to earn his own living but to serve his fellows and to worship his Maker. The feudal lord who allowed the serf to remain a slave all his life still believed that God had bestowed an immortal soul upon this creature and therefore that he must be protected in his rights, that he might live and die a good Christian. When the serf grew too old or too weak to work he was taken care of by the master. He knew that he was safe, that he could not be thrown out of employment, that he would have a place of shelter and always have something to eat. This feeling of stability and safety was found in all classes of society. In the towns the merchants and the craftsmen lived in guilds which assured every member of a steady income. Members of the guild followed the same craft, and the guild was concerned with regulating its conduct. Quality of goods, standards of labour and skill, hours of work, fixing of prices—all these were the primary concerns of the craft guild. Wages were based upon some attempt at a moral conception of what the wages should be, which had no direct or indirect concern with ideas of the wages fund or labour supply. There was a just price for each article as there was a fair wage for every class of labourers. The whole economic structure was a moral structure based on the consumer. Care was taken that he should not be oppressed, and market regulations were made for his protection. All things were God's, and men could only hold them on His behalf. Thus the trade guilds and the craft guilds had their religious and social side—their

patron saints and their contributions towards the parish church in the way of stained glass and other adornments, their schools and almshouses, their frequent feasts and common meals. The Church in the Middle Ages was not only a place of worship—it served the place of the newspaper, the poor law, and the Courts. It was God's house, and therefore the people's home. We find young men joining resources to buy a chalice, and the women to put up a window. All men are equal in the sight of God, and the humblest has an infinite worth. Work was a source of dignity and not of degradation, and justice was to determine wages, prices, and all the industrial relations of men to men.

The Period of Transition

This old-world conception of life was replaced in the course of a few centuries by the conception which dominates economic life to-day. Vast new territories were opened up; new scientific discoveries were revealed; a spirit of daring and adventure and speculation was called forth which the medieval methods of controlling economic life could not govern. Individual rather than corporate qualities were in requisition. Rivalry and competition rather than association were characteristic of the times. Trading on borrowed capital came into vogue. Democracy as it had existed in the Middle Ages was dead, the conception of men as united to each other, and of all mankind as united to God, by mutual obligations arising from their relation to a common end, was replaced by a mechanistic idea in which private rights and private interests prevailed over social purpose. These private rights and interests were regarded in the past as relative to some public purpose; henceforward they were thought to be absolute and indefeasible. The State could not encroach upon the rights, for the State existed for their maintenance. The most fundamental of these rights was property—and those who possessed it were

regarded as the natural governors of those who did not.[1] Society was based on freedom of contract, and assumed the character of a joint-stock company in which political power and the receipt of dividends were justly assigned to those who held the most numerous shares. The pursuit of economic self-interest by the individual was to be subject to no moral limitations, and the mechanism of economic life was so contrived as to convert the exercise of individual rights into the instrument of public good. The economic and social environment under which these principles of natural rights and vested interests were first formulated and then stabilised was of an exceedingly simple kind. The eighteenth century industry was of the nature of handicraft, not of the nature of mechanical engineering. It was a question of the skilled workman and his use of tools. Mechanical inventions were only labour-saving devices. "Capital stock" was the savings parsimoniously accumulated out of the past industry of the owner. Business was petty trade subsidiary to industry, and credit was an expedient of the needy. Profits were a reasonable remuneration for productive work, and for the labour-saving use of property. The efforts of masters and workers were directed to the turning out of the largest and most serviceable output of goods, and prices were determined by free competition. The forces which threatened property and industry were the fiscal policy of governments and the decaying relics of feudalism. To resist such interference was to protect not only property but industry. Property was regarded as the most sacred of rights, as it enabled the industrious man to reap where he had sown.

The Capitalistic Era

But these relatively simple institutions of social and economic life which were familiar to Adam Smith in the eighteenth century were soon transformed into the

[1] R. H. Tawney, *The Acquisitive Society*, pp. 12 *et seq.*

complex economic order of our own days, in the first place through a series of mechanical inventions affecting the textile and other industries, and then through a revolution in transport which brought distant places into commercial relationship. Large-scale production has taken the place of handicrafts, and the old personal relation between master and servant has given place to an impersonal arrangement in which a composite business concern representing a combination of owners, no one of whom is individually responsible for the transactions of the concern, deals like a machine with masses of labourers reduced very much to the condition of tools or hands. The economic order in which people are living to-day in the West recognises property rights in the individual which are altogether divorced from service. In modern industrial society the great mass of property consists not of the tools of the craftsman or the holdings of the peasants or personal possessions which contribute to a life of health and efficiency, but of rights of various kinds such as royalties, ground rents, and shares in industrial undertakings. Ownership and use are thus more or less completely divorced. Associated with this is the recognition of the right of inheritance and succession within the family, a right founded on reason in times when each family was a self-sufficing unit working for its own needs, but which ceases to be reasonable when inheritance within the family becomes a prerogative by means of which a parasitic individual is enabled to appropriate to himself the product of the labour of others. The population gets divided into two classes: a capitalistic class, possessing a monopoly of pleasant tasks and enjoyment, small in numbers, inspired by the faith that riches are not a means but an end, pensioners on industry who levy toll on its product; and the vast majority constituted by the labouring classes, the workers who find themselves degraded in public esteem in a society which reverences the possession of wealth, receiving a wage which scarcely keeps them alive. It may be that the capitalists as a class

represent the substitution in the place of a rigid feudal caste of a class in which social position is dependent on personal merit rather than birth. It may be that capital is more mobile than land, and that the proletariat massed in cities can more effectively organise itself than the bondsmen of earlier times. It may also be that, equipped with capital, we could tear down the old artificial barriers of the Middle Ages and achieve marvels in productive enterprise. But even whilst we are prepared to recognise the economic value of capitalism, we must also recognise that society seems feverishly engaged in keeping itself alive; that the chief incentive to commercial enterprise is the motive of personal advantage; that production is carried on not for use but for profit; that society gets divided into a class that is making money the sole business of life, and a class that lives itself out as the money-making tool of others. "The governing classes in Europe and America who to-day are the economically powerful have become an unholy alliance which exploits the state in the interest of trade."

Trade like property has thus been divorced from service. In the early days of commercialism the principle of competition was regarded as the panacea for all evils. Competition, it was suggested, seeks to produce an equilibrium between supply and demand; self-interest stimulates industry, the acquisition of skill and knowledge and enterprise. Economic progress is a competitive process; old trades are extinguished by the advent of new ones, as the motor seems likely to drive out horse traction; every new invention which reduces severity of labour competes with methods already existing and tends to displace them by its superior efficiency. The competitive system has stimulated the production of wealth. But, once again, the system which has by this time had a fair trial has failed hopelessly to provide a tolerably secure and sufficient subsistence for the great mass of men. It has deprived the mass of toilers of that security of physical subsistence which is a necessary condition of

liberty and of the liberation of the spiritual impulses. Far from providing men with a steady supply of the necessities of life—adequate food, adequate clothing, and a decent shelter—the system of competition has made life itself insecure and precarious. The pursuit of profit tends to depress the income of the worker, and in spite of all that Trade Unionism has achieved real wages have not appreciably risen. The maintenance of profits has necessitated the curtailment of supplies by such devices as diminution of working hours and periodic stoppage of work. Labour is treated as a commodity; unemployment is a normal feature of a system that deliberately seeks to secure a reserve of labour force in normal times. From unemployment to destitution is an easy step. The worker is at the absolute mercy of his master. He has been dehumanised, depersonalised, and degraded into a tool. Society is faced with a schism—the warfare between capital and labour in which the casualties are chiefly amongst the working classes.[1] The present economic order, with its principles of competition, individual production for profit, and its cleavage into classes, is intrinsically demoralising to all whom it affects. It is demoralising to the employer because he comes to regard the worker as a tool—a frame of mind that saps his own manhood. It is demoralising to the worker, who finds his labour bought and sold at a price; and as his labour is inseparable from his person,

[1] "Social life is turned into a scene of fierce antagonisms, and a considerable part of industry is carried on in the intervals of a disguised social war. The idea that industrial peace can be secured by the exercise of tact and forbearance is based on the idea that there is a fundamental identity of interest between the different groups engaged in it, which is occasionally interrupted by regrettable misunderstandings. Both the one idea and the other are an illusion. The disputes which matter are not caused by a misunderstanding of identity of interests, but by a better understanding of diversity of interests. Though a formal declaration of war is an episode, the conditions which issue in a declaration of war are permanent; and what makes them permanent is the conception of industry which also makes inequality and functionless incomes permanent" (Tawney, *The Acquisitive Society*, p. 43).

it reduces him to a condition of servility as real as that of a chattel slave.

This is the new order which the industrial revolution brought with it to the West—with its system of competition between class and class, with its individual production, free play of private enterprise, with its laws of property and inheritance, with its concentration of wealth in the hands of the few, with the ascendancy of the economic motive and its obsession of profit-making. But already there are signs that the economic order under which the West is living is being challenged and actually undermined. Free competition has disappeared in these last thirty years, when on the one hand combination amongst producers, and on the other hand combination amongst the workers, are the leading features of economic life. Capitalism to-day has resulted in the establishment of a monopoly in the leading industries of the civilised Western countries. The Standard Oil Company and the Meat Trust in America, the Imperial Tobacco Company and Coats' Combine in sewing-thread in England, are but outstanding examples of that policy of control of price and restriction of competition which legislation has failed to counteract. "In all capitalist countries rings, price associations, cartels, trusts and amalgamations, some national and some international, extend from industry to industry, the aggregations of capital becoming ever larger, and their tentacles creeping upwards and downwards, monopolising natural resources, integrating manufacturing processes, controlling transport, and more and more dominating the markets of the world by their manipulation of prices and their regulation of output." [1] Already before the outbreak of the war, "labour unrest" was becoming marked in the West; and "labour unrest" means in the first place that the workers of the world demand that the world shall be a fit place to live in, that the insecurity and want that have faced labour hitherto shall disappear, that the conditions of a satisfactory physical

[1] Sidney and Beatrice Webb, *Decay of Capitalist Civilisation*, p. 119

existence and economic independence shall be guaranteed to every man and woman. But "labour unrest" means something more: it is the result of a craving for a larger life, of which economic security and independence are but the indispensable pre-requisites. Already before the outbreak of the war, Socialism was dealing its hard blows at capitalism, awakening a new sense of right amongst the masses, teaching them to refuse to accept as permanent and just, a social organisation which permitted exploitation of man by man. Then followed the war with its five years of untold sufferings and sacrifices for the millions of the working classes, and with its five years of profiteering and gain-making by the few who remained at home and traded in the blood of their countrymen. These men have returned from the field and the camp; they have seen every social institution and every sacred right challenged and thrown to the winds, including property, freedom of speech, freedom of person, freedom of production, freedom of consumption. The war has challenged the economic order of Europe more effectively than any school of Socialism or Syndicalism; and the challenge need not be confined to Europe. The people who toil for a living have been taught in five years the effectiveness of organisation, of mass action; they have been accustomed to the sight of blood from day to day; they have been fed for years with a philosophy of hatred, sedulously cultivated for war purposes; they have been taught that no danger, sacrifice, or hardship is too great to be endured in defence of an ideal. They have now returned home from the war, and they have already commenced to question the adequacy of the social and economic machinery under which they have been living, in a manner which bespeaks the need for radical change if destruction in the shape of a more terrible warfare is to be avoided. Bolshevism is a translation into practice of the theory of Socialism amongst a considerable section of the European population. It is an experiment in the shape of a new economic structure. It may have its

serious shortcomings and imperfections : but the dictatorship of the Red Army in Russia is the natural corollary of centuries of autocratic despotism.

India and the Present Economic Order

The task before the West is thus to find its way to an economic organisation which, whilst it embodies the benefits of large-scale production and healthy competition, will deliver society from the ascendancy of the economic motive, will redeem commerce from profit-making, will secure to every member of the community in good and bad times alike the requisites of healthy life, and provide him with the opportunities for self-expression and a living fellowship. When we turn from this survey of the economic situation in the West to a consideration of Indian economic life, we find ourselves confronted with a double question. What were the features of the normal economic life of the country in the centuries that preceded the British rule, and what changes have resulted from the new factors that have come into operation during the last hundred years ?

The economic life of India in the past was, as we have already indicated, a many-sided life in which industrial pursuits and agriculture co-operated in producing a well-balanced organisation resting on custom and not on competition. Every one had his definite status in the social structure ; he was entitled to a fair remuneration by discharging his duties ; he found his work and his position determined for him by birth. The village was a self-sufficing unit ; the rent was fixed by custom and usage. Under the Moghul Empire the claim of the emperor was fixed either on the basis of the customary quota yielded by the cultivator to the collector on the spot, or assessed at one-third of the gross produce. Wages were equally determined by custom ; the cultivator as well as the labourer on the fields had no inducement or opportunity to migrate or leave his village ; he remained in his

village so long as the village could supply his food ; if he starved in his village it was equally probable that he would starve on the roadside or away from his village. A career was open to the exceptional labourer who might rise to the position of a cultivator ; but ordinarily the labourer was resigned to his position. Prices were also determined by custom in the absence of organised and sensitive markets ; transport was costly and dangerous ; there were no buyers for exporting firms ; payment of wages and government dues was often payment in kind. The bulk of the cultivators were small men with limited resources.

In the sphere of commerce and industry caste influences were prominent. The idea of association for mutual protection operated in the formation of trade guilds. The guild protected the individual trader and worker from the unjust requirements of princes and governments. The laws of the guild had an equal force with those of custom, family, or caste. Within the guild all were equal; the authority of the master was subject to a veto. A guild might be of one caste only or it might include several castes. As the guild was based on caste, membership of the caste carried with it membership of the guild, and no one not a guild member could practise any trade within the community over which the guild had authority. The guild fixed the hours of work, wages, and holidays. Expulsion from the guild involved excommunication from the caste. The guild preserved for trade and labour some measure of honour and dignity.

The craftsmen in the village were organic parts of a self-sufficing unit of communal life—the village blacksmith and potter, carpenter and washerman, each occupied his position in virtue of the service he rendered. Living in a society organised on the basis of personal relations and duties which descended in each family from generation to generation, their payment was provided for in various ways, of which money payment was the least important.[1]

[1] Even to-day in the villages there is relatively little buying and

Barter and personal service took the place of a cash nexus; prosperity consisted in having several years' provision of grain in one's granary. For their customary services the craftsmen were paid at harvest time, receiving a fixed proportion of grain or a share of the communal land. Often enough every man in the village might be a cultivator whether he was a husbandman, a blacksmith, or a washerman by caste. When the village had to be fenced in order to keep out wild beasts, or when roads or bridges had to be made, all the villagers worked together for the common good.

Whether in towns or villages the young craftsman was brought up and educated in the workshop and was his father's disciple. He learnt its technique from the beginning, primarily by service; the master's secret was best learnt by the pupil in devoted personal service, giving rise to that affectionate relation between the apprentice and the master which Western economic life so largely lacks. The transmission of a living tradition was made possible by such relations. There was nothing more striking about the position of the craftsman in society than the security of his position and status, the assurance of his purpose and value. There was a complete absence of anxiety as to the immediate future; those qualities of leisure and freedom so characteristic as the foundations of all true work in arts and crafts were secured in India. The craftsmen had leisure; their economic position made them secure against oppression or want. The craftsman "knows nothing of the desperate struggle for existence which

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selling. In Ceylon the smith, the carpenter, and even the doctor are bound to do services to the head of the village. Cf. J. M. Douie, "Land Tenures in the Punjab," *International Review of Agricultural Economics*, July 1917: "Living with the group of landholders were artisans and menials following hereditary occupations for the benefit of the community. Their services were defined and were paid for by a definite share of the produce at harvest time. All landholders and dependents had their houses crowded together on a common site, the impure leather workers and scavengers being settled on the outskirts or in separate sites close to the main village."

oppresses the life and crushes the very soul out of the English working man. He has his assured place, inherited from father to son for a hundred generations in the national church and state organisation; while nature provides him with everything to his hand but the little food and the less clothing he needs, and the simple tools of trade. . . . This at once relieves him from an incalculable dead weight of cares and enables him to give to his work, which is also a religious function, that contentment of mind, and leisure, and pride and pleasure in it for its own sake, which are essential to all artistic excellence."[1]

The outstanding character of Indian economic life in the past is that which Mr. Lipson ascribes to the guilds of the Middle Ages in Europe: "The guild embodied in its regulations a whole social system, into which the individual was completely absorbed by the force of public opinion, and the pressure of moral and social conventions. It embraced within its scope not only the strictly technical, but also the religious, the artistic, and the economic activities of medieval society."

This stable structure of social and economic life has been subjected to Western influences during the last hundred years and more. The economic life of the village has hitherto been the least affected by these new forces, but it has not been exempt from their influence.[2] Agricultural rent in India, which had been determined in

[1] Sir George Birdwood, *Industrial Arts of India.* See *The Indian Craftsman*, by A. K. Coomaraswamy, pp. 84 *et seq.*

[2] Sir Henry Maine, for example, traces the decline of the community of life that bound villages together in India in the past to the influence of the British rule: "If I had to state what, for the moment, is the greatest change that has come over the people of India and the change which has added most seriously to the difficulty of governing them, I should say it was the growth on all sides of individual legal right; of a right not vested in the total group but in the particular member of it aggrieved, who has become conscious that he may call in the arm of the state to force his neighbours to obey the ascertained rule." The individual has grown strong, defended by the law; corporate life has grown weak. Cf. F. W. Headley, *Darwinism and Modern Socialism*, pp. 49 and following.

pre-British days by custom, and which is now determined by administrative regulations and legislation, is not economic rent in the Ricardian sense. There is even to-day no economic competition between cultivator and cultivator in the Rayatwari areas, as the cultivator is the hereditary occupant of the soil and not a tenant farmer. The rent is determined by custom in the Rayatwari areas, where it has been said to have passed in some cases the amount which it can bear to pay under competitive conditions. The tenant pays the rent and cultivates the soil not because it pays him, but because there is no other outlet for obtaining a bare subsistence, and he is faced with the alternative of starvation. In the Zemindari areas originally rent was customary, till competition began to assert itself and rents went up, and the cultivator had to be protected by special legislation. But competition has affected the rate of wages in the villages: with the rise of industries in towns there has been a demand for labour; and labour is becoming relatively more mobile. This mobility has been facilitated by the organisation of markets and the opening up of communications. The only counteracting factor against the more rapid spread of competitive conditions is the illiteracy of the labouring classes and their conservatism. Prices in the rural areas are also increasingly determined by competition. But the competitive factor is the foreign firm and its agents who through their complex machinery get hold of the crop before it is harvested, deprive the cultivator of his legitimate gains, and force the general consumer to pay higher prices in order that the foreigner may have the benefit of the middleman's profits and support an overgrown population. "In India to-day we find co-existing economic ideas which at all events in European history are separated by thirty generations. The old customary and caste organisation actually exists by the side of the new competitive organisation; and they operate not only on different individuals in the same country, but also on the same individuals. India then is in a state of economic

revolution throughout all the classes of an enormous and complex society." [1]

In the urban areas to-day in India competition is the rule and custom an exception. Rent, wages, and prices are determined mostly by competitive factors. Ignorance and illiteracy among the general population may still be limiting conditions: and where these prevail, conservative habits also play a part in the determination of wages and prices to some extent. But in the urban areas, at any rate, Western industrial and economic conditions have been increasingly spreading: we have in our bigger towns all the features of slum life, destitution, sweating, with which machinery, large-scale production, and capitalism are associated in the West. Even in the rural areas, so far as the prices of raw materials and minerals and agricultural produce are concerned, prices are increasingly determined on a competitive basis, affecting the life of the rural population at the most vital point.

The economic life of India to-day thus presents to view the operation of two factors capable of working together in harmony for common social and economic purposes, but as they stand to-day, working side by side without any attempt at mutual adjustment, more or less as uncontrolled natural forces contrasted in their results. Whereas in European economic history we can trace the evolution of economic life through successive phases with their periods of transition and gradual development right through the Middle Ages down to our own times, in India we see the old economic order resting on status and custom and tradition suddenly subjected to the influence of competitive factors introduced with the advent of our British rulers. During the last six or seven decades foreign capital has been rapidly introduced into the country, working on a contractual basis, with the help of machinery, destroying the conditions of self-sufficient life in the villages, exporting raw materials and importing

[1] H. Dodwell, "Economic Transition in India," *Economic Journal* (1910), vol. xx.

cheap machine-made goods, with all the adjuncts of railways, telegraphs, and telephones. The idea that institutions and modes of economic life which were good for Great Britain could not be bad for India consciously or unconsciously pervades the history of British rule in India during the last century; and as the result we have our present economic situation with two almost conflicting tendencies working side by side—custom and the traditional modes of economic life on the one hand, competition, contract, capitalistic exploitation, introduction of standardised machine-made goods on the other.[1]

But the tragedy of the economic situation in India to-day is not that the country is subjected to the evils and incidental disadvantages of an industrial and capitalistic organisation thrust into the land and on a people hitherto living under a different mode of life, but that these evils and hardships are borne for the benefit of foreigners who exploit her material resources and grow wealthy on them. Capitalism in the Western countries has been accompanied by persistent insecurity and chronic penury among the wage-earners; it has widened destitution and encouraged parasitism; it has fostered a tyranny of wealth compared with which the worst political tyrannies are negligible. But in those countries in which it has made these ravages it has at any rate increased the aggregate production of commodities and services, due to the application of the sciences under the stimulus of the desire for profit. It has been employed in

[1] Cf. Dodwell, *Economic Journal* (1910): "Men thus lose their occupation in a community that is not thus organised on competitive principles. The needs of life are imperative, and so competition is introduced almost on a sudden into a unit which for long centuries has followed customary practices. The change is identical with that which England and indeed all Europe has undergone; in the West, its effects were less felt because they were spread over a considerable time, and because causes had long been at work slowly loosening and weakening the rural communities; but in India, village custom and competition are being suddenly brought together. . . . the Indian development is sudden. The villager who was brought up to follow immemorial custom is himself forced into following the methods of competition."

developing a national economy ; it has been the outcome of economic forces deliberately used for the promotion of the economic welfare of the people within each country. If capitalism has failed, the same economic forces will be directed into other channels for evolving a different order of economic life with organised production and regulated consumption. Japan adopted capitalistic methods and industrial competition, but Japan deliberately adopted them for promoting what she believed to be her true economic life. A Japanese statesman is reported to have observed that " the introduction of the capitalistic system into Japan had brought in its train an ever-growing class of destitute persons—a class quite unknown in the old Japan of the daimio and the rice cultivator." This destitution, he added, " is the price which Japan has had to pay for increasing the personal wealth of her leading citizens, and for becoming a world power." [1] Japan may have this consolation ; but we in India feel that capitalism, large-scale production, economic competition, have not been adopted by us as part of a deliberate plan for ensuring our own economic development, but have been forced upon us as the consequence of British domination ; that we not only suffer from the evils habitually associated with capitalism, but that these evils have to be borne without any compensating advantages. Large-scale machine production has come to stay ; but it has to be remembered that most of the capital is foreign capital, worked by foreign companies ; that this capital is employed in extractive industries or in trading concerns whose business is to export raw products and import manufactured goods ; that the people who grow wealthier, except for one or two industries, are not Indians but the foreign earners of profits, and that the imports of cheap machine-made goods which capitalism has brought with it, have led to the rapid destruction of the crafts and arts indigenous to the land. The result of a

[1] Quoted by Sidney and Beatrice Webb, *The Decay of Capitalist Civilisation* (1923), p. 14.

century of foreign domination has been the throwing out of gear of the old social and economic order, the destruction of the ideals underlying that order, and the unregulated introduction of institutions from the West which, while they work out all the evils incidental to them, do not bring with them the compensating advantages which they have brought to autonomous countries.[1]

The Sudden Transition from Local to International Economy

This transition from the earlier village economy and handicraft stage to the new regime brought about under British rule involves thus a violent interruption in the normal development of economic life in India which has nothing parallel to it in the history of other countries. Normal economic evolution in other countries commences with local economy, the stage of economic life that lasted through the Middle Ages in Europe and reached down to the days of Adam Smith; already with the eighteenth century and through the nineteenth the European nations evolved a "national economy," a stage in which every nation formulates and carries through a definite economic policy directed to the promotion of its national welfare, evolving a many-sided economic life and subordinating all other considerations to the national interests and the desire of self-sufficiency. An "international or world economy" in which all nations form a single organic unit with territorial division of labour, in which the gain of any one member is the gain of all the rest, has not yet been evolved.[2] What an international world economy to-day

[1] Thus, writing of China, Mr. Bertrand Russell observes: "The development of Chinese commerce by capitalistic methods means an increase for the Chinese in the prices of the things they import, which are also the things they chiefly consume; and the artificial stimulation of new needs for foreign goods which places China at the mercy of those who supply these goods, destroys the existing contentment and generates a feverish pursuit of purely material ends" (*The Problem of China*, 1922, p. 183).

[2] "There cannot be a world economy or international economy because

means is the growing intensive rivalry of a few leading powers exploiting the resources of the undeveloped tracts of the African and Asiatic continents, entering into an exchange of commodities that is one-sided in its action, keeping a restless democracy pacified at home on the produce and resources of the dependencies which they control abroad. Japan and Germany, for example, passed in the course of half a century from a local economy resting on custom to a national economy determined by a policy uncontrolled from without; and this was followed in turn by an imperialistic phase of economic development seeking outlets for manufactured commodities in return for food and raw produce.

But the economic history of India during the last few decades has been the history of a rapid transition from her local economy resting on custom and tradition to a system of international exchange under the influence of foreign rule, by which she has to part with her mineral wealth and food and raw produce in exchange for cheap manufactured goods, and which has been steadily destroying her indigenous industries and aggravating the distress of the transition period by overburdening a poorly cultivated soil. India in the past had a many-sided economic life, with a distinctly urban civilisation, with a free exchange of goods as between the villages and the cities—a land of self-sufficing villages on whose surplus was founded a structure of arts and handicrafts, the growth of knowledge and the development of literature and philosophy.[1] Then followed the British rule, introducing into the country machine technology, imports of cheap standardised

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a world will which would rank above national wills and in which they would find expression does not exist. International relations are not regulated in accordance with an ideal of the human race, but according to the wills of the nations concerned. . . . We have not an international economic policy; we have only an economic foreign policy which is part of the national economic policy" (J. Grunzel, *Economic Protectionism*, 1916, pp. 3, 4).

[1] *Village Government in British India*, by J. Matthai, preface by Sidney Webb.

machine-made goods, the railway, the telegraph, the telephone, and foreign capital, mainly British. India has had no economic policy of her own during this period of revolutionary changes: the improvement of communications has resulted in the development of foreign trade, which means the export of all her valuable raw materials; the employment of foreign capital means also the drain of her wealth and the exploitation of her resources; the dividends earned by Indian labour, and made possible by Indian mineral resources and natural gifts, are received and enjoyed by strangers living in distant lands; her railways facilitate this process by differential rates which favour the foreign importer and the exporter of raw produce. The country, in short, has passed through economic changes which have been instrumental in subordinating the economic life of India to the interests of the British Empire. India has had no opportunity, as Germany and Japan had, of determining her own economic destinies, and evolving a well-directed economic policy which would have added to her wealth and diffused material prosperity. The wealth which normally circulates within the country under an autonomous self-regulated system of economic life, as in Germany, Italy, or Japan, and serves to promote the efflorescence of art and culture, supports in the case of India an overgrown population far away across the seas. And it is adding insult to injury to be told by economists, who in other matters can see with the dry light of reason, that India's true interests lie in producing raw materials and buying from abroad manufactured goods. We are told that "it is an unfortunate consequence of the English connection that Industrialism should present itself to Indians as the royal road to prosperity and to a dignified position among nations. The decay of the village industries is due to the growth of specialisation consequent on the improvement of communications. But this improvement has also led to some degree of specialisation amongst nations, and if regard be had to the climatic

conditions and aptitudes and habits of her people, it seems hard to believe that India will not obtain more wealth by obtaining from the West, in exchange for her raw products, most of those commodities which she obtains in this manner, than by diverting her capital and her peasants from the fields of the country to Bombay."[1] Never could the presuppositions of orthodox political economy, with the underlying faith in competition individual and national, be more disastrously misapplied than in justifying the territorial division of labour which compels one nation to barter away its wealth in feeding and giving occupation to another.

And yet the economic situation which faces India to-day is not irretrievable. The ideals of an economic life dominated by social purposes have not yet died out. The heart of the country is still sound; underlying the old economic order that still prevails in the villages are the ideals of a corporate life in which human values were not measured in terms of economic powers, in which industry was regarded as social service, not as a means to personal gain or profit, in which production was carried on for need and use, in which prices and wages were subjected to moral valuations, in which the human factor dominated all economic interests. In the West economic thought and statesmanship are directed to-day to the question of reconstructing the social order on a new basis, in which production will be more and more controlled in the general interest, in which the minimum of subsistence will be guaranteed to every man and woman, in which the evils of large-scale production will be removed by abandoning the *laissez-faire* attitude, in which the spirit of social service will transform the nature of work, in which social parasitism will disappear by the gradual elimination of profits, in which men and women living together in a spirit of fellowship will achieve the glorious liberty of the sons of God. Regulation, wise organisation and control, transformation of self-interest, all these ideals which the West

[1] J. M. Keynes, *Economic Journal* (1911), vol. xxi. p. 47.

looks forward to realising and translating into life are with us in India, underlying the institutions and traditions of the people. What we need is a revival of this old-world ideal, not yet completely extinct; indifference to the rapid spread of Western economic institutions may spell disaster; they are already working havoc; and if we do not actively bestir ourselves to set our economic house in order to-day, it may be too late to-morrow. Large-scale production with the help of machinery is not necessarily an evil; we shall need it, as Western countries need it, for liberating a considerable volume of human energy for the pursuit of the spiritual ends of life; we should count on the permanence and still further extension of large-scale production; but it must be controlled and regulated for social purposes, as village industries and guild industries were in the past; and we have still amongst us the survivals of the earlier organisation, needing only wise and careful handling to transform them into the living institutions of a new social life in the present.

CHAPTER IX

PSYCHOLOGY AND ECONOMICS

Classical Political Economy

Every social science has been based upon some theory, implicit or explicit of human motives. Economics, political science and ethics, before they made any systematic attempt to study their materials empirically, had formulated theories of human nature to justify prejudices and crudely formulated prepossessions.

In classical political economy the single motive of human action was embodied in the abstraction of "the economic man." Utilitarianism, which supplied the postulates of classical political economy, reduced all human motives to self-interest. Disinterested conduct was explained as enlightened self-interest. The industrial revolution fixed men's attention on the possibility of the betterment of this world through the control and utilisation of the forces of nature. It opened up marvellous possibilities in industry and commerce, and new social conditions conducive to invention, enterprise, and an impersonal habit of mind dealing with mechanisms. An old theological doctrine of human depravity was continued in the idea of an inherent laziness which makes men averse to work unless bribed by expectations of pleasure or driven by fear of pain. This was the "incentive" to action, and the office of reason was to enlighten the search for gain by instituting a calculus of profit and loss. Happiness was identified with a maximum

net gain of pleasures on the analogy of business enterprise conducted for pecuniary profit. Gain was thus made the object of all action ; and gain took the form of pleasure. Such in brief were the psychological postulates of classical political economy.[1]

The Economic Man

The assumptions of classical political economy have been repeatedly challenged in our times. In the first place it has been pointed out that there is a fundamental difference between deliberation regarding business profit and loss and deliberation about ordinary conduct. Business calculations take the end for granted, and are concerned only with quantitative differences in gain of alternatives which carry out that end. In normal life on the other hand deliberation is a work of discovery, and centres on questions as to what kind of person one is to become, what sort of self is in the making; and this is plain enough in those crucial decisions of life where the pattern of life is rendered different according as this or that alternative is chosen. Minor decisions in life differ in acuteness and range, but not in principle. To put the same idea in other words, business calculations about pecuniary gain never concern direct use in experience ; we do not eat money, or wear it, or marry it, or listen for

[1] Cf. W. Bagehot, *The Postulates of English Political Economy*: "The science of political economy as we have it in England may be defined as the science of business. . . . It is an analysis of that world so familiar to many Englishmen—'the great commerce' by which England has become rich. It assumes the principal facts which make that commerce possible, and as is the way of an abstract science it isolates and simplifies them. . . . And it deals too with the men who carry on that commerce and who make it possible. It assumes a sort of human nature such as we see everywhere around us, and again it simplifies that human nature ; it looks at one part of it only. Dealing with matters of business, it assumes that man is actuated only by motives of business. It assumes that every man who makes any thing makes it for money, that he always makes that which brings him in most at least cost, and that he will make it in the way that will produce most and spend least. It assumes that every man who buys buys with his whole heart, and that he who sells sells with his whole heart."

musical strains to issue from it.[1] The man who decides to put business activity before all other claims of life, before that of family or country or art or science, does make a choice, but he makes it not as a business man, but as a man making a significant choice of ends. The stimuli for economic activity are thus to be found in non-economic activities. Only when money-making is itself taken as a good can economic activity be taken to exist by itself. But when business becomes an activity carried on for its own sake, it becomes a career in which a spirit of adventure, the play of imagination, foresight, and knowledge may be developed—it is a question not of future gains to be calculated but of the meaning of a present activity.

The "economic man" is thus an abstraction: love of pecuniary gain is an undoubted fact, but it is a product of social custom and expectation. As human beings we have desires and interests of diversified types, ranging from support of family or church and political influence to command of luxuries, respect from others, and love of motoring. We do not think of these diversified activities only because they are so inevitably present in life; it is this complex of social activities which enters into the make-up and meaning of economic activity; we may separate, isolate, and analyse economic activity for the purposes of study as we may separate for study the different parts of an animal organism; but as the hand or the eye gets its meaning and can function only in relation to the whole to which it belongs, so does economic activity get its meaning and can function only in relation to the scheme of activities which make up the social life of a group.

Personal Gain the one Type of Motive

But there is another reason besides the need for artificial conceptual simplification for the purposes of study which can account for the view in economic psychology that there is but one type of motive in human

[1] Dewey, *Human Nature and Conduct*, pp. 218 *et seq.*

life, that which concerns personal gain. This reason is to be found in the social conditions under which work is done in our times, conditions which place an unnatural emphasis on the prospect of reward. Labour in classical economic theory has always been regarded as something painful, something so disagreeable that every individual would avoid it if he could, and engages in it only because of the promise of an overbalancing gain. The existing industrial conditions under which labour is carried on make it immediately irksome and therefore uncongenial to men.

More powerful than this, as an influence that determines this exaggerated and one-sided psychological standpoint of classical economics, is the quest of profits that constitutes the dominant motive of business enterprise as we have already incidentally noted above. The production of goods and services under our present industrial system in the West is determined by considerations of individual profit. Variations in industrial behaviour which if fostered might subordinate the production of goods and services to considerations of public welfare are stifled ; and the social standard thus evolved finds an expression in law which emphasises the function of business enterprise as one of individualistic profit-seeking. Under the law the officers of a corporation must manage it for the benefit of the stockholders exclusively, and for failure to do this they may be involved in an action for damages by the corporation.[1] The liability

[1] Dodge *v.* Ford Motor Co., Supreme Court of Michigan, February 1919 (Conway Brief Co., Detroit). The Dodges were shareholders in the Ford Motor Co., of which Mr. Ford owned a majority of the shares. In 1916 Mr. Ford declared it to be the policy of the company not to pay any special dividends in the future, but to put back into the business all of the earnings of the company other than the regular dividend of 5 per cent monthly upon the authorised capital stock of the company. His object was to employ more men, to spread the benefits of the industrial system to the greatest possible number, to help them to build up their lives and their homes. The plaintiffs, who owned one-tenth of the shares of the company, sued for a restraining order against the carrying out of the new policy. The court decided in favour of

of a shareholder under the present system is limited to his investment; it reduces his sense of responsibility for the effect of the activities of the corporation on the public welfare. He surrenders his interest in the management to a board of directors. Individual shareholders for the most part are ignorant investors who know little or nothing about the way in which the business is conducted. For working capital the corporations of our time are dependent on banks. The money of thousands of depositors and investors is controlled and used by these financial powers, who exercise their autocratic control in the interest of private profits, who consider progressive views and tendencies unsafe for the purposes of granting credits and loans, and who favour the formation and successful running of corporations whose sole aim is to perfect arrangements which will enable them to fix prices in a way to realise the largest profits.

Thus behind and underlying this crude psychology of economics are the facts about existing industrial conditions, which both account for the misleading psychology and point to a need for the reconstruction of our social institutions and economic conditions which would give scope for the play of healthier activities and make a larger life possible, which would make work interesting and productive activity agreeable.

The Need for a Psychological Foundation

All economists, and not merely the classical school, have assumed certain psychological principles as essential in economic behaviour, and these have been hitherto more or

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the plaintiffs. "A business corporation is organised and carried on primarily for the profit of the stockholders. The powers of the directors are to be employed for that end. The discretion of directors is to be exercised in the choice of means to attain that end, and does not extend to a change in the end itself, to the reduction of profits or to the non-distribution of profits among stockholders in order to devote them to other purposes." The court affirmed the decree of the lower court, ordering the stated distribution of profits to the stockholders.

less unanalysed, uncriticised assumptions rather than carefully formulated and properly verified theories. Amongst the German economists, for instance, Wagner was impressed with the motives of the thrifty middle class, Knies, Schmoller,[1] and Brentano with the impulse for national economic development and superiority which was the dominating feature of the economic life of their times; so in our own times the value of psychology in the study of economics is recognised by Seligman, Seager, Jevons, and Fisher. Even Davenport, who specifically disclaims all connection with psychological assumptions and states that economics "treats phenomena from the standpoint of price," has to assume without analysis "the private and acquisitive point of view" as the human-nature basis of economics.[2] If economists in the past failed to recognise the psychological foundations of economic life, it was due to the individualistic assumptions of the classical school, which made them assume competition, private property, freedom of contract, and the motives of business life as the starting-points of an abstract and deductive science, without any critical inquiry into the validity of these assumptions.

Social Psychology

But whilst the assumptions of economics have hitherto been based upon principles of individual psychology, whilst the problems of economics have been studied mainly from the individualistic standpoint, it is not difficult to see that all the distinctive characteristics of man as man are social products, both in their origin and in their form. Thus the thought and language of any individual belong to the group of which he is a member; each group has its own philosophic, scientific, and religious ideas; and

[1] Thus, according to Schmoller, the prosperity of the towns in the Middle Ages could rest on no other mass-psychological cause-complex than corporate selfishness.

[2] See *The Foundations of Social Science*, by J. M. Williams, pp. 352 *et seq.*

each age similarly has its own heritage of thought which is not completely or directly intelligible to an earlier or later age. This social thought is not the sum of the thoughts of the individuals who compose the group, nor does it exist in the mind of a mystical social unit; it is the product of many minds working in conscious or unconscious co-operation; it forms the point of departure for individuals who are brought up in it, who may perhaps go beyond it and add to it something fresh of their own, and who may perhaps also fail to assimilate it and fall short of it.

Every group has also its system of common beliefs and common practical knowledge including the use of weapons and tools. Each society or group has its own social will; it does not necessarily mean that there exist objects common to all the members of the group—there may be such objects, for example the pursuit of a war in which national pride is involved. In such cases the social will has a very intelligible meaning. But the social will includes and covers all habitual modes of action of the group, sometimes arising from the action of individuals, sometimes forced on the group by the stress of the environment. In one group a limited food supply may produce a habit of infanticide; in another it may produce a habit of destroying middle-aged parents. Such social habits are familiar to us as customs, which express the social mind, the tradition which constitutes part of the social heredity of each generation. Every group has its own habits of family organisation, of marriage and divorce, its own modes of fighting in war and conducting trials in peace. As a society advances and becomes more reflective, its habits may become the products of conscious processes of thought. All institutions of a progressive society may be regarded as the reflection or embodiment to some extent of systematic thought and purpose—of a coherent body of ideas and thoughts worked into a single scheme. Every institution which really means something is an embodiment of a scheme of thoughts and purposes,

far greater than can be found in any single individual's mind. The system of thoughts and purposes embodied in an army or school is more complex than can be contained in any one person's mind, and the whole scheme of thoughts and purposes embodied in all our institutions may be called the social mind.

And every group has also its common emotional life. The individual member of a group develops his capacity for joy and sorrow by social intercourse ; and every new feeling has a tendency to communicate itself to all who come in contact with it. Common types of feeling mark each age and nation. There is an age of chivalry and an age of renaissance, and an age of doubt.

The social mind is thus an expression for the mass of ideas and feelings and purposes operative in a society, communicable from man to man and serving to direct the thoughts and actions of individuals. In the complex societies of our times there are many institutions, each with its own ethos ; and individuals belong to more than one institution. There will thus be more than one social mind that will claim him ; and an advanced society may be said to be pervaded by a system of co-operative psychological forces which crystallise into unity within unity. And as the function of the individual mind is to organise the life of the individual, so the function of the social mind is to organise the life of society, to control the physical environment, and to regulate the relations of the members of the community to one another and of the community as a whole to other communities.

Racial Character and National Development

McDougall has maintained that innate mental constitution, and therefore race, is of fundamental importance in determining national character or soul, not so much directly as indirectly ; it gives a constant bias to the evolution of the social environment, and through it moulds the individuals from generation to generation.

Further, that these racial qualities include innate moral disposition and intellectual capacities. We have already incidentally referred to the use made of such a theory to defend the claims of the racial superiority of the Englishman over the Indian. Comparatively little is known of inherent psychical racial characteristics, though there may be bodily characteristics like the size and configuration of the head, or colour, which distinguish one group of people from another. Even if such psychical characteristics are found they could hardly justify except by way of a metaphor an appeal to a racial soul immanent in all its members. In the second place we have the further question—How much are these characteristics due to heredity and how much to environmental causes? McDougall himself in his discussion seems to blur the distinction between innate racial disposition and acquired national character when he proceeds to point out that the differentiation of racial types took place in a prehistoric period, long before the formation of nations and the beginnings of civilisation; and that the differentiation was the result of the influence of the physical environment—an influence exerted in a threefold manner (1) through the direct influence on the imagination, (2) influence on temperament exerted chiefly through climate acting upon the bodily functions, and (3) influence through the senses exerting secondary effects upon the higher mental processes. These acquired qualities do not become innate by direct transmission; the physical environment brings about adaptation of the race by long-continued selection of individuals, or it determines peculiarities of social environment which in turn bring about adaptation of the racial qualities through long-continued selection. This is very much like the conclusion of another psychologist of our times: "no sharp separation between innate and acquired qualities is possible. What is innate is never a quality as such, but merely the indeterminate disposition to it. So too what is acquired is never any quality as such; for even a

quality which has received its precise form as the result of the strongest action of external factors, must have had some dispositional basis for the external influence to act upon." [1]

McDougall then goes on to point out how the evolution of national character depends not merely on the evolution of innate qualities but also on the evolution of traditions, including under tradition all the intellectual and moral acquisitions handed on from generation to generation, through institutions and customs, and finally on the evolution of social organisation.[2] The civilisation of a people is the sum of the intellectual and moral traditions that are living and operative among them at a particular time, and not the material evidences in the shape of buildings, industries, machinery and so forth, which are a measure of civilisation only so far as they are the expression and outcome of their mental evolution.

Climatic and Geographical Influences in India

Applying these general principles to India, the influence of climate may in the first place be briefly noted. It directly influences the mind of each generation and exerts indirect influence by determining the occupations and modes of life and through these the social organisation. The high temperature combined with moisture which prevails throughout the plains has been recognised as a factor in the production of low or depressed vitality; but on the other hand in India man has been surrounded with an endless variety of rich and pleasing scenes. The bright and clear skies, sunshine and rain, the glaring mirage of the sandy desert and the splendid snows of the Himalayas, have had their share in producing that temper of mind which deifies nature and seeks the highest realisation of the spirit in the absorption of the individual

[1] Stern, *Differenzielle Psychologie*, pp. 37, 69.
[2] McDougall, *The Group Mind*, pp. 201 *et seq.*

in the cosmos, in self-surrender to the world soul. Poetry is the possession of the race, rather than the monopoly of a few rare spirits. Buckle further traces in the physical features of India the source of her superstition, the supremacy of priests, and the discouragement of scientific reasoning. The physical features are planned on a large scale ; the mountains are huge, the rivers of an immense length and volume, the plains of a boundless extent, and the sun is scorching hot. Men are exposed, in such surroundings, to calamities on an enormous scale, great floods, violent storms, deluges of rain, earthquakes, excessive droughts resulting in famine and plague ; they are exposed to the attacks of dangerous animals and insidious diseases. Can we be allowed to trace to these physical features the temper of acquiescence and patient reconciliation to the misfortunes and calamities of life, which has often degenerated into a fatalistic attitude hostile to all progress ? Where the individual is dominated by the forces of nature he has no desire to challenge these forces, to struggle with them, to acquire a mastery over them by study and analysis and concentration on details.

But these influences exerted by climate were not merely historic factors operating on the mind and character of the Aryan tribes after they settled in India. They are influences whose operation we can trace in the highlands of Persia and Central Asia, moulding the racial characteristics of the conquering tribes who subsequently poured into the fertile valleys of the Indus and the Ganges. They must have also brought with them into the lands of their adoption some sort of social organisation adapted to their pastoral life, a sort of patriarchal system under which brothers and sons and grandsons of the patriarch formed with their families a community which held all the property consisting of flocks and herds in common. Each member had his claim to his share of the produce ; each did his share of the common labour ; each had a voice in the regulation of the affairs of the family. Such a system

repressed individualism ; there were no individual rights, duties, or responsibilities; there was no individual property, no scope for individual initiative. The individual is swallowed up in the community. Superior energy or enterprise brings no superior rewards, but rather tends to social disorganisation. The peculiarities of this social organisation created by the physical environment were brought by the Aryans into the new countries which they conquered. They found in these lands another people differing markedly in racial qualities, with whom they refrained from freely intermingling. The fair-skinned Aryan invaders despised the dark-skinned indigenous peoples, and in spite of a good deal of crossing they maintained the purity of their blood, especially in the case of the Brahmans, by a development of a rigid caste system. As the new tribes settled on the land, they found no written code of law and custom, and practices which in the beginning were socially advantageous were extended to other fields and assumed an excessive rigour. The custom of cleanliness, for instance, was transformed with the lapse of time into an exceedingly elaborate ritual of purification which limited and restrained social life at every point.

Thus was evolved the peculiar social organisation of the Hindus. The conquering invaders became a leisured class, which supplied its material needs by the labour of the indigenous population. Wealth was accumulated ; great works demanding enormous expenditure of human life and work could be undertaken ; and a leisured class was created which, freed from the necessity of bodily toil, was able to turn its energy to speculative inquiry, to the enjoyment of art, to directing and organising the labour of the masses, to the study of natural phenomena such as the cycle of the seasons, to mathematics and mechanics, and the astronomical sciences. Architecture amongst the Hindus attained great prominence, and besides being practised as an art was studied as a science. To quote Mr. Fergusson:

"Hindu architecture stands so completely alone, so entirely separate from the other forms of architecture of the world that it cannot well be compared with any of them, without the risk of false impressions being conveyed. . . . A nearer comparison might be instituted with the Gothic styles of the Middle Ages. . . . The Indian styles are unrivalled for patient elaboration of the details, which are always designed with elegance, and always executed with care. The very extent of ornamentation produces feelings of astonishment, and the smaller examples are always pleasing from the elegance of the parts and the appropriateness of the whole. . . . No affectation and no imitation of other styles ever interfere to prevent the purpose-like expression of every part, and the effect consequently is always satisfactory and pleasing, and, when the extent is sufficient, produces many of the best and highest modes of expression of which the art of architecture is anywhere capable."

Hindu astronomy and Hindu mathematics were far advanced sciences at a time when the European world was confined to the cruder conceptions of Greek scientists. They had learnt to apply arithmetic and algebra to astronomy and geometry, and their chemical skill had already acquainted them with mineral and metallic preparations like sulphuric and muriatic acid, oxides of copper and iron and zinc, sulphates of copper and zinc. India "had a keen eye for the importance of physical sciences, she knew how to organise the arts of ordinary life. But she saw that the physical does not get its full sense until it stands in right relation to the supra-physical. . . . When we look at the past of India what strikes us most is her stupendous vitality, her inexhaustible power of life, and joy of life, her almost unimaginably prolific creativeness. For three thousand years, at least, she has been creating abundantly and incessantly, lavishly, with an inexhaustible many-sidedness . . . there is almost a plethora of activity. . . . She expands, too, outside her borders, her ships cross the ocean, and the fine superfluity of her wealth brims over to Judea and Egypt and Rome, her colonies spread her arts and epics and creeds in the Archipelago, her traces are found in the sands of Mesopotamia, her religions conquer China and Japan and spread westward as far as Palestine and Alexandria, and the figures of the Upanishads and the sayings of the Buddhists are re-echoed on the lips of Christ." [1]

"At a time when the west of Europe, the birthplace of the modern industrial system, was inhabited by uncivilised tribes, India was famous for the wealth of her rulers and for the high

[1] Arabindo Ghose, *The Renaissance in India* (1921), pp. 10 *et seq.*

artistic skill of her craftsmen." [1] "The skill of Indians in the production of delicate woven fabrics, in the mixing of colours, the working of metals and precious stones, the preparation of essences, and in all manner of technical art, has from early times enjoyed a world-wide celebrity." [2]

This was briefly the social heritage of India, transmitted from generation to generation through her institutions of family life, her joint property system, her caste organisation and her traditions of culture. Her caste organisation may have been unfavourable to individual enterprise and initiative, her social institutions may have involved the perpetual degradation of the gentler sex, her traditions and beliefs may have reconciled men to social and economic evils which are otherwise remediable and could have been easily removed. But when all has been said, her social heritage made life in India not merely tolerable but contained within it the seeds of larger potentialities. It is this social heritage that has been confronted in the last hundred years and more by the material products of Western arts and industries. The peasants of India and her city population alike live amongst and make use of the railways and irrigation works introduced by the British rulers; they have amongst them the telegraph and the telephone, the fully equipped armies and the products of Western factories; as yet these have affected but little the moral and intellectual traditions inherited through ages; but it is possible that a prolonged and continued familiarity with these new material products from the West may influence the social heritage of India—perhaps for the better, perhaps for the worse.

It ought to be the privilege, if not the duty, of those who desire to guide and have at heart the welfare of the

[1] *Industrial Commission Report* (1918), p. 1.

[2] "There was a very large consumption of Indian manufactures in Rome. . . . The muslins of Dacca were known to the Greeks" (*Imperial Gazetteer*, vol. iii. p. 195). See quotation from Ranade on pp. 322-323.

country, to see that this social heredity is not lost or so modified as to bring about in India the failures which have marked economic and social life in the West, but that under the stimulus of contact with alien ideals it is so modified as to profit by the experience of humanity in the last two hundred years, as to promote through the influence of collective ideals a larger life for Indians. If Japan and Germany could within a few decades re-create themselves and transform themselves into potentialities for good or evil which eclipse those of ancient Rome, there is no reason why a politically unfettered India, with rich traditions of idealism running through her entire past, may not produce the conditions, social and economic and political, for that fullness of life which is the promise of humanity.

The Soul of India: her Religious Heritage. The Belief in Transmigration and Karma

In the earliest period of Hindu religious life as indicated in the Vedas the doctrine of transmigration of souls and karma was unknown. The people must have evidently lived under conditions which filled them with a keen delight in life. The righteous man of the Vedic period looked forward to eternal continuance of existence after death. The good man ascended to heaven to enjoy the companionship of the gods, and led a painless existence, free from all imperfections. But this innocent joy in life which greets us in the hymns of the Rigveda was replaced in later times by the belief that every individual after death enters again upon a new existence in which he gathers the fruits of merit earlier acquired and has to endure the consequences of sins previously committed. It may be that when the Aryans of India came into closer contact with the aboriginal inhabitants they received from them the idea of the continued existence of men as animals and trees, and appropriated it to themselves ; it may also be that in a later age of constructive speculation the

Indian philosophers moulded the primitive conceptions into an elaborate theory. Under this Indian conception of transmigration lies the conviction that there is no unmerited happiness and no unmerited misery, that each man shapes his own fortune down to the smallest details. No deed in its effect can ever be lost. Nothing can alter the inevitable sequence of cause and effect; even the gods themselves are subject to the law of karma. "Even God cannot alter this law any more than He can produce rice out of wheat seed." This conviction gave to the people a power to endure suffering which has often excited the wonder and admiration of the world. The supreme aim of all spiritual endeavour is to find a release from the necessity of renewed birth and death, and this could come by way of knowledge. Sin is the blurring of truth which clouds the purity of our consciousness. We lust after pleasures, we long for things not great in themselves; we lose the true standard of values. When our life is rescued from these distractions and finds its unity in the soul, all these conflicts and contradictions disappear, knowledge, love, and action are harmonised; every moment then carries its own message of the eternal. The soul dedicates itself to Brahma through all its activities; through truth it gains the joy of freedom. It was a philosophy of life that could give strength to men to love life in all its joys and sorrows, in its gains and losses, strength to see and hear, strength to work with full vigour on earth. The peasant tilling the hard earth could rejoice at the joy of Brahma gushing out in the green of the corn; the man who displaced the tangled forest and smoothed the stony ground and cleared a homestead for himself could perceive His joy in enfolding it in orderliness and peace. In the progression of ever-renewed births man could find opened out the vista of an endless futurity with a call to exertion, a futurity in which the tangled obscurities of material things would vanish, pain and disease and disorder would recede, the obstructions of ignorance would be thrust aside, and the promised land of

poetry and art, of wealth and health, of knowledge and righteousness, would be revealed to view.[1]

But the joy of existence and realisation of life which marked the profounder teaching of the Rishis were soon subordinated to a doctrine of redemption which started from an assertion of the evil and pain inherent in human life. Life is misery, from which there is no deliverance so long as personal consciousness persists. The doctrines of philosophical Brahmanism remained to a large extent confined to the few, and the great majority of the people sought a deliverance not in the remote future, but in the present; deliverance from the jealous and evil powers by which life on earth was made miserable. To them Buddhism appealed with a peculiarly emphatic note. Life is appearance and aimless change. And it is made up of desire. Peace could only be obtained through the extirpation of desire. Life is desire, and desire is pain; and only where both are extinguished is the craving of the soul satisfied. The joy of life and work, of the harvest song that leads humanity through increased production to the kingdom of God, the message of work that had been preached by the Rishis of earlier days, was now replaced by a teaching that emphasised the extinction of desires and the suppression of wants. And though Buddhism is now no longer in India the force that it once was, it has left its indelible impress on the mind of the people, taking away all joy out of work, making life a hindrance to spiritual progress, inspiring in the masses a sense of resignation to evil instead of that spirit of discontent which looks on every evil as a challenge to man to be overcome by his efforts. Though the hundred years of British rule have brought into the country the railway and the telegraph, the industries of the West, and the spirit of individualism that marks Western forms of government and economic institutions, the life of the vast majority of the people living in villages is still dominated by the social heritage of the past, with its philosophy of resignation,

[1] Cf. *Sadhana*, by Sir Rabindranath Tagore, pp. 130 *et seq.*

and the hopelessness of effort in an existence pervaded by misery and supported on an irreducible minimum of subsistence, imperceptibly grading into starvation and death. The lack of initiative and enterprise, the complete absence of the spirit of adaptiveness and of readiness to respond to stimuli from without, the failure to make use of improved methods even when they are made available to the masses, are only manifestations of the soul of India as forged by the stress of circumstances, moulded by the teaching of her poets and seers, by the institutions and traditions of centuries.

The Social and Political Environment

This character of the mass mind of India was further fostered and confirmed by her social and political institutions during the last thousand years. The caste system was the crystallised expression of an outlook on life that saw no value or worth in striving, in effort, in the desire to make oneself better and happier. Where life is a round of misery to be tolerated rather than battled against, social institutions might well become rigid and unchangeable, dominating the lives of the individuals who belong to them. To this social environment must be added the influence of a foreign domination, which may have been facilitated by the national temperament of resignation to evils, but which in turn also aggravated its predisposition to accept the inevitable, to accept from alien rulers the doles of such restricted freedom to breathe and to work and to live as they might permit to the human animals who lived under their dominion. The Pathan has been followed by the Moghul, and he in turn by the British ; but the mass of the population has not felt the difference ; if anything, the habits of passive obedience and reconciliation have been veneered over with the gloss of the idea, consciously preached and unconsciously inhibited, that the British rulers are inherently gifted with powers to rule which are sadly lacking in the ruled. The

Indian villagers of to-day have been brought up in this political atmosphere, saturated with the belief in their own inferiority and helplessness, with no prospect of improvement in the future, with no hopes to keep them up in the struggle for existence, with none of the incentives to progress which mark the economic life of the West and which have supplied the postulates of economic theory in the West.[1] There are emotional conditions created by political institutions which are exceedingly unfavourable to the stimulation of thought and intellectual or artistic worth.[2] In these depressing surroundings, with this gloomy outlook on life, there is no room for enterprise, initiative, the play of imagination, the insight into life's work and destiny, the power of organisation and management which are the essential pre-requisites for economic development in any country.

The Prospects for the Future

And yet the soul of India is sound. Underlying the teachings of its great teachers and prophets is a sane appreciation of the values of human life, which subordinates economic activities to the larger interests of humanity. The service of man is the end of economic life, and the reward of each ought to be in proportion to the extent of his services. Property is in the nature of a trust, and though the right to property is not to be denied, it is to be for use and not for power. It is essential to a man's freedom and growth that he should have absolute control of a certain number of things, but he may not have so much property as to make it possible for him to control and even

[1] "When circumstances are adverse, when social and political abuses abound, when pressure of physical need is severe, and when the channels of happy and fruitful action are obstructed, there is clearly a reason for the acceptance of a gloomy view of things by the community as a whole" (J. Sully, *Pessimism*, 1877, p. 434).

[2] Cf. Graham Wallas, *The Great Society*: "Let any man who doubts this sit down for a day's work at the British Museum after being grossly insulted by some one whom he is not in a position to resist," p. 206.

own the life and labour of others. The sanctity of personality and obligation of mutual service were alike recognised. In the West men live in an economic order in which production is carried on for profit, for the possession of wealth which brings power over the lives of fellowmen, in which men work to live and earn the means of subsistence which are more scrupulously secured to the criminal than to the honest and industrious worker. In the East men lived in conditions in which earth and water, fruits and flowers, were to be used as means to the attainment of their spiritual purposes. The civilisation of the West is bent on the conquest of nature, on the extension of man's power over his surroundings; the ancient civilisation of India had different ideals: its aim was not the acquisition of power and wealth, but the realisation of the Infinite in nature, in the family, in society, the consciousness of the unity of all life. It is the Infinite whom men seek in all their pleasures. The desire for wealth is not a desire for a particular sum of money, and the most fleeting of men's enjoyments are but the momentary touches of the Eternal. The tragedy of human life lies in the vain attempt to stretch the limit of things which can never become unlimited. "Man's abiding happiness is not in getting anything but in giving himself up to what is greater than himself, to ideas which are larger than his individual life, the idea of his country, of humanity, of God." This was the message of the sages of India in the dim past. It has penetrated deep into the minds of the people and it has become a part of their daily life.

The question before us to-day in India is—Are we going to cherish this outlook on life, a heritage from the past woven into the very fabric of our being, and embodied in our poetry, philosophy, art, and religion, or are we going to allow this heritage to be gradually wiped out of our racial memory under the pressure of poverty, the despondency created by the depressing atmosphere of alien rule, and under the influence of Western economic institutions

brought into the land without the corresponding correctives of Western freedom and opportunities of growth and self-expression? Our secular system of education, with its stress on the sciences and English individualistic tendencies of thought, has created in our towns a surface culture which has been destructive of the old-world ideals of corporate service and of the intrinsic worth of human souls; the introduction of machinery, the cramping atmosphere of factories, the handling of men as tools, the traditions of an administrative machinery which concentrates attention, however inefficiently, on the bodily welfare of men, with its medical and sanitary measures, its carefully elaborated codes of civil and criminal law, all alike have tended towards wearing out the heritage of spiritual idealism, born and bred in our souls from a dim past. Are we going to allow ourselves to drift, without taking thought, towards a future which holds out no promise except of such political institutions as have been tried in the West and have been found wanting? Or are we to listen to the music of humanity as it already rings through the writings of Western poets and economists and philosophers, a music which breathes through every note a sense of dissatisfaction with the economic and political life of the West and takes us back to the teachings of our own Rishis of old?

In every work on political and economic subjects that has seen the light of day during the war and after, we have been repeatedly told that man does not live by bread alone, that in the industrial and economic activities of the West men have, for the most part, hitherto confined themselves to the costs and utilities directly connected with the processes of production and consumption, but that we cannot neglect the interactions between economic and other human interests involved in the organic nature of man and society. Most of the critics of our times complain that business bulks too largely in our lives, and that our modern command over the resources of nature for the satisfaction of our wants ought to issue not so

much in the larger supply of old, and constant addition of new, economic wants, as in the increased liberation of human powers for other modes of energy and satisfaction. With improving arts of industry and the dwindling growth of population, people in the West can afford to give an increasing share of their interests and energies to the cultivation and enjoyment of intellectual and moral goods. The greatest impediment to this progress is the superstitious and excessive value put by all classes of the people on industrialism and prosperity. Until they can throw off the dominion of the economic spirit, they cannot win the spiritual liberty needed for the ascent of man. So long as they stand for six-sevenths of their time and more, with hands and eyes, intelligence and will, dedicated to the service of industrialism, they cannot see, much less realise, better ideals of humanity. Such is the chorus of the song [1] that reaches us here in the East, and it blends with the music of our own poets and interpreters. Our own heritage is slowly dawning on the West, after nearly a century and a half of life lived under institutions embodying the spirit of capitalistic individualism. East and West can meet on common ground, under wise guidance and careful handling. Let us avoid, above all, the dangers that threaten us through a policy of drift. Speaking to an audience of Japanese students, Sir Rabindranath Tagore struck the same note of warning as we are striking for our own country :

You had your own industry in Japan ; how scrupulously honest and true it was, you can see by its products—by their

[1] We may refer *en passant* to a few books : Sidney and Beatrice Webb, *Decay of Capitalist Civilisation* (1923) ; Bertrand Russell, *Principles of Social Reconstruction* (1916) ; Walther Rathenau, *In Days to Come* (1921) ; Sir H. Jones, *Principles of Citizenship* (1919) ; Ramsay Muir, *Liberalism and Industry* (1920) ; G. D. H. Cole, *Labour in the Commonwealth* (1918) ; R. H. Tawney, *The Acquisitive Society* (1922) ; Hetherington and Muirhead, *Social Purpose* (1918) ; " Christianity and Industrial Problems," *Report of Archbishop's Fifth Committee of Inquiry, Church of England* (1918) ; *The Coming Renaissance*, edited by Sir James Marchant (1923) ; Veblen, *Theory of the Leisured Class* (1899) ; A. E. Zimmern, *Nationality and Government* (1918).

grace and strength, their conscientiousness in details, where they can hardly be observed. But the tidal wave of falsehood has swept over your land from that part of the world where business is business, and honesty is followed merely as the best policy. Have you never felt shame when you see the trade advertisements, not only plastering the whole town with lies and exaggerations, but invading the green fields, where the peasants do their honest labour, and the hill-tops which greet the first pure light of the morning ?—This commercialism, with its barbarity of ugly decorations, is a terrible menace to all humanity, because it is setting up the ideal of power over that of perfection. It is making the cult of self-seeking exult in its naked shamelessness. . . . Its movements are violent; its noise is discordantly loud. It is carrying its own damnation, because it is trampling into distortion the humanity upon which it stands. It is strenuously turning out money at the cost of happiness. . . . The vital ambition of the present civilisation of Europe is to have the exclusive possession of the devil.[1]

To-day in the West the temper of science is changing: sixty years ago it was endorsing materialism, so it appeared to the man in the street. To-day science is enhancing mystical ways of thought. And whilst such ways of thinking are coming into notice, they are intimately associated with a demand for social reconstruction. It is not without significance that the Western world, whilst it suffers the birth-throes of a new co-operative order, should also begin to realise for the first time in the modern era the spiritual treasures of the East. The great gift of the East has been an ever-present sense of the Eternal. The competitive system of a few decades ago, intoxicated with its ugly successes, would have scouted this gift as absurd; but a social organisation where material production, controlled and regulated by social purposes, no

[1] Cf. with these words: "The socialist, whilst by no means despising full maintenance for himself and his family (and in fact demanding it for every one), feels a profound dislike for greed of gain as the dominant motive; he demands that the desire for riches shall no longer be made the basis of our statecraft, no longer preached to the young as the guide to conduct, no longer applauded and honoured as conducive to the common wealth" (Sidney and Beatrice Webb, *Decay of Capitalist Civilisation*, pp. 172-73).

longer absorbs attention, may welcome this message; and we might well imagine the religious historians of Western society of the future noting with satisfaction the preparation of the West by drastic changes in the social order for receiving the gift of the more contemplative races of the East. And if the West is turning to the East for inspiration, shall it be for the East to forget her own ideals of life and rush aimlessly into a future which can hold nothing but disaster to all she should most ardently treasure and defend?

CHAPTER X

PRODUCTION

Factors of Production

The economic activities both of individuals and of nations are directed towards the production of material and immaterial goods which contribute to the welfare of the individual and of the nation. These goods may be either concrete material things that satisfy the demands of physical life, or immaterial objects in the shape of services that satisfy the intellectual and moral as well as spiritual demands of our lives—the creative work of the artist, the painter and the poet, the historian and the composer of music, the seer and the prophet. We shall thus begin with a consideration of the problems of production, though from a psychological point of view it may be contended that the study of consumption should precede that of production. Consumption is the end or goal of all productive activity. Hunger and thirst and the desire for shelter are the sources of all human activity; and though in primitive times the resources and character of the locality chiefly determine the character of the food, materials, shelter, and other necessaries, guaranteeing an instinctive selection of organically sound articles of consumption, in our own times, with increasing rapidity of communication and expansion of industries and arts, commodities are brought within the reach of individuals which give no security of organic utility of consumption. The fundamental principle of which the student of economic life must never lose sight is that production must be

guided and controlled by the organic needs of human life, instead of determining as it does to-day what men should consume. As Mr. Hobson points out, the fact that the monetary profit of producers is the chief determinant of most of the changes in the nature of consumables is one of the most serious sources of danger to the evolution of a healthy social economy.

"The present excessive control by the producer injures and distorts the art of consumption in three ways: (1) It imposes, maintains, and fosters definitely injurious forms of consumption, the articles of 'illth.' (2) It degrades or diminishes by adulteration, or by the substitution of inferior materials or workmanship, the utility of many articles of consumption used to satisfy a genuine need. (3) It stimulates the satisfaction of some human wants and depresses the satisfaction of others, not according to their true utility, but according to the more or less profitable character of the several trades which supply these wants."[1] The prevalence of many of the social evils of our times is to be attributed to the fact that their trade appliances are sources of great private profit.

Keeping in mind this elementary principle that all production must be and is inter-related with consumption and must be controlled by a proper valuation of the organic needs of human life, we may now turn to the problem of production. What are the factors or agents of production? The fundamental factors or agents of production are land, labour, capital, and organisation. It may be pointed out that organisation came to be recognised as one of the fundamental factors—now perhaps the most important factor—of production, only since the Industrial Revolution, and especially in the last century, when large-scale production and improvements in the means of communication and transport have made the world a single market for staple commodities. Our joint-stock enterprises and trusts require scientific organisation for purchasing raw materials and selling finished goods.

[1] Hobson, *Work and Wealth*, p. 112.

Land, or rather nature, in a comprehensive sense, supplies raw materials, and we include under nature land with all its varied fertility and qualities, the mineral resources embedded in the soil, the slowly gathered deposits of the ages accumulating potentialities for the humanity of the future; we also include natural forces such as rainfall, water power, the atmosphere, wind power, etc. In the second place, it is essential for production that the men who work on the raw materials should have tools or instruments of some kind, primitive or elaborate, and tools and implements represent the wealth stored up or saved by labour for future use. All economic progress implies the possibility on the part of man of producing by his labour something more than what is necessary for his daily needs —a surplus of wealth, which must sustain him during the period of his work, which gets embodied in his tools and implements, and which in our own times assumes the form of elaborate machinery which multiplies wealth and saves human labour. The first capital in the world may have been provided by nature, but economic progress depends upon a process of making, or causing to be made, non-consumable goods, instead of making, or causing to be made, directly consumable goods. The socialist contention that since labour makes all goods whether consumable or nonconsumable, the only cost of providing capital is the productive energy of labour, can scarcely be regarded as an adequate analysis of the growth of capital. For the decision and effort of mind or will which determines that non-consumables shall be made instead of consumables comes not from the labour employed in making them, but from the owners of income who decide to save instead of spending.

Thirdly, there is the human factor in production; the resources of nature can only be moulded into the instruments of human welfare by the labour of men; even the fruit hanging on the tree, supplied by nature's bounty, requires a hand to pluck it before it can minister to man's wants; and economic progress depends not on the simple

labour of the hand and the foot, but on human skill, intelligence, and foresight, on the ability to take risks, to organise, and to manipulate the resources of nature by the gifts of understanding and insight, by the qualities of head and heart which can mould nature to human purposes, by the ability to control and conquer.

A Survey of these Factors in their Bearing on Production in India

(1) *Agricultural and Mineral Resources.*—India is, as we have already indicated, rich in natural resources, both agricultural and mineral. There are still large tracts of uncultivated but cultivatable land. Intensive cultivation has hitherto been unknown. The yield of crop per acre is remarkably low and capable of considerable increase. But the increasing fragmentation and subdivision of holdings act as hindrances in the way of agricultural development. The crushing poverty and the heavy indebtedness of the cultivators make it difficult for them to adopt improved methods of cultivation, even if their unwillingness to adopt such methods, due to conservative instincts, were removed. Thus agriculture, which may be regarded as the key industry of India, is carried on on an inefficient and uneconomic basis. The land revenue policy of the Government, with its swollen demands and inelastic methods of collection, aggravates the situation, and yet, if all these difficulties could be removed, there are vast prospects of agricultural development. And these difficulties are not incurable; they are not the outcome of niggardly nature, they are not due to a barren soil or to erratic climatic conditions; they have been the result of ignorance, social conservatism, clumsy methods of administration, and poverty, and all these are controllable conditions and removable by tactful management and sympathetic handling. With regard to mineral resources India has potential deposits of enormous value. There are vast and rich coal-fields yet to be worked. She has enormous potential resources of water power. Her

mineral resources are vast, varied, and valuable. The Fiscal Commission sums up the situation in this connection in the following words :

" On the agricultural side we have a production huge, indeed, in total volume but still capable, with improved methods, of great increase. This production provides all the food grains consumed in the country, and in normal years leaves a moderate surplus for export. It yields a very large crop of cotton, about half of which is worked up in the country, while half is exported. It provides the jute supply of the whole world, of which the proportion worked up in the country is increasing every year. It gives a large crop of oil seeds, which not only satisfies the whole demand of India but leaves a large and valuable surplus for export. It furnishes some 40 per cent of the tea supplied to the world's market, and finally it provides the whole of the raw sugar consumed in the country, which is roughly seven times as great as the quantity of refined sugar exported."

(2) *Labour.*—The other fundamental factor in production is man—labour and organisation. The raw materials supplied by the bounty of nature must be appropriated and worked up by man. Labour is at the very basis of the process of production, and under labour we include all kinds of work, sometimes distinguished as the labour of the machine-tenders and the factory hands and the manual workers and the labour of the artists and inventors, the professional and managerial classes. The labour force of a country, the active motive power of the economic machine, depends on the quantity and quality of the population—their intelligence, adaptability, willingness to work, standards of life, efficiency, and skill, and all these in turn depend upon hours of work, wages, education, physique, food, and opportunities for leisure. We shall say more on these problems in a later chapter. In India the labour force is adequate in quantity, but inadequate and unsatisfactory in quality, in skill and efficiency, and it cannot be otherwise if we remember the conditions of economic life in the country. Unskilled labour is plentiful, but skilled labour is remarkably scarce, mainly owing to lack of opportunities for acquiring skill. Wages are

comparatively low. Agricultural labour—and this is the predominating portion of the Indian population to-day —is conservative, home-keeping, and immobile, as well as illiterate, though these traits are now being modified under the pressure of modern economic conditions. The industrial labour employed in factories run on modern lines—and the total number of such labourers in the whole of India does not exceed 1,500,000—is mostly illiterate, irregular, and of a migratory character. It is unorganised to a large extent, and inefficient, and the labourer has no heart in his work. Taking factory labour in cities like Bombay and Ahmedabad, the seats of industry, we find that the mill hands are for the most part agriculturists, who migrate to Bombay to supplement their earnings in the seasons when they are not required on the fields. It is true that, as the years roll on, the larger industrial centres are building up an industrial population, but the process is slow, especially owing to housing difficulties and other factors.[1]

(3) *Capital.*—As for capital, it has come to play an increasingly important part in production and in the economic life of our own times. Without an adequate supply of capital, and that also at a reasonable rate of interest, both for agricultural and industrial purposes, no country can rise to a complex and highly developed economic existence. It has already been pointed out that the national dividend and the *per capita* income in this country are strikingly low ; hence it is not possible that India should have a large and rapid accumulation of capital to develop her industries. Where people have not

[1] "As regards labour, there is an agricultural population which is in many parts of the country in excess of the numbers required for efficient cultivation, but owing to special causes, which are partly to be found in deficiencies of housing in industrial centres and partly in the hereditary conservatism of the people, exhibits at present some reluctance to adopt the life of industrial labour. As a result, it is found that labour for industries is sometimes scarce and generally migratory. The labour supply recruited from this source is necessarily unskilled, and there is a great dearth of skilled labour" (*Fiscal Commission Report*, 1922).

enough to satisfy the demands of daily existence it is foolish to expect them to save or lay aside non-consumables for future production. It is well known that agriculture in India suffers from the scarcity of capital, and much the same may be said with regard to manufactures. It has been pointed out, however, that what little capital there is in the country, in the shape of small scattered hoardings set aside at the cost of the decent comforts of life, is now no longer shy, but readily responds to demands for agricultural and industrial purposes. With the spread of education, the provision of banking facilities, the adoption of a sound system of currency, and an elastic financial policy, India may be in a position to finance her agricultural, mineral, and manufacturing industries to a very considerable extent, and can borrow in the foreign money market on easy terms. "The difficulty of finding Indian capital, which some years ago seemed to impose a definite limit on the expansion of Indian industries, seems to be vanishing gradually under the influence of new ideas bred of education, new banking facilities, and a new enthusiasm for the employment of capital in industries." [1]

(4) *Organisation.*—But all these agents of production require to be co-ordinated, and this is effected by management or organisation. Land, labour, and capital must be co-ordinated, organised, and focussed for the purposes of production. Enterprise, initiative, and organising ability are indispensable for the economic and industrial development of a country. If in India we have, as compared with other countries, less of organising ability, it is not because Indians are inherently incapable of organising and launching concerns or are lacking in business enterprise; they have as good insight, imagination, and powers of initiative as any nation in the West; it is because of an unfavourable economic environment which affords no room for the play of enterprise. Where capital is not readily available in sufficient volume for investment, where labour is relatively unskilful and unsteady, where the

[1] *Fiscal Commission Report*, 1922.

financial policy is determined by considerations which involve a conflict of interests as between the country and the people on the one hand and those who rule them on the other, where the rulers experiment with the currency, in other words, with the general price level, regardless of consequences, it is unreasonable to expect the development of industries even with the highest abilities that the nation could command in the shape of business enterprise. While India's potential resources in the form of fertile land and rich mineral deposits, of capital and of labour, are uniformly recognised by writers of all shades of opinion, doubts have not infrequently been raised with regard to business ability and initiative. Such doubts are the economic reflex of the political shibboleths about the inherent incapacity of Indians for self-government. They are utilised for justifying a state of permanent economic pupilage for India, as her alleged incapacity to govern is made the plea for a condition of permanent political subjection.[1] The development of the cotton textile industry and the Tata iron works is sufficient in itself to expose the hollowness of the plea that India is lacking in organising ability. India, like Japan and Germany fifty years ago, has no modern technology, and if she were politically self-dependent like Germany and Japan, she could easily get this under a carefully planned economic policy. The Fiscal Commission is clear on the subject when it observes :

[1] "But it may be doubted whether the natural advantages for industrial development claimed by the Commissioners—the possession of power, raw materials, and so on—form so good a *prima facie* case for protection as at first appears. Is it not essential to their argument that these 'natural advantages' should include adequate supplies of organising ability actual or potential? And are these supplies in sight? On this subject the Commissioners are silent, or nearly so. They refer, indeed, to India's former predominance in highly skilled industry, but reasonably enough they refrain from any explicit inference that she will therefore be able to produce large numbers of business men of initiative and energy comparable to those of her foreign competitors" (F. Lavington, "The Indian Fiscal Commission," *Economic Journal* for March 1923).

Whatever the cause of this neglect in the past, we feel that in many parts of the country a change has come over the spirit of the people, and that what is lacking now is more often the opportunity than the will. We think, therefore, that so far as the comparatively slow development of industries in India has been due to lack of national aptitude or interest, the factor will become progressively of less importance, and that a time has come when India is prepared to take any advantage of any stimulus applied to her industries.

From the point of view of her economic development India has thus a hopeful future before her. She has adequate sources of power, abundant raw materials, an equally abundant supply of unskilled labour, potential sources of capital, and hitherto dormant sources of organising ability and initiative. If, in spite of these natural advantages, her production to-day is ridiculously low, it is because of a lack of balancing and co-ordination of these resources by means of a vigorous, well-thought-out national economic policy. If a national purpose runs through her economic life, adjusting and correlating the different factors of production, educating her labour-power, inspiring confidence amongst the people, and drawing capital into productive channels, fostering her nascent industries by wise economic regulation, India can successfully compete for the leadership of the world in the economic and industrial field. Such a purpose can never find adequate expression so long as her economic policy is controlled by rulers whose interests conflict with her own, and no amount of tinkering with economic problems, of half-hearted concessions and measures with no definite ideals or purpose behind them, of economic experiments recklessly undertaken at the possible cost of hideous failure by doctors and quacks whose bodies and souls remain immune while the millions of patients may suffer and die, will ever solve the economic problems of the country. At the best such a policy may aggravate the economic difficulties of the country; at the worst it may involve economic ruin.

CHAPTER XI

AGRICULTURE

Importance of Agriculture

The production of the material commodities which constitute the wealth of a country may be roughly classified, according as it can be assigned to the primary industries like agriculture and mining, or to the secondary industries like manufactures. Of these two classes the primary industries are of greater importance, as they supply food for the nation as well as raw materials for the secondary or manufacturing industries. It is true that in our times the whole world is linked together by commercial ties and constitutes a single market ; food, as well as raw materials, can be procured from distant lands, more especially where the countries supplying such commodities are the dependencies in a great empire. But, as the recent war so effectively demonstrated, a country that is dependent upon others for the necessaries of life may be so largely cut off from commercial relations with other countries as to have no means of resistance, and may have to choose between a complete surrender and national extinction. We find to-day the continental powers giving more and more attention to their primary industries, and economic theory does not lag behind practice. Thus in a recent work we are told :

If every nation should produce that for which it is best suited, the question naturally arises, what must it begin with, and the answer is necessaries of life—yea, even if it be at a disadvantage in producing them. The greater importance of necessaries as compared with luxuries is intensified in the

case of international relationships, for although a Government should be expected to control its own subjects, and see that an adequate supply of necessaries is available before luxuries are produced, it cannot compel those of another nation to provide a surplus of necessaries beyond its own requirements.[1] Both a man and a nation which are dependent upon others for their daily necessaries of life are at their mercy; . . . a nation which gives up the production of its own necessaries of life surrenders its economic, and possibly its entire, independence, and so long as present human frailties endure no nation should be dependent upon another for its primary necessaries of life.[1]

A country's economic strength depends upon the possibilities of its primary industries. Among these primary industries farming is the most important and, at the same time, the most ancient. Even on the continent of Europe, which is highly industrialised, in the words of E. F. Wise, "Agriculture is still by far the most important industry, whether measured by the value of its products, the number of persons employed in it, or by any other tests." In India agriculture is the basic industry. In a country where 72 per cent of the population live directly or indirectly on agriculture the significance and value of farming as an industry can never be overstated. The problem of food supplies is to be one of the most acute problems of the immediate future. It can never be too often stated that it is only on the basis of a secure and reasonably cheap supply of staple food and raw materials that improvements in the standard of life and in the production and organisation of other industries can be effected. "In the complexity of trade it is easy to overlook the purpose for which trade and industry exist; to forget that all this huge organisation of manufacturers, of merchants, of suppliers, of bankers, of importers exists primarily to supply mankind with food and clothing and must be judged ultimately by success in achieving this

[1] Hecht, *The Real Wealth of Nations*, pp. 165-66. This consideration evidently does not govern the economics of a country like India, which must continue to export foodstuff and raw materials to support an overgrown population in Great Britain.

end."[1] It is thus necessary to examine the present agricultural production in India, to determine whether it is sufficient for the population, to inquire into the causes of low production, and to consider the possibilities of improvement. So long as the industries that supply the necessaries of life in the shape of food and clothing and shelter are not sufficiently developed to meet the requirements of the Indian population, it would be a misdirection of efforts, if not a social crime, to consider the possibilities for the production of articles which are not indispensable. The production of material commodities in India must be organised and intensified primarily to meet the requirements of the country itself; and so long as any portion of her population, small or large, goes without food and lives without decent covering for the body, there is a case for concentration of attention on the problem of agricultural production and the development of other primary industries. It will become abundantly clear in the pages that follow that India's economic position in the matter of her primary industries is intrinsically sound. Even at present, with the use of primitive implements, with a most lamentable dearth of capital, with the lowest yield per acre of almost every variety of crop, with inferior seeds and no manure, India is able to produce almost all that she needs in the shape of food-stuffs and raw materials. Not only so, but according to the official view there is an exportable surplus of food grains, while of other raw materials there is at present undoubtedly a large exportable surplus. Thus her position is strong. But to be prosperous she must organise, intensify, and modernise the

[1] "If the price of imports is kept high because a scarcity of ships makes freight dues heavy, then the transatlantic liner with its bedroom suites and baths and tennis courts and promenades is a crime against society. If, again, cheap motor buses are badly needed to carry labourers to their work, what right has the millionaire to occupy the mechanic's time in making him a car? We need to think of the world more than we do as one great household which is affected for good or for ill by the thrift or extravagance of every member" (Robinson, *New Fallacies of Midas*, p. 43).

production. According to the agricultural statistics (1919–1920) the total area of British India is 622,468,000 acres,[1] classified as follows :

	Acres.	Per cent
Forests	88,323,000	14
Not available for cultivation	145,770,000	23
Culturable waste other than fallow	113,415,000	18
Current fallow	52,135,000	9
Net area sown	222,825,000	36
	622,468,000	100

Deducting the area covered by forests (14 per cent) and land absolutely barren and uncultivable or covered by buildings or roads (23 per cent), we have a balance of 388,375,000 acres (63 per cent) available for cultivation, of which only 222,825,000 acres (36 per cent) were under actual cultivation in 1920. A large area available for cultivation is thus allowed to lie fallow ; even from an extensive point of view Indian agriculture is far behind the point of maximum return.

The gross area cultivated with crops in 1920 was 255,000,000 acres, and it was occupied by different crops as under :

Crop.	Acres.	Per cent of Total.
Food grains	199,667,000	78·4
Condiments and spices	1,620,000	0·6
Sugar	2,813,000	1·1
Fruits and vegetables	5,675,000	2·2
Miscellaneous food crops	1,190,000	0·5
Total food crops	210,965,000	82·8
Oil seeds	12,571,000	4·9
Fibres	18,865,000	7·4
Dyes and tanning material	726,000	0·3
Drugs and narcotics	2,293,000	0·9
Fodder crops	8,206,000	3·2
Miscellaneous non-food crops	1,013,000	0·5
Total non-food crops	43,674,000	17·2

[1] The total area of British provinces is 754,547,000 acres; by deducting 129,798,000 acres belonging to Indian states a balance of 624,749,000 acres is left, and this is according to professional survey; but according to the return of the village papers the area is 622,468,000 acres.

From these figures it is clear that nearly 83 per cent of the total cultivated area is covered by food crops; next to food crops appear fibres and oil seeds, covering 7 per cent and 5 per cent of the total. What is remarkable is that with cultivation covering only 59 per cent of the total cultivable area, and with the most inefficient methods of production, India should be in a position to export large quantities of her agricultural produce.[1] One can well imagine the vast possibilities for development that lie ahead with improvements in the methods of production and the use of manures.

In a previous chapter we have already dealt with the meteorological conditions that affect Indian agriculture, as also with the nature of various kinds of soil. Here we shall briefly enumerate the principal crops of the country.

Principal Crops of India

Rice.—Rice is the main crop of India, both as regards the area cultivated and the value of the output. It is the only crop that could be grown without an elaborate system of drainage over millions of acres. On an average it covers nearly 35 per cent of the total cultivated area (81,256,000 acres). The estimated yield for 1921–22 was 33,038,000 tons. The acreage under rice has increased from 50 millions in 1901 to 70 millions in 1913 and 80 millions in 1920, and the output has increased from 21½ million tons to 33 million tons. It constitutes the staple food of the Eastern provinces, Burma, and Southern India. The varieties of paddy are many, and the cultivators know the conditions of soil, cultivation, climate, and water supply most suitable for each variety. Bengal and Burma are the chief producers of rice; in Madras and Bombay it is an important crop. In the United Provinces it is grown with the help of irrigation. India is the

[1] On an average of five pre-war years, India exported 9 per cent of her output of rice, 15 per cent of her wheat, 36 per cent of the production of oil seeds, 51 per cent of jute, and 56 per cent of cotton.

greatest producer and exporter of rice in the world. About 7 per cent of her total production is exported.

Wheat.—Wheat stands next to rice in area as a single crop, and is grown on an average on about 10 per cent of the total cultivated area (28,234,000 acres in 1920). The estimated yield for 1921 was 9,813,000 tons. It is grown in the cold weather and most extensively in Northern, Western, and Central India. Wheat cultivation has increased during the past twenty years from 25 to 30 million acres and the output from $7\frac{1}{2}$ to 10 million tons. An appreciable quantity (15 per cent of the total production before the war) is exported every year. India is the third greatest wheat-producing country in the world.[1] The relative position of India in the wheat production of the world and the possibility of extending its cultivation can be seen from the following table, which gives the pre-war acreage, the maximum acreage reached during the war, and the acreage in 1921.

Country.	Pre-war.	War Period.	Post-war.
	acres.	acres.	acres.
Canada . . .	8,000,000	17,300,000	23,300,000
U.S.A. . . .	46,400,000	60,400,000	62,400,000
India . . .	27,700,000	35,500,000	28,600,000

The quality of Indian wheat has improved during recent years, and in various parts of India better seeds are being substituted. It is asserted that Indian wheat, being of low quality, cannot command high prices and cannot compete in the world market. Attempts are being made

[1] The total average production of wheat in the world from 1909 to 1913 was approximately 100 million metric tons, produced by various countries as follows:

Russia . . .	22	million tons.
U.S.A. . . .	18·7	,, ,,
India . . .	9·6	,, ,,
France . . .	8·6	,, ,,

the balance being made up by other countries.

by Government to encourage the introduction of better quality wheat.[1]

Millets.—Indian millets are of two types, Jawar and Bajra, but there are many varieties in each type. The total area under cultivation is 28,000,000 acres and 15,000,000 acres respectively. The total output was 5,000,000 tons Jawar and 2,000,000 tons Bajra in 1921–22. They are used in all parts of India. In some provinces they form the staple food of the country. Barley is grown to some extent over the whole country. The area covered by this crop is on an average 7,500,000 acres, and the output in 1921–22 was 3,000,000 tons. It serves as food both for men and animals. Maize is grown in various parts of the country. In the United Provinces it is an important food crop. The area under cultivation on an average is 6,500,000 acres, and the output was 2,000,000 tons in 1921–22. Ragi covers on an average 4,000,000 acres, Gram nearly 13,000,000 acres. Besides these there are other cereals of minor importance. Next to cereals come pulses with a number of varieties, the best of them being grown in the United Provinces and Bengal.

Oil seeds.—Oil seeds form a very important crop covering nearly 5 per cent of the cultivated area. The area under the principal varieties of oil seeds—linseed, safflower, rape, mustard, sesamum, ground-nut, castor, cotton seeds, cocoanut, mahura, and other flowers used for obtaining oil was 15,700,000 acres, and the yield 3,015,000 tons in 1921–22. The total quantity of oil seeds exported during this year was 735,000 tons. In 1913–14, the pre-war normal year, the production and export of oil seeds for which figures are available[2] were as follows:

[1] "It is estimated that in the two chief wheat-growing provinces of India (the United Provinces and the Punjab) over a million acres of improved wheats (Pusa-12, Pusa-4, and Punjab-11) are grown by cultivators" (*Review of Agricultural Operations in India in 1921–22*, p. 7). "It has been calculated that a safe estimate of the gain to Indian wheat-growers, if the crops were replaced by varieties like Pusa-12, would be Rs. 15 per acre per year" (J. Mackenna, *Agriculture in India*, p. 45).

[2] Figures for the production of all kinds of oil seeds are not available.

Name.	Production.	Export.
	tons.	tons.
Ground-nuts . . .	748,800	401,960
Linseed	1,877,200	959,160
Rape seed		
Mustard seed . . .		
Sesamum		
Cotton seed . . .	1,822,760	305,185
Total . . .	4,449,760	1,666,305

The export of oil seeds in such large quantities deprives India of food both for men and animals, and, what is as regrettable, of manure most urgently needed for agricultural development.[1]

Fibres.—Of the fibre crops cotton and jute are the most important. India stands second only to America as regards the total area covered and the production of cotton. The cotton crop covers an area of 23,000,000 acres, and the total output is nearly 5,000,000 bales. On an average the quantity exported is more than 50 per cent of the total production. In the five pre-war years on an average nearly 56 per cent of the total produce was exported. Cotton is grown more or less over the whole country, the main areas being the plains of Northern Gujarat, the highlands of the Deccan, Tinnevelly, Madura, Bihar, and the Central Provinces. Compared with the yield per acre in other countries the yield per acre in this country is poor. As yet India does not produce long-stapled cotton. Various attempts have been made by the Agricultural Department in different provinces to introduce exotic varieties.[2] "Cambodia cotton,"

[1] We shall deal with this aspect of the question in connection with the problem of manures.

[2] "The problem of the improvement of Indian cotton falls under two heads: the first, the selection of the best pure types from existing varieties, the maintenance of these types, and the increase of the yield by better cultivation; the second, the introduction of exotics or the production of hybrids. The first is concerned principally with the improvement of short-stapled cotton, for which India has a reputation, and it is to this that efforts have for the most part been directed; the

introduced a few years ago, now grows abundantly in the Madras Presidency. In Sind Egyptian cotton has been introduced with considerable success; and with the completion of the Sukkar Barrage Sind will produce a large quantity of long-stapled cotton. Cotton seeds are now preserved with care, and great efforts are made to safeguard them from adulteration. It is somewhat curious to find that the rise of the Agricultural Department in India was due to the "benevolent" interest of the representatives of the cotton industry in England; and that the activities of the Department in the earlier days were largely confined to improving the quality of cotton (to introduce long-stapled cotton) by hybridisation, introduction of exotic varieties, and other similar methods. So even to-day the British Empire Cotton-Growing Association and the Cotton Cess Committee are keenly interested in the improvement of the cotton crops of India.[1] Though the native cultivators find the cultivation of indigenous qualities more profitable than that of exotics, there can be no doubt that with better seeds and intensive methods the output of cotton can be enormously increased in the near future.

India has a virtual monopoly of the jute supply of the world. The area under cultivation varies from year to year owing to uncertain factors in the world market. In 1920–21 the area covered was 2,509,000 acres and the yield 5,885,000 bales (of 400 lb. each). Attempts are being made to increase the output per acre by the application of manures and the introduction of cross-fertilisation. Jute cultivation requires a large supply of water. The

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second is an attempt to meet the demands of Lancashire for long-stapled cotton" (Mackenna, *Agriculture in India*, p. 33).

[1] The same benevolent interest was manifested by Sir James Wilson when at a meeting at the Third International Congress of Tropical Agriculture he observed that though the Government of India first considers the needs of the people of India, "we want to encourage people to grow the sort of grain that is required in this country" (that is Great Britain)—(*Proceedings of the Third International Congress of Tropical Agriculture held in London, 1914*, p. 181).

conditions which favour the cultivation of rice are also best suited to the cultivation of jute. Owing to the rise in price of jute during recent years we find jute crops being substituted for rice crops in Bengal, which is the main area for jute cultivation. Nearly 75 per cent of the total produce is exported. India provides the jute supply of the whole world, and there are great possibilities for increase in output.

Indigo, Poppy Seeds, Tobacco.—The area under the cultivation of indigo in 1921–22 was 316,000 acres and the yield of dye 60,900 cwts. It is grown mostly in the United Provinces, Madras, and Behar. At one time indigo was one of the chief crops of India, but the use of aniline dyes has seriously affected the industry.

Poppy cultivation in British India is a monopoly of Government. It is mostly grown in the United Provinces, Central Provinces, and the native states of Rajputana. It was an important crop from the point of view of export trade, but its cultivation diminished after the covenant with the Chinese Government to control the export of opium to China.

Tobacco is chiefly grown in Madras, Bengal, Behar, Bombay, and Burma. The quantity produced is large, but the quality is coarse and meets the local demand to a large extent. During recent years the growing cigarette habit among the upper classes has created a demand for finer foreign tobacco. With improved methods tobacco cultivation has a promising future.

Tea and Coffee.—In 1921–22 the area covered by the cultivation of tea was 709,100 acres and the estimated yield 274,264,000 lb. On an average the Indian production of tea amounts to 300,000,000 lb. a year. It is grown in Assam, in the Nilgiris, in the United Provinces, and in the Kangra valley in the Punjab. A very large quantity of the total produce is exported every year. India provides 40 per cent of the tea supply in the world market. There is scope for expansion in its cultivation, both extensively and intensively.

The cultivation of coffee is practically confined to Southern India, comprising the Madras Presidency, Coorg and the State of Mysore, Travancore, and Cochin. The area under crop in 1921–22 was 627,273 acres, the total production of cured coffee being 20,645,700 lb. On an average the crop is much larger; the cultivation has suffered owing to the competition of Brazilian coffee.

Sugar.—India is the largest producer of raw sugar, having the largest acreage in the world, though the yield per acre is less than one-third that of Cuba, one-fourth that of Japan, and one-seventh that of Hawaii. In 1921–22 the area under cultivation was nearly 3 million acres, the yield being 2,750,000 tons. According to the estimate of Messrs. Willet & Gray of New York, the world production of sugar is as follows :

Country.	In Tons (=2240 lb.).	
	1920–21.	1922–23.
Cane sugar—		
U.S.A.	1,106,520	1,049,875
Rest of America	4,512,070	5,694,700
British India	2,506,320	2,575,000
Java	1,508,755	1,750,000
Formosa and Japan	342,176	405,000
Philippine Islands	255,843	285,000
Australia	182,401	300,000
Egypt	79,706	90,000
Mauritius	259,872	225,000
Natal	185,194	141,260
Total	10,938,857	12,515,835
Beet-sugar—		
Europe	3,681,461	4,689,290
U.S.A.	969,469	625,000
Canada	34,600	15,000
Total	4,685,530	5,329,290
GRAND TOTAL	15,624,387	17,845,125

The best cane is grown in the United Provinces, in Behar, in Madras, and Bombay. Once the sugar industry

was one of the flourishing industries, but there has been a decline in it owing to the competition with Java and Mauritius sugar and the bounty-fed beet-sugar from Europe. In 1890 there was hardly any sugar imported into the country; to-day we import sugar worth 26 crores of rupees. With improved methods sugar cultivation has unbounded possibilities.

Table Vegetables and Fruits.—There is a large variety of table vegetables in India, the potato being the most important. It is grown usually after paddy and jute and requires deep cultivation. Its value as a food crop is now increasingly recognised, and the area under cultivation is being steadily extended. Other vegetables which deserve mention are brinjals, cabbages, cauliflowers, tomatoes, turnips, etc. Large areas hitherto uncultivated might well be utilised in the immediate future for the growth of table vegetables.

Nowhere in the world have we such varieties of fruits as we have in India, and yet they are comparatively dear, owing to the shortage of supply. Amongst these fruits one might incidentally mention mangoes, apples, pomegranates, oranges, and lemons.

Miscellaneous Crops: India-rubber, etc.—Rubber is grown mainly in Southern India, Burma, and Assam. The area under cultivation is 196,900 acres, the production being 10,000,000 lb. There is a great future for this crop, with a constantly increasing demand. India has a practical monopoly of lac, a "resinous incrustation" found on the twigs of certain trees. Sericulture was in a flourishing condition a few years back; and it is still carried on on a fairly large scale in Bengal, Assam, and the Central Provinces.

Fodder Crops.—Jawar, Bajra, and Ragi are used as fodder crops in some provinces. Gram is used in the Punjab, and in the other provinces barley, oats, and turnips are grown as fodder crops. The fodder supply is inadequate and the cultivation needs extension.

The Position of Agriculture in India to-day

Exports of Food-stuff and Raw Materials.—From the description of the various crops and the total output under each head it will have become clear that the position of agriculture in India is far from satisfactory, that there are vast potentialities for development hitherto neglected, and that from a comparative point of view the output per acre for almost every variety of crop is disappointingly low. It has been sometimes said that India produces more than enough in the shape of food and raw materials for the requirements of her own people, and that the exports of food-stuff and raw materials from year to year represent her surplus production. Thus, speaking of the exports of rice and wheat, the *Imperial Gazetteer* tells us: "These exports could in no way appreciably affect the total food supply of India, the more so since they are not drawn from the chief materials of Indian diet nor from the most necessitous or most densely populated provinces." [1] The reference to necessitous and populated provinces seems a somewhat curious sort of argument in days when the country is being increasingly linked into an economic unit for purposes of distribution by the railway and the telegraph and the steamship. It is another phase of the same view that finds expression in the observation of the Fiscal Commission: "It is not really the insufficiency of the total food supply so much as the fact that certain classes of the population are too poor to buy all the food they require." If there are considerable sections of the Indian population so abjectly poor as to be unable to buy the necessaries of life, then it is not only economically inexpedient, but even a social crime, to tolerate a policy of free trade that favours the export of food-stuff and makes it more difficult for people to buy the necessaries of life. The Fiscal Commission is aware of the problem, but instead of facing it with an honest direct expression of opinion one way or another,

[1] *Imperial Gazetteer* (1908), vol. iii. p. 224.

shirks and avoids an answer. A number of witnesses advocated the imposition of export duties or other methods of restriction on the export of food grains to conserve the food supply of the country. An attempt is usually made to support by statistics the assertion that India's production of food is insufficient to feed her population. Calculations are made of the total food production in India, an average ration is assumed which is suitable to provide the whole population with what is regarded as a sufficiency of food, and it is then shown that the food production of India is not adequate to provide the required ration. But the subject is not really susceptible of treatment in this manner. "India exports food-stuffs, not because she has a surplus, but because her people are deprived of the means to buy them, and are compelled to live an underfed life." [1]

What is true of India's export of food-stuffs is still more true of other exports of raw materials. A surplus implies an excess over a definite minimum which in the case of the individual will be measured by his standard of life, in the case of a country by its economic organisation and stage of development. But as an individual may be underfed and a cut in wages may compel him reluctantly to subsist on starvation rates, while the employer may show a surplus for distribution, so a country may under alien rule be denied opportunities for industrial development and be in a position to show a surplus of raw materials available for export. But as sweated and low-

[1] Sir James Caird, in his famous report to the Secretary of State for India in 1879, says: "Considering the exhausting practice of agriculture so generally followed in the cultivation of dry grain in India, we are unable to concur in the statement that India as a whole now produces and is likely long to produce sufficient food for its population in any season of drought." This was said in 1879, when the exports of food-stuffs were not half as big as they are to-day. And the most significant witness to this bogy of a surplus is the fact that, in times of famine, it is the "surplus" that is being exported to pay the home charges, to meet the claims of foreigners, in the shape of profits, or to pay for the savings of European officials remitted home from month to month.

paid labour may ultimately affect economic development and efficiency, and surpluses for distribution as dividends may be the precursors of economic crises, so the surplus of raw material which is the product of a policy of repression may be the precursor of economic ruin, involving within its sweep not only the country subjected to repression but the author of the repression policy itself.

But one feels inclined to put this question on a still simpler basis than the refinements of economic science allow. On the part of an individual we are entitled to speak of a surplus when the needs of an individual are satisfied and he finds he has something left over for others. From a national point of view an economic surplus can be said to exist only when the needs of its population are satisfied and enough can be spared for exchange with other nations. It is a parody of facts, which the technicalities of a science may sanctify, to suggest that India is exporting her surplus produce when thousands, if not hundreds of thousands, of her population are starving and going in rags. Even Great Britain does not export its *surplus* coal when thousands go without fire in winter; and it is infinitely worse in the case of a dependency like India which is forced to export her food-stuff and her raw materials under the stress of an economic organisation which is gradually passing into a sanctified tradition.

Agricultural Output and Yield per Acre

The table on the following page indicates the total output of different crops in India.

The yield per acre of almost every crop in India as compared with that of other countries is exceedingly low. "It is well known that in many cases the yield per acre of Indian crops is very much lower than that obtained in other countries. The average weight of stripped cane per acre in the principal sugar-producing tracts of India is only 10 tons as against 40 tons in Java. In India

Crop.		1919–1920.	1920–21.
Rice	tons	32,000,000	28,033,000
Wheat	,,	10,122,000	6,719,000
Sugar-cane	,,	3,036,000	2,465,000
Linseed	,,	419,000	269,000
Rape and mustard	,,	1,153,300	848,000
Sesamum	,,	449,000	368,000
Ground-nut	,,	822,000	931,000
Cotton	bales	5,796,000	3,555,600
Jute	,,	8,481,000	5,915,000
Indigo	cwts.	38,000	40,000
Tea	lb.	377,255,000	345,340,000

98 lb. of ginned cotton are obtained per acre, in the United States nearly 200 lb., and in Egypt 450 lb. The average yield of rice per acre is only about half of what it is in Japan. India cannot, however, claim to set off against the lower yield a greater economy in the use of her available labour."[1]

The following table, compiled from comparative figures, speaks for itself:

TABLE SHOWING YIELD PER ACRE IN LB. OF VARIOUS CROPS IN DIFFERENT COUNTRIES (AVERAGE FOR 1919–20, 1920–21)[2]

Country	Wheat	Barley	Maize.	Rice	Tea	Cotton	Linseed	Rape-seed.	Jute	Tobacco.
United Kingdom	1861	1550	..	..	..	..	..	..	..	..
France	1185	1015	882	534	..	..	429	1274	..	1390
Italy	900	775	1354	3500	..	..	163	..	..	837
U.S.A.	775	1077	1684	1755	..	151	330	..	..	784
Canada	748	1077	3046	..	..	..	321	..	..	980
Australia	775	802	1125	..	..	..	347	..	..	1007
Japan	1318	1496	1487	3232	640	347	401	882	1719	1479
Egypt	1496	1425	2013	2610	..	294	1033	..	..	..
British India	677	994	1163	1336	518	89	255	392	1077	..

From the point of view of intensive cultivation India lags far behind other countries in the production of wheat or rice, cotton or linseed. Even from the point of view of extensive cultivation there are immense possibilities for

[1] *Report of the Industrial Commission*, para. 85.

[2] Compiled from the *International Year-Book of Agricultural Statistics*, 1909 to 1921.

development and increase. The following table gives us a comparative view of the distribution of land for different purposes in percentages of the total area :[1]

Country.	Arable Land.	Meadows and Pastures.	Vineyards	Gardens and Orchards.	Other Cultures.	Forest Land.	Marshes, Heaths, and Uncultivable Soil.	Total.
France .	47 6	20·2	3 4	·1	2·2	18·8	7 7	100
United Kingdom	26 8	43 4	..	·4	1	4·6	24 7	100
Germany	50·4	16 9	·3	·9	.	27 4	4·1	100
Italy	51·9	21 2	3·3	1 2	1 2	17 3	3 9	100
Belgium .	55 6	15 2	..	1 8	·2	20 6	6 5	100
Canada .	31 4	17 8	..	·6	..	26 5	23·5	100
British India .	62	..	..	..	1 0	14	23	100

Judging from the figures of the European countries mentioned as well as Canada, the proportion of arable land, meadows, and forest land seems to be fairly fixed; arable land forms about 50 per cent of the total area, meadows and pastures about 21 per cent, and forest land 22 per cent. In India we find that 63 per cent of the total area consists of arable land. Nature has been lavish in its bounties to India; if the total volume of agricultural production compared to these resources is less relatively to that of other countries, the causes are not to be sought in the niggardliness of nature but in the contrivances and policies of men and in the maladjustments of her institutions.

In the next place, if we turn our attention to the actual distribution of arable land amongst different varieties of crops, the table on the following page will enable us to judge of the relative position of India.

Including rice among cereals in the case of India, we find that about 85 per cent of the land actually under cultivation is devoted to cereals; this percentage naturally fits in with the economic fact that in Europe the cereal-exporting countries are exporting only because their

[1] See Slavko Secerov's *Economic Phenomena Before and After the War*, p. 167.

DISTRIBUTION OF ARABLE LAND IN PERCENTAGES OF THE TOTAL ARABLE AREA

Country.	Cereals.	Grass and Forage.	Other Cultures.*
France	57·6	21·5	20·9
United Kingdom . .	44·4	43·7	11·9
Germany	56·8	14·8	28·4
Italy	53·3	18·3	28·4
Belgium	55·9	17·0	27·1
Canada	56·0	34·3	7·7
British India . . .	54·8	1·6	43·6

* This table is taken from Slavko Secerov, *Economic Phenomena*, p. 169. It is exceedingly amusing to find a European economist like Slavko Secerov excluding rice from the list of cereals and including it amongst other cultures, by which he means commercial or non-food crops. Rice, of course, does not form part of the staple food of the European population; from the European point of view the rice crop can only be intended as a commercial commodity to be exported or to be used as raw material, like cotton or jute or indigo. He admits that rice forms "a food of importance for the Indians themselves"; but in that case the percentage in the case of India of land under cereals will be found to be more near 85 than 54. The figures actually given in the table are, therefore, to that extent, *i.e.* in the case of India, not quite accurate—nay, even misleading.

percentage of arable land used for cereal crops is exceptionally high. In Hungary it is 72 per cent; in Rumania, 83 per cent; in Bulgaria, 65 per cent. It will also be noted that grass and forage land in the case of India is a negligible percentage of the total arable land, as compared with other countries. With such shortage of grass land what can be more natural than the disappearance of live stock and the complete absence of dairy industries!

STATISTICS OF EXPORTS OF FOOD-STUFFS AND RAW MATERIALS

If we now turn to the history of the growth of agricultural production in India during the last thirty years, including both food-stuffs and commercial products, and trace the parallel growth during the same time of exports of these commodities, we shall find some interesting facts revealed by statistics. For this purpose we have prepared

a few tables showing the growth in the area under cultivation, starting from 1892, and also showing the growth in quantity of production and in the volume of exports. We have included separate figures in our tables for cotton and jute, as they constitute two of the most important varieties of non-food crops.

TABLE I

STATEMENT SHOWING THE AREAS UNDER FOOD CROPS AND NON-FOOD CROPS (ALSO UNDER COTTON AND JUTE SEPARATELY) IN ACRES *

Year.	Area under Food Crop.	Area under Non-food Crop.	Area under Cotton and Jute.
1892-93	187,000,000	30,000,000	11,000,000
1900-1	191,000,000	33,000,000	12,000,000
1910-11	214,000,000	41,000,000	17,000,000
1919-20	210,000,000	43,000,000	18,000,000

* Compiled from the agricultural statistics for 1919-20 and from *Statistical Abstracts relating to British India* from 1892 to 1911.

TABLE II

INDEX NUMBER SHOWING INCREASE OF AREA UNDER FOOD CROP, NON-FOOD CROP, AND COTTON AND JUTE CROPS (1892-93 ASSUMED AS BASIC YEAR)

Year.	Area under Food Crop.	Area under Non-food Crop.	Area under Cotton and Jute.
1892-93	100	100	100
1900-9	102	110	109
1910-11	114	137	154
1919-20	107	143	164

TABLE III

STATEMENT SHOWING EXPORTS OF PRINCIPAL FOOD-STUFFS AND RAW MATERIALS FROM INDIA * (ANNUAL AVERAGE IN DIFFERENT PERIODS)

Name.	1892–97.	1901–6.	1911–16.
	cwts.	cwts.	cwts.
Rice	31,000,000	44,000,000	43,000,000
Wheat	15,000,000	21,000,000	22,000,000
Wheat flour	584,000	797,000	1,246,000
Cotton, raw	4,500,000	6,600,000	8,100,000
Jute, raw	1,100,000	1,400,000	1,400,000
Seeds	19,000,000	21,000,000	24,000,000

* Compiled from *Statistical Abstracts relating to British India*. In preparing this table we have taken averages of three periods of five years each, namely, 1892–97, 1901–6, and 1911–16, as there are violent fluctuations in the quantities of these staples from year to year. We have selected three kinds of food-stuff and of non-food crops as typical of tendencies. In connection with the use of the *Statistical Abstracts relating to British India* from which we have compiled these tables, we cannot help referring to the unsatisfactory methods of preparing the tables adopted in Government publications. For instance, the figures for the production of cleaned rice in earlier issues were given in cwts., in later issues they have been changed into tons. Similarly the production of raw jute in earlier issues was given in cwts., in later issues it is being given in tons. But strangest of all is the unexplained fluctuation in the exports of "other sorts" of grain and pulse, when in one year the exports amount to nearly 3,000,000 cwts. and the very next year to 27,000. Shall we take this to be a printer's error ?

TABLE IV

INDEX NUMBER SHOWING INCREASE IN EXPORTS OF THE ABOVE COMMODITIES DURING THESE THREE PERIODS. THE AVERAGE OF 1892–97 IS TAKEN AS THE BASIS

Name.	1892–97.	1901–6.	1911–16.
Rice	100	142	139
Wheat	100	140	147
Wheat flour	100	136	213
Cotton, raw	100	143	180
Jute, raw	100	127	127
Seeds	100	111	126

TABLE V

INDEX NUMBER SHOWING THE RELATIVE INCREASE IN THE PRODUCTION AND EXPORT OF SOME CHIEF FOOD CROPS AND NON-FOOD CROPS. THE PERIOD 1892–97 IS TAKEN AS THE BASIC PERIOD

Year.	Rice.		Wheat.			Cotton.		Jute.	
	Production.	Export.	Production.	Export.		Production.	Export.	Production.	Export.
				Wheat.	Wheat-Flour.				
1892–97	100	100	100	100		100	100	100	100
1901–06	105	142	152	140	136	176	143	129	127
1911–16	142	139	164	147	213	220	180	154	127

In selecting the year 1892–93 as the basic year for our index numbers we must not be understood to imply that either the production of commodities or their export in that particular year was normal in any other sense than as affording a convenient starting-point for our inquiries. Tables I. and II. bear ample testimony to the fact that in the last thirty years the area under non-food crops has increased to a much greater extent than the area under food crops.

Whilst with an increasing population there is an increasing demand for food-stuffs, the land available for food crops is utilised for the growth of cotton and jute. Every acre of land that is used for these latter crops is land lost to the growth of cereals for the time being. But what is worse is that the increase of cotton and jute crop may even seriously affect the growth of food crops by encroaching upon land hitherto devoted to food crops. Thus we find Mr. R. S. Finlow, the Bengal Government Fibre Expert, expressing himself in his written evidence before the Industrial Commission in the following terms :

It is worth noting that in the period 1910–14, which was an era of uninterruptedly high prices for rice as well as for jute, the area devoted to rice in Bengal fell by 1,700,000 acres ; and the total area under food grains shows a similar decline. Since the commencement of the war, which caused a shrinkage

of over 25 per cent in the area under jute, rice cultivation has shown a rapid and progressive recovery. It is practically certain that the whole of the increased area put under jute in the period 1910–14—roughly 400,000 acres—was at the expense of food grains ; but even then there is an area of over a million acres which cannot be accounted for by the statistics available and which apparently went out of cultivation ; in fact it would appear that the increased area put under jute caused a much more than equivalent reduction in the area of food crops.[1]

Large profits from jute, or the conflict between extracting jute and the planting of rice which coincide in point of time, or both, may be responsible for this reduction in the output of rice, but the fact remains that in spite of an increase of population in Bengal in the period 1910–14 there was a serious diminution of the staple food supply of the province.

But more convincing than this is the testimony borne by the figures quoted by Mr. Datta in his Report on Prices. On the following page we abstract a few figures from his table on page 65.[2]

Mr. Datta goes to the length of suggesting that one effect of the increased cultivation of commercial crops on the food supply of the country has been that the best lands available are applied towards their cultivation while the cultivation of food grains is relegated to some extent to inferior lands.[3]

Returning to our figures, Tables III. and IV. indicate the increase in the volume of exports of a few typical food-stuffs and of raw material in the same period. But it is Table V. that throws a striking light on the relation between increase of production and increase of exports in the last two decades and a half ending with 1916. As

[1] *Indian Industrial Commission* (*Minutes of Evidence*), vol. ii. p. 311.

[2] *Report on Enquiry into the Rise of Prices in India.*

[3] The Government of India in its resolution on the subject disputes the statement that there has been a substitution of non-food for food crops in the country as a whole, but even the Government of India admits that while the food cultivation area has grown, the area under commercial crops has increased in a higher proportion.

PERCENTAGE TO THE TOTAL GROSS AREA CULTIVATED

Province.	Quinquennium.				1910–11.	1911–12.
	1890–91 to 1894–95.	1895–96 to 1899–1900.	1900–1 to 1904–5.	1905–6 to 1909–10.		
Bengal Northern and Eastern						
Food grains . .	71 48	70·1	68 54	65·64	67·9	67·7
Jute	11·28	10·7	12·22	14·9	13 2	14·1
Punjab East						
Food grains . .	84 58	77 76	76·26	75 0	75·6	72·3
Cotton	3·28	5 14	5 26	4 44	4·4	5·0
Sind						
Food grains . .	81 56	83 04	83·32	83 14	83 9	79·5
Oil seeds . . .	12·34	10 48	9·88	8 32	7 5	7 4
Cotton	3 06	3·18	4·44	5 78	6·1	10·3
Gujerat						
Food grains . .	74·94	76 96	72 22	68·68	67 0	66·0
Cotton	18 1	16 64	19 46	23 74	26 0	26·9
Deccan						
Food grains . .	80 02	80 1	78 8	76 9	74 7	73 0
Cotton	10 42	10·34	12 46	14 86	16 7	18 0
Madras South						
Food grains . .	82 78	83 32	81 74	79 86	79 6	76·8
Cotton	4·8	4·34	4 34	5 54	6 2	7·2

regards the two typical food-stuffs, rice and wheat, we find that the enormous increase in annual production between 1892 and 1916 has been entirely absorbed in exports, that as a matter of fact in the case of wheat the exports have relatively affected to some extent the annual consumption at home, when we remember that the quantity of wheat flour exported represents a much greater quantity of wheat in grain form. But there are other food-stuffs whose exports were negligible in 1892, and have attained enormous proportions in 1916. Thus the exports of barley increased from 54,000 cwts. in 1901–1902 to 4,000,000 cwts. in 1916–17, the exports of pulse from 947,000 cwts. in 1901–2 to 3,300,000 cwts. in 1916–17; Jawar and Bajra from 300,000 cwts. in 1901–2 to an average of 1,000,000 cwts. a year over the five years ending 1916–1917. And though the figures for raw jute and cotton exports relatively to production show an increasing home

consumption, there is an increasing annual exportation of oil cakes, of hides and skins, of raw rubber, and of wool.

Table V. is also eloquent in the witness that it bears to another fact, as regards the staple food of the people. It is this: that in spite of all the opportunities and facilities for export of food-stuffs under a free-trade regime which our rulers are anxious to perpetuate in their own interests, the exports cannot considerably affect the home consumption, and have not affected it, because the home consumption is a bare minimum incapable of being further reduced without disastrous consequences. The index numbers of the production and export of wheat and rice in the interval of about twenty-five years between 1892 and 1916 show a parallelism in growth, the increase in exports being roughly correspondent with the increase in volume of production. We are consuming from year to year a definite minimum of our annual production of food-stuffs, not a minimum that keeps us physically fit, but a minimum that just keeps us alive; and any further *relative* growth of exports as compared with production can only mean famine and starvation for some portions of the Indian population. And yet while the people are living on a bare minimum in India, the statistics of exports are made to proclaim to an ignorant world the growth of India's wealth; we are told it is her "surplus" production that India is exporting from year to year in the shape of food-stuffs and raw materials. We forget the elementary facts in the economic situation, that these exports represent the drain of material resources incidentally following upon, if not deliberately contrived by, the domination of an alien rule, that the gradual impoverishment of the dependent country may in the long run spell disaster to the nation that is increasingly compelled to rely on foreign food.[1] How woefully statistics may be

[1] "If we could imagine an overseas world, the productivity of which had so fallen that it was producing only just enough for itself, if foreigners were so poor that they produced only enough food to keep themselves alive, then obviously it would be no good offering them our

misread in connection with the relation between increase of production and increase of exports is evidenced by the following observation from one who represents the official view :

> The acreage under rice has increased from 50 millions in the early years of this century to 70 millions pre-war and 80 millions present day, and the output from 21½ to 33 million tons. Wheat cultivation has increased during the past twenty years from 25 to 30 million acres, and the output from 7½ to 10 million tons. The figures represent the increasing demand and capacity of a growing population. They are all the more striking when it is remembered that the increase in the cultivation output of both crops together (an increase of nearly 50 per cent) far exceeds the ratio of increase of the population (from 294 to 319 millions in the same twenty years, or 8½ per cent). The result has been a considerable increase in the quantities available for export, the building of foreign credits and cheapening of the cost at which India secures machinery and the other overseas goods essential to her.[1]

Our tables expose plainly the fallacy of an argument like this based on the assumption that the country is an independent economic unit, capable of controlling her economic policy, and freely exporting her surplus produce.

India exports food-stuffs and raw materials as the result of an economic policy imposed upon her from without, at the price of keeping her own people on a bare minimum,

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manufactures. They could not pay for them, and these twenty or twenty-five million British to-day (they may be thirty-five or forty million in a generation) who depend upon foreign food, would either die or migrate " (Norman Angell, *If Britain is to Live*, p. 62).

[1] H. A. F. Lindsay, " The Indian Consumption and Export of Food-stuffs," *Manchester Guardian, Commercial Reconstruction Supplement*, Section 14. It is interesting to note how English critics of the Indian situation grow eloquent about the growth of agricultural production in India, leaving increasing surpluses to be exported; production from this point of view has far outrun increase in population, and yet how often have we not been treated to the enormously rapid growth of population in India, far outrunning her production and accentuating the poverty of the people ? We leave the bewildered readers of these shibboleths to draw their own conclusions from such self-contradictory and irresponsible statements from observers of economic phenomena ready to adjust their observations to the prejudices from which they start.

having the instruments of future growth in wealth and well-being taken away from her year after year by the export of her raw materials.

We have already referred incidentally to the loss of economic equilibrium in the civilised countries, due to the systematic pursuit of a policy of industrialism by the nations that could command the services and materials of dependent tracts. The need for an adequate continuous and regular supply of food-stuffs is being increasingly felt by the over-industrialised countries whose population has to look to other countries for the supply of necessaries of life. This view found expression in Germany even towards the end of the last century when it was felt that Germany was becoming over-industrial, and that the primary duty of the nation towards itself was to secure for itself not necessarily a cheap but an assured source of food.[1] But Europe as a whole before the outbreak of the war, under the operation of the laws of capitalistic production on the basis of the international division of labour, had ceased to be self-contained and self-sufficient, and was dependent for its food supplies and raw materials upon the world overseas. Mr. Hoover estimated that as a result of this process of industrialisation there were in the war-time Europe of 1918 a hundred million more persons than the continent could support out of its natural resources. And if the victory of the Allies was due to any one factor rather than another, it was due as much to the cutting off of the supplies of cotton and jute, of wool and hides and fats, as to the sacrifices of the Allied armies. The war not only gave an impetus to agriculture in Europe, but has opened the eyes of Europe to the need for fostering its agriculture.

In Great Britain, for example, before the war the country produced less than half of the food-stuffs necessary

[1] Cf. Von Bülow, *Imperial Germany* (1914), pp. 209 and following. "I was persuaded that vigorous agriculture was necessary for us from the economic, but above all from the national and social point of view. . . . Without great and flourishing agriculture by its side industry would soon use up the best forces of the nation."

for its population, and only one-fifth of the staple food-stuff, wheat.[1] A revival of agriculture is now regarded as a question of the highest national importance; this is to be brought about by amending the land system so as to make access to land more easy and to discourage the use of land for the purposes of mere sport or social ostentation, by strengthening the position of the peasant, by creating a system of banks for the supply of agricultural capital, by encouraging co-operation in buying and selling and in the use of agricultural machinery. It was possible for Great Britain in the past and it is still possible to-day to maintain an overgrown population by a policy of imperialistic capitalism, drawing on the food-stuffs and the raw materials of her dependencies; but the events of the past few years have undermined the assumption on which such a policy has hitherto rested, viz. that Great Britain was going to enjoy a permanent peace; and what is more, the awakening of national self-consciousness in the Eastern nations may result in the creation of a serious situation when these nations build up their own industries and cease to export food and raw materials. But, on the other hand, a policy directed towards making a nation industrially self-contained or self-sufficient may not only result in hindering the community from taking full advantage of industrial arts and so lowering to an extent its industrial efficiency, may not only divert industry into less productive channels, but may also breed an enhanced attitude of animosity towards foreign nationalities.[2] The European nations in the coming years have to steer their way through these shoals as best they can. Over-industrialisation may mean persistence in a policy of territorial expansion and exploitation of dependencies; economic self-sufficiency,

[1] "For nearly two-thirds of our food we depend upon other countries. For these great imports of food we have to pay by our exports, which consist mainly of manufactured goods, coal and services (shipping, banking, insurance, etc.). For our manufactures we require raw materials, most of which we have to import" (Harold Wright, *Population* (1923), p. 97.

[2] Veblen, *Imperial Germany and the Industrial Revolution*, p. 236.

even if it were practicable for a country like Great Britain, may mean an intensification of national animosities, unless there is a radical change of heart and mind on the part of the nations. The only solution of this problem lies in the cultivation of the spirit of true fellowship amongst the nations, so that one country's gain may not be regarded as the loss of another, and the free exchange of commodities may link the nations together as members of one family. Speaking in 1917, when the issue of the war had not yet been decided, Alfred E. Zimmern observed: "The war will have been fought in vain if it finds the various governments, in their mutual business relations, actuated by the same grasping and anti-social spirit as too often characterised their pre-war commercial activities. If the problem is left to be solved on competitive lines, with the governments outbidding one another, there will be a scrambling and pushing and threatening and bullying such as the world has never seen before." [1] These prognostications seem strangely enough realised in the relations of the continental states to-day; the lessons of the war seem so far more or less lost, and yet we may be allowed to hope that the danger of common ruin that threatens the European powers may yet open their eyes in time to the need for a change of hearts.[2] It is almost heartrending

[1] *Nationality and Government*, p. 293.

[2] Cf. Harold Wright, *Population*, p. 142: "National hostilities, however, interpose a barrier between mankind and the rational consideration of the matter, and lead to national policies which aggravate the evils and increase the dangers by which the laws of nature have surrounded us. The first step towards the co-ordination of the number of human beings with the available food supply will not be taken until we have ceased to regard a relative advantage over rival nations as more important than the well-being of humanity as a whole." So also *ibid.* p. 149, we have seen how "human co-operation and the division of labour have made it possible for vast numbers of people to come into, and to be maintained at, a higher standard of life than the earth has ever yielded before. We have also seen how national antagonisms intensify the difficulties which man must overcome in winning his subsistence from the earth. The present tendency appears to be away from co-operation, and towards a keener sense of national differences. But that road leads inevitably to a bitter struggle upon an overpopulated planet for the bare necessities of life. Is that to be the end

to find even a prophet of "Co-operation" like Norman Angell deluding himself with the idea that salvation may lie in a policy of economic expediency resting on agreements and bargaining. Whilst we "co-operate" with Germany and Russia we need not assume that they are our friends "or that we admit them to be good people or nice, or that we share their views on marriage, music, or cookery."[1] This is only a policy of postponing the evil day; it is a policy of substituting for the exploitation of one nation by another the exploitation of the backward parts of the world with potentialities of raw material by a group of "co-operating" powers. To ground allegiance to the things of the spirit on considerations of expediency is to barter away the soul for a mess of pottage. A policy of "co-operation" such as Norman Angell's may suit the League of Nations with the dominating control of the Big Five; but it is largely responsible for the bankruptcy and chaos that face the civilised world to-day. No nation can prosper at the expense of another; and you cannot destroy the economic well-being of a

of modern civilisation, or will human reason overcome blind impulse in time to avert the catastrophe?" By an irony of fate the powers that stand most in need of world co-operation for solving their economic problems are the powers that do their utmost to prevent its realisation!

[1] "We may not do those things with our tailor or the man who waits on us in the restaurant, but we do business with the former and accept the services of the latter" (Norman Angell, *If Britain is to Live*, p. 126). That we are not unfair to Angell will be sufficiently clear from the following passage taken from the same book. We should "direct our foreign policy mainly at substituting for the haphazard system of the past a formally recognised international 'Code of Economic Intercourse' dealing with the more fundamental principles: the relations of national customs tariffs to the general economic needs of the world; equality of economic opportunity in undeveloped territory, concessions and investments therein, access to their markets and raw materials, and as an earnest of our sincerity in this aim we should be prepared to place our entire non-self-governing empire (India, African crown colonies) under such code, to place foreigners on an economic equality therein, etc." An economic code dependent on a League of Nations may be better than a policy of Imperial self-sufficiency supported by balance-of-power commitments, but it means ultimately a policy of feeding the overgrown populations of Europe on the food-stuffs and raw materials of undeveloped territories.

single integral part of the world, not even Bolshevik Russia or fallen Germany or dependent India, without destroying the well-being of the whole world.[1]

But whilst the European nations are turning their attention to-day to the development of a many-sided life which will make them as far as possible economically self-sufficient, whilst they have been endeavouring to remedy the evils of over-industrialisation by the fostering of agriculture, in India we are allowing things to drift; we have neglected our agricultural industries, and we have done nothing to foster our manufactures. Our economic development and our machinery for the production of wealth are not guided by any definite policy, national or international. Our economic life is not based on a national policy; if it had been so based, we might have expected and witnessed a many-sided development of economic life, a co-ordinated productive mechanism in which agriculture and manufactures were mutually adjusted. If our economic life had been based on a larger international policy which aimed at linking the country by increasing commercial ties with the rest of the world, we might have witnessed a development of our agricultural industries, a phenomenal expansion of the production of food-stuffs and other raw materials. The result of a century of British rule for the economic life of India has been the gradual exportation in increasing quantities of her food-stuffs and raw materials, year after year, whilst her rulers—following the traditions of a *laissez-faire* policy—have done nothing to foster and develop her economic resources. Production for home consumption may be very often actually diminished through an increase in exports, and the nation may be the poorer for the exports, especially so if these exports include irreplaceable raw materials, as, in addition to the capital lost, labour is wasted which might have been utilised in production.

[1] See Scott Nearing, *The Next Step*, pp. 22 and following.

The Law of Diminishing Returns and Indian Agriculture

The classical idea that agricultural industry is subject in the long run to the law of diminishing returns, and that manufactures in the long run come under the operation of a law of increasing returns, has suggested to many thinkers the belief that Indian agriculture is already subject to the operation of the law of diminishing returns. The classical conception of the law has now been replaced by a wider view which points out that all production goods or productive agents, including land, labour, and capital, are subject at the different stages of their economic utilisation to a law of increasing returns, a law of constant returns, and a law of diminishing returns. If a labourer tends one loom he will turn out a certain quantity of cloth ; double the number of looms under his control and you will find him turning out more than double the quantity. But after a certain limit is reached he will make mistakes and do less efficient work with every additional loom that is placed under his control. The total output will be large, but the output of each loom will be less. So also if we enlarge the supply of labour instead of enlarging the supply of tools. An industrial labourer by putting forth more effort may increase the product of his labour, but after a certain point is reached more effort means relatively less output. Similarly a large omnibus will hold more people than a small one, but after a certain size is reached it will pay better to buy another omnibus than to enlarge the old one. On a given piece of land every dose of capital or labour successively employed may be attended with greater results ; but after a certain point is reached the application of additional doses will yield relatively smaller returns. Every factor of production is thus subject to the law of diminishing returns, but only after a certain point is reached. It does not necessarily apply before that point has been reached. This point is the point of maximum utility. The question

whether Indian agriculture has reached this point depends upon the possibility of profitably employing more labour or capital, that is of successfully extending the point of intensive or extensive utilisation. The question has to be answered in detail in respect of every definite type of crop by taking into account the possibility of intensive or extensive culture. If the yield per acre of agricultural produce in India is relatively small when compared with that of other countries, it does not follow that the law of diminishing returns has come into operation. It may be pointed out, on the other hand, that the poor yield per acre is due to lack of capital and labour, to the want of manure and good seeds, the absence of implements and water; the soil needs recuperation; and the country has been squandering away her vast agricultural resources in the most extravagant manner without taking care to conserve them.

CHAPTER XII

LOW AGRICULTURAL PRODUCTION

Natural Causes

Agriculture in India is governed by climatic conditions to a much greater extent than in other countries. The forces which dominate agriculture are the quantity of rainfall, its distribution and timely arrival. There is thus an element of uncertainty and precariousness in the annual output of agricultural products; but though climatic conditions have to be noted as introducing the element of uncertainty, they must not be over-emphasised, as a failure of rains throughout the entire country is a rare occurrence, and the deficiency in harvest in some parts of the country can always be made good by the surplus produce of other parts.

Manure

The soils of India can stand comparison with the most fertile soils of other countries. Nevertheless it has been correctly pointed out that the soil in India is being exhausted, largely owing to lack of manure. The output from agricultural industry in Western countries has increased from 50 to 100 per cent during the past century, and in some cases it has been trebled.[1]

[1] *E.g.* in Germany the average production per acre of oats, wheat, and barley increased from 1024 lb. to 1800 lb. between 1879 and 1913, and that of potatoes, in the same period, from 3 to 5½ tons per acre (T. H. Middleton, *Recent Development of German Agriculture*, p. 8).

This has been amongst other things due largely to the increased application of manure. While in the West the soils are being enriched from year to year by the application of all kinds of manure, in India the land is being continually impoverished owing to lack of manure and the uninterrupted cultivation of heavy and exhausting crops.[1] As long ago as 1893 Dr. Voelcker observed :

It must be accepted as an axiom in agriculture that what is taken off the land in crops must in some way be put back into the soil, or else the soil will suffer exhaustion. It is an equally accepted fact that the production of heavier crops means that more manure must be applied to the land. A country which exports both crops and manure must be declining in fertility. Now what is the state of things as regards India ? On the one hand there is a large export of seeds, cotton, and other products, besides an increasing one of wheat, all of which remove a considerable amount of soil-constituents. What is returned in their place ? Only stems, or the stalks and leaves, and it is not even correct to say that they are returned, for after all it is only a portion that does find its way back to the soil.[2]

In 1922, thirty years later, things have not improved. " Evidence of soil exhaustion in various parts of India and Burma has been adduced by many experts and must be accepted as final. This evidence is not only based on the theory that while much is being taken out of the soil, very little is being put back, but also on the practical demonstrations of increased production resulting in some areas generously and continuously from the application of manure." [3]

[1] " The chief immediate cause of the productivity of German soil is the increase in the use of artificial manures . . . Helfferich points out that between 1890 and 1910 the total consumption of artificial fertilisers rose from 1,600,000 to 6,000,000 metric tons, while the use of potash increased tenfold " (Middleton, *Recent Development of German Agriculture*, p. 37). Cf. Keatinge, *Agricultural Progress in Western India* : " It will be noticed that manure secures the first place amongst the causes that have contributed to increased yields, and under the heading of manure is included not only artificial manure but in an even greater measure the increased supply of farmyard manure due to the large number of live stock kept."

[2] *Improvement of Indian Agriculture*, pp. 39-40.

[3] H. A. F. Lindsay, " Note on the Export of Indian Manures,"

In the earlier days there can be no doubt that indigenous manures, especially in the shape of cattle manure, were used very freely, and the process of natural recuperation of the soil was facilitated by the custom of allowing rest to the fields. To-day cow dung is mostly burnt as fuel, oil seeds and oil cakes are mostly exported, and fields are not allowed sufficient rest for natural recuperation. On the contrary, heavier commercial crops are being introduced. In a country like the United States of America it has been conservatively estimated that the value of animal manures exceeds two billion dollars.[1] One is almost tempted to say that our agricultural industry in India involves a criminal exhaustion of the powers of the soil.

The Problem of Cattle Manure

It is an elementary fact that the Indian agriculturist does not use cow dung as manure, because he converts it into fuel.[2] The administration of the Forest

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Proceedings of the Board of Agriculture in India (1922), p. 103. The Director of Agriculture in Burma points out in support of the possibility of soil exhaustion that, whereas in 1908 the area under paddy was 9,300,000 acres, exports of cargo rice were 2,430,000 tons. In 1905 the area rose to 10,000,000, and Upper Burma began to grow paddy for export; the exports fell to 2,410,000 tons. Nearly 3,000,000 acres in Burma are being cropped continuously by tenants on yearly leases without anything being put back into the soil.

[1] Carver, *Principles of Political Economy*, p. 15.

[2] "Every person who visits the agricultural districts of India and sees the fields and houses of the cultivators, and who takes any interest or has any thoughts about the products of the soil, is at once struck by this most important and most monstrous fact, that a very large part of the manure that should go into the soil to increase its productiveness is used as a fuel for warming the dwellings and for cooking the food and other purposes. The cow dung is picked up and plastered in cakes on the walls of the houses so that it may dry in the sun. Sometimes it is kept for the use of the householder, sometimes it is sold to the town for the use of people there. . . . The mere fact that this is done is sufficient to condemn the Government of India. It is the most horribly ruinous, unprofitable, uneconomical and wicked thing it is possible to do, and yet the Government never stirs a finger to prevent this from being done" (Lupton, *Happy India*, p. 50).

Department makes it exceedingly difficult for people in the villages to get sufficient supplies of wood as fuel, and the disappearance of common lands adds to the difficulties. Cow dung is ready to hand and serves as fuel. The gradual enclosure of common pasture round the villages makes it hard, if not impossible, to maintain a large number of cattle, with the natural result that the quantity of cow dung has also decreased. What is immediately wanted is a relaxation of the harsh forest laws, with a view to providing cheap wood as fuel, an organised policy of afforestation, and the restoration of common pastures to every village. Such a policy alone can provide cheap fuel—leaving cow dung to be used for agricultural purposes—and the conditions for the breeding of healthy cattle. Improvement of live stock is as essential for agricultural prosperity as the application of manure to the soil, and both can be secured by a wise administration of forests and by the provision of common grazing ground for the villages. India in the past enjoyed the benefits of a system of agriculture that was adapted to the needs of the people; the village had its common pasture; grazing grounds were not divided; the cultivators felled the trees as they needed them. Even to-day land is abundant; woods and copses are not scarce; nature is as bountiful as before in her gifts to man. It is our human policies and forest laws and our enclosure methods that deny to man what God has so amply provided; and what we need is a humanisation of our administrative methods, a realisation of the plain fact that our forest laws are made for men and not men for forest laws.[1]

[1] Lupton suggests that instructions should be given to forest officials in every district to take in hand the plantation of sufficient trees and plants which would supply fuel, so that people will not be obliged to burn cow dung for fuel. In five to ten years sufficient fuel would be grown in or near each locality, and in localities where the land was too valuable to use for growing wood fuel, roads and railways should be made for rapid conveyance of fuel from forests to the places where it was required (*Happy India*, p. 88).

Oil Seeds, Oil Cakes, and Bones

The importance of oil seeds and oil cakes for maintaining the fertility of the soil in India has been repeatedly pointed out in our own times by the Department of Agriculture itself:

> The Committee consider that the Board should place on record their opinion that the conservation of the natural manures such as oil seeds, oil cakes, bones, including horns, and fish manure of all kinds, for use in this country, is a matter of the greatest importance. Oil seeds contain a large percentage of nitrogen, which is the most valuable of all manure constituents and is absolutely necessary to maintain the fertility of the soil. No other constituents can take its place, and it is acknowledged that when applied with organic matter such as oil cakes it is more valuable than in any other form.[1]

And so again we are told:

> The soil exhaustion in India is not merely a question of limited plant-food; it is the position of that plant-food in the soil. In most places manuring has become a necessity, but at the present time adequate manuring is beyond the financial scope of the farmer. Continued manuring year after year is the exception rather than the rule, and therefore most of the manures applied must be looked upon as a top-dressing. The result is that there is a tendency for crops to feed near their surface which greatly affects their powers of resisting drought. If a crop is to resist drought, plant-food must find its way deeper into the soil where the roots of the crop should normally develop, and this can now only be done by regular and systematic manuring.

At present India is exporting year after year enormous quantities of oil seeds and oil cakes for the benefit of foreign countries, whilst her own fields are getting impoverished. The following figures speak for themselves.

[1] *Proceedings of the Board of Agriculture in India*, 1919.

STATEMENT SHOWING EXPORT OF OIL SEEDS, OIL CAKES, AND BONES DURING TEN YEARS (1911–12 TO 1920–21)

Name.	Tons.
Ground-nuts	2,641,319
Linseed, rapeseed, mustard and sesamum	5,995,189
Castor	972,790
Copra	388,974
Cotton seed	1,417,894
Poppy seed	111,474
Niger seed	25,207
Bones	754,615
Total	12,307,462

On an average India exports a million tons a year of manure. Alarmed at the rapid exhaustion of the fertility of the soil, the Board of Agriculture in 1919 advocated the imposition of an export tax on oil seeds and oil cakes, and the total prohibition of the export of bones and fish. In subsequent years doubts were cast on the recommendation in favour of export duties, principally on the ground that the price of oil seeds and oil cakes is a world price determined by world supplies, and that an export duty would only lower the price and injuriously affect the industry. It is also pointed out that Indians cannot afford to pay for these manures and will not absorb the annual production. We are told, "If India cannot pay the market price for fish-manure it is her misfortune"; but that is not sufficient justification for a prohibition of exports. Those who rely on considerations of world prices for what is to be produced, and judge production by profit, are of course true to the traditions of economics as a science "that treats phenomena from the standpoint of price."[1] The central and unifying problem of present-day economics is the problem of market price for this type of thinkers. But to those like ourselves who look on economics as a human science, whose primary business is the supply of human needs, the question of levying export duties or of the total prohibition of exports of manures is not a question of prices, not a

[1] Davenport, *Economics of Enterprise*, p. 25.

question of an officious pronouncement of the righteousness of the existing order of things, but a question of what the people of India require in the shape of the decencies of life and how these requirements can be met. From this point of view, if the export of oil seeds or bones lowers the productive capacity of the soil in India, and therefore diminishes to that extent the means of living and endangers the chances of life of future generations, such exports are not only inexpedient but unrighteous from a moral point of view. A science that seeks to distinguish between economic expediency and moral righteousness is a dismal science indeed.

The Indian cultivator was not unfamiliar with the use of manure in the past ; cow dung was largely available to him ; and if to-day he does not use it as freely, it is because of the restriction of the supply of wood as fuel. The farmer is a shrewd business man sufficiently alive to his surroundings, and ready to take advantage of all available means for increasing his output. "The Ryots have a keen eye to the result of a good system of farming as exhibited on model farms, but they cannot derive much good from the knowledge, though they may take it in and thoroughly understand that superior tillage and proper manuring mean a greater out-turn in crops."[1] When all has been said, the one thing that stands in the way of the use of manures by the Indian cultivator is the lack of capital, of money to pay for oil seeds and oil cakes ; and the solution here as in so many of the other problems is an increase in the purchasing power of the individual and an improvement of the material condition.

Under these circumstances even a suggestion for the use of artificial manures by the cultivators seems to be beyond the scope of practical politics. The imports of artificial manures into India rose from 863 tons in 1909–1910 to about 8000 tons in 1913–14 ; most of these imports go to Calcutta and Madras, to meet the demand of the European planters. It is also significant that whereas

[1] Elliot James, *Indian Industries*, p. 6.

only ten tons of sulphate of ammonia were imported in 1919–20, on the other hand there were exports of the same article to the extent of 6800 tons. The possibilities of agricultural development through a proper system of manuring have often been indicated. Mr. Kenny, Inspector of Agriculture to the Nizam, points out in connection with experiments carried out on Mr. Newman's dry land at Ranipet, that when the land was not manured the yield of grain (paddy) was 1084 lb. and of straw $7\frac{1}{2}$ cwt. On one acre of land manured with ashes 2 tons, bone-meal 8 cwt., cattle manures 12 tons, the grain obtained was 3484 lb. and the straw 22 cwt. On one acre of unmanured land the value of grain obtained was Rs. 23; on the manured land the excess value of the grain was Rs. 52.[1] So also Mr. T. Basu, Assistant to the Department of Land Records, stated, as the result of five years' experiments carried out on the Dumraon Farms, that whereas the average crop of wheat with no manure was 822 lb. per acre, with manure in the form of 84 lb. of saltpetre per acre the average result was 1558 lb. per acre. One might well rest content with the agricultural situation if it only involved the postponement of the development of the resources and potentialities of the soil; what is tragic is the gradual exhaustion of the soil due to the disappearance of the mineral substances removed with every crop from the soil, without any attempt at replacing them by the use of cattle manure or bone-meal or oil seeds or artificial fertilisers.

[1] *Intensive Farming in India*, p. 260.

CHAPTER XIII

SUBDIVISION AND FRAGMENTATION OF HOLDINGS

The Nature of the Problem

It has been often pointed out that one important cause of the low productivity of land and of the backwardness of the agricultural industry all round is to be found in the excessive subdivision and fragmentation[1] of holdings in many parts of the country. This process of excessive subdivision prevents development of agriculture and improvement in the yield per unit of land. This subdivision and fragmentation are further ascribed by critics to the rapid increase of population and to the law of inheritance and succession both amongst Hindus and Mahomedans. We are told that unless these laws are radically changed or modified there is no chance of preventing further subdivision and fragmentation. We are also told that the present holdings, uneconomic as they are, should be consolidated and redistributed in sizes which would ensure farming on an economic basis; and when the redistribution is effected, the tendency to subdivision should be made impossible by legislation resting on a law of primogeniture or on the recognition of an indivisible unit of land. An attempt to alter the law in this direction was made in

[1] By fragmentation we mean the ownership by one and the same individual of land scattered in different parts of one and the same rural area. Mr. Keatinge defines the problem of fragmentation as consisting in the fact that individual holdings, whether large or small, tend to become broken up into a number of separate plots, often situated at a considerable distance from each other.

the Bombay Presidency in 1916, but it failed. The statement of the objects of the Draft Bill to prevent excessive subdivision of agricultural holdings drawn up by Mr. Keatinge presents this view of the problem in clear terms:

It has long been a subject of comment in India that the landholdings of cultivators have become subdivided up to a point at which they are now in many localities very small, and that the holdings, whether large or small, are frequently fragmented in a manner which is very prejudicial to effective cultivation. This progressive process of subdivision and fragmentation is due to the increase of population and to the fact that the laws of inheritance which are in force in this country operate in such a way as to give to each male member of a landholder's family a share in the family land. . . . In the Bombay Presidency in general, and in particular in the Konkan, West Deccan, and the garden and rice tracts of Gujerat, subdivision and fragmentation of land have reached an intolerable point . . . fields measuring less than half an acre are found to be subdivided into more than twenty separately owned plots, many of them of less than one guntha (one-fortieth of an acre) apiece. In view of the fact that a large proportion of the cultivable land has been reduced to those unpardonable conditions, it is almost impossible to expect any substantial economic improvement amongst the majority of the landholders until the fundamental impediment is removed. So long as the existing laws of inheritance continue to operate in such a way as to subdivide holdings continuously from generation to generation, it is impossible either for landowners or for the Executive Government to take any steps in the direction of consolidation of holdings which would have more than temporary effect.

Not only officials but even Indian economists [1] endorse

[1] "We come to the conclusion that for the economic development of the agricultural class it is necessary to modify the system of inheritance and partition slightly so as to prevent the subdivision of land where it is likely to lead to the creation of uneconomical holdings" (A. V. S. Reddy, "Agricultural Holdings," *Indian Journal of Economics*, Nov. 1919).

"The evils of land morcellement are concealed in France by the French people's great advance in civilisation that has taught them to place voluntary but effective restraints on the growth of population. In India the corresponding evils may be said to be concealed by the prevalence of the joint-family system; but the evils are none the less, and any hopes for the expansion of agricultural production must be based

the view that subdivision and fragmentation are due to laws of inheritance and succession, and that the cure is a change in these laws which would prevent subdivision of regrouped and consolidated holdings.

The problem as it presents itself in India has two aspects: the smallness of the holdings and the need for preventing further subdivision, and the fragmentation of these small holdings giving rise to the need for consolidation. What is to be regretted in the presentation of this problem by a number of Indians as well as Government officials is the hasty conclusion that this subdivision and fragmentation are the cause of low production, and that a process of enlarging and consolidating the holdings will automatically secure improvement in agricultural production.

Facts and Figures about Subdivision and Fragmentation

There is no doubt about the fact that excessive subdivision of holdings is a common feature of village life in India; and there is also no doubt as to the injurious character of this process. Subdivision and fragmentation have made cultivation more costly, if not definitely uneconomic.[1] Ample evidence is forthcoming from all

upon only such regrouping of land as would permit a more profitable economic cultivation. . . . But even if irrigation were extended to the fullest capacity, its real service would be lost so long as the land-holding in India is based on the principle of excessive and uneconomic morcellement. Some system of regrouping, whether by the superimposition of collective association amongst the adjacent cultivators in the village, or even by the minor expedient of the right accorded to one member of a family to buy out the rest and then avoid further dismemberment of the holding, is thus inevitable and immediately necessary if agriculture, which represents at least 80 per cent of the wealth of India, is to be saved from premature decay" (K. T. Shah, *Trade, Tariffs, and Transport in India*, pp. 158-159).

We find the same view endorsed amongst others by Prof. S. Jevons, Dr. H. Mann, Rao Bahadur Govind bhai Hathibhai of Baroda, and Prof. Gilbert Slater.

[1] "It means, to repeat what we have elsewhere said, that by far the greater proportion of holdings could not, under the most favourable

directions pointing to subdivision and fragmentation. We have the following figures supplied by Gilbert Slater about holdings in the village of Gangai Kondan in Tinnevelli District :

Size.	Number of Owners.	Size.	Number of Owners.
Under 1 acre .	105	From 20 to 30 acres .	50
From 1 to 5 acres .	220	„ 30 „ 40 „ .	60
„ 5 „ 10 „ .	250	„ 40 „ 50 „ .	50
„ 10 „ 20 „ .	100	Over 50 acres .	90

Holdings of wet land are as under :

Size.	Number of Owners.	Extent.
Over 100 acres	..	..
From 50 to 100 acres	1	80
„ 40 „ 50 „ . . .	..	..
„ 20 „ 40 „ . . .	3	70
„ 10 „ 20 „ . . .	5	60
„ 5 „ 10 „ . . .	40	250
„ 1 „ 5 „ . . .	210	400
Under 1 acre . . .	200	120

In the village of Kodaganallur, Tinnevelli District, the following figures indicate the rapidity with which holdings tend to be broken up : [1]

Years.	Holdings paying Rs. 10 and less in Kist.	Holdings paying more than Rs. 100 in Kist.
1882	112	22
1887	140	19
1892	173	18
1901	204	15
1906	239	14
1911	367	11
1916	366	8*

* *Some South Indian Villages*, p. 221. These figures do not give us an accurate idea of the process of subdivision. The assessment of land has increased in the interval between 1882 and 1916 ; the average size of the 112 holdings which in 1882 paid Rs. 10 or below, as Kist, must have been larger than the average size of the 366 holdings paying similar assessment in 1916.

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circumstances, maintain their owners. It looks almost as if we had reached the limit of subdivision, below which it is not worth while to divide " (Harold Mann, *Land and Labour in a Deccan Village* (1921), vol. ii. p. 42).

[1] *Some South Indian Villages*, pp. 57-58.

Dr. Harold Mann supplies the following information regarding the size of holdings at different dates in a typical village—Jategaon Budruk in the Poona District.

Year.	Average Size of Holdings.
1771	40
1818	17½
1820–40	14
1915	7

Of the total number of holdings in the village, 81 per cent are under 10 acres in size, and 60 per cent under 5 acres. These holdings have been fragmented into 729 separate lots, of which 463 are less than 1 acre, and 112 less than ¼ of an acre.[1] Another typical example of the hopeless subdivision of holdings may be quoted from the report of the Settlement Officer of the Bhusaval Taluka on the Second Revisional Settlement of the Taluka (1921):

Some remarks are required as regards the comparative size of holdings. The following table gives the information in summary form. Each holding enumerated is made up of all the lands held on occupancy rights by one man, however they may be distributed in different villages.

Size of Holdings.	Number of Holders.
From 1 to 5 acres	5207
„ 5 „ 15 „	7491
„ 15 „ 25 „	2614
„ 25 „ 100 „	1775
„ 100 „ 500 „	123
Over 500 acres	6

A holding paying an assessment of Rs. 25 may be regarded as an economic holding. The average assessment of the whole area under the existing settlement is Rs. 1.7.10. It may therefore be assumed that an average holding of 17 acres is economic.

It should be remembered that in this presentation of figures the evil of fragmentation is overlooked, as each

[1] Cf. Keatinge, *Agricultural Progress in Western India* (1921), p. 17: "An extreme case may be mentioned where a holding of 2½ gunthas was partitioned amongst five brothers, so that each brother got a holding of half a guntha, and each of the five brothers cultivated each of these five holdings in rotation."

holding enumerated is made up of all the lands held by one man, however they may be distributed in different villages.

The following table gives us a summary of distribution of agricultural land in the Bombay Presidency : [1]

Size.	Area covered.	Owners.
Up to 5 acres . . .	2,029,461	872,485
From 5 to 15 acres . .	4,932,266	529,649
„ 15 „ 25 „ . . .	4,337,143	221,449
„ 25 „ 100 „ . . .	8,854,144	206,143
„ 100 „ 500 „ . . .	2,777,005	18,173
Over 500 acres . . .	556,593	551
Total . .	23,486,612	1,848,450

Regarding the Northern division of the Bombay Presidency we are told: "The total number of holdings has increased by 21,180 during the course of five years: 1916–17—482,727 ; 1921–22—503,907. The number of holdings of 5 acres and under shows an increase of 23,527."

Speaking of the Punjab Mr. H. Calvert says : "The third important factor is the small size of the majority of the holdings. The total cultivated area of the province is between 29 and 30 million acres, and this is divided into over 10 millions of holdings." [2]

We have reliable statistics regarding the size and nature of holdings in the Baroda State in the following table : [3]

No. of districts	4
Total agricultural land . . .	6,249,517
No. of Survey numbers . . .	1,292,671
No. of khatedars	318,649
Acreage under khatedar . . .	27-10
Average area for Survey number . .	3⅞

[1] Appendix IV., *Report of the Land Revenue Administration of the Bombay Presidency*, 1921–22. Here again the existence of fragmentation is ignored. Even assuming that all the holdings held by one man are at one place, we get an average holding of 12·7 acres, an average below the average of an "economic holding," according to official calculation. Even with consolidation, the holdings will be uneconomic.

[2] *Wealth and Welfare of the Punjab* (1922), p. 74.

[3] R. S. Patil's *Report on the Reconstitution of Small Agricultural Holdings in Various Countries of Europe*, p. 109.

In all parts of the country, with the exception of Bengal, we have thus evidence of the process of subdivision and fragmentation which affects unfavourably the prospects of agricultural development. The question is not one as to the relative merits of small and large farming; the nature and size of a holding are determined by various factors of which we shall say more farther on. Small farming is not necessarily uneconomic and wasteful; and large farming is not necessarily beneficial. But even assuming that small farming is under present economic conditions desirable in India, there is a limit to the size of a farm, beyond which its cultivation becomes unprofitable. But as the cultivator has no other occupation to fall back on, he goes on cultivating, it may be at a loss. When we add to this the fact that the small holding is fragmented, the evil assumes a more serious aspect. Subdivision of holdings combined with fragmentation makes cultivation costly; supervision becomes more difficult; the putting up of boundaries and fencing involves a considerable encroachment on soil which might otherwise be available for cultivation. If this evil is avoided, there are constant bickerings amongst neighbours owing to absence of boundaries and fencing, and every one feels compelled to cultivate the crop that his neighbour cultivates. There is a tremendous wastage of time and labour, and the use of labour-saving implements becomes difficult, if not impossible.

But whilst we are prepared to recognise the evils of subdivision and fragmentation, we are not prepared to accept the analysis of causes and the diagnosis of the disease which are put forward by writers who are more or less imbued with the traditions of English agriculture and the English land system, and who believe that the remedy lies in legislative enactments for pre-emption rights or in changes in the laws of inheritance and succession.

The Alleged Causes of Excessive Subdivision and Fragmentation

We are often told that increase of population in the country has resulted in the excessive subdivision and fragmentation of holdings. Now it is very difficult to say definitely to what extent increase of population is the cause of subdivision, and to what extent the effect of subdivision of holdings.[1] The two act and react upon one another; but there are some considerations which must be kept in mind when discussing this question. It is possible to maintain that the increase in population during the last three decades is not relatively so great as the increase in subdivision and fragmentation of holdings. It must also be borne in mind that abnormally small holdings which yield to the cultivators a bare minimum of subsistence may lead to reckless multiplication; where men have nothing much to lose by adding to the number of children, the tendency to multiply gets emphasised. Where the decencies of life are lacking, the moral and prudential restraints to marriage and multiplication are also lacking.

The laws of inheritance and succession amongst the Hindus and Mahomedans are also made responsible for progressive reduction in the size of holdings and their fragmentation.[2] At the time of succession, we are told, the heirs quarrel; everybody insists on getting a piece from every kind of land, and that too by a fantastic

[1] "It is frequently a matter of difficulty in dealing with too closely related phenomena to say which is the cause and which the effect of the other. Thus it was constantly asserted by the contemporary economists that the excessive subdivision of land in Ireland was caused by the remarkable increase of population. The opposite, however, is nearer the truth" (George O'Brien, *The Economic History of Ireland* (1921), p. 73).

[2] Cf. R. S. Patil, *Report on Consolidation of Small Holdings, etc.*, p. 107: "Owing to the laws of inheritance of the Hindoos, Mahomedans and Parsis, which allow certain shares in the property to the heirs of the deceased, a progressive reduction in the size of the holdings by means of the ever-increasing subdivision and an increase in the number of those too small to be worked economically is going on continually."

division which assumes the shape of a long ribbon, or length without breadth. There is an excessive attachment to ancestral property, which binds them tenaciously to a piece of the few paternal acres which they hold in high esteem above all other things. To this sentiment is attributed to a great extent the existing subdivision of agricultural land. The Hindu laws of inheritance and succession date from the times of Manu, and so also the Islamic law is as old as the days of the Prophet and his successors. The laws of succession and inheritance combined with the joint family organisation constitute a social structure based on the principle of distributive justice; and we cannot change or modify a part of this structure without profoundly affecting the whole. The land system is essentially a part of this structure, and we cannot alter the laws relating to property without touching the social and economic organisation as a whole.[1] These laws were in existence for centuries; and their operation in the past did not lead to subdivision of holdings. The problem of subdivision and fragmentation has only arisen and attracted attention during the last four or five decades, and to-day it is said to have become acute. We need not go to the length of denying the influence of these laws on the problem; it is undoubtedly true that the laws of inheritance and succession have accentuated the process of subdivision and fragmentation. But there are deeper causes that underlie this process, and the student who desires to have an insight into the problem must take note of these causes.

Our Attempt at Diagnosis

The laws of inheritance and succession have been in existence for centuries; in the past land was not

[1] "Property is by no means exactly the same in all its qualities and incidents all over the globe. Different ideas prevail in different countries, and are embodied in the laws and customs which are enforced by the various Governments" (E. Cannan, *Wealth* (1916), p. 86).

scientifically surveyed and mapped out as it is to-day, and land was abundant.[1] The social organisation rested on a communal basis; the joint family was the unit, and the death of the father did not affect the solidarity of the family, which continued its joint existence for years together. Coparcenary was the rule, and separation was the exception, as can be seen even to-day by the legal presumption that a Hindu family is to be considered joint unless the contrary is proved. But a century of British rule has brought about a radical change considerably affecting agricultural prosperity. The desire of the Government to obtain revenue has led to a careful survey of all the land for the purposes of assessment; the common pasture land in every village has gradually disappeared. The solidarity of the joint family has been affected through a hundred different channels, and the administration of the Hindu and Mahomedan law by English judges with their bias towards the recognition of individual property rights has accentuated the process of breaking up of the joint family system. Subdivision of holdings is but the natural result of these tendencies.

But more important than these factors is another—the loss of equilibrium of occupations in the economic organisation of the country. We have already noted the fact that with the introduction of cheap machine-made goods from foreign countries and the decline of the crafts and industrial arts of an earlier age, a considerable proportion of the population hitherto occupied in non-agricultural pursuits was thrown out of employment and forced on the soil. No systematic attempt was made to meet the evils and mitigate the distress of the transition period; none to revive the arts and crafts and adjust them to the new conditions of life. The craftsmen, the weavers, and the artisans fell back on agriculture, thus increasing

[1] Speaking of the village Pimpla Soudagar, Dr. Mann says: "In the present village there was a good deal of unoccupied land, though there is none now, and all further increase in the number of landholders must be brought about by the subdivision of those holdings already existing."

enormously the pressure on the soil. With the increasing ruralisation of the population, the demand for land increased; it could only be met by a process of subdivision, accentuated from one generation to another, not only by the natural causes of death and partition, but by the increasing pressure of a growing population incapable of being absorbed in non-agricultural occupations.[1] If the only alternative to cultivating a small holding is starvation, the population will stick to the land, even though the cultivation is carried out at a loss. There is a surplus idle population subsisting on the land, which consumes the capital which would otherwise be available for further production. It might even be suggested that owing to the existence to-day of this surplus population in agriculture the law of diminishing returns has come into operation. An increase in the number of people working on the soil is increasingly advantageous up to a particular point, like an increase in the amount of capital; but beyond that point every additional unit of labour involves an additional social cost.[2] The existence of a surplus

[1] "In a country which presents very few openings to absorb the surplus rural population, ancestral land is taken to be the sure basis on which to work and devote one's energy to eke out a living that would anyhow manage to keep the body and soul together" (R. S. Patil's *Report*, p. 108).

[2] "In all times the bulk of the Indian population has been agricultural, but formerly the cultivators were not wholly dependent on agriculture. They had home industries which employed their leisure when labour in the fields was useless; there was the carrying trade, in which the bullocks used at ploughing were employed—the railroads have much ruined the trade; and above all, there was the weaving industry. The Rayats are now reduced to the simple labour of their fields" (Sir H. Cotton, *New India* (1909), p. 114).

"In no agricultural country that I know of are so many people to be seen stalking idly about during the hours of labour as in India. The streets and court-houses and yards are full of idlers; the roads are never empty. . . . Entering a village at any hour of the day you are surrounded by idlers. Much of this arises from the absence of other occupations than agriculture, and in many parts of the country from the uncertain character of land tenure" (James Caird, *Famine Commission Report*, 1880). The description still holds good, and the idlers create feuds which lead to partition suits and further subdivision.

population on the soil was noticed as early as 1880 by the Famine Commission in their Report.

"The numbers who have no other employment than agriculture are in large parts of the country greatly in excess of those required for the thorough cultivation of the land." [1]

Causes that determine the Size of a Holding

The size of a holding is determined by a number of causes, partly geographical, partly social, partly economic. Where the soil and climate are especially adapted for cereals and sheep, and where the physical configuration of the country admits of large enclosures, large holdings are the most productive. On the other hand, where the districts are hilly and the soil rocky, small holdings are more frequently to be met. Thus in Norway, for example, the scarcity of arable land, and the subdivision of this into small and scattered tracts, has rendered the country least adapted to large estates. So also the physical configuration of a country like Switzerland makes small holdings a necessity. Where, on the other hand, land is abundant and the soil fertile and unbroken by mountain ranges, there is a natural tendency towards the formation of large estates. So again the social organisation as embodied in laws and customs and institutions may profoundly affect the size of the holding. In Great Britain estates are locked up from generation to generation in

[1] Whilst on the one hand there are officials who believe in the necessity of legislation of some kind to prevent subdivision and fragmentation, the regulations of the Revenue department have of late been so altered as to make consolidation and enlargement more and more difficult. Till recently a number of cultivators could hold land in one name in the village records. Brothers, even after partition, had a chance of consolidating their property; but now regulations require that the name of every holder must appear separately in the register, and he must pay his revenue separately. So again till recently the survey numbers of property, originally held by a joint family, were not altered even when the property was partitioned. Now the department insists on every partitioned plot being separately marked, and separate maps are supplied for separate shares.

the same family by means of settlements effected every few years; the law of primogeniture tends to prevent the dispersion of the land, and it has the further effect of promoting the aggregation of land in a small and constantly decreasing number of hands. The periodic renewal of entails secures ancestral properties against the risk of being broken up, and these are in turn augmented by new purchases of land. In France, on the other hand, subdivision of land is accelerated by the French law of succession, which limits the parental power of testamentary disposition. This tendency to subdivision is helped by other laws which render transfer of landed property simple, safe, and easy. In Great Britain the expense, the difficulty, and the risk of buying small estates make them an altogether impracticable investment for the savings of the peasant or the middle-class townsman.

The nature of the crop raised also determines the size of the holding. Grain, meat, and wool can be produced more economically upon large farms. Dairy produce, poultry and eggs, and vegetables are best suited for small holdings. Wherever minute care and attention secure safe and quick returns, small farms are economically preferable to large. Finally, market conditions largely determine the size of the holding. For a century and a half before 1875, market conditions were favourable to the production of corn in Great Britain; with an increasing population there was an increasing demand for grain, which could only be obtained at a higher price; and the high price of cereals fostered large farming with considerable capital and agricultural machinery. But when after 1875, with improved communication and the cultivation of virgin soils of great fertility, there ensued a fall in the price of corn in the world market, large farming became relatively unprofitable, there was a greater demand for butter, fruit, vegetables, the unit of holding changed, small holdings being especially adapted for dairy-farming and vegetable-growing.

The size of an agricultural holding thus depends on

complex factors; geographical and climatic conditions, laws and social institutions, wages and prices—all will have a share in determining the ideal size of any holding. There is no type or size of holding which could be said to be the ideal for all agricultural purposes. The ideal size will vary from crop to crop. The problem of the unit of holding for any individual crop is dependent on the particular agricultural conditions of a country at any given moment. That unit is ideal, whether large or small, which under given agricultural conditions makes for the maximum production. Now maximum production depends upon the law of proportions; for a large holding to yield the maximum return a definite amount of seeds, live stock, manure, and agricultural capital generally, is necessary. If these are not available, large farming may prove uneconomic and unprofitable. If the holding is larger than what the "equipment" can properly cultivate, economic considerations demand that it should be decreased in size; if the holding is smaller than what the equipment can allow of, it must be enlarged.[1] Where free trade conditions prevail, it must be remembered, fluctuations in the price of corn may also determine the size of the holding. But what is most apt to be overlooked in a discussion of the ideal size of a holding is the factor of equipment. It is often pointed out that large holdings are more profitable for corn growing than small holdings. Assuming that we are clear about the limits of a "large" holding, we are told that only the large agriculturist can afford to purchase horses, and that the number of horses will decrease as the holding grows; that the large farmer alone can use labour-saving machinery, like the steam plough and the steam threshing machine, and the drilling machine. But the realisation of these advantages rests on the assumption that the farmer has the requisite capital for live stock, for seeds,

[1] Cf. Devas, *Political Economy*, p. 104: "Size is not measured by area; the more intensive the cultivation, the smaller the area needed for a large farm."

for agricultural equipment. This may be true in a country like England, where the average farmer cultivating from 50 to 100 acres of land is a man with resources and intelligence; but it may not be true of other countries. An average holding of 50 acres for corn growing may not be considered a large holding in England; but it may be too large in a country like Ireland or India, where the farmer lives from hand to mouth, and where the equipment he can bring to the cultivation of his farm is the minimum consistent with the possibility of cultivating at all.[1] We live in a period of intensive farming, and if the poverty of the Indian cultivator does not allow of the necessary investment of capital suited to the small holding, a mere enlargement of his holding will not solve the problem. When all things are taken into account it would appear that the point of maximum return in agriculture is determined as much by the amount of capital and the efficiency of labour as by the size of the holding.

An Economic Holding

We have already recognised the fact that the process of subdivision and fragmentation has already in many parts of the country rendered the average holding uneconomic, and that consolidation and enlargement are desirable from the point of view of maximum return. We need not repeat that an economic holding is a relative term, varying from place to place, according to the fertility of the soil, the proximity of markets, the facility of transport, and the nature of the crop. Those ardent reformers, however, who believe in the possibility of legislation as the solvent of low production, have attempted definitions of an economic holding which we shall briefly

[1] Cf. Ely, *Outlines of Economics*, p. 531: "In addition to the factor of rent, the amount of capital that he can command, the kind of farming in which he is most skilled, the character of the labour he can secure, the proximity of the markets, and the adequacy of the transportation facilities, all must be taken into account by the farmer in determining how large a farm he will attempt to manage and how intensively he will farm it."

examine. An economic holding "is a holding which allows a man a chance of producing sufficient to support himself and his family in reasonable comfort after paying his necessary expenses. In the Deccan an ideal economic holding would consist of (say) forty or fifty acres of fair land in one block with at least one good irrigation well, and a house situated on the holding. The desirable area would vary in different parts according to circumstances. . . . Between the ideal economic holding and the obviously uneconomic there are many gradations, but it would not be difficult to fix a standard for any tract." [1] Dr. Harold Mann tells us: "An economic holding is one which will provide an average family at the minimum standard of life considered satisfactory. If we take thirteen acres of dry and garden land in the proportion in which they exist in this village as being an economic holding at Pimpla Soudagar (and this is a minimum), the size of such a holding here (basing the size on soil alone and taking no account of the more uncertain climate) would be 20 acres." [2] The Baroda Committee defines an ideal economic holding as consisting of "30 to 50 bighas of fair land in one block with at least one good irrigation well and a house situated in the holding." [3] "Each of these new plots must be of such a size as having regard to the local conditions of soil, tillage, etc., to form an economic field, *i.e.* a parcel of land to keep fully engaged and support one family." [3] So also Prof. Stanley Jevons maintains that in a redistributed village a model holding should be fixed at such a size as to enable the farmer to enjoy a high standard of life, and fixes the size between 29 and 30 acres.

Now if we examine these definitions it will at once be apparent that they assume that whatever satisfies the needs of an average family cultivating a piece of land is an economic holding. The criterion adopted is one of

[1] Keatinge, *Rural Economy in the Bombay Deccan*, pp. 52-3.
[2] *Land and Labour in a Deccan Village* (1921), vol. ii. p. 43.
[3] *Report of the Baroda Committee*, pp. 31, 53.

consumption instead of production. Now undoubtedly production must be judged ultimately by the needs of men; the system of agriculture that is most desirable is not that which with limitation of production brings a larger net profit to the farmer, but that which aims at producing the greatest amount of food and raw products; and it seems somewhat strange that the economic efficiency of a piece of land should be judged by the immediate needs of the people who cultivate it rather than by the total yield. If we assume consumption as the criterion, the question that we have to ask and answer is not whether the piece of land which we call an economic holding supports an ideal family of four or five, but the actual number of persons, labourers, and all others who are dependent on the land. Under normal conditions, in a country where there is an economic equilibrium of occupations, and where the soil is not burdened with a population greater than it can support, the piece of land that yields the maximum return will necessarily support in comfort those who live on the land. But in India the soil, as we have already indicated, has to support a surplus population that in other countries is absorbed in non-agricultural industries; and if consumption is made the criterion for defining an economic holding, no holding, large or small, will ever be adequate to support in comfort the people who at present are dependent on it. Maximum returns from any given plot of land depend not only upon the size of the holding, but, *inter alia*, upon the number of people who work this plot and get their living from it; and if, as in India to-day, we have more people to every holding than the holding can support, the result will be that the holding becomes uneconomic, and the law of diminishing returns is brought into play.

The Causes of Low Productivity in India

The causes of low productivity in our country are many, some of them obvious, others of a more subtle

nature whose operation may not be so readily perceptible. Amongst these causes is undoubtedly to be included the subdivision and fragmentation of land. But we must also include amongst them as of greater importance the lack of equipment on the part of the farmer.[1] We have already noticed the almost total lack of manures in a preceding paragraph, the disuse of cow dung as manure, and complete absence of artificial manures, owing to want of capital. The implements that he uses are of the most primitive type. Owing to famines and other causes the number of plough cattle in the country is said to have diminished during the last few decades.[2]

Even the amount of irrigation where wells are used is also stated to be reduced. The cultivator with a small holding lives usually on the margin of subsistence. When the season is favourable his produce may be just sufficient to meet his wants; in bad years he inevitably falls into the clutches of the money-lender. One feels almost tempted to say that under present economic conditions, in the absence of capital and equipment and with the normal cultivator in the hands of the money-lender, the average holding is rather too large than too small for efficient cultivation. What can the cultivator do with a larger holding than he has at present if he has not the equipment for good cultivation ?[3]

[1] "All that need be stated is that his equipment is very defective both as regards implements and as regards fixtures such as sheds, cattle byres and fencing." "The cultivator is aware of his deficiencies in this respect. His capital is certainly short, but it is due at least as much to defective organisation as to lack of capital or credit that his equipment remains as poor. The only two things that are lacking for really high-class production are capital and skill" (G. Keatinge, *Agricultural Progress in Western India*, pp. 111, 80).

Cf. Martin Leake, *Agricultural Practice and Economics in United Provinces*: "The first essential is capital to buy the cattle and necessary equipment, and few cultivators possess the necessary capital."

[2] See Datta's *Report*, p. 63.

[3] Cf. Ambedkar, "Small Holdings in India and their Remedies," *Journal of Indian Economics Society*, vol. i. Nos. 2 and 3: "Given this state of affairs, can we not say with more propriety that not only the existing equipment is inadequate for the enlarged holding, but that the

Legislation as Remedy for Subdivision and Fragmentation

When the British rulers first entered the country, India was economically organised on a well-balanced system, the population fairly equitably distributed as between agricultural and non-agricultural occupations. The village was a self-sufficient unit with its cultivators, its blacksmith, its carpenter, its potter, and men who did the sanitary work of sweeping and cleaning. Each village had its common pasture for live stock, its pond, and its sources of fuel supply. The introduction of machine-made goods, the individualistic tendencies of English judges who administered the Hindu and Mahomedan law, the increasing export of food produce and raw materials, the increasing burden of taxation in money rather than in kind—all these causes brought about a change in the economic life of the people, throwing enormous numbers of the population on the soil who were hitherto dependent on non-agricultural occupations, and creating an artificial land-hunger which resulted in subdivision and fragmentation. If this analysis of the situation is well grounded, we are now in a position to estimate the value of that remedy which has been repeatedly suggested of late, viz. consolidation and enlargement of holdings by the help of legislation. It has been suggested in the Bombay Presidency, for example, that the land should be redistributed amongst the cultivators on the basis of an economic holding. Such holdings might be registered and treated as impartible. Subdivision of such an economic holding will be legally prevented, and special rules of succession will be framed in cases of intestacy. The main objection to such legislation consists in its entirely overlooking the problem of

existing holdings, small as they are, are too big for the available instruments of production other than land? Facts such as these, interpreted in the light of our theory, force upon us the conclusion that the existing holdings are uneconomic, not, however, in the sense that they are too small, but that they are too large."

the dispossessed.[1] Even accepting 15 acres as the size of an economic holding,[2] we find that in the whole of the Bombay Presidency the average holding is below this unitary size; and when we estimate the actual average size of a holding, we overlook altogether the complications of fragmentation. Dr. Mann tells us of a village in the Deccan where 70 per cent of the holdings are now less than 20 acres in size and 48 per cent are less than 10 acres. At Pimpla Soudagar 81 per cent were below 10 acres. Dr. Mann puts the size of an economic holding at 20 acres. What is to become of the large number of people who will have to be ousted in order to consolidate the holding on a 20 acres basis? The actual holders cannot be ousted without compensation; and the needy cultivator already in debt has no money to offer for an enlarged holding. Government will have to find the money, which is exceedingly improbable; and even if the redistribution is accomplished, it will only add to the number of those who constitute the surplus population, consuming the produce of the soil without contributing

[1] Cf. George O'Brien, who quotes the authority of Mr. Blacker, *Economic History of Ireland* (1921), pp. 65-66: "The consolidation of farms I understand to mean the conversion of sundry small holdings into others of larger dimensions. In this I have had some experience, and my opinion is decidedly against it in all cases where the object can only be accomplished by turning out the unfortunate occupants without making provision for their future support. In Ireland I apprehend we are too apt to be carried away by the ideas and practices of our English fellow-subjects without considering the differences of circumstances between the two countries. In England large farms, large fields, straight fences, etc., have long been a favourite scheme of English landlords and English writers, and no doubt where there is capital and no redundant population such arrangements are very desirable, but it should be remembered that to these large farms and large fields England owes her own Poor Laws." "In a later treatise Mr. Blacker repeated this opinion, and drew attention to the remarkable paradox that while the Irish landlords were endeavouring to increase, the English landlords were endeavouring to diminish, the size of the farms of their estates. The small farms of Ireland, which are so often instanced as the cause of our own miseries, are coming back to England by way of a cure."

[2] The official estimate is 17 acres. The actual size is 12·7 acres, and this is fragmented.

to the production. If the holding, moreover, is to be impartible, the pressure on the soil will be aggravated with every generation, as the children, who are deprived of their interest in the holding, will be added to the ranks of the dispossessed. The practical difficulties against legislation of this kind were recognised by the Government of India more than thirty years ago in their resolution on Mr. Caird's report. "In saying," the Government of India observe, "that minute subdivision of land must be so restricted that the increase of population be kept within the capacity of the soil to feed it, Mr. Caird has touched one of the great difficulties which threaten the well-being of the landed class in future. It is possible for the Government to declare that it will not recognise or record any subdivision of a land tenure below a certain minimum area, but it does not appear to us that such a course would have any material effect in checking subdivision. If a man who owns only the minimum area dies leaving three sons, the fact that Government will only record the eldest son as the possessor will not prevent the others from remaining on the land as his co-sharers and will not drive them forth to seek employment elsewhere. . . . Nothing, we fear, will effect the desired result except the pressure of a dense population on itself driving out the superfluous members of society to find room on more thinly peopled tracts." Where the notion of an equal inheritance by birthright has been engrained in the national mind for centuries, a law of forced entails will remain a dead letter on the Statute Book; where the climatic conditions and conditions of the soil permit the lowering of the subsistence standard to the very margin of starvation, no legislation will ever by itself raise this standard to a fixed minimum.[1]

[1] Cf. Dr. Harold Mann: "But the problem of getting rid of the evil which we have described has been so far beyond the skill of any one to solve, or even to suggest a satisfactory solution, without interfering drastically with present Hindoo customs, and introducing a new principle into the land policy of the country" (*Land and Labour in a Deccan Village*, vol. ii. pp. 48-49).

The True Remedy

If the dominating feature of the agricultural situation in India to-day is the loss of economic equilibrium, resulting in an extraordinary pressure of the population on the soil, the only effective remedy is the restoration of equilibrium by the introduction of industries and the utilisation of raw materials in manufactures. We have to-day become more than ever dependent upon agriculture, upon influences which we cannot control or count upon with certainty. Under the free trade regime brought into the country with British rule we are as a nation being clothed, warmed, washed, and lighted by a thousand arts and industries in the manipulation of which we have scarcely any share.[1] If this pressure on the soil is to be relieved, it can only be done by industrial development. If the surplus population which now feeds idly on the land is diverted to industries, it will cease consuming the present production, and will begin producing fresh forms of wealth. The development of industries will not only absorb the surplus population which presses on the soil to-day,[2] but will take in the increasing population from year to year. The national wealth and national dividend

[1] See Ranade, *Essays on Indian Economics* (1906), p. 196.

[2] Cf. Gilbert Slater, *Some South Indian Villages*, p. 243: "At present a condition of chronic under-employment does exist on a very large scale in South India." And again, speaking of a village suffering from the evils of subdivision, such a village obviously cannot reach a high pitch of prosperity by the cultivation of its main crop. It requires either a large proportion of its land under other crops which demand labour at another time or some subsidiary industry or industries of a non-agricultural character. Otherwise nearly all the labour time of the village is wasted, and the normal condition of the whole population is what is termed by the English economists "chronic unemployment."

Compare in this connection the *Report of the Indian Fiscal Commission*, p. 26: "Many of our witnesses have asserted that industrial development will solve the problem of agricultural poverty and provide a remedy for the periodical scourge of famine. We have explained above that the wages earned in industries will have some effect on economic conditions in the villages, and this will endow the people with greater staying power. We have also indicated the probable effect of industries in drawing surplus population from the land."

will increase; the average income of the cultivator will share in this prosperity, giving him capital for cultivation purposes. The sons who at present are compelled to fall back on the soil as their only occupation will find means of livelihood in other occupations. The present demand for land, which is so largely responsible for subdivision and fragmentation, will become less insistent, and the problem will be solved of itself. The cultivator with better equipment will naturally desire a larger holding, and with his increased resources he will be in a position to consolidate and enlarge his holding. Prices of land will at the same time fall with a lessening of the pressure on the soil and a diminution in the intensity of the land hunger.

If the force of resistance to subdivision and fragmentation cannot be superimposed by external legislation but is to well forth from within, the only condition that will foster this process is the industrialisation of the country. The era of village communities and village self-sufficiency cannot and need not be restored; we are living in an age of large-scale production, and we must move with the current, if we do not wish to be wiped out of existence; and the energy that is released from the absorbing drudgery of finding daily subsistence may flower forth in our villages and towns into the blossoms of art and literature and philosophy. Industrialisation in the West has meant the mad pursuit of fineries and superfluities that appeal largely to the physical and sensual demands of life; industrialisation in the East, if watched and wisely guided, may result in a revival of things of the spirit that constitute the essence of civilised life, may upbuild a nobler structure on the foundation of those traditions which still live in the flesh and blood of its people.

In bringing these remarks to a close, we need not add that we believe industrialisation to be the remedy not only for subdivision of land, but also for fragmentation. Fragmentation of large farms up to a particular point is economically advantageous, but after that point is reached

fragmentation leads to inefficient cultivation as much as subdivision. Prof. Gilbert Slater believes that the evils of fragmentation are over-emphasised under present conditions in India. Surveying the conditions in various villages in Southern India, he says: "While such inconveniences are admitted to exist, and while the villagers agree that it would be an improvement if the intermixture of holdings were abated, the inconveniences do not seem to be considered a matter of much importance. It is in fact largely a question of waste of time; and waste of time does not matter much unless it is at the critical period. One Rayat told me, when questioned on this point, that he had recently gone to great expense to buy an extra land to serve as a seed-bed to the lands he had adjoining. In that way he would save time for the critical operation. But very seldom are villagers willing to make the smallest sacrifice of area or value in order to have their lands continuous instead of scattered. I can only account for this by supposing that the fragmentation in actual practice makes less difference than might be supposed" (*Some South Indian Villages*, pp. 243-44). Stanley Jevons, struck with the excessive fragmentation in the United Provinces, advocated a policy on the lines of the English Enclosure Acts at the Agricultural Conference, 1917. The whole of the land should be valued and redistributed in compact economic holdings. This is a typical illustration of the importation of English prejudices into Indian economic conditions. Consolidation of scattered holdings will come not by forced legislation but by education, by co-operative efforts backed by permissive legislation, and with improved conditions following industrialisation.

CHAPTER XIV

TILLAGE AND TECHNIQUE

Methods of Cultivation

The methods of cultivation in India have not altered for centuries. We find the same methods of sowing seeds, ploughing land, and reaping harvests as were prevalent in the days of Manu. The agricultural implements, the plough, and the spade are the same as of old; Indian agriculture seems to wend its way unaffected by the discoveries of modern science. This does not mean, however, that the implements used by the Indian cultivator, or for that matter his methods of cultivation, are primitive and inefficient. Careful observers have been attracted by the Indian cultivator's methods of sowing seeds, intermixing crops, of weeding and pruning, of changing and intermixing soils, of ploughing the fields up to a particular depth for a particular crop, of appropriating a particular soil for a particular crop by rotation. "To take the ordinary acts of husbandry, nowhere would one find better instances of keeping land scrupulously clean from weeds, of ingenuity in device of water-raising appliances, of knowledge of soils and their constituents, as well as of the exact time to sow and to reap, than one would in Indian agriculture, and this not at its best alone but its ordinary level. Certain it is that I at least have never seen a more perfect picture of careful cultivation combined with hard labour, perseverance, and fertility of resource than I have seen at many of the halting-places in my

tour."[1] If we forget for a moment the fact that the agricultural industry in our times is revolutionised by the application of scientific knowledge, by the use of machinery and the application of manures, we might well regard Indian methods of cultivation as in no sense inefficient. Dr. Voelcker's description may be somewhat flattering, but the fact remains that, as in industries so in agriculture, India in the past had a highly developed and efficient organisation; but as in industry the country has to adjust itself to-day to methods of large-scale production and to conditions of mechanical appliances, so in agriculture the country needs to adjust itself to the more intensive methods of farming which scientific appliances have made possible.

Our attention has been frequently drawn to the potentialities of improved methods of farming, good tillage, application of manure, timely operation of sowing, and interculture and protection from surface washing. The following table drawn from Mr. Keatinge's book may be taken as representative:[2]

Determining Factor.	Percentage of Crop Increase available.			
	Surat.	Jalgaon.	Poona.	Dharwar.
Manure . . .	30	30	30	30
Cultivation . . .	20	25	30	35
Seed	10	10	10	10
Drainage . . .	10	..	..	..
Field embankments .	..	15	15	20
Total . .	70	80	85	95

Another table, quoted by the same author and prepared by the Principal of the Poona Agricultural College, is as follows:

[1] Dr. Voelcker, *Report on the Improvement of Indian Agriculture* (1892), p. 10.

[2] *Agricultural Progress in Western India*, p. 104.

	Value of Out-turn per Acre.	
	Obtained by Villagers.	Obtained on Government Farm with advantages mentioned above.
Jawar	Rs. 24 13 0	Kharif . Rs. 55 Rabi . „ 80
Bajra	„ 17 4 0	„ 38
Wheat	„ 24 2 0	„ 53
Ground nut . . .	„ 45 0 0	„ 99

It is obvious that the agricultural production of the country could be enormously increased if modern agricultural implements and appliances could be introduced into the country. The question of the improvement of agriculture was emphasised by the Famine Commission as early as 1880.[1] Since then large sums have been spent every year on the maintenance of the Agricultural Departments, both provincial and imperial. But whilst we are prepared to recognise the good work done by the Agricultural Departments in supplying improved seeds, in undertaking demonstration work, in popularising the use of improved implements, in carrying on experiments, we must at the same time observe that the results actually secured are small when compared to the possibilities of improvement in a vast country like India.

What are the causes for the comparatively disappointing pace at which the agricultural industries in this country move? Nobody to-day, not even the official apologist, is prepared to allege the conservative tempera-

[1] Nearly forty years later the Industrial Commission repeats the same truism as if nothing had been done in the interval: "We take this opportunity of stating in the most emphatic manner our opinion of the permanent importance of agriculture to this country, and the necessity of doing everything possible to improve its methods and increase its output." The Industrial Commission points to the unlimited possibilities of improved agricultural methods by the introduction of the use of power-driven machinery for lifting water from wells, channels, tanks, and rivers for irrigation and for other purposes, by the introduction of machinery for ploughing, reaping, thrashing, and winnowing crops.

ment of the cultivator as a cause of this backwardness. It is now recognised that the Indian cultivator is as ready to take advantage of improved methods of cultivation as any one else. The Deputy Director of Agriculture in the Central Provinces remarked how the cultivators in his province took an intelligent interest in the work of the Agricultural Department and freely experimented with the manures and implements brought to their notice.[1] If the Agricultural Departments have not been so successful in their work judged by the actual results as they might be expected to be, the fault does not lie with them only; it is to be found in the lack of agricultural capital. The Industrial Commission halts between two views when on the one hand it observes: "For a long time to come the employment of machinery in agriculture in India will largely depend upon the completeness and efficiency of the official organisation which is created to encourage its use and to assist those who use it"; and on the other hand also remarks that in India very little mechanically operated plant is in use, "chiefly because holdings are small and scattered and Rayats possess little or no capital."[2] If improved agricultural implements are not used, if manure, natural or artificial, is not employed for preventing impoverishment of the soil, if machine-driven devices are not resorted to, it is not because the number of gazetted officers in the Agricultural Departments is small or their attitude unsympathetic. You may multiply them fivefold and you will not make the situation one whit more hopeful, so long as the cultivator has no capital for buying improved seeds and machinery, and lives from day to day on a precarious income. Once again we return to the familiar truth that if the agricultural problem is to be solved, it can only be solved by increasing the purchasing power of the people. "The Indian Rayat has proved himself susceptible to the lure of increased returns, and the problem now before the

[1] *Evidence before the Industrial Commission*, vol. ii. p. 533.
[2] *Report*, chap. v.

Department is not how to get into touch with him, but of finding him necessary means to finance improvements."[1] Sir Henry Cotton's remarks made about three decades ago seem to apply with equal force to-day :

Elaborate and costly Departments have been created, but the indigenous methods of agriculture have not been improved one jot or tittle by official enterprise. The Rayats of India possess an amount of knowledge and practical skill within their own humble sphere which no expert scientist can ever hope to acquire. Our attempts to teach the natives of India agriculture are based upon forgetfulness of the essential elements of the case. The native cultivators of India are too poor to be able to adopt the scientific improvements which English experience suggests. They are told to plough deeper, to do more than scratch the soil. But it is forgotten that the cattle with which they plough are incapable of deep ploughing. We tell them to enrich their fields with manure and that the produce of the land would be augmented by its use. No doubt it would. The Rayats do utilise manure as much as they possibly can in the way of simple forms of manure, such as cow-dung . . . which is, however, also an extremely useful article to the poor cultivator as a substitute for firewood, but they can no more afford to procure the expensive manures with which we are so familiar than they can afford to plough with elephants. I do not know whether the poverty of the people does not always obtrude as a permanent obstacle to improvement.[2]

[1] *Review of Agricultural Operations in India* (1921–22), p. 69. In this connection compare the following observations of James Mackenna (*Agriculture in India*, p. 29) : " We have seen that the introduction of European machinery has always figured prominently in the efforts of the amateur agricultural reformer. Much success has undoubtedly been obtained in the introduction of grain, winnowers, cane-crushing machinery, etc. But in recommending the introduction of reaping machines or heavy English ploughs caution is necessary. Reaping machines may be useful on large estates where labour is scarce, but the whole rural economy of a tract where population is dense may be upset by their use. In the case of heavy ploughs the advisability of deep ploughing has first to be proved. In both cases the capacity of the available cattle and the difficulty of replacing broken spare parts and of carrying out repairs are serious obstacles to the introduction of foreign machinery. As in the case of plants, the improvement of a plough which the cultivator can himself make and repair and which his cattle can draw, seems the more hopeful line for improvement."

[2] *New India* (1909), pp. 99, 100.

Live Stock

The prosperity of agriculture in a country depends among other things on the live stock, especially the bullock. The bullock is in India the only motive power for cultivation. The veneration for the cow handed down through remote antiquity is based on the recognition of the fundamental importance of that animal in the national economy. Alike in the Vedas and in the Gathic hymns the soul of the cow or the bull represents the universe with its variegated life conversing with the gods, and even the products of the cow get through association a sanctity that has survived to our own times. One can well understand the need for this veneration amongst those primitive Indo-Iranian tribes, whether as pastoral hordes living upon the milk of the cow or as settled cultivators living upon the grain which sprouted forth from a smiling earth through the labours of the animal that drove the plough. And even to-day the descendants of these tribes revere the animal, give the cattle a place in the home ; the animals sleep by the side of the cultivator and his children ; and the loss of his cattle moves him as much as the loss of his dear ones. He often starves himself that he may feed his bullock, and it has even been suggested that the grain that should in normal times be barely sufficient to feed the population of the country is shared to a considerable extent by the cattle in the absence of proper supplies of fodder.

One of the important requirements of the Indian cultivator is the possession of healthy live stock. After capital, implements, and water, live stock are the greatest need. Power is necessary for every industry ; in agriculture it is supplied either by bullocks or by horses. In the West horses have played a predominant part ; to-day they are being replaced by mechanical contrivances and power-driven implements. In India we might in the future drive our plough and do our sowing and reaping

by machines driven by electric power; but for years to come at any rate the mainstay of the farmer will be his bullocks; he will need them for driving his plough and carrying his produce to the market, as he will need the cow for milk, butter, and ghee.

And yet important as the live stock are to agriculture, both the Government and the people seem to be indifferent, callously negligent about the question.[1] It is alleged that since the beginning of this century the quantity and quality of live stock throughout the country are progressively deteriorating. In considering the question we must bear in mind the fact already pointed out in an earlier chapter, that the total area under cultivation has appreciably increased during the last twenty-five years; if agricultural efficiency is to keep to the same level with an increase in the area under cultivation there must be a corresponding increase in the quantity of cattle or an appreciable improvement in quality. If official statistics are to be relied on, they show that there is no *absolute* decrease in the number of live stock; but such statistics must be accepted with due caution, as we are warned by officials themselves.[2] Statistics, on the other hand, are adduced to support the view that the supply of cattle, both of milch cows and plough bullocks, is steadily decreasing.[3] It is difficult to accept this view without qualifications. The total number of the bovine class in India was no less than 146 millions

[1] "The important part played by cattle in the agricultural economy of India makes their improvement in breed and maintenance in good condition a matter of first concern. While the cattle are almost certain to benefit by a general improvement in the out-turn of grain and other crops, it must be admitted that in the whole range of agricultural endeavour in India no other question has received less attention than the live-stock industry" (Mackenna, *Agricultural Operations in India* (1921–22)).

[2] Cf. Resolution of Government of India dated October 24, 1914: "The normal yields per acre, the foundation of all such estimates, are notoriously untrustworthy."

[3] Datta's *Report on Rise of Prices in India* (1914). Compare the following table:

in 1921.[1] The following gives us comparative figures of live stock:

	In 1910–11.	In 1919–20.
Bovine* . . .	121,000,000	146,000,000
Ovine† . . .	54,000,000	46,000,000
Others . . .	3,000,000	4,000,000
Total . .	178,000,000	196,000,000

* Bovine includes bulls, bullocks, cows, buffaloes, and buffalo calves.
† Ovine includes sheep and goats.

"According to the 1919–20 cattle census the number of cattle per 100 acres of sown area ranges from 101 in Bengal to 30 in Bombay, while the number per 100 of population varies from 86 in the Manpur Pargana to 33 in Delhi. The average for British India as a whole is 66 cattle per 100 acres of sown area and 61 cattle per 100 of the population." [2]

CATTLE STOCK OF INDIA FROM 1916 TO 1921

Year.	Bulls and Bullocks.	Cows	Male Buffaloes.	Cow Buffaloes.	Young Stock.
	lakhs.	lakhs.	lakhs.	lakhs.	lakhs.
1916–17	494	375½	55⅜	136 9/10	431½
1917–18	493½	374⅝	55⅞	130½	430⅝
1918–19	493½	374⅛	56½	136½	420
1919–20	492½	371½	55⅓	133½	408¾
1920–21	489⅕	370⅞	54⅓	133⅛	403¼

[1] Rushbrook-Williams, *India in 1921–22*, p. 163.

[2] Statistics show that in Denmark there were 74 animals for every 100 men, while there were even more in other countries of Europe. The following table is of interest:

Name of Country.	Number of Cattle.	Population.	Number of Cattle per 100 of Population.
India (British) . .	147,336,000	244,267,542	61
Denmark . . .	1,840,500	2,500,000	74
U.S.A. . . .	72,534,000	92,000,000	79
Canada . . .	5,576,500	7,250,000	80
Cape Colony . .	1,270,000	1,100,000	120
New Zealand . .	1,816,300	1,200,000	150
Australia . . .	11,956,024	5,500,000	259
Argentine . .	25,844,800	8,000,000	323
Uruguay . . .	6,830,000	1,400,000	500

Deterioration in Quality: Causes and Remedies

Even assuming the correctness of the official figures with regard to quantity, that there has been an appreciable deterioration in the quality of the live stock can scarcely be disputed. The grazing land once available in every village in abundance has decreased owing to the policy of enclosure and the stringency of the forest laws. It is very difficult for the cultivator with a few acres to maintain cattle and for the shepherds to maintain their flocks. Almost all available land is enclosed by Government with a view to obtain more revenue. The free pasture land has disappeared, and even the pathways for cattle have been encroached on. There are no fodder crops to-day adequate for the number of cattle in the country. Commercial crops have made the growing of fodder crops impossible.[1] Oil-cakes which might serve as cattle food are increasingly exported. The breeding of cattle, moreover, is entirely left to accident. The methods of scientific cattle-breeding are unknown. The majority of the cattle are underfed and ill-housed. There is a large number of useless and decrepit cattle—some have estimated the number at 15 to 20 per cent of the total. If we deduct these from the total quantity, the percentage of active cattle per 100 people and per 100 acres of sown area as it is indicated in the official returns will be found misleading; the number of cattle will be nearer 50 than 65 for 100 acres of sown area and for every 100 of the population.

In the first instance there is the question of improving the breed, and secondly the need for preserving the cattle

[1] "The gradual pressure of population has resulted in a serious encroachment on grazing areas which formerly contributed to the maintenance of the cattle. Outside the canal-irrigated areas it is now found practically impossible over the greater part of India to grow crops purely for fodder purposes; and the result is a cattle population which subsists almost entirely on crop residues" (*Agricultural Operations in India* (1921–22)).

from disease and fodder famine. At present there are thousands of villages without a stud or a male buffalo. The agriculturists have to send their cows and buffaloes to other villages. The primary need of the cultivators which the Agricultural Department can and must supply is a provision for good breeding bulls. If the quality of the cattle is to improve, every village must be supplied with one stud and one male buffalo. If the land revenue brings to the Government a substantial part of the national resources, some part of it might well be devoted to a purpose like this; for the amount of the revenue will always depend in the long run on the prosperity of the farmers. In the earlier days the Brahmani bulls dedicated to the gods served a useful purpose; they were allowed to roam about and were used for breeding purposes by the villagers, who treated them as pets. They have now disappeared.[1]

In the next place there is the need for preserving cattle from disease and starvation. The amount of injury and loss resulting annually from the unchecked ravages of disease is something enormous. During 1920–21 there were 574 veterinary hospitals and dispensaries at work in India, and the cases treated and operations performed at these institutions numbered over one million. The Imperial Bacteriological Laboratory at Muktesar, which supplies the munitions of the campaign against contagious cattle diseases, issued more than 2,500,000 doses of sera to the provincial Veterinary Departments. Undoubtedly the facilities for treatment of cattle diseases provided at present are inadequate; but it is not so much the multiplication of veterinary officials that will solve the problem as the free spread of information through the vernacular as to methods of prevention and treatment of the common

[1] Sir John Woodroffe suggests that the disappearance of the Brahmani bulls is the result of High Court rulings which treated them as *res nullius* whom any one can take and kill. If so, we have here one more instance of the harm which follows the rigid application of Western, and especially English, law to this country (see *Bharata Shakti*, p. 17).

diseases. The hot weather in India is nature's healthy remedy for the checking of diseases amongst men and cattle alike; the frequency of disease may itself have worked out a survival of the fittest amongst cattle in India. And if to these conditions we add the provision and encouragement of private veterinary practice under an enlightened Government, we shall have secured all that we need in the way of cure of diseases. But it is not so much cure as prevention of disease and the securing of health amongst cattle that should be the object of all who are interested in the agricultural prosperity of the country. And for health we require sufficient and proper fodder. We have already noted in this connection the deficiency of pasture and the disappearance of pasture land. Various proposals have been made to meet the difficulty. Some have suggested legislative action to protect grazing grounds. Others propose that Government should acquire new grazing grounds from public funds. There are others who philosophically assure us that the economic organisation of India has been thrown into the melting-pot; that in the earlier days wants were few and could be easily satisfied by farming the better class of land whilst the rest of the land was kept in pasture; that with the development of commerce arable farming has replaced the old mixed methods of farming, and the grazing lands have disappeared. They tell us that these things may be deplored but cannot be helped, and that the only method of meeting the situation is to look forward to times when the price of cattle will rise until the necessary adjustment of prices ensures the retention of waste land in grazing. Those who endorse this view seem to forget that the cultivator has hardly any capital to buy good seeds or implements, and that the only result of the realisation of this hope of high prices would be to deprive the cultivator of cattle power, and to further the tendency towards an increased exportation of cattle to take advantage of the rising market.

The Director of Agriculture in Bengal suggests a solu-

tion by the growing of fodder crops such as jawar and lucerne, or by mixed farming combining grazing and cropping alternately. At any rate, looking to the enormous interests at stake, it would not be waste of money to attempt a policy of restoration of grazing land to every village. Even private efforts in the same direction may meet with success. A Pasture Society has been working at Patna whose object is to appeal to those who are in possession of public lands to restore them to pasture.

In a country so dependent for harvests on timely rain, storage of fodder is essential. The history of recent famines has repeatedly impressed upon us the need for such storage. In the famine of 1897, 1,000,000 cattle were carried away in the Bombay Presidency alone. In the famine of 1899–1900 the Presidency lost 2,000,000 cattle. There is likewise in this connection a great field for the development of ensilage. It could be done without large expenditure of capital; all that is required is to build the grass into a good large stack on the surface of the earth and tie it down tightly with galvanised steel wire rope.

The export of cattle may well be prohibited in view of the large interests of agriculture. It is the best quality cattle of all kinds that are usually exported and their loss cannot be easily made good. It is curious to note the attitude of agricultural officials who believe that encouragement of the export trade will operate as an incentive to better breeds of cattle. The Board of Agriculture in India in 1919 resolved: "The changing economic conditions have doubtless created an increased demand, to meet which there has been an inadequate expansion of supply in response. To deal with this position it is incumbent on Government to encourage and foster the cattle-breeding industry with vigour. It is suggested that this can best be done by establishing farms in breeding areas, by distributing selected breeding stocks, and by propaganda. The inherent instinct for gain and consequent incentive to breed good animals will be developed by encouraging

trade." Trade, if it is to be mutually beneficial, must be essentially based on relative equality in the conditions of the parties to the trade. Where one party to the trade is in a state of political subjection to the other, and relatively helpless on account of lack of capital, trade can only mean exploitation. It is so in the relations that determine wages as between employer and employed; it is so as between one nation and another where one is economically and politically inferior to the other.

The preservation and improvement of the breed of cattle is not only important from the point of view of the cultivator; milk and its products constitute the food of millions in this vegetarian country. Cow's milk is the most commonly used; but in addition buffalo's milk and goat's milk are also consumed in large quantities. The yield per animal will largely depend upon the health and breed of the animal. The milk problem in India, especially in the bigger towns, is becoming a serious and complex problem. When adulterated or polluted it becomes a potent medium for the spread of diseases like tuberculosis and rickets. In one Indian city four-fifths of the milk supply was found on an examination of 1400 samples to be adulterated with water, and 90 per cent to be contaminated with microbes indicating the presence of dirt. It has been found extremely difficult to obtain milk which has been handled with care and cleanliness. Though the evil is acute in the larger cities, the milk problem in other parts of the country also calls for attention. The shortage of pure milk and the adulteration of ghee are matters of common experience throughout the land. In a city like Bombay pure milk cannot be had for anything less than 8 annas a seer, and this rate is higher than in most European and American cities. It has been suggested that municipalities should prevent the keeping of cows in towns, that facilities should be given for milk transport, that the stables should be supervised, and provision made for the testing and certification of milk. The Milk Supply Committee of the Poona Agricultural Conference suggested

"that the securing of an adequate milk supply is so vital to the health of the people and the future of the community that there is a strong reason for Government being prepared to assist in the reorganisation of the milk supply to a greater extent than would be wise in almost any other industry."

Lastly, there is the question of the slaughter of prime cows and calves—cows which have not calved more than thrice and whose milking capacity has not ceased, and cow calves themselves capable of bearing. The best cows are being used in towns for milk, and when their milk declines they are slaughtered for beef. In Europe and America cattle are raised for two distinct purposes—beef cattle for food and dairy cattle for milk. No one ordinarily thinks of killing a good dairy cow; if calves are slaughtered they are usually bull calves. Beef is consumed in this country by relatively few; what is taking place to-day is that draught and dairy cattle are being used to supply meat. Government must legislate, defining the age at which alone dairy cows can be slaughtered, and efforts might be encouraged at starting a beef-raising industry so that it would become unnecessary to slaughter milch cows.

Agricultural Indebtedness and Capital

"The history of rural economy, alike in Europe, America, and India, has no lesson more distinct than this —that agriculturists must and will borrow. The necessity is due to the fact that an agriculturist's capital is locked up in his land and stock, and has to be temporarily mobilised, hence credit is not necessarily objectionable nor is borrowing necessarily a sign of weakness. As a matter of fact the agricultural classes all over the world are in a state of extreme indebtedness, due very largely to causes outside of the demands of agriculture, such as poverty, ignorance, carelessness, the laws of inheritance, foreign competition, seasonal disasters, and epidemic

diseases and the demands of usury." [1] In a country like Great Britain, where the average farm is a large unit, and the tenant farmer a man with technical knowledge and resources, the average cultivator may be free from indebtedness; but wherever in the West the cultivator is a small farmer owning his own land or renting another's land—in France, in Russia, in South-Eastern Europe—taxation, rent, and usury keep him as near as possible to the margin of starvation. The farmer's calculations are based on the expectation that taking one period with another the gross value of his crops may be near the mean, and the expectation is usually justified. If for any reason, however, like a cycle of low world prices or a series of bad seasons, his calculations are defeated, whatever capital he possesses disappears, and he is compelled to borrow. Where cheap credit is not readily available the cultivator gets involved in debt. In the West in ordinary circumstances the farmer is in a position to borrow advantageously from joint-stock banks; where this facility is not available, there are village banks and credit societies and co-operative associations to supply the farmer's needs. But in India three-fourths of the population are dependent on agriculture, and the success of agriculture largely depends on precarious and fluctuating factors like the rains. They plough with the same implements as their ancestors did centuries ago; they live in the same precarious manner, uncertain of the morrow; they are as carefully denied the opportunities for education under a civilised Government as their ancestors were under the rule of Hindus and Moghuls. The Indian cultivator is proverbially in debt; and in an age when the discoveries of science promise to man the freedom of the larger life based on economy of effort, millions must toil all the year round from sunrise to sunset to eke out a bare minimum of subsistence.

[1] Sir F. A. Nicholson's "Report on Land and Agricultural Banks," para. 5.

Extent of Agricultural Indebtedness

It is not possible to obtain the accurate figures regarding the total agrarian indebtedness in India. The materials are available in the village records, but they are not yet published or scientifically utilised.[1] It is obvious that unless an accurate idea of the extent of indebtedness is arrived at, no adequate remedy is possible.

Even assuming that under the Moghuls the Indian cultivator led a life of poverty; that the mass of the population lived on such meagre subsistence as the land afforded; in times of distress and famine they could abandon the country and seek a more tolerable mode of existence in the towns, or fly to districts where they might find a greater degree of comfort. We have already noticed how the destruction of the handicrafts in the towns with the advent of manufactured imports from abroad led to a process of ruralisation in the last century under the British rule. This enormous burden of a numerous population dependent on a system of cultivation comparatively crude and uneconomical, if not primitive, has aggravated the indebtedness of the cultivators. As early as 1875 the Deccan Riots Commission observe:

We have endeavoured to show that the normal condition of the bulk of the ryots in the disturbed districts is one of indebtedness, that owing to the causes, some natural and others the result of our administration or of internal circumstances, this indebtedness has grown to an extreme point during the twenty years preceding the riots. About one-third of the occupants of the Government land are embarrassed with debt, their debts average about eighteen times their

[1] In the village records there are special columns showing whether a holding is mortgaged or not; if mortgaged, to what extent and on what conditions. This source of information must be used; it does not involve considerable expenditure. All that it is necessary to do is to make the village accountants supply statements from those returns. It must be borne in mind that the figures thus arrived at will not be accurate, for there are thousands of agriculturists who have incurred debts without mortgaging their land, but on personal security backed by the certainty that they are owners of land. The error, if any, will, however, be on the side of an under-estimate.

assessment, and nearly two-thirds of the debt is secured by mortgage of land.

The Famine Commission of 1880 substantiate this statement :

> We learn from evidence collected from all parts of India that about one-third of the land-holding class are deeply and inextricably in debt, and that at least an equal proportion are in debt though not beyond the power of recovering themselves.[1]

So also the Famine Commission of 1901 :

> Taking all these statements into account and comparing them with the evidence recorded, we think it probable that at least one-fourth of the cultivators in the Bombay Presidency have lost possession of their lands, that less than a fifth are free from debt, and that the remainder are indebted to a greater or less extent.

The Hon. Mr. Rogers, member of the Bombay Council, reported to the Secretary of State that in the eleven years up to 1890 there were sold by auction for the collection of land revenue the occupancy rights of nearly 2,000,000 acres of land held by 840,713 defaulters, in addition to personal property to the value of Rs. 30,00,000. Nearly 60 per cent of this land had to be bought in by Government for lack of bidders. That is to say, in eleven years one-eighth of the entire population of the district was sold out of house and home.[2]

The mass of the population in India have no reserve to fall back upon in times of distress and famines. In the last century thirty-one widespread famines were recorded which carried away 32,000,000 souls. Whilst

[1] Part II. chap. iii. section 4. In 1891 Mr. S. S. Thorburn, Revenue Commissioner of the Punjab, made a house-to-house investigation of conditions in an area of about 100 square miles, with a population of 300,000 scattered through 535 villages. The Commissioner reported that "quite half the old agriculturists are already ruined beyond redemption in 126 villages," and their farms had passed into the hands of the money-lenders, whom "our system is making masters of the community."

[2] See *India's Silent Revolution*, Fisher, p. 37.

hundreds of thousands died in one province of starvation, the adjoining provinces were exporting loads of wheat and grain to other parts of the world. People died of starvation, not because they had no grain to buy, but because they had no money with which to buy it. For the last five decades and more Government has been growing increasingly alive to the seriousness of the problem; but no statesmanship has come to the help of the agricultural population. Dadabhai Naoroji, Sir William Wedderburn, William Digby, R. C. Dutt, emphasised the top-heavy expenditure of the administrative machinery, the ruinous revenue policy of the Government, and the enormous drain of wealth from the country. But their voices have been voices in the wilderness. An ex-Lieutenant-Governor of Bengal, Sir Andrew Fraser, tells us: "A good friend of mine, who has studied the subject as much as any man in India, estimates the indebtedness of the agricultural community in India at five hundred millions sterling. I understand that Mr. Gokhale accepts that figure, and I know European business men of much experience who do."[1] This is a rough estimate, and even if it is inaccurate, it is an under-estimate rather than an over-estimate. We have figures regarding the Punjab, and these figures for the Punjab may give us some idea about the state of affairs in the whole country. From the investigations of the Registrar of Co-operative Credit Societies in the Punjab in 1919-20 it was found that the rural indebtedness of the Punjab was about £30,000,000. We have equally emphatic general statements regarding other Presidencies also.[2] One thing that is certain is that the agricultural classes in India are heavily indebted all throughout the land.

[1] *Among Indian Rajahs and Ryots*, p. 203.

[2] See Gilbert Slater, *Some South Indian Villages*; Harold Mann, *Land and Labour in a Deccan Village*; J. C. Jack, *The Economic Life of a Bengal District*; Calvert, *Wealth and Welfare of the Punjab*.

CHAPTER XV

AGRICULTURAL INDEBTEDNESS

Causes of Indebtedness

Unless this economic disease is properly diagnosed no remedies can be suggested. The Famine Commission of 1880 summarised the causes of agrarian indebtedness in a remarkably clear manner :

> The origin of debt among the landed classes is traceable to various causes, among which the most prominent are the failure of crops from drought, expenditure on marriage or other ceremony, general thriftlessness, an improvident use of sudden inflation of credit, the exactions of an oppressive body of middlemen, and administrative errors such as unsuitable revenue settlements ; and debts once incurred very rapidly grow with exorbitant rates of interest. In so far as the causes of indebtedness lie in the inherited tendencies of the people, such as want of forethought and readiness to promise anything in the future in order to secure present gratification, no remedies are possible except through the spread of education, the gradual growth of provident and self-sufficing qualities under the influence of painful experience, and the success of the stronger and thriftier individuals in the struggle for life.

It is necessary to examine the causes thus summarised in detail.

1. *Loss of Economic Equilibrium*

One of the important causes that have led to agrarian indebtedness is the loss of economic equilibrium in the distribution of occupations. We have no reliable statistics

regarding the amount of agricultural indebtedness in the country in the days that preceded the establishment of British rule. The Indian cultivator in those earlier days, brought up under the traditions of a philosophy that made him think only of the passing day and reconciled him to the dispensations of a grim necessity that makes no distinctions between man and man except such as belong to the social stratum of which he is an organic part, could not have been able to stand the distress of famine or failure of harvest any more than he is to-day, and must have often run into debt. But it is significant that the increase in indebtedness of the Indian agricultural population is parallel to the growing loss of economic equilibrium. With the decline in the handicrafts and indigenous arts the pressure on the soil increased; and though there has been an expansion in the total area of the soil brought under cultivation, this expansion is not adequate to the increase in the number of people who are dependent on the soil. The loss of industrial occupations created an extraordinary demand for land;[1] this land-hunger has resulted in the fragmentation and subdivision of agricultural holdings till many of them have become uneconomic and those who cultivate them have become involved in debt. The supplementary income from handloom-weaving and other occupations which might otherwise enable the cultivator to avoid falling into the hands of the moneylender is no longer readily available.

2. *Land Tax*

Another and equally important cause may be found, as the school of R. C. Dutt have pointed out, in

[1] "The extensive importation of cheap European piece-goods and utensils, and the establishment in India itself of numerous factories of the Western type, have more or less destroyed many village industries. The high prices of agricultural produce have also led many village artisans to abandon their hereditary craft in favour of agriculture" (*Census Report*, 1911, p. 409).

the heavy land tax.[1] The heavy land assessment with its rigid procedure of collection is largely responsible for the aggravation of indebtedness. To appreciate this contention it is necessary to consider the salient principles of the revenue system in those provinces which are not permanently settled. The land revenue policy of the Government is influenced by two rival theories, one of which "is only partially true, the other only partially relevant." The official theory usually advocated is that land revenue in India is not a tax but of the nature of rent—an appropriation of the unearned increment. The State is the landlord, and therefore has the right to appropriate the economic rent. It is on this basis that the land revenue assessment is fixed, and it is on this consideration that the Revisional Survey Settlement takes place (at the end of twenty or thirty years, as the case may be) with its discretionary power of enhancing the assessment to the extent of 33 per cent. Now the Ricardian theory of rent with which the Government of India identifies the land tax treats rent as a differential payment for the use of the soil and is based on certain implications. It assumes that the cultivation of the holding is economically profitable; in other words, that the land is above the margin of cultivation, leaving the cultivator a differential or surplus which he passes on to the landlord in the shape of rent. Secondly, the Ricardian theory also assumes free competition as between tenants; the tenants cultivate the land because it pays them to do so; and there are alternative occupations other than agriculture to which a tenant may resort. None of these conditions, however, obtain in India. The Indian cultivator has no alternative occupations to which he can turn.[2] He must cultivate his land,

[1] See R. C. Dutt, *Open Letters to Lord Curzon*; *Memorial of the Retired Officials of the Indian Civil Service to the Secretary of State*, 1900; Henry Cotton, *New India*; Digby, *Prosperous British India*; R. C. Dutt, *Famines in India*; Land Revenue Policy (Resolution, 1902); A. Loveday, *History and Economics of Indian Famines* (1914).

[2] When an alternative to agriculture as a means of subsistence is

whether it pays him to do so or not. If it does not pay, he must cultivate it at a loss and incur debt or starve. On the Ricardian theory rent is the last charge on the produce of the soil, and it is paid if the tenant can cultivate it with sufficient profit to maintain his standard of life. In India the land tax is the first charge on the produce of the soil.[1] To use Vaughan Nash's dictum: "Government first fixes the standard of living and cultivation, and then proceeds to drain off all winnings of the people which rise above the mark which has been fixed."[2] The land tax is not the appropriation of the unearned increment of the soil, it is the appropriation of the bare minimum of subsistence left to the cultivator. Even according to the official criteria, as we have already noticed, the majority of agricultural holdings have been declared to be extremely uneconomical; in other words, they cannot afford the burden of the land revenue. A good deal of the present land revenue is taken from what is barely necessary for the upkeep of the peasantry; and the loss to the cultivator is made good by borrowing. With alternative occupations in the shape of industries and handicrafts there can be no doubt that a large number of holdings cultivated under the pressure of necessity to-day would be thrown out of cultivation. The Famine Commission of 1901 observed with regard to the condition of the peasant: "In good years he has nothing to hope for except a bare subsistence; in bad years he falls back on public charity." The produce of the cultivator, even if he were left to the sole enjoyment of it, is barely enough to meet his ordinary wants; and from this

practically non-existent, it is ridiculous to speak of earnings sufficient to call capital and labour into the industry; it is no less ridiculous to contend that rent does not enter into the cost of production when the effect of that rent is so to lower the standard of living and efficiency that the cultivating classes, forced on to the margin of existence, are rendered unable to sink capital into the land they till or to maintain the personal energy with which they are endowed" (A. Loveday, *History and Economics of Indian Famines*, pp. 121-22).

[1] See the Bombay Land Revenue Code.

[2] *The Great Famine* (1900), p. 245.

produce he has to pay the land tax. Thus none of the assumptions underlying the Ricardian theory of rent are present in India. There can be no free competition where the choice is between cultivating the land and starving; the land revenue enters as an element in the cost of production; it is not a differential or surplus. Even granting that the State is the landlord and therefore entitled to the differential gain, in the case of the large majority of holdings there is no differential that the State can appropriate as landlord.

There is another theory that has sometimes been advocated about the nature of the land revenue assessments—that it is a tax and that Government from time immemorial has claimed a portion of the soil. If the land revenue is a tax, it might be urged that its amount should be determined by the ability of the assessee to pay; and with this criterion a large amount of the land revenue collected at present would have to be wiped off. But Government is not prepared to accept this view. We are told that the land revenue is "a thing *per se*, a tax on agricultural income." But if it is a tax on income, we have now accepted for some time past the principle that all incomes below a certain minimum (Rs. 2000 a year) should be exempted from the income tax; there is no reason why agricultural income should not be exempted up to, say, a limit of Rs. 1000 a year. The case for such exemption of agricultural income is all the stronger as the persons dependent on agriculture constitute three-fourths of the population and there is an imperative need for the accumulation of capital for agricultural development. That the land revenue is of the nature of a tax can scarcely admit of question when it is remembered that there is the element of compulsion in it which attaches to taxation; it is of the nature of a first charge without any of the redeeming features of the latter.[1]

[1] Sir W. Robinson pointed out long before that "no margin is left for extraordinary vicissitudes of season, and the demand is so heavy

Thus the revenue policy of the Government has been determined by the fundamental idea of raising the largest amount of revenue, and is defended by whatever theoretical considerations lend themselves to this idea, quite irrespective of their conflicting character. If we examine the receipts of land revenue during the last forty years we find that there has been a progressive increase in the amount; and this increase has taken place in spite of the fact that many of these years were years of calamities in the shape of famines and partial failures of crops, in years in which the currency policy of the Government has hit hard the entire agricultural population, and in which in very many parts of the land the yield of the soil has been stated to be steadily diminishing. Deterioration in agricultural conditions is accompanied by an increase in the land revenue demand of the State. Have we any reason to be surprised that the agriculturist should have no savings, should be entirely resourceless, should be unable to make use of the gifts of kindly nature, and should be heavily in debt ? [1]

To make matters worse, this heavy demand is collected rigidly. The cultivator has no savings; if there is a failure of crop he has to borrow and to pay the land revenue; but even if there is no failure, as he has to pay the land revenue in two instalments—one before the 15th of January and the other before the 15th of March—he must have money at these times. Now it frequently happens that though he has a crop ready for sale he cannot sell owing to the slump in the market—all the cultivators are out for sale. He has to forgo his profits

and searching that little room is left for the accumulation of agricultural capital to meet contingencies such as have overtaken the population" (quoted by Loveday).

[1] The Director-General of Statistics observed in 1904: "It is doubtful whether the efforts now being made to take the cultivator out of the hands of moneylenders will have much effect; or even if they have the fullest effect, they will materially improve the cultivator's position until a larger share of the produce of the soil is left in his hands, and he is protected against enhanced assessment by Government officials and against enhanced rent by private landlords."

or to borrow money. The rigidity of collection deprives the cultivator of the benefit of high prices.[1] The demands of Government might well be spread over a number of instalments to be paid at the convenience of the cultivator. This will involve no additional expenditure, as the Patel and the accountants are a part of the existing administrative machinery.

In short, there is need for a radical revision of the land revenue policy, and unless this is done agricultural improvement is impossible. All talk about wiping off agricultural indebtedness is futile in the absence of this reform. The State demand should be moderate, and should be levied only on holdings that are economic; it should leave a sufficient margin to the cultivator; its collection should be on an elastic basis, and the cultivators must have left to themselves a sufficiency of resources to stimulate their energy and to finance intensive methods of cultivation. Whatever loss of revenue such measures may involve directly to the Government will be more than made up by a material advance in the standard of living of the people.

3. *Application of Western Conceptions of Property Rights*

The Famine Commission of 1901 pointed to the "agrarian system introduced by the Survey Settlement as an accelerating cause of indebtedness, and more

[1] Cf. *Report of the Famine Commission of 1901*: "The rigidity of the revenue system forced them into debt, while the valuable property which they held made it easy to borrow" (Part iii., sec. vi.). See Ramsay MacDonald, *The Awakening of India*, pp. 157-58: The cultivator "in bad years often pays his land assessment from borrowed money upon which he has to pay 25 to 30 per cent. Thus it is that fixed charges have driven the cultivator into the hands of the usurer. It is not that the charges have been always excessive of themselves. They have not been sufficiently elastic to meet the short views which have been characteristic of Indian economy from time immemorial; they have been too rigid to fit into his habit of meeting his obligations by sharing his crops. . . . Obligations calculated on capitalist habits can never be anything but oppressive when imposed on communities where payments have been almost directly made in kind, and where the measure of economic obligations has been a season's crop."

especially to the unrestricted right of the cultivators to transfer their holdings." Unless a cultivator is hard pressed he does not borrow and will not mortgage or transfer his land. The Survey Settlement facilitated borrowing by recognising his rights in land and destroyed the old patriarchal relations between the cultivators and landlords. Contractual and legal relations based on a cash nexus took the place of these early customary relations; and where the landlord was a party to a contractual relation the cultivator's difficulties could only be met by advances from a professional moneylender. The number of transfers and ejectments during the last quarter of the nineteenth century affords eloquent testimony. "To some extent the distress of the agricultural classes during the latter half of the nineteenth century was due to the policy of the Government in reference both to their habits of borrowing and indebtedness and to the collection of the land revenue. For the Government did not at first realise that its property laws had increased the capital saleable value of land without in any way increasing its yearly yield, and that in consequence the cultivator's power of obtaining money had grown without any equivalent growth in his capacity to produce wealth. It persisted in believing that these classes were possessed of hidden reserves, and brought forward the extent of their borrowings as a paradoxical proof of the strength of their economic position." [1] The process of borrowing has been helped forward by the introduction and application of Western conceptions of property rights. "As invariably happens when an ignorant and improvident peasantry can dispose, without restriction, of valuable rights in land, the cultivators sank deeper into debt and their property began to pass out of their hands. It must be admitted that the conditions on which under the revenue system the cultivators held their lands helped to bring this result about." [2]

[1] Loveday, *History and Economics of Indian Famines*, p. 118.

[2] *Report of the Famine Commission of 1901*, para 331.

4. *Usury*

It is well known that the rates of interest charged by the Sowkars, Mahajans, and Banias are abnormally high. But this is not peculiar to India. Under similar conditions exorbitant rates of interest have been charged everywhere else in the world. The rates of interest, sometimes as high as 200 per cent, are undoubtedly responsible for the aggravation of the disease, but they cannot account for its origin. The village moneylender has too often been the subject of abuse. Thus: "It is usury—the rankest, most extortionate, most merciless usury—which eats the marrow out of the bones of the ryot and condemns him to a life of penury and slavery, in which not only is economic production hopeless, but in which also energy and will become paralysed, and man sinks down beaten into a state of resigned fatalism, from which hope is shut out, and in which life drags on wearily and unprofitably as if with no object in view."[1] Whatever mischief the Mahajan may have caused by its heavy rates of interest, we cannot trace to it exclusively the growth of agrarian indebtedness. Sir William Hunter, speaking of the Mahajan, points out that it was "the one thrifty person among an improvident population, the basis of the simple Indian system of rural economy, without whose help the Indian cultivator would have nothing to depend upon but the harvest of a single year." The Report of the Deccan Riots Commission and the litigation under the Deccan Agriculturists Relief Act show that in many cases the moneylenders were tyrannical; but we must not forget the fact, which R. C. Dutt points out, that where the cultivators are well off the moneylender has no influence; where they are in perpetual poverty the moneylender serves them in times of difficulty and gets a grip over their land.[2]

[1] Wolff, *Co-operation in India* (1911), p. 3.

[2] Cf. Prof. Lee-Smith, *Studies in Indian Economics* (1909), p. 102: "The village moneylender is under such circumstances a necessary evil. Nothing can be gained by abusing him until you put forward some other agency to perform his functions."

5. *Extravagance and Improvidence*

The Indian peasantry is as good and as bad as the peasantry of any other country, with the one salient feature that the people are illiterate and uneducated. One naturally hesitates to accept the view that the Indian peasantry is the thriftiest in the world,[1] or that it is, as the official view maintains, the most improvident in the world. When we remember the fact that the large majority of the cultivating classes and those dependent on the soil eke out a bare minimum of subsistence, that their poverty compels them to be satisfied with the simplest mode of existence, and that a local failure of rains drives thousands to starvation and death, it is somewhat of a riddle to be told that the cultivating classes are habitually improvident and thriftless. But their outlook is confined to the passing day; they do not think in periods longer than a season; "sufficient unto the day is the evil thereof"; the morrow will take care of itself under the operation of inscrutable laws. When the harvest fails, the cultivator has no resource to fall back on except the moneylender; when the solemn occasions of life arrive associated with the gods, he squanders all that he has, be it on the marriage of his children or the death of his near ones.[2] His extravagance on these occasions is only the outpouring of a devout

[1] R. C. Dutt.

[2] Cf. K. L. Datta's *Report on Enquiry into the Rise of Prices* (vol. i. para. 379): "The Indian cultivator is as a rule thriftless and extravagant, and much addicted to litigation. He lacks that business education which leads the ryot to restrain his tendency to borrow and which enables him to calculate the result of expenditure, whether on improvements or otherwise. In a good year his ignorance and improvidence make him spend the whole of his surplus on marriages and festivities, and his extravagance on such occasions often leads him even in good years to the doors of the moneylender. A ryot would stop at no extravagance which would enable him when marrying one of his children or performing any funeral or social ceremony to show more ostentation than his fellows, and cases are of quite common occurrence of men spending sums equal to five years' income or even more on a single ceremony."

heart that does not stop to measure the cost or estimate the burden—would even consider it profane to do so. An extravagance which was reprehensible even under the old village economy in days when a man was linked to his fellows by ties of co-operation becomes a serious hindrance to progress when ideals of co-operation are being replaced by the individualism that creeps into the village economy through the administration of laws and through the introduction of a cash nexus and of contractual relations.

6. *Drain of Potential Capital*

No survey of the causes that aggravate the problems of rural indebtedness would be complete which did not include the huge drain of wealth from the country from year to year, depriving the people of the surplus or capital which is the pre-requisite for improvement in the conditions of life. The wealth which normally remains within the country, in the case of other nations, multiplying the comforts of life, increasing the mass of production, and laying the foundations of future prosperity, is in the case of India drawn off to pay foreign pensioners, to satisfy the greed of foreign shareholders, to support the families of foreign merchants and industrialists and mechanics. The channels through which whatever meagre savings there are can flow to fructify the industries and develop the agriculture of the country dry up for want of the necessary current; that current is diverted by an elaborate mechanism of railways and roads and administration, tariffs, and currency into channels which foster English industries and manufactures and relieve the burden of English unemployment. Where people are deprived of the very opportunity to save, it is absurd to blame them for running into debt through extravagance and thriftlessness. These, then, are briefly the causes or conditions that have led to the seriousness of the problem, and no remedy can be adequate which does not take them into account.

Measures adopted by Government for the Relief of Agricultural Indebtedness

The problem of agrarian indebtedness had as early as 1875 become acute and drawn public attention; its gravity was emphasised by the Famine Commissions, and Government had in its own way attempted to meet the situation. The measures adopted by Government for relieving agricultural indebtedness may be conveniently classified under five heads.

1. Measures to avoid unnecessary debts.
2. Measures to grant loans and advances to the agriculturists.
3. Measures for the improvement of civil law in connection with agrarian debts.
4. Measures for restricting the alienation of land.
5. Measures for providing credit to the agriculturists or for reducing their debts.

One cannot refrain from observing at the very outset that all these measures, even when they are taken collectively, have failed to bring adequate relief; at the best they have touched the fringe of the problem, while some of them have intensified the difficulty instead of solving it, and aggravated the malady.

1. *Measures to avoid Unnecessary Debts*

Nothing effective has hitherto been done by Government under the first of these heads. The extravagance of the Indian cultivator and his lavishness on certain occasions have been the commonplaces of rural economics for almost every one who is interested in the subject as a student or as an administrator. That on occasions like the marriage of a son or the birth of male issue the natural propensity to give expression to feelings of gratitude to the gods for benefits conferred should involve lavishness of expenditure may be admitted without casting any censure on the social habits in question. What

may, however, cause concern is, not the expression of this propensity of the heart, but its transformation in the present day as it passes from status to contract, from an economic environment of a simpler type to an environment saturated with commercial standards, measuring all acts and social habits by their monetary equivalents. It is this transmuted tendency that yields readily to the allurements of social vanity and ostentation, and involves large numbers of people in habits of extravagance ending in indebtedness to the professional moneylenders from which they find it extremely difficult, if not impossible, to extricate themselves. The dangers attending such habits are aggravated by the ignorance and illiteracy of the mass of cultivators, which make them an easy prey to the intrigues of the moneylenders. One way out of these dangers lies in the direction of mass education, which might make the cultivators "look before and after," might extend their thoughts beyond the passing day, and might induce amongst them habits of insurance against old age and the uncertainties of the seasons. It is only a short-sighted opportunism that alleges financial stringency as an excuse for the neglect of primary education in the rural areas. No expenditure can be too great, no measure too difficult, in order to organise and spread in the country primary education free and compulsory. If money could be found by our Government for manufacturing the weapons of war and for perpetuating tribal skirmishing on the frontiers, it could equally readily be found for spreading literacy and enlightenment amongst the mass of the rural population.

2. *Grant of Loans and Advances*

It was realised by Government early enough that the greatest need of the cultivator was credit—credit to buy cattle, implements, and seeds; credit to improve the land by the use of manures and by the adoption of intensive methods. With a view to supplying credit, Government

passed the Land Improvement Loans Act in 1883 and the Agriculturists Loans Act in 1884. Money advanced under the Act of 1883 was to be spent on the improvement of the land,—for digging wells, improving drainage, etc., while money advanced under the Act of 1884 was to be used for the purchase of cattle, seeds, implements, etc. The principles embodied in these Acts were accepted by Government as early as 1871, but they were not brought into operation till 1884. Though a number of agriculturists have availed themselves of them in improving their condition, the total relief afforded by these Acts is almost negligible. The amount advanced is small, the rate of interest charged is not tempting, and the procedure is exceedingly rigid and cumbrous. Much the same observations may be made in connection with the Takavi loans, which are small in amount and have to be repaid in instalments within a fixed period.[1] Added to these observations is the common complaint that some portion of the loan disappears before it actually comes into the hands of the agriculturist. A Government that already acknowledges its duties towards the agriculturists and is prepared to act as a banker to provide credit and to finance agriculture has left far behind it the doctrinairism of a *laissez-faire* policy; but it allows precious opportunities of fostering agriculture to be wasted by enormous expenditure on a dubious military policy and by refusing to find the money by loan on the security of the land itself. What we need to-day is only an extension

[1] Cf. Sir D. E. Wachha: "It may be observed without contradiction that the advances are generally looked at askance by the rayats and therefore not extensively availed of because of the trouble, vexation, and even blackmail to which they have to submit before the necessary advance applied for is given. Moreover, it is a fact that it could not be obtained immediately. Circumlocution and red tape have to go their round before the grant is sanctioned. Whatever official apologists may say in defence of the system, there are no two opinions among the peasantry itself as to their unsuitability for all their immediate and practical needs. The Takavi advances are a mere palliative, and in no sense a help to the ryot to diminish the load of his indebtedness" (*Indian Journal of Economics*, vol. i. part 1).

of the policy of advances to the cultivating classes on easy terms on a scale proportionate to the vastness of the agricultural resources of the country.

3. *Changes in Civil Law*

The civil law in India has been simplified by the Government for the benefit of cultivators, and they have been placed under special protection. There is thus a special provision in the Civil Procedure Code which precludes attachment of certain property belonging to the cultivators.[1] So also under the provisions of the Agriculturists Relief Act an agriculturist cannot be arrested for a money decree, and he has the right to ask for a payment of his debts in instalments. The Usurious Loans Act was meant specially for the agriculturists. The riots in the Deccan in the 'eighties of the last century were attributed to the rapacity of the Mahajan and the Sowkar, and agrarian indebtedness was traced to usurious rates of interest. There was no clear insight in the official mind into the causes that had led to agrarian indebtedness and the resulting discontent. It was thought that the gravity of the situation could be relieved, and agrarian indebtedness would diminish, if it would not altogether disappear, by the enactment of laws against usury and a provision which would enable the Courts to go behind the transactions between the agriculturist and the Sowkar. The recommendations of the Deccan Riots Commission were embodied in subsequent legislation. Though the Deccan Agriculturists Relief Act may have helped a few agriculturists against the Mahajan and the Sowkar, the outbreak of litigation that followed served only to shake the entire rural credit structure to its foundations. The Sowkars were no longer ready to lend on personal security, as they had once done; the Mahajan would not lend except on the security of land. The old personal relation between the Sowkar and the borrower which had permitted

[1] See Civil Procedure Code, secs. 44, 45, and 60 (clauses *b* and *c*).

the play of non-economic motives to some extent was now replaced by a contractual bond ; the creditor stood on his guard as against an uncertain and changing legal system administered in favour of the borrower, and took care to see that the solid earth could ultimately repay him the loan that he advanced. We have already indicated in another place the large number of legal suits which resulted in depriving the agriculturists of their plots of land, and aggravated the seriousness of the problem of rural indebtedness.

4. *Legislation restricting the Alienation of Land*

In certain parts of the country the problem became so serious that Government resorted to legislation for the purpose of restricting the right of alienating land or mortgaging it to non-agriculturists. This remedy has been adopted in the Punjab, the United Provinces, and Bombay. The Famine Commission of 1901 had expressed the opinion that one of the causes that accelerated the process of agrarian indebtedness was the proprietary right of the peasant recognised by the Survey Settlement. It was thought that there was no likelihood of preventing the agriculturist from running into debt so long as he could alienate, transfer, or mortgage his land. The Punjab Land Alienation Act of 1900 as amended in 1907 imposed very drastic restraints on land transfers. It gave the State power to declare by notification what tribes in each district were " agricultural." It forbade any member of an agricultural tribe to sell land to a non-agriculturist without the sanction of the officer in charge of the district. We find similar attempts in the Deccan Agriculturists Relief Act of 1879 in Bombay and the Jhansi Encumbered Estates Act of 1882. Even assuming that such legislation has not been attended by any serious consequences for agricultural development, it must be kept in mind that at the best such legislation will counteract the disintegration of the family holding and village community brought about

by the administration of a code of laws alien in spirit to the culture and institutions of this country. Legislation of this kind can never create the flow of credit on which alone ultimately depends the redemption of Indian agriculture.[1]

5. *Credit to Agriculturists*

The gravity of the problem compelled attention to the necessity for other measures of a more adequate character. As early as 1884 the Governor-General in Council in a despatch to the Secretary of State for India pointed out that the cultivator required money, and hinted at the need for a private bank which should take the place of the village usurer, but which would at the same time be bound by the articles of its constitution to supply capital at comparatively easy rates to solvent cultivators. Sir William Wedderburn's proposal to establish a land bank in Poona failed of materialising only owing to the opposition of the Secretary of State. Sir Frederick Nicholson, who was deputed by the Madras Government to study land banks on the continent of Europe, emphasised in his report the need for co-operative land banks. The Famine Commission of 1901 observed :

We attach the highest importance to the establishment of some organisation or method whereby cultivators may obtain, without paying usurious rates of interest and without being given undue facilities for incurring debt, the advances necessary for carrying on their business. Agriculture, like other industries, is supported on credit. "The Sowkar is as essential in the village as the ploughman," said the Secretary of State in reviewing the report of the Deccan Riots Commission, and the statement is true in existing circumstances.

[1] Speaking of the Punjab Land Alienation Act, the official apologists of the Government policy have to admit failure : "The introduction of the Land Alienation Act has not improved the situation in the Hazara, Bannu, and Deraismailkhan. Land being no longer available as security for loans, rates of interest have increased and vary between 12 per cent and 75 per cent" (*Moral and Material Progress Report*, 1913, p. 308); so also "it is generally admitted that the Deccan Agriculturists Relief Act has had the effect of imposing restriction on the facilities for credit" (*ibid.* p. 423).

But, owing to causes which it would be tedious to trace, the Sowkar has, from being a help to agriculture, become in some places an incubus upon it. The usurious rates of interest that he charges and the unfair advantage that he takes of the cultivator's necessities and ignorance have, over large areas, placed a burden of indebtedness on the cultivator which he cannot bear. Passed on from father to son, and continually swollen in the process of compound interest, this burden of indebtedness has become hereditary, and retains the cultivating classes in poverty, from which there is no escape that we can perceive except through State assistance or the discovery of some other means by which the cultivator may get on easier terms the accommodation that he needs. But even the fuller measure of State aid in the shape of Takavi loans which we shall recommend, will go but a small way towards removing the difficulty of the whole class. Government cannot possibly finance all the cultivators of a district, still less of a province. In the establishment of mutual credit associations lies a large hope for the future of agriculture in India, and from the inquiries we have made there is reason to believe that if taken up and pressed with patience and energy such associations may be successfully worked.

So wrote the Famine Commission of 1901. The question of starting co-operative credit societies was taken up by the Madras Government, where the Nidhis afforded an indigenous basis for their establishment. There were in 1901 over 200 Nidhis with 36,000 members and a subscribed capital of £1,700,000. Small beginnings had also been made in the Punjab and in Bengal. In 1901 a Committee was appointed to consider the whole question, and on its report legislation was undertaken in 1904 with the objects (1) of taking such societies out of operation of the general law and substituting provisions especially adapted to their constitution and objects; (2) of conferring upon them special privileges and facilities so as to encourage their formation and assist their operations and (3) as a necessary corollary, of taking precautions against the improper utilisation by speculators and capitalists of privileges not intended for them. The Co-operative Credit Societies Act of 1904 was the outcome of these legislative efforts.

CHAPTER XVI

AGRICULTURAL INDEBTEDNESS—*continued*

THE CO-OPERATIVE CREDIT MOVEMENT

WE have already noticed how the problem of agrarian indebtedness which had attracted attention since 1870 was not seriously dealt with till about 1900. The problem may almost be said to have been completely ignored. The majority of the cultivating population was heavily indebted ; the causes that had brought about this serious situation were pretty familiar ; with a surplus population on a soil rapidly tending to exhaustion in the absence of intelligent farming, there was a heavy wastage of economic resources and material energy from year to year, a wastage that increased with the sense of helplessness created by the environment in the mind of the cultivator. Agriculture requires credit generally the world over ; with a population living from hand to mouth and heavily indebted as in India, credit is the one condition for any agricultural development. It is needed for wiping out indebtedness, it is needed for further development of the industry. There is also the need for education and the reorganisation of social and economic conditions, for a revision of the revenue policy to preclude revival of the old evils. Thus the problem that faced Government in the matter of its agricultural policy was twofold, if not manifold, (1) the removal of the indebtedness, and (2) the provision of cheap credit on reasonable terms. The co-operative movement, it was thought, would not only solve

the problem but would by its educative influence remove the causes that had led to agrarian indebtedness in the past. The Maclagan Committee observes :

As the aims of the movement have not been always clearly apprehended, we consider it desirable to explain at the outset that the chief object of co-operation in India was to deal with the stagnation of the poorer classes, and more especially of the agriculturists, who constitute the bulk of the population. It was found in many parts of India that in spite of the rapid growth of commerce and improvements in communications, the economic condition of the peasants had not been progressing as it should have been, that indebtedness instead of decreasing had tended to increase, that usury was still rampant, that agricultural methods had not improved, and that the old unsatisfactory features of a backward rural economy seemed destined persistently to remain. The more obvious features of the situation presented themselves in the form of usury and land-grabbing on the part of the money-lending classes, while the agricultural classes either hoarded their savings or owing to thriftlessness and indebtedness showed themselves unable to withstand bad seasons and to meet organised trade on equal terms. The depression of the rural classes was further characterised by an underlying absence of any desire for education or advancement, and a certain resigned acceptance of oppression from those who by wealth or social position occupied a superior position—an attitude due to ignorance, to a traditional subservience in the past, and to an absence of ideals for the future. The peculiar feature of co-operation as a remedy for stagnation is that it is intended to meet not only the more obvious material evils but also the underlying moral deterioration to which the poor classes have so long been exposed.[1]

These were, in brief, the hopes entertained about the co-operative movement in the official world in the first decade of the present century ; it was not only to remove the agrarian indebtedness, but it was also to be the means of uplifting the agricultural population into an intelligent, thrifty, progressive peasantry. Whilst we are prepared to recognise the intrinsic value of the co-operative movement, we are here concerned with the actual results of the working of the movement judged both in the light

[1] *Report of the Committee on Co-operation in India* (1915), para. 1.

of the evils which the movement has to face in India and in the light of the hopes entertained by its promoters.

The committee appointed under the chairmanship of Sir Edward Law to report on the movement resulted in the Act of 1904. In an explanatory memorandum appended to the Bill Sir Denzil Ibbetson observed that the object of the Act was to "encourage thrift, self-help and co-operation among agriculturists, artisans, and persons of limited means." They also recognised "the enormous advantage which would result to the Indian cultivators if by any means they could be induced to utilise their combined savings, under a system of co-operative credit, and so be freed even partially from the necessity of recourse to the professional money-lender." [1] From the extracts we have quoted it will be apparent that there was a confusion of two issues (more or less distinct from each other) in the official mind. On the one hand it was hoped that the movement which the Act of 1904 inaugurated would adequately meet the problem of agricultural indebtedness, would remove or wipe out the existing indebtedness and prevent further indebtedness. On the other hand it was also thought that the movement would mobilise the scattered savings of the culti-

[1] See Proceedings of the Governor-General in Council, October 23, 1903. Cf. also the Maclagan Committee's Report, para. 2: "The stagnation of the agricultural classes in the greater part of the country has for many years attracted the attention of the Government, and various remedies have been tried for improving their material condition. A system of state loans was introduced; Post Office Savings Banks were opened; the civil law relating to debt was frequently and extensively amended; special legislation was initiated at various times in different areas for dealing with tenant right, the alienation of land, the general settlement of debt, and the curbing of usury. But although much has been done by some at any rate of these measures to help the peasant community, the general effect of the action taken can only be described as partial and incomplete. The further efforts which have been made by sanitation and education to improve the environment and intellectual condition of the poorer classes have not been more successful. Without, therefore, abandoning the class of remedial measures previously attempted, the Government turned to co-operation as the most hopeful method of dealing with the problem itself."

vators, would promote thrift, self-help, mutual trust and confidence, and would thus enable the cultivator to get cheap credit from the combined resources of his own class for his requirements.

Assuming now that the co-operative movement initiated in 1904 aimed at the second of these objects, the success of the movement presupposes economic conditions which are very largely absent in India.[1] It presupposes the existence of savings, that the Indian cultivator is a man who can save but is thriftless, and that he could be educated into thrift, and with this secure for himself the advantages of combined credit. Co-operation at its best is an attempt at doing by combination what cannot be achieved by the isolated efforts of scattered individuals. Here in India, however, we are faced with a peasantry heavily indebted and in the clutches of the money-lender; where the farmer is not in debt he lives on a bare minimum with not the remotest opportunity to save, even if he had the willingness to save. In the second place the success of the movement presupposes education; and the Indian cultivator is obviously illiterate and uneducated. Hardly 10 per cent of the total population in India know how to read and write, and this percentage of literacy is to be found mostly amongst the non-agricultural classes. We have been assured that the traditions of Indian life have imprinted deep into the Indian mind and heart the spirit of social endeavour and work that underlies the modern co-operative movement; and no one need doubt this fact; but that spirit needs to be roused by a favourable environment into activity, and it is only the wide diffusion of education that can provide this necessary stimulus. In the absence of this stimulus the co-operative movement as an exotic plant may keep alive but will never thrive. Finally, the co-operative

[1] The theory of co-operation is very briefly that an isolated and powerless individual can, by association with others and by moral development and mutual support, obtain in his own degree the material advantages available to wealthy and powerful persons, and thereby develop himself to the fullest extent of his natural abilities.

movement presupposes for its success a spontaneity of demand on the part of the people, some amount of readiness to adopt its principles and profit by its opportunities. In Denmark and Germany the movement sprang from below and it was not imposed from above as in India. It has been well pointed out that the real difference between the co-operative movement in Germany and in India is that while in Germany we think of co-operation and recall Raiffeisen to mind, in India when we think of co-operation the man of whom we think is the Registrar.[1]

If, on the other hand, we assume that the Act of 1904 was intended to tackle the problem of indebtedness and to free the agricultural population from bondage to the Sowkar, it becomes a little difficult to understand how a movement working on such a limited scale and known to work on this scale could have been expected to achieve such an ambitious result. Even starting on the moderate estimate of Rs. 500,00,00,000 as the amount of the total agrarian debt, we find that after sixteen years of strenuous work, the total share capital of all the co-operative credit societies in 1920–21—including the central, the non-agricultural and agricultural bodies—was Rs. 3,50,00,000, and the loans issued to members and other societies in the same year amounted to Rs. 15,00,00,000 only. And it must be further remembered that these 15 crores of rupees were lent to non-agriculturists as well as to

[1] We do not for a moment deny the intrinsic value of the co-operative movement as a factor in the advancement of education, of material prosperity and moral uplift. What we are here pointing out is the broad fact that, with an illiterate, famished population in the clutches of the moneylender, with the rapid exhaustion of the soil and the disintegration of the economic holding, and in the almost complete absence of non-agricultural industries which can draw off the pressure on the soil, it is vain to expect co-operation by itself to work wonders and to bring about the revival of agricultural prosperity. Struck with the need for preparing the ground for the successful working of the movement amongst the people, Wolff in his introduction to *Indian Co-operative Studies* "looks to voluntary workers in thousands who, called to their task by a missionary sense, would spread the idea amongst the masses, and do the work in a few years which the official hierarchy might vainly struggle to do in as many decades."

agriculturists, and some portion of it for the normal requirements of current credit. At the lowest estimate it would require 300 years to raise credit sufficient to wipe out the Rs. 500,00,00,000 of agrarian debt.[1] In many provinces agrarian indebtedness has actually increased. Prof. Gilbert Slater, an ardent official apologist, observed in 1918: "It is a doubtful point whether the actual indebtedness of the villagers to private money-lenders is not steadily increasing in spite of the progress of co-operation, the amount of debt rising *pari passu* with the sale value of the pattadar's tenant right." We are too often inclined to judge of the success of the movement by the increase in the number of societies. We need to know how far the agriculturists who have availed themselves of the societies' credit have improved in their condition, how many of them have wiped out their debts. In the absence of definite information one is tempted to reserve even a qualified approval of the limited success which the movement has achieved so far.

The Co-operative Credit Societies Acts

The Co-operative Credit Societies Act of 1904 was simple and elastic in its principles. Societies were classified as rural and urban. The rural societies were

[1] Cf. Sir Dinshaw Wachha: "So far as these societies have been brought into existence for the purpose of relieving agricultural indebtedness, I for my part must pronounce them a failure . . . it may be said that the majority of those 70 to 80 per cent of the population who are engaged in agricultural pursuits are in an impecunious and indebted condition. At a very rough guess it has been estimated the total amount of such indebtedness cannot be at the lowest estimate less than 375 crores of rupees. There are those who put it at 500 crores of rupees. But take the lower estimate. Is it possible even after twenty-five years of the working of the co-operative societies that they could ever manage to wipe off this immense load of debt? Where are the members of such societies whose joint capital and credit can be of such a nature as to command the relief sought for? In my opinion it is beyond their power and capacity" ("Agricultural Banks in India," *Indian Journal of Economics* (1916), vol. i. part i., and *Some South Indian Villages*, p. 241. See also Harold Mann's *Land and Labour in a Deccan Village*).

all compelled to accept unlimited liability. A society of ten persons residing in the same town or village or the same group of villages, or, subject to the sanction of the Registrar, of the same tribe or class might be registered. They were given legal personality and authorised to raise funds and carry on their business in a corporate capacity. Loans could be given to members on personal or real security. Annual official audit was insisted on and the interest of members in the share capital was limited. In the case of rural societies, however, the principle of unlimited liability was applied to secure safety and close watch over members by one another. A Registrar was appointed in every province. Profits in the case of rural societies were in the first instance to be credited to a reserve fund or applied to the reduction of the rate of interest.

The Registrars appointed under the Act set themselves to work, starting model societies and doing propaganda work. The following figures give us an idea of the growth of societies up to 1911–12 :

Year.	Number of Societies.	Number of Members.	Amount of Working Capital.
			Rs.
1906–7	843	90,844	23,71,683
1909–10	3428	224,397	1,24,68,392
1911–12	8177	403,318	3,35,74,162

The Act of 1904 contained no provision for co-operative societies for distribution and for purposes other than credit ; the need for free supply of capital and for an improved system of supervision led to the formation of various central agencies to finance and control the original credit societies, and these agencies were without legislative protection. The Act of 1904 was an experimental measure and had never contemplated the use of capital other than the limited share-capital of the members. It could only touch the fringe of the agrarian problem,

and if the bureaucracy who piloted it hoped for more, they manifested a complete lack of insight into the nature of the problem.

Experience had demonstrated the need for further legislation, and the Act of 1912 legalised many co-operative societies which had hitherto no legal recognition. The old distinction between rural and urban societies was swept away in favour of a scientific distinction based on the nature of the liability of members, whether limited or unlimited. The registration of Unions, Central Banking Unions, and Central Banks was provided for, and a number of minor modifications introduced, but no provision was made on the subject of liquid resources to meet liabilities.

The Registrars were not only to perform the formal duties imposed on them, but to try to spread the movement. The success of the movement depended on two conditions—provision of funds and proper supervision. Both these conditions are glaringly absent in rural India. There are no funds, because the peasantry is too poor ; there is no proper supervision, as the peasantry is entirely uneducated. Outside capital could not be attracted, as those who have capital prefer to invest it in more secure and immediate reliable securities. Investment in land does not bring quick returns, and in all countries persons who have loanable capital prefer investment in other securities. Again investment in co-operative credit societies is not so tempting as investment in industrial concerns. So also with an illiterate and ignorant peasant class there is no scope for the play of mutual help, for the development of a sense of responsibility, for confidence, punctuality, and honesty of dealings. The hopes of promoting corporate responsibility were bound to be frustrated. In the absence of popular supervision and control the Registrar's powers became supreme and the movement came under the rigidity of official administration.

The Registrars in different provinces in the flush of

enthusiasm multiplied the number of societies. The number increased by 1914 to 14,881 with 695,998 members and Rs. 7,45,31,725 as working capital. Societies for the sale of produce, cattle purchase, milk supply, yarn, silk, and manure purchase, and the retail of farm implements and common necessaries were registered. The number of central institutions also grew rapidly. Before taking the responsibility of fostering further growth, Government was anxious to be satisfied that the movement was proceeding on lines economically and financially sound. A comprehensive resolution reviewing the progress of co-operative societies was issued in 1914, and a Committee was appointed to investigate the whole question. The terms of reference laid down the primary duty of the Committee to be "to examine whether the movement, especially in its higher stages and in its financial aspect, is progressing on sound lines," and to suggest measures of improvement if necessary.

The Maclagan Committee

The recommendations of the Committee were confined to agricultural credit only, as other types of the movement have not spread as yet on a large scale. The Committee laid down certain conditions for the successful organisation and working of the primary societies, the central unions and provincial banks. The whole organisation is classified under three heads: Primary Societies, Central Unions, and Provincial Banks.

(*a*) *Primary Societies.*—A primary agricultural co-operative credit society is formed firstly by ten persons who can borrow money for their agricultural needs by means of collective credit. The liability of each member is unlimited. There is thus a guarantee for repayment, as each member will exert moral influence and pressure on the others to ensure that the loan is used for productive purposes and is duly repaid. In the formation of a society the first essential is the careful selection of

honest members. The dealings are to be confined to members only, and the lending is to be for productive purposes. All business is to be transacted with the maximum of publicity, honesty, punctuality in payments. Frequent meetings are desirable for continuous vigilance and supervision. The Committee recommended the utmost care in the starting of new societies, that in the granting of loans and fixing the time of repayment due attention should be paid to the purpose for which they are advanced, and that the policy of lending to members at rates which are substantial but lower than the current outside rates should be continued.

(*b*) *Unions or Central Banks.*—As the funds from the share capital and deposits of members were not found sufficient, capital was drawn upon from the central co-operative financing unions. Unions are constituted by the primary societies, to advise on the grant of loans and to supervise the working. The internal resources of the societies must be supplemented by deposits from the public. The Committee recommended that the work of audit and supervision should be vested in the first instance in the unions and central banks, but that the ultimate responsibility must rest with the Government as represented by the Registrar.

(*c*) *Provincial Banks.*—In all provinces except Madras and Bombay the funds of the primary societies are provided by a number of local central financing institutions whose business covers a district or a subdivision. Each of these institutions is an independent co-operative society with limited liability. In Behar and the Central Provinces they are federated by an apex bank—the Provincial Co-operative Bank. In Bombay we have the Central Co-operative Bank at the head, which has a Government guarantee for interest on condition that it should lend money to co-operative societies at rates not exceeding 8 per cent. The term Provincial Bank is applied to the apex institution in each province which is intended to co-ordinate and control the finances of

the Central Banks. Some of these Provincial Banks keep current accounts, but generally they receive deposits from the public. The Maclagan Committee recommended the organisation of apex banks in all the provinces with wider powers.

These were briefly the recommendations of the Maclagan Committee. The Committee urged the organisation of apex banks obtaining capital from the outside world to support and feed the co-operative societies, and serving to direct capital and credit available from non-agricultural sources to agricultural purposes. The figures which we quote in the annexed table for 1920–21 fully bear out the necessity for drawing upon outside capital for the successful working of the primary societies. Whilst the total deposits and share capital of all the co-operative credit societies, agricultural and non-agricultural, taken together amount to 5 crores of rupees, the total amount of loans from private persons, other societies and banks, reaches 17 crores of rupees. These figures involve the same suggestion that we have made a little earlier, viz. that the agricultural classes in India have no savings of their own, that in this country it is idle to expect the members of the co-operative societies to bring sufficient capital to work the societies, and that the only alternative is to secure a flow of outside credit and capital through the Provincial and the Central Banks. We do not desire for a moment to condemn a system which facilitates the flow of credit for the development of agriculture; what we desire to emphasise is that a movement which seeks to raise credit with public deposits or Government help is not co-operative in the strict sense. The history of the last eighteen years of the co-operative movement in India bears witness to the fact that the financing of the primary societies has to be managed with the help of capital drawn from outside sources, that even with all the credit that the movement has been able to organise, it has only touched the fringe of the problem of indebtedness, and that under the name of co-operation

CO-OPERATIVE SOCIETIES IN BRITISH INDIA

Year.	No. of Societies at the close of year	No. of Members.	Loans from Private Persons, other Societies, and Banks.	Share Capital.	Deposits by Members.	State Aid.	Reserve.	Loan issued to Members and other Societies.
			Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1911–12	8,177	403,318	1,98,87,310	50,58,037	65,07,698	9,34,613	9,92,454	2,70,50,640
1920–21 (Central) . .	1,534	156,449	8,67,41,314	1,30,05,222	..	2,78,106	40,72,814	6,49,38,223
„ (Agricultural) .	38,697	1,261,368	7,27,62,908	1,20,67,241	65,23,095	26,36,926	1,41,43,504	5,56,76,078
„ (Non-agricultural)	2,860	339,108	1,07,07,900	1,02,86,045	85,96,837	5,40,279	17,24,910	2,87,90,319
1920–21—Total . . .	43,091	1,756,925	17,02,12,122	3,53,58,508	1,51,19,932	34,55,311	1,99,41,228	14,94,04,620

Government has been tinkering with a serious economic situation in a light-hearted manner.

But if the co-operative movement cannot adequately meet the situation, it points the way to a remedy—a measure which involves only the larger application of a principle which has been worked somewhat incongruously into the movement itself. The organisation and mobilisation of the credit of the country through the agency of a bank—a Central Agricultural Bank, with its branches scattered all over the country—seems to be a measure more full of hope and promise than the muddling policy of creating co-operative credit societies and propping up their transactions by non-co-operative methods.[1] A Central Agricultural Bank for all India, with head offices in the Provinces, and a network of branches all over the country, can alone find credit sufficiently large to wipe off substantially the indebtedness of the rural classes. The branches of such a bank with a Government guarantee and the backing and confidence which such a guarantee can inspire, could easily attract to themselves the small scattered hoardings such as exist, could afford opportunities for the investment of small savings in the form of deposits, could encourage habits of thrift among the masses; and such a network of banks need not in any way conflict with the work of the existing co-operative societies. Even in Western countries there are land mortgage banks side by side with co-operative credit societies. The banks can help in the wiping out of the rural indebtedness, while the co-operative societies afford current credit to the cultivators. There is room enough in this country for both.

Such a Central Bank as we are thinking of can even

[1] Cf. D. E. Wachha: "The indebtedness of the agriculturist is so colossal, while the resources by way of capital of the societies are so extremely limited and hedged in by restrictions and limitations, that there never can be any emancipation of the ryot from the slough of indebtedness. Agricultural banks are the only solution" (*Indian Journal of Economics*, vol. i. part i.).

claim to have its credit based upon the enormous resources of the Government now lying idle or used, if at all, in easing the London money market. There are 30 crores of rupees in the Post Office Savings Bank, 60 crores in the Gold Standard Reserve, and more than 75 crores of the fiduciary portion of the Paper Currency Reserve; we may add to this the annual favourable balance and the influx of precious metals. If there is any section of the Indian people who have a claim on those resources more than any other it is the agricultural population.[1] If only a portion of these total resources were made available through a bank for the building up of a credit superstructure, it would go a considerable way towards meeting the problem of indebtedness. The idea of an agricultural bank has the sanction of such eminent men as Dunbar and Hunter. Sir W. B. Hunter asserted emphatically before the Chamberlain Commission that the agriculturists should be assisted out of the resources of any Central Bank; and one of the reasons in its opinion for the creation of a Central Bank was "that it would form a link between what might be called the great banks of the country and the agriculturists, that it would link the money markets together, and that the Central Bank could undertake the task of lending to agriculturists, perhaps through co-operative societies."

It is urged sometimes that the securities afforded by these banks, or in the alternative by the co-operative credit societies, are not so sound and tempting as commercial securities. As Prof. J. C. Coyajee points out, there are special merits in the paper of co-operative societies as securities. In the first place, the Central Bank is consistently controlling and inspecting the affairs of the borrowing society, whereas such minute control and inspection are entirely absent as between

[1] "The Indian agriculturist has at least an equal claim to the benefits from these loans (from the fiduciary portion of the Paper Currency Reserve), and his need is even greater" (J. C. Coyajee, *Indian Journal of Economics*, vol. i. part 1).

the accepting house and the drawer of a commercial bill. Further, a primary society takes shares in a Central Bank in proportion to its borrowings, and this gives a further hold to the Central Bank on the borrowing society. The reserves of the primary societies very often go to buy shares in Central Banks, and in some cases behind the promissory notes there is the further security of deposits made by the Primary Society in the Central Bank. Besides all this, there is the unlimited liability of every member of the Primary Society.[1]

Let us then realise that the problem of agrarian indebtedness can never be solved by the co-operative movement in its present form, and that the only honest course is to recognise the need for a bank with a large credit superstructure built up with Government help and on the resources of Government. Such a bank may serve the double purpose of facilitating the mobilisation of small scattered hoardings and encouraging the formation of habits of thrift. Such a bank alone can hold forward the prospect of wiping out a considerable portion of the agrarian debt. Egypt was faced with a similar problem and met it by the organisation of an agricultural bank; and so can India. No multiplication of the number of co-operative credit societies of the type now instituted and no succession of Government inquiries and resolutions can solve the problem. On the other hand, with a bank on a large scale "the many petty Sowkars scattered over lakhs of villages in the country who now finance the impecunious ryot could be utilised" for the purposes in view. "They could be formed into a link in the chain between such institutions and the peasantry itself, as they have already done in Egypt."[2]

And finally, a word of caution. Co-operation as usually and properly understood, valuable as a means of education and uplift, can never, as we have seen, enable the country

[1] "Co-operative Progress," *Indian Journal of Economics*, vol. i. part 1.

[2] Sir D. E. Wachha.

to be rid of the dead weight of indebtedness. An agricultural bank on a huge scale, with State guarantee and State resources as the foundation of its credit, may succeed where co-operation proves inadequate; but its success will depend not so much on itself as on the environment in which it works. A State bank of this kind cannot by itself work wonders; we must never forget the need for a comprehensive, well-directed policy, including the spread of education, rapid industrialisation, and a revenue administration sympathetic in spirit and elastic in its methods of dealing with the cultivators. With such a change in the environment, a bank of the type we are contemplating may safely be trusted to respond to the demands made upon it for lifting the agricultural classes from the slough of indebtedness.

CHAPTER XVII

AGRICULTURAL ORGANISATION

For the success of any industry in our times organisation is indispensable. It has become the keystone of modern methods of production. It is hardly any exaggeration, however, to say that agriculture in India is not yet organised. If there is any organisation at all, there is an organisation of middle-men who buy off the cultivators' produce long before it is actually harvested, both for internal consumption and for export. In the past every village in India was economically self-contained ; it was a regime of local economy, in which the cultivators who formed the village unit directed production, controlled it, increased or decreased it according to their changing requirements—in short, adjusted production to their needs. That earlier rural organisation has been, as we have already observed elsewhere, subjected to changes which have resulted in conditions which are neither based on local economy nor national economy nor even internal economy, but are marked by a complete absence of organised efforts, and, if they show any definite trend of production at all, involve a direction of agricultural production calculated to foster British Imperialistic interests, as in the increase in the production of wheat, cotton, and jute for export. Our primary need in the matter of agricultural policy is the need for organisation ; not the type of organisation which in the West represents the unregulated activities of the capitalist and the business man producing for profits and personal gain,

but an organisation directed and controlled by social purpose, by considerations of the general welfare of the people, adjusted to what the country requires in the shape of necessaries and raw materials. The war has opened the eyes of the Western nations to the need for a revival of agriculture. There is a serious shortage in the production of food-stuffs, and the decline in foreign trade of the industrialised countries has compelled them to think of increasing their own agricultural production. Even in a country like Great Britain the State, which had hitherto moulded its policy on lines of *laissez-faire*, has now been forced into activities of a far-reaching character for the promotion of agricultural research and the diffusion of information, into a policy of making advances of working capital to farmers, and of providing facilities for marketing agricultural produce. And yet the English farmer is a man of capital and resources, ready to resort to and utilise improvements and advances in intensive methods of cultivation, used to large-scale production and organised methods of buying and selling. If Great Britain with its favourable conditions in the shape of a well-informed and resourceful farming population recognises to-day the advisability of organisation controlled by a social purpose, what shall we say about the need for organisation in India with a population predominantly agricultural, with a peasantry illiterate, resourceless, mostly in the hands of moneylenders in very many provinces ?

There can be nothing more disastrous than the present policy of drift in agricultural matters, a policy that directs its efforts to the improvement of cotton and wheat seeds, that fosters the extension of the cultivated area for jute and barley for foreign exports, whilst an underfed population keeps clamouring for more and cheaper food. The policy that we need is one that will favour the production of food-stuffs for the people, that will prevent or restrict the exportation of rice or wheat by export duties, that will extend the cultivation of food crops in preference to commercial crops, that will conserve the manuring resources

in the shape of bones and cow-dung and oil-cakes to prevent the exhaustion of the soil.

But we need more by way of organisation—we need an organisation for the provision of credit, for the purchase of seeds and implements, for the supply of manure, and for the marketing of the produce. We need an agricultural banking system with a large capital, with branches all over the country, with the credit facilities which Government can command placed at the disposal of the banks. India is a country of small farmers; we have been repeatedly told by officials of the uneconomic size of the average holding. In Ireland, in Denmark, and in other parts of the Continent agricultural prosperity has been largely assisted by the principles of co-operative credit; and India is peculiarly adapted to a system of co-operative banking, with its population bred in traditions which favour a willingness to accept responsibilities for the liabilities and engagements of others.[1]

Agricultural Education

It is a truism that the most immediate requirement of India for progress of any kind is the diffusion of knowledge through existing voluntary agencies, and much more through a system of organised education both free and compulsory. But simple primary education, whilst it may level up the intelligence of the people, will not of itself suffice for the purpose of raising up amongst us an intelli-

[1] Cf. G. W. Russell's remarks in connection with Ireland: "We want pioneers of civilisation to go out into our country districts, with a divine passion in them, the desire of the God-implanted spirit to make the world about them into some likeness of the Kingdom of Light. . . . The men in every rural district, united together, could make the land they live in as lovely to look on as the fabled gardens in the valley of Damascus. They could have fruit trees along the hedgerows and make the country roads beautiful with colours in spring. This has been done in many a rural commune on the Continent, and there is no reason why it should not be done here. Only let us get our men together, get them organised, and one improvement will rapidly follow another. . . . If we are to have any rural civilisation in Ireland, it must spring out of co-operation."

gent progressive class of cultivators. We need primary education to be supplemented by a provision for agricultural education. The necessity for education was recognised as early as 1880, when the Famine Commission pointed out that no general advance in the agricultural system could be expected until the rural population had been educated; and yet we find we have not made any considerable advance in the matter of education even to-day. Dr. Voelcker emphasised the need for education in his report, and the Board which considered the report suggested that agricultural education should be combined with primary education, that the elementary principles of agriculture should form an important part of the curriculum of village schools, that proper teachers and text-books should be provided. But none of these recommendations have yet been carried out. The President of the Board of Agriculture observed in 1922:

> The Board (1917) recommended that while rural education was primarily the business of the Education Department, in view of the possibility of a demand for a purely agricultural education arising through a general advance in the people themselves, a limited number (one or two in each vernacular tract) of agricultural schools based on the Lom model should be opened as an agricultural measure.

The Agricultural Department is afraid that education for the rural classes might involve a cut in the expenditure for work in agricultural research. Research in India, so far as agriculture is concerned, has been said to be directed with an eye to the development and improvement of export crops. But even assuming it to be otherwise, money spent on research must in the natural course of things follow rather than precede expenditure on the diffusion of knowledge of the elements of agriculture. Considering the vast area under cultivation and the numbers of the agricultural population, the provision for agricultural education is entirely inadequate. The following figures are significant: in 1921–22 there were 6 Agricultural Colleges in the whole of India, 16 Agri-

cultural Schools, and 1 Research Institution at Pusa. All these institutions taken together had 1154 students. In France there are 71 colleges with 2200 students; and Belgium has 70 colleges with 5000 students, Denmark 99 colleges with 9561 students.

If agriculture is to improve, and if the country is to avail itself of scientific methods of farming, we must have first a basis of free primary education; and on this basis can be erected a superstructure of agricultural schools, colleges, and research institutions, in touch with the current requirements of the cultivators, helping them at every stage by the application of theoretical principles. But education by itself, even dominantly agricultural education, will not bring in the millennium; intensive farming requires capital and credit; and training in scientific methods would be valueless in the absence of credit facilities.

Agriculturists and Agricultural Labour

We have seen that nearly 72 per cent of the total population of India is agricultural, but if we examine statistics in detail we find that a large proportion of this population are not actual or active workers. According to the census of 1921 there were in British India 173,123,061 ordinary cultivators, of whom only 74,664,886 were actual workers, while there were 37,924,917 farm servants and field labourers, of whom only 21,676,107 were actual workers. When we are told of the growing scarcity of agricultural labour in recent years we must keep in mind that this scarcity refers to actual workers and not to the total number of persons available for work.

The agricultural population may be divided under three heads—the landlords, the proprietors or peasant owners in the Rayatwari areas, and the tenants both in the permanently settled areas and in the Zemindari tracts, and finally the landless labourers. The landlords do not work

on the fields; they are parasites enjoying the unearned increment, and we leave them out in our present discussion. The second class, which consists of the actual cultivators, are industrious, hardy, efficient; they work on the fields with their families and are occupied all the year round. The efficiency of the cultivators has attracted the attention of foreigners. Dr. Voelcker says:

> At his best the Indian rayat or cultivator is quite as good as, and in some respects the superior of, the average British farmer, while at his worst it can only be said that this state is brought about largely by an absence of facilities for improvement which is probably unequalled in any other country, and that the rayat will struggle on patiently and uncomplainingly in the face of difficulties in a way that no one else would.[1]

We are told that the standard of life of the Indian peasant is low; that this low standard, lack of ambition, a sense of contentment described as pathetic, have combined in bringing about a class of idlers, especially amongst those engaged in the production of commercial crops, which in recent years have fetched high prices.[2]

Regarding the landless labourers who constitute the

[1] *Report on the Improvement of Indian Agriculture* (1893), p. 11.

[2] "The fact is that since the Indian farmer has had access to the world's market he has managed to secure a much better price for his produce than was formerly possible. . . . It is a matter of general comment that whole classes of cultivators who formerly used to do their field work have now ceased to take any active part in field operations. This is said of the Patidars in Gujarat, of the better-class Lingayets in the Southern Maratha country, and of the more substantial cultivators everywhere. . . . Amongst the agricultural classes of Patidars, Kunbis, Anantas, Boras and Rajputs in Gujarat, practically no one does any actual field labour nowadays, and he (Mr. G. N. Desai) estimates that amongst these classes above 300,000 able-bodied men have during the last generation been withdrawn from the ranks of active labourers in this way and added to the class which lives on the land without doing any actual field work" (Keatinge, *Agricultural Progress in Western India*, pp. 145-147). This is not the whole truth. There is no doubt that some cultivators have ceased from working in the field; but it is not so much because they find it unnecessary to work, as because they find it unprofitable to work—their holdings being uneconomic and the cost of production greater than the return. As to the Indian farmer being content with his lot and refusing to

world of agricultural labour, they are at present in a worse condition economically than other sections of the population. During recent years there has been some improvement in their condition owing to increasing demand; but their wages are still paid in kind in many parts of the country, and where their money wages have increased it is doubtful if their real wages have also increased. Agricultural labour is inarticulate, uneducated, and unorganised. It is pertinent to remember that when we ordinarily speak of the labour problem in India, we generally think of the factory labourers, whose numbers are very small as compared with those of agricultural labourers. With the increasing emancipation of the labourers, with the substitution of wages in money for wages in kind, with the standing temptation of higher money wages in the cities, with increasing facilities of travelling by railway and the increasing outlets for better employment in industrial centres, and with the spread of education, the problem of agricultural labour is likely to become a serious problem. We hear even to-day of agriculturists giving up their work owing, *inter alia*, to the scarcity of labour. But the cause for alarm is not serious when we remember that the use of mechanical appliances in the future may secure economy of human labour. The country to-day is passing through a period of transition, and what is going on in the country as a whole may be gathered from the following observations about the Central Provinces and Berar:

> Old customs based on the idea once appropriate to the village economy, but now no longer applicable, are beginning to lose their force. The theory of the self-contained village, with its dependent fringe of non-cultivating artisans and servants, is breaking down. The cultivator is refusing to allow the menial castes to take away the hides of his dead cattle, now a valuable product. The village artisan finds

work if he fetches a higher price for his crop, one may treat it as one of those political shibboleths which pass unquestioned in the absence of critical insight into the principles of social psychology.

that the towns offer him better wages; where he is not tied to the village by the possession of land, he is leaving it; and where he stays he is raising his charges. Relations between landlord and tenant tend to become more purely economic. The practice of unpaid customary labour for the landlord is dying out, and with the increased wages for paid labour there is a marked tendency to restrict the extension of home farm, and to give out land on premia or cash basis, a policy much the same in fact as that which landlords were compelled to adopt in England and elsewhere after the Black Death denuded the village of its labourers or small cultivators.[1]

Conclusion

Our discussion of the agricultural problems of India has made it clear that the country is endowed with a wealth of natural resources in the shape of a fertile soil, plenty of water, and a bright sun ripening two crops a year in many parts of the country. It has also made it clear that the population dependent on the soil is living a half-starved existence, that the majority are heavily in debt, and that want of credit and resources are largely responsible for the backwardness in agricultural output that strikes the observer even on a superficial survey. This poverty and low productivity are further aggravated by the consequences of a foreign rule which through its railway policy and fiscal policy and its general administrative methods has brought about the decline, if not the total destruction, of the indigenous industries and thrown the industrial population on the land. It may be that when the East India Company entered on a policy of territorial acquisition over a hundred years ago, it had in mind only the obvious and easily available advantages of a foreign market for the sale of finished com-

[1] *Report on Moral and Material Progress* (1913), p. 404: "The temptation to indulge in comparisons between the relative efficiency of the Indian agricultural labourer and the labourer in other countries is often too great to resist. It is useful to remember in this connection that efficiency is relative and adjusted to needs; the man who from the American business man's point of view is efficient, may be thoroughly inefficient in a polity modelled on Plato's *Republic*, where human wants are not disfigured into monstrosities by commercialised institutions."

modities in exchange for such goods as India could supply, either finished products or raw materials. There may not have been from the commencement any well-planned comprehensive scheme for the utilisation of India's raw materials at a time when the newly acquired African and Australian possessions were available for the supply of food-stuffs as well as raw materials of all kinds. But Britain's fiscal policy stimulated the imports of cheap machine goods which displaced indigenous industries, her railways facilitated the exports of food-stuffs and raw materials, her land revenue policy told unfavourably on the conditions of the agricultural population ; and to-day Great Britain finds that she has muddled through into a situation in which India is not merely a large market for her finished goods but also the main source for the supply of food-stuffs and raw materials. The self-governing colonies can no longer be regarded as plantations for the supply of such materials ; America, hitherto a source of supply, threatens to cut off these supplies ; markets on the Continent are no longer so reliable as they were before the war ; with the result that a policy of exploitation into which Great Britain more or less accidentally and unconsciously found herself stepping has now become more vital to her national existence and to the requirements of her overgrown population. Even to-day, faced with this situation, Britain's policy towards India ought to dictate in her own interest an all-round agricultural development for India based on the relaxation of her land revenue exactions, on the concentration of her public resources towards the creation of credit for agricultural needs, on the revival of indigenous arts and industries for the diffusion of wealth. It is almost tragic to behold the complete absence of such foresight, to find that the activities of her Agricultural Department in India should be confined to the introduction of improved seeds of wheat and cotton, to the encouragement of the growth of long-stapled cotton and other crops which are useful, not for the purposes of the indigenous population,

but for the needs of the foreign consumer and manufacturer. And we find during the last few years this interest in export crops further developed by concessions to foreign syndicates for the working of cotton plantations in the Punjab and in Sind, and by the floating of the Sukkar Barrage scheme. And whilst millions may be spent in schemes like these, the agricultural population is allowed to rot in ignorance and poverty, to persist in its methods of cultivation that tend to the exhaustion of the soil; and the resources made available by the sweat of the peasants, instead of being used for the uplift of the peasantry, are to be frittered away in giving increased emoluments to a parasitical bureaucracy or transplanted to foreign lands to ease other people's financial stringencies.

CHAPTER XVIII

INDIAN INDUSTRIES

Indian Industries in the Past

The Indian Industrial Commission began their report with the observation that "at a time when the west of Europe, the birthplace of the modern industrial system, was inhabited by uncultured tribes, India was famous for the wealth of her rulers and for the high artistic skill of her craftsmen," and that "even at a much later period when traders from the West made their first appearance in India, the industrial development of this country was at any rate not inferior to that of the more advanced European nations." The early introduction of cotton-spinning and weaving into India, and the extent to which they were practised as domestic employments, are attested by numerous passages in the Vedas. "Cares consume me as a rat gnaws a weaver's thread"; "day and night, like two female weavers, interweave the extended thread." Sayings like these bear witness to the familiarity of the weaver's art in those early days. The Pharaohs of Egypt used to wrap their mummies in Indian muslin and fashion their jewel-boxes from the ivory and gold and sandal-wood of India. The muslins of Dacca were known to the Greeks under the name of *Gangetika*.[1] With regard to the iron industry we are told that in the past it "not only supplied all local wants but it also enabled India to export its finished products to foreign countries.

[1] *Imperial Gazetteer*, vol. iii. p. 195.

The quality of the material turned out had a world-wide fame. The famous iron pillar near Delhi, which is at least fifteen hundred years old, indicates an amount of skill in the manufacture of wrought iron which has been the marvel of all who have endeavoured to account for it. Mr. Ball (Deputy Superintendent of the Geological Survey) admits that it is not many years since the production of such a pillar would have been an impossibility in the largest factories in the world, and even now there are comparatively few factories where such a mass of metal could be turned out." [1] The manufacture of steel and wrought iron had reached a high stage of perfection at least two thousand years ago. India was famous likewise for her silk manufactures, her woollen shawls, her boxes of sandal-wood inlaid with steel and ivory, her cabinet work and her cutlery. Her internal resources were not only sufficient to supply her inhabitants with almost every article of necessity and comfort, but attracted the attention of foreigners. It is likely that even as early as the days of the Rig-Veda they were familiar with traders from abroad who came in ships. Sufficient evidence of Indians having had relations with foreign merchants, and of their own share in such trade, exists in the settlements which they are alleged to have established in the island of Java. There was likewise an extensive land trade carried on by means of caravans.

In the days of Akbar these traditions of her arts and manufactures were jealously preserved. Even the official apologist of British rule [2] has to admit the existence in those days of a considerable and flourishing silk industry that consumed 3,000,000 pounds of raw material; that Indian cotton goods as well as silk goods were exported in substantial quantities to Persia, Turkey, Syria, Barbary, and Arabia. It was the fine linens and prints, the jewels and embroideries of India, that enabled the East India Company in the eighteenth century to pay its bondholders

[1] M. G. Ranade, *Essays on Indian Economics* (1906), pp. 171-2.
[2] W. H. Moreland, *India at the Death of Akbar*, chap. v.

average profits of 117 per cent for the first few decades of its existence and to sell stock issued at £100 at as much as £500. The rivalry amongst the European traders to secure a footing in India at that time was occasioned, not by the raw produce of the country, but by the value and the variety of her manufactures and crafts. Dyeing, rug-making, fine embroidery, metal work, damascening of arms, carving, paper-making, all flourished on a large scale and maintained a considerable proportion of the population. Through the agency of the Dutch and English East India Companies " Indian goods became familiar in Amsterdam, London, Paris, and other markets ; the tastes of consumers were made known in the areas of production ; and the East was searched systematically for commodities which might command a profit in the West." [1] The activities of the European traders brought economic benefit to weavers, to growers of indigo and cotton, to producers of silk and saltpetre, to the land transport industry, and to export merchants. " Less than a hundred years ago," wrote Sir Henry Cotton in 1890, " the whole commerce of Dacca was estimated at one crore of rupees, and its population at 200,000 souls." [2]

The Influence of British Rule on the Economic Life of India

Within half a century after this there was brought about a sudden change in the economic conditions. In 1817 the exports of Dacca had ceased altogether. The arts of spinning and weaving, which for ages had given employment to a numerous and industrial population, gradually became neglected arts. Large numbers of families formerly living in a condition of relative affluence were driven from the towns to the villages.

The rapid change from an India with a well-balanced economic equilibrium, with a population fairly well dis-

[1] W. H. Moreland, *From Akbar to Aurangzeb*, p. 141.
[2] *New India*, p. 104.

tributed between agriculture and industries, to an India with a predominantly agricultural population was brought about by two causes. In the first place, the end of the eighteenth and the beginning of the nineteenth century saw vast and revolutionary changes in the methods of production in Great Britain and elsewhere. Production on a large scale leading to division of labour had already set in when there followed a series of mechanical inventions affecting first the textile trades and later on other industries. In the middle of the eighteenth century British industry was largely of the cottage or domestic type; a hundred years later the factory system had become predominant. The infant industries of Lancashire and Manchester demanded protection. Henry St. George Tucker, a director of the East India Company, made the statement in 1823 that Indian silks and silk and cotton mixtures had already been excluded from the British markets, and that by the operation of a duty of 67 per cent, and also owing to the effect of superior British machinery, not only had the cotton fabrics of India, hitherto her staple product, been displaced, but they were exporting cotton to India.[1] According to Mr. Digby, in 1813, Indian cotton manufactures were liable to the following charges in England:

	£	s.	d.
Calicoes for every £100 of value	81	2	11
Cotton, raw (per 100 lb.)	0	16	11
Cotton, manufactured	81	2	11
Hair or goat's wool manufactures	84	6	3
Flowered or stitched muslins or white calicoes (for every £100 in value)	32	9	2
Other manufactures of cotton not otherwise charged	32	9	2[2]

Nor was this all; not satisfied with excluding Indian cotton from her own market, first by loading them with oppressive duties and later by underselling them, the British manufacturer assumed the offensive and appeared

[1] Fred. B. Fisher, *India's Silent Revolution*, p. 36.

[2] *Prosperous British India*, p. 90: "These charges were subsequently removed out only after the export trade in them had, temporarily or permanently, been destroyed."

as seller in the Indian market. In 1823 St. George Tucker observes: "The silk manufactures of India and its piece goods of silk and cotton intermixed have long since been excluded altogether from our market; and of late, partly in consequence of the operation of a duty of 67 per cent, but chiefly from the effect of superior machinery, the cotton fabrics which heretofore constituted the staple of India have not only been displaced in this country, but we actually export our cotton manufactures to supply a part of consumption of our Asiatic possessions. India is thus reduced from the state of a manufacturing to that of an agricultural country."[1] The shipping industry of India followed suit; Indian ships were displaced by the British mercantile marine; and the same story may be recounted of other arts and handicrafts.

But the period that saw this rapid transformation of English industries coincided largely with the growth of her control over her Indian possessions. Already in the eighteenth century colonies were looked upon as plantations, whose raw produce was grown only to be sent to the mother country to be manufactured and re-exported to the colonies and to the rest of the world. The American War of Independence had put an end to this policy of economic exploitation so far as the colonies were concerned; the greater colonies in Africa and Australia which grew up in the last century have been left to work out their own economic destinies without interference from the mother country. But greater than these colonies was the dependency of India, over whose territories Great Britain acquired increasing control in the early part of the nineteenth century. The raw materials that had once been supplied by the colonies could now be supplied by India, which with the lapse of time increasingly became a plantation "growing raw produce to be shipped by British agents in British ships, to be worked into fabrics by British skill and capital, and to be re-exported to

[1] Quoted by R. C. Dutt in his *Economic History of British India*, p. 262.

India by British merchants to their corresponding British firms in India and elsewhere."[1]

The Need for Industrialisation

The result of this policy of Great Britain has been, as we have already indicated in an earlier chapter, the increased ruralisation of the country; 72 per cent of the population is dependent on agriculture; the co-ordination of occupations which once existed to a large extent, which distributes the population between those who produce the raw materials and food, those who transform these materials into manufactured commodities, and those who exchange and circulate them, has now given place to an economic organisation in which the large majority are dependent on the single and somewhat precarious resource of agriculture. In this ruralisation is to be sought the ground of Indian poverty. Sir William Hunter spoke of 40,000,000 souls who go through life on insufficient food. In 1900 William Digby spoke of 70,000,000 continually hungry people in British India. Mr. Moreland in 1917 observes: "It is a matter of common knowledge that the present income of the country, even if it were equitably distributed, would not suffice to provide the population with even the indispensable elements of a reasonable life. This fundamental factor of poverty is unquestionably co-related with the undue preponderance of agriculture as a means of livelihood."[2] The Famine Commission of 1880 clearly grasped the fundamental economic issues at stake when it pointed out that the only remedy for the recurring disasters of famine was the rapid industrialisation of the country, providing diversified employments to the people.

Economic theory in the past has too often been a reflex of actual tendencies, an analysis of what is, instead of being a humane science, a study of the needs of men

[1] Ranade, *Essays*, p. 106.
[2] *Quarterly Review*, April 1917.

and of the means of adequately satisfying them with the least waste of energy. Under the influence of an economic order resting on capitalism, large-scale production, and specialisation of labour, the economic theory of the last century proclaimed the necessity of dividing the whole of humanity into national workshops each producing its own speciality. India was an agricultural country like Hungary and Russia, and therefore it was predestined to grow corn in order to feed the manufacturing countries; Britain had to provide the world market with cottons and iron goods, and Belgium with woollen manufactures, and this sanctification of the *status quo* found expression even as late as three or four years back in the evidence submitted by a few English officials to the Industrial Commission. But as the individual has revolted against an order which seeks to degrade him to the position of a machine by increasing specialisation, and has asserted his claims to be treated as a man, so nations in our times have refused to be specialised. Each nation is a living organisation, with tastes and inclinations, wants and resources of a diversified nature. The territory occupied by each nation is also a varied texture of soils and climates, of hills and valleys, of fertile tracts watered by rivers, and deserts. Where there is life there is differentiation and variety. And all of us who to-day claim for India the urgency of industrialisation will do well to remember that the ultimate ground on which such a claim should be founded is the need for national self-assertion, the desire on the part of India as a nation to live the highest life which is possible to her under God's dispensation. As the realisation of a full life on the part of the individual presupposes freedom from the uncertainty of finding his daily bread, so a full national life presupposes economic self-sufficiency on the part of the nation. Modern commercialism in the West, while it talks of peace and of the blessings of interchange of commodities as between nation and nation, rests on a basis of class-war and leads to division of occupations as

between country and country, which is a reversion to the primitive simplicity of unicellular organisms. Under the mask of peace and the blessings of commerce is the poisonous reality of war, the ugliness and squalor and waste of competitive production for profit. What the world needs is a commerce of a different kind resting on a basis of equality as between the nations that enter into it, a commerce that serves man and nations and does not degrade them into the uniformity and simplicity of machines. Such commerce presupposes many-sided individual nations, each with its own fully developed and diversified economic activities, sharing their surplus goods with one another, each contributing through its own creative efforts its quota to the general stock that promotes the well-being of the human race. Commerce has hitherto meant interchange of the bare necessities of life or exchange of raw materials for finished goods. These things cannot grow by being shared. The raw material that is exported can never feed the hungry thousands or support the labour of those thousands that remain within the country; they are the loss that corresponds to the economic gain of the importing country. But each country may exchange its superfluities, its economic surplus in the sense of the surplus that is the outcome of a national energy freed from the fear of hunger and unemployment; and such surpluses grow and multiply by being shared and exchanged. Such industrialism and such commerce will find room for large-scale production and for cottage industries, will be based on a many-sided economic life and on a well-balanced economic organisation.

Position and Prospects of Industrial Development in India

India is and will remain, it has been repeatedly said, primarily an agricultural country. Whatever development takes place on the industrial side, agriculture will continue to be the occupation of the great mass of the people. We have already noted elsewhere how low is the

agricultural productivity of the country at present, and what enormous potentialities of agricultural efficiency lie in the future. The yield per acre in India, whether of sugar or rice, wheat or barley or cotton, is ridiculously low as compared with the yield in other countries. We have also noted how this production is more than sufficient for the needs of the people, and if increased up to the limits of efficiency can sustain an enormously larger population than the present.

In addition to these agricultural resources, India contains extensive deposits of coal, iron ore, lead, zinc, copper, and other minerals, as well as immense other resources out of which valuable industries can be built up. India, in brief, contains all the possibilities of economic self-sufficiency.

Before the war, Indian industries were few in number, and consisted of textile factories for cotton and jute, silk and wool; railway workshops; collieries; flour- and paper-mills, rice- and oil-mills; and iron and steel works started about 1912 by the Tata Iron and Steel Co., Ltd. After the outbreak of the war, the Government of India organised the Indian Munitions Board in 1917 to control and develop Indian resources with special reference to the needs of the war and to apply the manufacturing resources of India to war purposes. The Munitions Board, whilst it was organised primarily for furnishing war supplies, incidentally fostered the growth of indigenous industries by the direct purchase in India of all articles and materials needed for the army, by the diversion by means of the priority system of all orders for articles from the United Kingdom and elsewhere to manufacturers in India, and by giving assistance and advice to individuals and firms in importing plant and engaging technical experts. Amongst the articles for which the Board refused to recommend priority on the ground that they could be manufactured in India were carbolic and sulphuric acids, caustic soda, magnesium chloride, zinc chloride, brushes and brooms, leather and cotton beltings, cast-iron piping,

lamp chimneys and globes, chrome leather, fire bricks, glass dishes and jars, penknives and pruning knives, scissors, linseed oil, lubricants, metal polish, turpentine, paints and varnishes, soaps, tallow, twine, paraffin wax, cast-iron wheels, hand tools, etc. The list that has been enumerated shows at any rate the variety of goods the manufacture of which has been started under the influence of artificial protection afforded by the war.

The Cotton Industry

The Indian cotton industry dates as far back as 1851, when the first mill was started; but complete statistics are not available up to 1879–80. The following table gives us quinquennial averages from 1879–80 to 1918–19 and annual figures for each of the years 1916–17 to 1920–21:

	No. of Mills.	Authorised Capital	Persons employed.	Looms.	Spindles.
		Rs.			
Average 1879–80 to 1883–84	63	6,57,60,000	51,000	14,500	1,610,600
,, 1884–85 to 1888–89	93	8,87,90,000	75,700	18,200	2,296,800
,, 1889–90 to 1893–94	127	11,61,70,000	116,100	25,300	3,263,800
,, 1894–95 to 1898–99	156	14,19,50,000	150,000	36,600	4,046,100
,, 1899–1900 to 1903–04	195	16,87,90,000	171,600	42,000	5,000,900
,, 1904–05 to 1908–09	218	18,78,70,000	216,400	60,000	5,549,100
,, 1909–10 to 1913–14	257	22,43,30,000	243,800	88,100	6,406,400
,, 1914–15 to 1918–19	265	24,17,20,000	277,600	110,700	6,629,800
1916–17	267	23,05,80,000	277,300	110,800	6,670,200
1917–18	269	24,66,30,000	284,000	114,800	6,614,300
1918–19	264	28,17,60,000	290,300	116,100	6,590,900
1919–20	263	38,83,60,000	305,500	117,600	6,714,300
1920–21	257	..	332,200	123,800	6,870,800
1921–22	298	..	343,700	134,600	7,331,000

The total production of yarn in the mills in British India and the figures of exports are stated below in lbs.:

	Nos. of Counts 1 to 25.	Counts above No. 25.	Total Production.	Total Exports.
Average 1896–97 to 1900–01	423,906,000	20,082,000	443,989,000	198,002,000
,, 1901–02 to 1905–06	537,379,000	39,935,000	577,314,000	270,818,000
,, 1906–07 to 1910–11	555,373,000	53,392,000	608,926,000	228,318,000
,, 1911–12 to 1915–16	576,997,000	59,245,000	636,877,000	178,684,000
1916–17	574,746,000	69,354,000	644,446,000	177,468,000
1917–18	548,699,000	77,877,000	626,800,000	130,223,000
1918–19	507,899,000	72,430,000	580,560,000	72,480,000
1919–20	529,668,000	67,430,000	597,355,000	160,315,000
1920–21	..	..	660,002,000	82,535,000
1921–22	..	..	692,313,000	81,003,000

The outstanding feature of the piece-goods trade during and after the war has been a diminution in the total imports of nearly 80 per cent. The following figures of the imports of piece-goods of British manufacture—grey, bleached, coloured, and printed—into Bombay, Calcutta, and Madras carry their own tale:

Year.	Piece-Goods. Quantity in Yards.		
	Bombay.	Calcutta.	Madras
1912	658,026,000	1,451,819,000	173,698,000
1913	804,333,000	1,547,872,000	210,797,000
1914	617,498,000	1,378,930,000	160,552,000
1915	354,966,000	1,052,246,000	106,332,000
1916	481,857,000	1,035,437,000	88,153,000
1917	851,853,000	898,872,000	78,886,000
1918	429,754,000	449,044,000	33,046,000
1919	275,575,000	423,299,000	37,684,000
1920	569,054,000	656,277,000	69,872,000
1921	265,737,000	744,049,000	50,486,000
1922	410,500,000	852,153,000	77,563,000

Whilst British imports thus show a steady decline as compared with pre-war years, there has been a phenomenal expansion of the imports of piece-goods from Japan. Whereas in 1913–14 the United Kingdom's imports of grey piece-goods were 98·8 per cent of the total as against Japan's ·5 per cent, in 1920–21 the percentages stood respectively at 72·4 and 25·9, and in 1921–22 at 82·8 and 13·1.

The following comparative statement of the production of cloth in yards by Indian mills will bear witness to the growth of the industry and the possibilities before it in the shape of displacing the foreign imports by its own manufactures, in the production of those types of piece-goods of which Lancashire does not enjoy a monopoly—*e.g.* dhooties, shirtings, and long cloths.

	Total Cloth Production by Indian Mills, in Yards.		Total Cloth Production by Indian Mills, in Yards.
1912 . .	1,136,150,000	1918 . .	1,614,120,000
1913 . .	1,220,440,000	1919 . .	1,450,720,000
1914 . .	1,164,290,000	1920 . .	1,639,770,000
1915 . .	1,135,700,000	1921 . .	1,580,840,000
1916 . .	1,441,510,000	1922 . .	1,731,570,000
1917 . .	1,578,130,000		

The Jute Industry

The growth of the jute industry will be disclosed by the following table :

	No. of Mills.	No of Persons employed.	Looms.	Spindles.	Value of Jute Exports.
					Rs.
Average 1879–80 to 1883–84	21	38,800	5,500	88,000	1,24,90,000
„ 1884–85 to 1888–89	24	52,700	7,000	138,400	1,62,90,000
„ 1889–90 to 1893–94	26	64,300	8,300	172,600	2,89,30,000
„ 1894–95 to 1898–99	31	86,700	11,700	244,800	5,18,00,000
„ 1899–1900 to 1903–04	36	114,200	16,200	334,600	8,26,50,000
„ 1904–05 to 1908–09	46	165,000	24,800	510,500	14,42,70,000
„ 1909–10 to 1913–14	60	208,000	33,500	691,800	20,24,80,000
„ 1914–15 to 1918–19	73	259,300	39,700	821,200	40,19,30,000
1917–18	76	266,000	40,600	834,000	42,84,30,000
1918–19	76	275,500	40,000	839,000	52,65,20,000
1919–20	76	280,400	41,000	856,300	50,01,50,000

Woollen Manufactures

The following table gives us the value of woollen goods manufactured in the country as well as the value of the goods imported :

	Value of Goods produced in India.	Value of Goods imported.
	Rs.	Rs.
1915	1,23,01,000	86,05,000
1916	1,66,59,000	1,64,04,000
1917	2,01,10,000	2,28,00,000
1918	2,00,15,000	2,05,96,000
1919	1,64,99,000	1,47,46,000

Before 1915 the value of the woollen goods imported into India was much greater than that of the production in Indian mills. In 1915 the production exceeded the imports. In 1917 the imports regained their position, but in 1919 they again fell below production. In 1921–1922 there was a serious decline in the imports, attributed to heavy stocks in Bombay and elsewhere. But the Indian woollen mills are beginning to compete in the production of finer serges ; and there are large potentialities for the woollen industry in the future.

Mineral Production

The table on following page shows the development of the mineral resources of the country and the growth of mineral production from 1911.

Coal

The coal industry is perhaps the most important of the mineral industries of India. The demand for coal has increased so rapidly that some apprehension has been caused by the recent decrease in production. This decrease in output has been assigned to fewer working hours and to the decrease in output per head, with a mining population that is never steady and the majority of whom go off periodically to attend to their fields. What is most significant about the industry is the remarkable difference between the average value of the coal at the pit's mouth and the declared export value per ton, as will be seen from the following figures :

	Export Value per Ton.		Value at the Pit's Mouth per Ton.	
	Rs.	As.	Rs.	As.
1915	9	3	3	5
1916	9	2	3	6
1917	9	5	3	11
1918	10	9	4	6
1919	11	14	4	8

The following figures in tons show the quantities of foreign coal imported into British India :

	Tons.		Tons.
Average 1891–1895 .	705,000	1916 . . .	34,000
„ 1896–1900 .	333,000	1917 . . .	44,000
„ 1901–1905 .	205,000	1918 . . .	54,000
„ 1906–1910 .	344,000	1919 . . .	48,000
„ 1911–1915 .	427,000	1920 . . .	86,000
		1921- . . .	1,489,000

The phenomenal rise in the imports of coal in 1921 was the result of the high price of Indian coal due to

Year.	Coal.	Iron Ore.	Manganese Ore.	Wolfram.	Chromite.	Tin Ore	Gold Troy	Silver.	Lead.	Copper Ore.	Mica.	Salt.	Petroleum.
	tons.	tons.	tons.	tons	tons.	tons.	oz.	oz.	tons.	tons.	cwts.	tons.	gallons.
1911	12,715,000	366,000	670,000	1,300	3,800	97	583,000	103,000	13,000	2,200	33,800	1,325,900	225,792,000
1912	14,706,000	580,000	633,000	1,600	2,800	175	590,000	93,000	8,500	9,600	43,800	1,454,600	249,083,000
1913	16,208,000	370,000	815,000	1,600	5,600	170	595,000	125,000	5,800	3,800	45,700	1,473,100	277,555,000
1914	16,464,000	441,000	682,000	2,300	5,800	270	607,000	236,000	10,500	5,300	40,500	1,348,200	259,342,000
1915	17,103,000	390,000	450,000	2,600	3,700	430	616,000	285,000	13,500	8,800	27,100	1,745,500	287,093,000
1916	17,245,000	411,000	645,000	3,600	20,100	465	598,000	760,000	13,700	2,600	43,400	1,488,500	297,189,000
1917	18,212,000	413,000	590,000	4,500	27,000	666	574,000	1,581,000	16,900	20,100	40,900	1,427,500	282,759,000
1918	20,722,000	492,000	517,000	4,400	57,700	780	536,000	1,971,000	18,900	3,600	54,700	1,856,600	286,585,000
1919	22,628,000	563,000	537,000	3,500	36,400	1,345	507,000	2,165,000	19,000	32,700	45,700	1,891,100	305,651,000
1920	17,962,000	558,000	736,000	2,300	26,800	2,117	499,000	2,870,000	23,800	28,100	46,900	1,630,100	293,116,000
1921	18,358,000	600,000	539,000	884	28,700	1,610	470,000	3,827,000	33,600	20,000	30,900	1,800,000	280,000,000

labour costs, but more especially to shortage of waggons and high rates of freight on Indian railways. It is a significant commentary on the policy of a Government interested in the development of its industries that British coal could be transferred from Cardiff to Bombay, a distance of 6000 miles, at a freight of 20s. per ton and could undersell Indian coal situated at the most at a distance of 1200 to 1500 miles.[1]

New areas are now being opened in Burma. The many coal-fields of Burma have so far not been seriously touched, although coal is actually transported to places where local coal of good quality could economically displace the imported coal. There are coal-fields in the Central Provinces which cannot be worked because they have no railway facilities.

Iron and Steel

The iron and steel industry is in its infancy. Of the existing companies the Tata Iron and Steel Works at Jamshedpur produced in 1919-20 50,000 tons of pig-iron, 75,000 tons of steel rails, and 60,000 tons of bars and girders, valued in all at 5 crores of rupees. Besides this, the Bengal Iron Company produces daily 450 tons of pig-iron, and the Indian Iron and Steel Co. has a plant

[1] Cf. the remarks made at the Annual Meeting of the Bombay Mill-Owners' Association, March 1922: "I should like to bring to your notice one or two facts about the unsatisfactory and wholly illogical coal position in Bombay. At present Bengal coal, second-class good quality, costs us Rs. 25.8 *via* Calcutta. If the same coal is railed it costs us *ex* station now Rs. 27, and as there will be a 25 per cent rise in railway freight from April 1, after that it will cost us Rs. 31. Now these are absurd and unnatural figures if you take into consideration the following facts: (1) Such coal before the war used to cost us Rs. 12 to Rs. 15 per ton; (2) the quality was better before the war than it is now; (3) the Steamer Company's charge is Rs. 10 to Rs. 11 per ton for freight, whereas before the war it was Rs. 4 to Rs. 5, whilst the freight from Cardiff is only 21 or 22 shillings per ton, which is about the same as the freight before the war; (4) in consequence of the absurd price Bombay is now mainly supplied with either Natal or Cardiff coal."

designed for a daily output of 600 tons. The United Steel Corporation of Asia, Ltd., was registered in India with a capital of £10,000,000, with a plant capable of producing 300,000 tons of pig-iron and 200,000 tons of finished steel.

The vast potentialities for the development of the iron and steel industry can be gauged from the fact that if the several companies now formed or already working were worked to their full capacity they would have a total estimated output of 1,500,000 tons of pig-iron and 1,000,000 tons of steel annually. If the Geological Survey reports are to be relied on with regard to the iron resources in Orissa alone, India is provided with reserves of high-grade iron ore commensurate with as large an expansion of iron and steel as may be justified not only by what India requires but by what the Eastern markets may require in the future.

Under these circumstances it is not surprising to notice the steady fall in the imports of iron and steel as witnessed by the following table :

	Total Imports in Tons.		Total Imports in Tons.
Annual average —		1916–17 . . .	257,200
1909–10 to 1913–14	735,000	1917–18 . . .	152,000
1913–14 . . .	1,018,200	1919–20 . . .	426,900
1914–15 . . .	608,600	1920–21 . . .	711,900
1915–16 . . .	424,600	1921–22 . . .	480,000

The Indian iron and steel industry has thus a large future before it ; the plant of the Tata Iron and Steel Works, after having supplied war materials to Government in the days of the war, will now be devoted to supplying the industrial needs of the country, not only in the shape of steel rails and slippers, but also in the shape of plates, sheets, bars, wire, and electrically produced high-grade steel, while the by-products installations produce large quantities of coke, coal tar, benzol, sulphate of ammonia, and sulphuric acid.

Gold, Silver, Lead, Zinc, and Copper

Ninety-six per cent of the total output of gold in 1919 was derived from the Kolar Gold Fields in Mysore, the quantity being 485,000 ounces valued at Rs. 2,13,62,000. The annual production has, however, been steadily decreasing for the past few years.

As regards silver, except for trifling amounts from the Anantapur mines in Madras, all the silver obtained from mines in India is extracted from the Bawdwin mines of Burma. The output of these mines during the last three years has been :

	Refined Lead in Tons	Fine Silver in Ounces.
1919	18,535	2,164,854
1920	23,821	2,869,729
1921	33,694	3,827,904

There is a considerable demand in India for lead sheeting for lining tea-chests. Most of the lead for this purpose is supplied by the Bawdwin mines.

Large quantities of zinc ore are accumulating at Bawdwin, promising well for the manufacture of galvanised iron sheeting.

Nearly all the Indian production of copper is obtained from Bihar and Orissa. The proved ore reserves of the mines in that province are estimated at 300,000 tons of ore assaying 3·74 per cent copper.

Manganese

India has been for years one of the largest exporters of manganese ore to Europe. With the erection of steel works in India a vast demand for manganese ore in the country will follow.

Tin

The production and export of tin ore have been steadily increasing. The erection of a tin plate works at Jamshedpur marks a new phase in the tin industry.

Mica

The two principal areas of production are Madras and Bengal. India has been for many years the leading producer of mica. Labour-saving devices have now been introduced to supplant the old-fashioned methods of raising rock by manual labour.

Petroleum

Petroleum in India is found in two distinct areas—one on the east including Assam and Burma, and the other on the west including the Punjab and Baluchistan. The eastern area is by far the most important. Native wells have been at work for over a century in the Irrawaddy valley. Drilling was begun in 1887; the output rose to 10,000,000 gallons in 1894 and reached 119,000,000 in 1919. The output in the Punjab in 1915 was 250,000 gallons, rising in 1918 to 750,000 gallons. It is significant in this connection to note that whereas in 1900–1 the percentage of Indian kerosene oil consumed in India was 10·7 as contrasted with 89·3 per cent of foreign oil, in 1918–19 the percentages of Indian and foreign oil were respectively 90·3 and 9·7, and in 1919–20 53·3 and 46·7. There is thus a large scope for the development of the industry in the country. The companies that work the deposits in Burma are mostly foreign companies.

Vegetable Oils

The vegetable oil resources of India are vast; the principal oil seeds produced are linseed, cotton seed, cocoanut, rape, ground-nut, castor, and sesamum. The

oil-pressing industry in India is run on mediaeval lines—the seeds being pressed in small bullock-driven ghanis, which are inefficient, as they leave a percentage of oil in the residual cake, and owing to this high percentage of oil the cakes are less useful for the purposes of cattle-feeding or as fertilisers. Most of the oil seeds are at present exported.

There is an increasing need in India for a cheap and satisfactory substitute for ghee; and it seems almost absurd that India should import cotton-seed oil from abroad. There is a large scope for the growth of the oil industry in India, with increasing industrial development, and in course of time India might well become one of the largest exporters of oil instead of oil seeds.

Essential Oils

Amongst the oils produced in Europe from raw materials grown in India are cardamom oil, cinnamon oil, sandal-wood oil, ginger oil, thymol, lemongrass oil, and citronella oil. Some of these are obtained from products grown only in India and Ceylon.

Prior to the war sandal-wood was exported in large quantities from Southern India. From 1914 the Mysore Government has established and worked distilleries for the extraction of oils. The Bangalore factory has a capacity of producing 6000 lb. of oil a month, and another factory has been started in Mysore with an ultimate capacity of 20,000 lb. a month.

Appreciable quantities of citronella oil are now being distilled in Burma.

Tanning and Leather Industries

The most important development in our times has been the great increase in the production of rough tanned cow hides; three-fifths of the upper leather used in the United Kingdom in the manufacture of boots for the Allied Armies during the war was supplied from Indian kips; as regards

leather manufacture Indian tanneries produced during the war increased quantities of leather goods of all sorts. Two million pairs of boots are now being manufactured every year. The manufacture of chrome leather is making rapid progress in many parts of India, especially in the Madras Presidency. The largest demand for leather in India is for water-bags, of which many hundred thousands are required every year. Sandals required by 300,000,000 people also involve a large demand for chrome leather. Water is found to have little effect on it; it remains soft and pliable even when subjected to repeated alternations of wetting and drying. There is a growing demand for boots and shoes in the towns which has hitherto been supplied by foreign markets. The total imports of boots and shoes into India stood as below for the two years given:

	1920–21.	1921–22.
Pairs . . .	1,071,000	171,000
Value . . .	£1,058,000	£102,000

This enormous falling-off in the imports for 1921-22 may be partly due to heavy stocks brought forward from the previous year, and also to depression in trade; but there can be no doubt that with good leather always available, and with the installation of the latest machinery, India will henceforward entirely supply her own internal demand for boots and shoes.

Cement

At the time of the outbreak of the war there were no factories in India producing cement up to the requirements of the British standard specification. There are at present three large companies manufacturing cement with modern plant and on a large scale, the Bundi Lime and Cement Co., the Katni Cement Co., and the Indian Cement Co. (Porbander). The total output of these firms is 1,500,000 cwts. per year. But the supply is still far short of present demands; and there is immense scope for further development of an industry in which proximity

to the market is an essential factor of success. At present Calcutta is over 650 miles from Katni; Lucknow is 350 miles from Bundi or Katni, whilst the whole of India south of Katni is without any large-scale cement works. There will be an increasing demand for cement in the bigger towns of the country in the near future; reinforced concrete structures are becoming more popular; the abnormal rise in the price of teak has led to cheaper substitutes; and the water and drainage schemes all through the country ensure the steady absorption of whatever quantities of cement can be made in the country. There is still a considerable amount of foreign cement imported into the country. The imports of cement fell from 3,500,000 cwts. in 1913-14 to 1,700,000 cwts. in 1917–18; in 1921–22 the total imports were 2,500,000 cwts. But this rise is evidently due to large Government orders and the increasing trade demands.

Engineering Industries

The production of iron and steel on a large scale will inevitably bring about a great extension in engineering industries of all kinds. Apart from the railway workshops situated all over the country the principal engineering industries before the war were centred in Calcutta and Bombay. The reduction in imports of all manufactured goods as a result of the war forced Indian works to turn their attention to the manufacture of a diversity of machines for which their workshops were imperfectly equipped. During the last few years machines have been made, the production of which would never have been considered before the war—amongst others, bailing presses for jute mills, colliery coal-tub wheels, crank shafts, milling machines, rough lathes of all kinds, steam hammers, and winding engines. Structural steel work of all kinds, especially bridge work and building work, is carried out by at least a dozen well-known firms. Machine tools of all kinds are now being turned out; textile

machinery, especially spare parts of machinery for jute and cotton mills, bobbins, rollers, pickers, is now being made in the country; even railway rolling stock is now being manufactured by Calcutta firms. The value of the imports of machinery of all kinds rose from 9 crores of rupees in 1919–20 to 24 crores of rupees in 1920–21 and 34 crores in 1921–22. The value of the imports of railway plant and rolling stock increased from 9 crores in 1919–20 to 16 crores of rupees in 1920–21 and 21 crores in 1921–22. These increases in imports can easily be accounted for by the rapid industrial development within the country, and the capital expenditure programme of 150 crores during five years on railway expansion. In the cement and the engineering industries alike a national Government with a single eye to Indian industries could bring about a complete economic transformation within a decade or two with the resources which the Government of India commands.

The Soap Industry

There are about 50 bar soap factories, but most of them are petty; 13 factories profess ability to supply 50 tons of bar soap each per month. The total output of toilet soap aggregates about 710 tons or about 9,500,000 cakes. There is a large future for the industry in India with an abundant and increasing supply of oils and fats, and with a rapidly growing market.

Paper-making and Glass

Toilet-paper is now being produced in the country; and thin bank paper used for typewriting, as well as suitable boards for post-cards, has been successfully put on the market. The imports of writing-paper declined from 2 crores in 1920–21 to 48 lakhs of rupees in 1921–22, and those of packing-paper from 53 lakhs in 1920–21 to 19 lakhs of rupees in 1921–22. The production of the Indian paper-mills amounted to 30,000 tons in 1920.

There are now 20 glass factories in India. The glass bangle industry is rapidly growing; the manufacture of bangles has now ousted the imports from Austria and to-day supplies at least a third of the total Indian demand for bangles. There are 12 works engaged in the production of lamp-ware and bottles; and several factories have turned out glass tubing, flasks, beakers, and test tubes. The total imports of glass-ware and glass increased in value from Rs. 1,50,00,000 in 1916-17 and 1917–18 to Rs. 3,37,00,000 in 1920–21 and Rs. 2,23,00,000 in 1921–22.

The brief survey of existing industries and of the potentialities for further development that we have given carries its own lesson with it. As the Fiscal Commission observes :

> Industrial progress there has been, but on a limited scale; and in comparison with other countries it has been slow. We hold that the industrial development of India has not been commensurate with the size of the country, its population and its natural resources.

Speaking fully thirty years ago, the late Justice Ranade summed up the situation in a hopeful way :

> India has now fairly entered upon the path which cannot fail to work out its industrial salvation. . . . What we have to do in each case is to learn by organised co-operation to compete with the foreigner and take in as much raw produce as we need and work it up here, and to send in place of exports of our raw produce the same quantities in less bulky but more valuable forms after they have undergone the operation of art manipulation and afforded occupation to our industrial classes. . . . We have to improve our raw materials or import them when our soil is unsuited to their production. We have to organise labour and capital by co-operation, and import freely foreign skill and machinery, till we learn our lessons properly and need no help. . . . Natural aptitudes, undeveloped but unlimited resources, peace and order, the whole world opened to us, our marvellous situation as the emporium of all Asia, these priceless advantages will secure success, if we endeavour to deserve it by striving for it.

The Need for a Census of Production

Whilst we are discussing the possibilities of industrial development in the near future, the need for accurate statistics of the actual production of the country from time to time irresistibly forces itself on our attention. In the first place, every civilised country compiles its agricultural statistics; such statistics have economic value as the basis of estimates of changes in yield per acre of various crops from time to time. The census of agricultural production takes account of the acreage under crops and of the number of live stock; this information is supplemented in recent years by estimates of the yields of different crops. In India agricultural statistics have a more vital interest for Government as they determine ultimately the amount of the land revenue. The accuracy of these statistics in India has, however, been called into question by the Government itself. An acre of wheat will vary from district to district, and vary also in yield from year to year. These variations are all the more likely to vitiate averages of yield on account of the uncertainties of rainfall and its bearing on the yield.

In the next place, we have in all civilised countries statistics of mineral production, which afford information as to trade and as to the resources of the country. With the growth of the sentiment of national self-sufficiency so deeply accentuated after the war, the value of such statistics has enormously increased, as the mineral wealth of a country is the foundation of its prosperity. The Government of India has grown alive during the last two decades to the need for statistics of mineral production, and publishes them from year to year. Then, again, every civilised country attempts to estimate the annual production of its manufactures. Such estimates are available with re d to factory production; they are arrived at by for ated process of calculation. Thus, for example, the for ıd, in estimating the value of cotton fabrics, is taken in the first place of the raw material

which is imported into the country. Then there are the export figures of the finished commodity, whose value and quantities could be easily ascertained. An estimate is finally made of the value of the annual production from these figures. The process of arriving at an estimate of the factory production in India is a more difficult one, as much of the raw material is available in the country itself at varying prices, as this raw material may be stocked in advance, and as the finished products are also sold in local markets at fluctuating prices. But more important than the census of factory production is a census of the thousand and one miscellaneous handicrafts which are still to be found giving whole-time occupation to millions and part-time occupation to larger numbers. The value of a census of this kind is enormous; it may enable us to gauge accurately the growth or decline of cottage industries from decade to decade, the place of these industries in the rural economy, and thus constitute the basis for constructive efforts at reviving these handicrafts and giving them a permanent place as subsidiary occupations in the coming age of machine production on a large scale. In the absence of such information we are fumbling in the dark and we may have to pay a heavy cost in the process of trial and experimentation carried out in the absence of statistics. Such a census is not a difficult matter, in the simple outline, in a country like India, administered by a centralised band of officials reaching every small village. Precision of detail is impossible in a case of this kind; even in the West only rough approximations have been made in subsidiary industries; but these rough approximations are of value in arriving at an estimate of the production per head and the efficiency or otherwise of man-power in the country. We have now in India well-equipped Departments of Industry in every province; with regard to factory production executive orders under the Factories Act might be sufficient for the purpose of collecting statistics of production; and provincial Departments of Industry might be utilised.

gathering statistics with regard to cottage industries. The second conference of Industrial Directors held in November 1920 considered the general question of the desirability of a census of production, and there was a general consensus of opinion that a staff of surveyors and circle officers should be employed in each province, to be trained for the collection of industrial information.

CHAPTER XIX

FACTORY LABOUR

Statistics of Factory Labour in India

The total number of operatives employed in factories in India in 1921 was roughly 1,560,000. Out of these 332,000 were employed in cotton-spinning and weaving mills; 287,000 in jute mills; 153,000 in railway and tramway workshops; and 145,000 in cotton gins and presses. The total number of cotton factories, including those not classed as mills, was 400; there were 11 silk mills and 10 woollen mills and 82 jute mills. The number of oil mills stood in the same year (1921) at 225; that of soap factories at 13; sugar factories at 71; and rice mills at 921—the last employing 61,000 men. There were also 84 glass factories employing 4000 men; 467 tile and brick factories employing 51,000 men; 146 tanneries with 8000 men.

Labour: the Tests of Efficiency

The economic organisation in industry that our country has to face in the immediate future is that which comes to us from the West, an organisation based on capitalism, with its marked contrasts of wealth concentrated in the hands of the few and poverty for the rest, with its chronic unemployment, with its inequalities of possession, and with its underlying assumption that the labourer is worth only what the employer can get out of him, that he is simply a hand, an instrument, a means towards the end of private profit. It is an organisation based on the

profit-seeking motive ; the mechanism of commerce which had its origins in social need is now fed and maintained by industries which have lost their social motive, and which are carried on not to feed and clothe men but to bring profits to those who control these industries. The industrial order which is coming into existence in our country under the influence of British rule is based on competition, conflict, on private enterprise, on a denial of social responsibility, on an ignoring of the worth of every soul ; and whilst it calls itself Christian it is essentially based on an emphatic assertion of self-interest, and not of love and social service, as the only practical economic motive. Under these circumstances efficiency of labour can only be judged by the maximum production of the labourer, and the latter in turn depends on the differential gains that it brings to the producer.

As against this industrial organisation with its underlying implications that comes to us from the West, we have had in the past an organisation based on the ideals of social service, co-operation, and fellowship, an organisation to which the best thought in the West looks forward in the protest against the paganised institutions of the last two centuries. Industry may be carried on on a large scale with all the applications of machinery driven by fuel or steam or electric power, but all industry must ultimately be directed to the creation of commodities which satisfy the social wants and to the provision of services which the community requires. If industry is made to rest on the social basis, employer and employed are partners in common work, and labour ceases to be a tool or commodity. The value or efficiency of labour will then be judged, not by what it does to increase the general gain of the producer, but by what it does to add to the communal welfare, which includes his own welfare as a member of the community. The efficiency of labour will then be gauged, not by the external measure of output or by the measure of somebody else's profit, but by what it does towards the creation of a material and social environ-

ment favourable to the realisation of the highest mode of existence of which he and all fellow-members of his society are separately capable. Efficiency will still be measured by production, but it will be measured by the production of goods and the rendering of services that are socially beneficial.

Machinery and Labour

The distinguishing function of labour under the present industrial organisation has been said to be the operation of machinery and the handling of material. The material and machinery make up the capital which is under the control of owners or employers. It is not for labour to decide whether new machinery shall be installed or who shall own the machinery or where the material shall come from. Labour feeds raw material into the machine, lifts the levers and fingers the controls, takes the product away from the machine and transports it to the places where it can be used. Labour's part is to accept unquestioningly the technology worked out by the management.[1] The mechanical processes which labour carries through involve endless repetition. The operation of the automatic machine requires that the labourer shall touch the same lever in the same way at the same speed several thousand times per day. It has been said that the man who handles such a machine tends to become as automatic as the machine itself. This, however, is not the whole truth; if the labourer could completely mechanise a section of his faculties it would be all the better for him. As a matter of fact this machine imposes the repetition of the same muscular and nervous action upon a being whose muscles and nervous resources are continually changing. The worker cannot succeed, even if he so wishes, in becoming altogether an automaton; he is an organism fed at irregular intervals with different sorts of food, incapable of maintaining constant in its quantity the muscular and nervous tissue, and with structures and functions whose

[1] See Edie, *Principles of the New Economics*, p. 99, etc.

activities impede the automatic activities of machine-tending.[1] In his attempt to become like a machine the worker has to pay a heavy cost in the shape of injurious fatigue that results from muscular and nervous overstrain. Excessive duration of labour, and specialisation when combined with excessive repetition and speed, involve muscular and nervous fatigue, and this last in turn is accompanied by a greater liability to accidents and to nervous disorders like cardiac neurosis and neurasthenia.[2]

But this human cost resulting from the use of machinery is reduced by counteracting conditions; it has been pointed out that one main cure for monotony and fatigue is not less machinery but more; that the main trend in the development of machinery has been to set non-human tools to do work which man could not execute with required regularity or pace, by reason of his organic deficiencies. In many mechanical processes human skill and practice are necessary to set and regulate the machines, to correct errors of machines which are apt to run down, become clogged, or otherwise go wrong. Even in manufactures there are still processes where hand labour is required, as in jewellery and watch-making, cabinet-making, and the picking and packing of fruit. Bad as things may look when we contrast present conditions with ideal conditions such as we catch glimpses of in the guilds of the Middle Ages, we must never lose sight of the fact that machinery has rendered a great human service by taking over large masses of heavy, dull, and degrading work; and that if machinery is subordinated to social service and is worked for social purposes, it may become the means of acquiring freedom for the masses, releasing human time and energy for creative work in

[1] Hobson, *Work and Wealth*, p. 62.

[2] *Ibid.* Hobson points out that there is a marked similarity in the curves relating accidents to hours of labour; accidents increase progressively up to the end of the morning's work, and again in the late afternoon as the day's work draws to its close. Recent German statistics show that the highest rate of accidents is during the fourth and fifth hours of the morning's work.

arts, in literature, in industries, for the realisation of the best and the highest life for all, each according to his measure.

It has also been suggested that division of labour based on the employment of machinery makes the modern worker a dull and docile instrument, devoid of all initiative, interest, and sense of personal responsibility. The one-sided, uniform, and prolonged occupation of the modern worker deadens his mental faculties, and scientific managers have claimed that many mechanical processes can be attended to most efficiently by workers who in their temperament and intelligence most nearly resemble the ox or the gorilla. The human consequences of such management have been pointed out by C. H. Cooley:

> Men, women, children find themselves required to work at tasks, usually uninteresting and often exhausting, amidst dreary surroundings and under such relations to the work as a whole that their imagination and loyalty are little, if at all, aroused. Such a life either atrophies the larger impulses of human nature or represses them to such a degree that they break out from time to time in gross and degrading forms of expression.[1]

The lack of interest and enthusiasm in the modern worker which has transformed him into a mere servant of the machine and deprived him of his personality is undoubtedly one of the marked features of economic life in our times. Fishing and hunting, which in the earlier days were the daily occupations of life, are now the favourite amusements of a small minority; and these once made possible, for those who were so occupied, a life in which all their energies could be employed, their limbs set in motion, their interests aroused, their sagacity called forth, and a full and varied existence secured. To-day the masses work under the conditions of a stifling and cramped atmosphere, and tend to become automatic drudges.[2]

[1] Quoted by Edie, *Principles of the New Economics*, p. 102.

[2] "Workshop routine under present conditions is a deadening thing. It does not encourage men to think for themselves or to develop qualities of leadership or of individual initiative. It encourages them

But here again we must discriminate between the incidental consequences of an economic organisation resting upon division of labour and the use of machinery, and its inherent and necessary implications. If to-day the worker in a factory leads a dull, joyless existence with no scope for the play of personality, it is not division of labour and the use of machinery that are responsible for the result, but the economic organisation that consigns the workman for twelve hours and more to a monotonous occupation in order that the irresponsible shareholder may earn large dividends. As Hobson points out, the damage inflicted by the rigour of mechanical discipline may be compensated by a larger leisure resulting from shorter hours of labour. If all healthy adults in a country took part in national production and if there were a more methodical organisation of labour forces, it has been suggested that three or four hours' work per day would be more than sufficient to assure to every member of the society his means of subsistence.

There is another consideration that might be kept in mind when we are judging of the effects of division of labour. The worker is a human being and will often assert his humanity in spite of the institutions under which he lives. Scientific management may dream if it likes of reducing him to an ox or gorilla; but he will often show himself to be the human being he is, often unreasonable, unmechanical, uncontrollable; and a decaying society, conscious of the evils of its own making, is already devising palliatives in the shape of measures for arousing the interest of workmanship and a sense of pride in work. When labourers are found to "go stale" at certain machines or to suffer excessive fatigue, they are moved to machines of different types in order to have

merely to get through the daily task in the easiest possible way, and to reserve such humanity as they possess for their hours of leisure. Worse than this: it tends so to crush their individuality that although they expend little or none of it in the factory, they have only the most meagre supply for their times of leisure" (*Labour in the Commonwealth*, by G. D. H. Cole, p. 118).

variety. The managers in progressive industries call for suggestions from workers about economy, better arrangements of machines, and new inventions. Rivalries between industrial workers and between department and department are employed to stimulate the imagination and enthusiasm of the workers. These are not, however, the solvent of the economic evils that we have noted; they are the symptoms of a diseased society which is vainly striving to drive out of its own failing life-blood the gangrene that has set in.

The Worker and his Job

The opportunity to work and to earn a living, which is so indispensable to the worker, the opportunity to render social service, in other words, by such work as he is capable of, constitutes the worker's job. Now, under the present economic organisation the worker has no recognised right to a job; there is no recognised duty or obligation on the part of any body to guarantee to the worker a steady job. The employer may give a job or withhold it as he thinks proper. The loss of a job frequently arises from causes which can be traced to the worker himself; but more often it arises from causes that are altogether beyond his control. The maintenance of profits by the employer frequently necessitates a check on productivity and reduction of supplies. It is estimated that in America this restriction keeps productivity down from 25 to 50 per cent below its possible maximum; and this restriction is effected by diminution of the hours of work, dismissal of workmen, and periodic stoppages of work. This insecurity of a job is further accentuated by the fact that labour is treated as a commodity and its price governed by conditions of supply and demand. To prevent an undue rise of wages, our industrial system has evolved "a reserve of labour," commonly called unemployment. In normal times there is in every trade a chronic margin of unemployed men, and no worker knows when his turn may

come to fall into the ranks of the unemployed. Taking official estimates in America, it has been stated that estimating industry as a whole to keep 5,000,000 workers fully employed throughout the year 1914, there was a total of 8,000,000 workers changing jobs that year. For one-half of the labouring population employment is an unstable, uncertain, temporary affair of a few weeks or a few months. The demoralisation produced by this uncertainty of employment has been well described by Lescohier; it "undermines his physique; deadens his mind; weakens his ambitions; destroys his capacity for continuous, sustained endeavour; induces a liking for idleness and self-indulgence; saps self-respect and the sense of responsibility . . . sends him to work worried and underfed; plunges him in debt." [1]

Under these circumstances, to talk of the efficiency of labour is a mockery; one of the primary conditions of efficiency as measured by the possibility of leading a full life is the security of the job, the guarantee of work through which he can satisfy the physical needs of himself and his family, and where this security does not exist, the worker's life and therefore the bare possibility of his work is threatened, leaving aside the question of efficient work.

The uncertainty of the job has a direct bearing upon industrial morale and upon the degree of loyalty existing between the employer and employed. Unsteadiness of employment operates as a direct cause of disloyalty to the company.[2] Where the wages, hours, and conditions of work are so uncertain, the worker is ready to leave his job at any moment and on any excuse; and where the employer is ready to close down his factory when the prospects of business are gloomy, regardless of the lives of the thousands who may be dependent on work in his factory, no worker can entertain friendly feelings towards the employer.

[1] *The Labour Market*, p. 107.

[2] Edie, *Principles of the New Economics*, p. 108.

If uncertainty of his job is a chronic feature of the worker's life in the West—a condition aggravated by the effects of the last war—it is responsible for a large amount of economic waste; and it is a consciousness of this enormous waste that has led to the formation of preventive schemes in the shape of State insurance against sickness, insurance against accidents, insurance against unemployment, and old age pension schemes. Even where these are not in existence most of the labour is organised, and the men belong to trade unions, which are in one aspect co-operative associations for mutual protection of members of the working-class against sickness and unemployment. But in a country like India where trade unions are in their infancy, and insurance schemes or old age pension schemes are not believed to be within the field of practical politics, the evils arising from uncertainty of employment are of a more serious character than elsewhere. The employer in India believes in the gospel of fear; he believes he can bring his workmen to reason by the constant display of his right of dismissal with loss and forfeiture of a month's wages. He thinks he can compel obedience by keeping his workmen in a constant state of fear and dread. Fear is a poor motive at the best; it cannot evoke those energies on the part of a workman which are associated with sympathetic treatment, with ambition and with hope to rise in the scale of life. But the evils of such a policy are aggravated tenfold where the workman is not solely devoted to his work, because he has ties with his village where he has a plot of land to cultivate and a family to look to. The Indian employer and capitalist is to-day very largely suffering from the inexperience of a youth who has to grow wiser with age. You cannot have even a remote chance of a steady, efficient working-class, so long as the employer is an unsympathetic, narrow-visioned individual, inaccessible to the workman, out of touch with his wants and his legitimate aspirations, indifferent to the larger interests of society that demand some guarantee of work to his men even in times when the interests

of shareholders may dictate either total stoppage of work or short-time work. Whilst employers in the West are awakening to a sense of their social responsibilities and are being forced to recognise that the labour employed under their charge has a first claim on the product, the Indian capitalists and employers, whether foreigners or belonging to the land, have yet to learn the value of a more humane treatment of workers. The history of recent strikes in Bombay amply illustrates the mind of the capitalist, working at a level which the capitalist in Europe had reached half a century ago, when labour had not been organised and when the capitalist organisation had not yet been systematically challenged by thought. And it would be foolish to urge in favour of the capitalist in India that he has to deal with a worker who is ignorant, illiterate, and therefore incapable of responding to a more sympathetic treatment. Human nature is everywhere the same; the Indian worker who is made to feel that he is not merely a "hand," but a soul, a sharer in common social work along with his employer, will be linked to his employer by a sentiment of loyalty that will override his settled habits of lethargy and his shifting moods. In his written statement submitted to the Industrial Commission the General Manager of the Tata Iron and Steel Co. observed: "Our employees come from all parts of India. We afford a source of continuous employment all the year round to a great many people, our total number of employees being fifteen to sixteen thousand, the majority of whom before our works started mainly followed agricultural pursuits, which entailed intermittent and uncertain occupation." Not that the relations between employers and employed in the Tata Works have been ideal; but that the provision of better-class houses for the workmen, attention to sanitation, and provision for education and amusements such as games and picture-shows, have secured a steady body of workmen who, if they are not quite contented, give satisfaction at any rate to their employers. The

traditions of reverence to superiors have been ingrained for centuries in the Indian temperament; the Indian worker is pliant, amenable to discipline; he has none of that radical proneness to self-assertiveness which marks the Western labourer. Will the Indian employer rise to the opportunity, and when he is about to enter upon an era of industrial expansion steer clear of the disastrous appurtenances of Western industrialism? Will the Indian shareholder, the product of the Western economic organisation that is coming into this country, avoid the intoxication of privilege and power that his scraps of paper may bring to him, and realise his fellowship in service with the labourers who work in the factory? [1]

Hours of Work

It is universally recognised that long working hours are objectionable, as they produce harmful effects on the physical health and mental activities of the worker. "The problem of hours has undergone a fundamental change through the introduction of large-scale factory production and the growing concentration of our population in cities. Men and women can work relatively long hours at work which is interesting, which calls upon their various energies, which gives some opportunity for creative self-expression. Work which is repetitive, monotonous,

[1] When the railway strike broke out in England in October 1919, a small group of men and women who owned railway shares felt that they could not conscientiously receive dividends while the wages paid to any of the employees of the Company were really inadequate. Recognising that in the last resort it is the demand of shareholders for dividends that determines the policy of public companies in matter of wages and condition of labour, they joined in issuing the following statement: "We, the undersigned, being shareholders or beneficiaries through shares in Companies, wish to state publicly that we are convinced that the claims of the workers to wages making it possible for them to live a full and free life, come before the claims of shareholders to dividends. We will therefore support such a reorganisation of the present industrial system as shall bring about the highest good of the workers and the best interests of the community, and are prepared to accept whatever personal loss shall arise through such reorganisation."

and conducted under the confining indoor conditions of even the best industrial plant, especially where the plant is located at a distance from the homes of the workers, makes much more exacting physical and nervous demands." [1]

The reign of machinery in our times imposes upon the delicate mechanism of the human operator a monotony of operation, a distraction of noise, a speed of motion—all of which involve a heavy strain on the nervous organism. We have already indicated in an earlier paragraph how the fatigue produced by work under modern conditions increases liability to accidents and to nervous breakdown.

In the second place, it has been contended that a shorter working day means improvement in the efficiency and intensity of labour. The British Health of Munition Workers Committee found that for women engaged in certain forms of lathe work a fifty-hour week yielded as good an output as a sixty-six hour week, and a considerably better one than a seventy-five hour week. Investigations of cotton manufacturing indicate that in America between fifty and fifty-six hours per week secure the maximum efficiency in that industry. The ideal length of day for each industry is thus relative to the conditions of that industry, and though forty-eight hours a week is accepted as the normal working period for most industries, there may be industries in which a forty-four hour week, and others in which a fifty-four hour week, is found more advantageous as measured by output. But the general principle that shorter hours are not incompatible with greater output may be safely accepted as repeatedly demonstrated by experiments in the West. The South Yorkshire miners, for instance, had their hours reduced in 1858 from 12 to 8, and turned out much more in the short

[1] Edie, *Principles of the New Economics*, p. 112. It is significant that the factory system, introduced by the pioneers of the movement because it was "labour-saving," should in the end entail a new and more harassing strain on the physique of the labourers than those experienced under the old manual scheme of production.

day than they did in the long one. The men in some of the departments of the Springfield Armoury, U.S.A., were found in 1868 to have done much more work in 8 hours than they used to do in 10; and in the other departments the old rate of production was fully maintained. The same result of a full maintenance of the old rate of production is reported of many other eight-hour experiments in trades so different from one another as iron shipbuilding, chemical manufacture, engineering, glass-making, cabinet-making, printing, mason work, cutlery, soda manufacture, typefounding.

But this argument, based on productive efficiency in favour of shorter hours of work, may be carried too far; shorter hours may be too dearly bought, if they involve an intensification of labour which leaves the body and mind of the worker exhausted at the end of that short-hour week. The competitive conditions of our times, with no limitations on the pace at which machinery is driven by mechanical power, may involve a work-day which, though not unduly long if measured by hours, habitually exhausts the ordinary worker. The weaver and the shoemaker, the mason and the smith in the Middle Ages in Europe, as well as in the caste organisation of two centuries ago in India, worked under conditions regulated by purely voluntary action; they could slacken, break off, or speed up their work according to their inclination. They lived in an atmosphere of freedom which the modern factory worker does not enjoy. If shorter hours mean a strain on nerves and energy which would make the consequent leisure valueless for the worker, they may be too dearly bought.

This brings us to the next point that we desire to emphasise; and it is this. The real question that underlies the claim for shorter hours of work on the part of labour is a question not of spare hours as such, but of spare human energy.[1] Shorter hours for the individual worker mean, in the first instance, a reduction of his

[1] Hobson, *Work and Wealth*, p. 233.

personal cost by cutting off the last hour of fatigue and pain, and an increase in the human utility which he can get out of his wages by enabling him to spend more on the higher strata of his standard of comfort. Leisure supplies, under modern conditions, a counterpoise to specialisation by affording opportunity for the cultivation of neglected tastes, for the exercise of neglected faculties. The routine worker of our times drudging away at a monotonous operation needs leisure to keep him human. Leisure alone can afford him opportunity for occupations in which the spontaneity, the liberty, the element of novelty increasingly driven out by the monotony of his daily task shall find expression. Shorter hours would mean that thousands of men who at present leave the factory, the desk, or the workshop in a state of lassitude would take a turn at gardening or carpentry, would read some thoughtful books, or take part in some invigorating game. Given social conditions with opportunities for education on a larger scale to each one according to his capacity, leisure has vaster potentialities for social advance. The finest fruits of human life arise out of the freedom which leisure makes possible. The inventor, the poet, the artist owe their achievements to the leisure which fosters the freedom of the spirit and the creative instincts of man. "The wind bloweth where it listeth." A very slender harvest of happy thoughts and feelings will justify much apparent idleness.[1]

[1] "Labour unrest" is the result of a craving for a larger life. Of this larger life the worker instinctively feels that economic security and independence are the indispensable pre-requisites. This is the inwardness of the present agitation on the part of organised labour. Whilst he is compelled to hire himself out for bread, under conditions which make a sufficiency of bread permanently uncertain, and which make him a tool in the hands of others, he can never become the man he might be, or experience the joy of life which is his rightful heritage. The greater part of the worker's life is an unexplored tract, and the possibilities hidden in those regions no eye hath ever seen. It is towards this promised land that his mind is directed when to-day he clamours for shorter hours and more leisure.

Indian Labour and the Hours of Work

We are told that the Indian labourer prefers to do his work in a leisurely fashion, with frequent rests; that he is incapable of prolonged and intense effort; that his natural inclination is to spread the work he has to do over a long period of time, working leisurely and taking intervals of rest whenever he feels disinclined to exertion. He is said to leave his work, even when he is working in a factory, in order to eat, smoke, bathe, and so on.[1]

As the result of inquiries it is estimated that in the cotton mills in India the average operative probably spends from $1\frac{1}{2}$ to 2 hours each day, in addition to the statutory mid-day interval, away from his work. In factories where the pass system is in force it is found that if 15 passes are granted to a room of 100 men, 15 per cent of the time of the whole room is lost each day. The Factory Labour Commission of 1908 rightly pointed out that these habits were the natural outcome of excessive hours of work. In jute mills in Calcutta, where the operatives work on an average for 10 hours, the loitering is considerably less than in Bombay. In engineering shops throughout India, where the hours seldom exceed 8 a day, there is very little idling. In a woollen mill in the United Provinces, working on an average only 10 hours a day, it was found on two selected days that about 44 per cent of the workmen remained inside the mill during the whole of the working hours; the average operative did not leave his work for more than half an hour in the day. In Agra, on the other hand, where the operatives come from the same part of the country, but where the working day varies from 13 to 15 hours, the Commission of 1908 found the operatives listless and lazy, and a large number of them loitering in the compound. "Where the hours are short and

[1] *Indian Factory Labour Commission Report* (1908), i. pp. 20-21.

supervision is good, the operatives can be trained to adopt fairly regular and steady habits of working; where the hours are long and the discipline of the factory is bad, the workers will idle through the time and take frequent intervals away from the work." [1]

These habits of loitering are also traced to the enervating climate of the East.[2] If a ten-hours day is too long for many industries in the West, with more favourable climatic conditions, the continuance of the system of *laissez-faire* in India, with a patronising limitation of the working day to 11 hours in textile factories, and that, too, saddled with exceptional clauses, can only be accounted for by public indifference and apathy and by the absence of organisation on the part of labour which prevents it from becoming articulate.

The Factory Labour Commission of 1908 were compelled to admit that it was impossible to make men work for 14 hours a day without serious permanent injury to their health, and that any system under which they were required to work for such excessive hours must necessarily be prejudicial not only to them but to the industry with which they were connected. The Commission also recognised that whenever favourable conditions arose, factories would work as long hours as possible, and that there was thus a possibility of the abuse of excessive hours of work continuing under a *laissez-faire* regime. But they urged against a policy of legislation directly restricting the number of hours for adult males the consideration that such legislation was unnecessary, and that it would hamper existing industries and discourage the growth of new industries. Where labour is not articulate and is not organised, as is the case in a country like India, legislation restricting in some manner the number of hours of work is the only remedy; and even in the West, where trade union action can secure

[1] *Indian Factory Labour Commission Report*, i. p. 22.

[2] *Report on the Prospects of British Trade in India*, by the Senior Trade Commissioner (1919), p. 113.

by voluntary arrangement the restriction of hours of work, the expenses and the misery of strikes and labour conflicts have compelled legislation as the only method of preventing the tyranny of a minority over the large majority of workers. The Indian Factory Act of 1911, therefore, enacted that in the case of textile factories no person shall be actually employed for more than 12 hours in any one day, nor shall any one be employed before 5.30 in the morning and after 7 in the evening. All factories which adopt a system of shifts are exempted from the restriction. The Act of 1911 was further amended in 1922, the hours of work for any person employed in a factory being limited to 60 in any one week and 11 in any one day. The war forced the pace of economic organisation and legislation in the direction of restriction of hours of work ; an eight-hours day has now become a recognised principle for industries employing 5,000,000 workers in the United States. India, as a member of the League of Nations, is now a party to the International Labour Convention, and Indian representatives took part in the International Labour Conference held at Washington in 1919. A draft convention discussed at the Conference limited the hours of work to 8 in the day ; but India was included among the special cases to be treated separately.[1] India, as a signatory to the League of Nations, is committed to bring the question of limitation of hours of work before the legislature; and even the 60-hour limit now

[1] By Article 10 of the Convention the Government of India is committed to bring up the question of the limitation of the number of hours before the Indian Legislature : " In British India the principle of a 60-hour week shall be adopted for all workers in the industries at present covered by the Factory Acts administered by the Government of India, in mines, and in such branches of railway work as shall be specified for this purpose by the competent authority. Any modification of this limitation made by the competent authority shall be subject to the provisions of Articles 6 and 7 of this Convention. In other respects the provisions of this Convention shall not apply to India, but further provisions limiting the hours of work in India shall be considered at a future meeting of the General Conference."

prescribed for factories [1] is an old-fashioned survival of an over-cautious conservatism. It is significant that the Commission of 1908 declined to offer any definite opinion as to the effect of the varying hours of work of the operatives on the total output; they admit, however, that a reduction of the hours of work, from 14 or 13 to 12 in the day, will not materially reduce the out-turn. The Senior Trade Commissioner for India strangely enough appeals to the argument from the point of view of output and suggests that the reduction of the hours of work to 8 or 9 per day would involve a loss in production in direct proportion to the reduction in hours; and this he attributes to the low energy and stamina of the worker. A number of witnesses before the Industrial Commission of 1916–18 thought similarly that a reduction in the hours of work would involve a reduction in the present rate of production. This, as we have already indicated, involves a measurement of efficiency by the output that would bring the largest returns to the shareholder, not measurement by the means of living a full life enjoyed by the worker himself. The ground on which the claim for shorter hours rests is not the greater or the smaller output which it would make possible, but it is the leisure available to the workman, enabling him to exercise his neglected faculties and cultivate his neglected tastes. The amenities of social life which are provided in cities at public expense, in the shape of libraries and museums, parks and music and recreation, are half wasted, because the demands of production under a capitalistic regime have encroached upon the claims of humanity. The worker wants leisure even to enjoy his meals and derive benefit from them; he requires time for wholesome processes of digestion and for assimilation by exercise. He requires much more time for recreation, for making

[1] By the Factories Act Amendment of 1922 a factory is defined as any premises wherein on any one day in the year not less than 20 persons are employed and mechanical power used; or premises in which not less than 10 persons are employed which have been declared by the local Government to be a factory.

the most of his opportunities of education and social service.

But, it has been suggested, the leisure which would be afforded to the Indian worker by a reduction of hours of work would be wasted or thrown away on account of his temperament, his ignorance, and complete lack of educational opportunities. Leisure for the worker in the factory may commonly mean idleness and torpor qualified by the grog shop. We are told that the lower classes will not work unless forced to do so by the necessity of providing for themselves and their families, and that once they have earned barely sufficient wages to meet their simple wants, they prefer to sleep and loaf rather than endeavour to earn more to improve their position. In reply to an objection of this kind it may be pointed out, in the first place, that the human utility of leisure to any individual or class of individuals is relative in the last resort to the sum of those conditions which we call his environment. But the environment is not a static condition fixed for all time; it is dynamic, and the stimuli of economic and non-economic wants usually go together. In the next place, lack of educational opportunities is not an argument against reduction of hours of work; it is a part of the workers' environment which needs to be improved. As for the allegation that the operative in the city is addicted to drink, the Factory Labour Commission assure us that the drinking is not excessive, and that if there is any relatively greater consumption of liquor among factory workers than amongst men engaged in other occupations, this may be due to the excessive hours of work and the monotonous nature of their occupation. Shorter hours of work, instead of promoting the drink habit, may afford a means of eradicating it amongst workers, more especially if the environment in which they live affords opportunities for innocent amusement and play;[1] and lastly, if the

[1] Thus the General Manager of the Tata Iron and Steel Works in his evidence before the Industrial Commission said that his own workmen

worker is satisfied with his few simple wants and is not animated by the normal motives which make the Western worker desire to improve his condition by the addition of social amenities, this may be the outcome of traditions transmitted from the past, the survival of a philosophy of life which made men proud of being poor that they might be the richer in things of the spirit. Not that we desire to see the Indian worker remain contented with his lot, and lacking in the impulse to improve his condition; but under present conditions in the West, leisure for the worker has meant an opportunity to enjoy the material goods of civilisation and to nourish the private personality of the worker, rather than an opportunity to serve his fellows, to give more of his life to his city and his country, to share in the functions of citizenship. Greater leisure is, in this sense, an essential of democratic government; and no democracy is worth its name that does not rest on the guarantee of leisure to every citizen.

There is one final consideration in favour of State regulation for the reduction of hours of work in India which needs emphasising. In the West, general legislation for determining hours of work is being considered less satisfactory than determination by representative bodies in each industry, made up of an equal number of representatives of the directorate and of the workpeople; the hours of work are among the general conditions of work which, like wages, vary from industry to industry; and each industry could best work out these conditions for itself under a system of self-government. But in India labour is unorganised and illiterate; it has not yet become vocal; and if reduction of hours is a measure desirable in itself, the only way to secure it is by general legislation, even though this may be cumbrous and involve hardship for particular industries.

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used their increase in wages not in drink and in staying away from work, but in a healthier way, and he attributed this to sanitation, better housing, and provision of amusements.

Environment

The environment of the worker includes all the surrounding influences upon his body and mind. Good wages and reduced hours of work may lose all their value if the worker lives in physical surroundings which threaten his life, or works under conditions where his life and limbs are endangered.

Environment, in the first instance, includes the physical conditions under which the labourer works. Thus the average number of people killed by accidents in the United States of America is 70,000 every year, and about 700,000 suffer injuries to their bodies which incapacitate them from work for an average of four weeks each. With the development of high-speed machinery, the network of electric currents, the use of compressed air, the presence of dangerous gases, improper ventilation, insanitary surroundings, and inadequate lighting—with all these accompaniments of a machine era, the risks to the lives of the workers have enormously increased.[1]

Legislation in the interests of the workers has long ago thrown on the employers the responsibility for the health and safety of the workmen; thus every Factory Act in the West to-day contains provisions for the removal of dust and securing of pure air; provisions requiring guards or fences to be placed round dangerous machinery, elevators, air shafts, etc.; clauses providing for fire escapes, adequate staircases; clauses prohibiting the cleaning of machinery while in motion; and special laws are enacted relating to mines, railways, and other dangerous occupations. These traditions have been followed in the Indian Factory Act of 1911; there are provisions for ventilation, for fans where dust and impurities dangerous to health are likely to be inhaled; provisions for lighting, for purity of water used for humidifying, for latrines, and water supply; for precautions against fire and for fencing of dangerous machinery. These provisions are enforced by a systematic

[1] Edie, *Principles of the New Economics*, p. 142.

inspection through special inspectors appointed for the purpose.

But in the West employers in some cases have gone beyond mere considerations of the safety and health of the workers. In the United States of America some employers surround their factories with well-kept lawns, arrange for scientific shading and illumination, keep the interior well painted and neat, provide doctors and dentists, hospital facilities, play-grounds, gardens, rest-rooms, libraries, stores, and night schools.[1] The monotony of work, the fatigue and the nervous strain of factory life may be considerably reduced by such devices; but the most elementary and essential of the health requirements of workers is sanitary dwellings.

In England, under the Act of 1909, supplemented by the Act of 1919, the local authorities have now full power to acquire land for building and to build thereon; to destroy individual houses, to clear slum areas, to raise funds and subsidise building operations. There has now grown up a desire in England, and subsequently on the Continent, to so plan the new buildings that the home shall not merely conform to a minimum standard necessary for public health, but shall also make for improvement in the moral and spiritual welfare of the inhabitants. The Garden City Association, first formed in England in 1899, has been a pioneer movement which has been followed with interest by most of the countries of the world. At Letchworth an attempt was successfully made to build up in an entirely rural area a manufacturing city that, whilst meeting all business requirements, provides all the inhabitants, including the poorest, with a healthy, a happy, and a beautiful environment.

The cities of India to-day are passing through the stages in which Liverpool and London were to be found

[1] Amongst the Corporations that have carried out these devices are the National Cash Register Company, the Goodyear Tire and Rubber Company, the Eastman Kodak Company, and the Procter and Gamble Company.

in the first half of the nineteenth century. The workers in Bombay live in cellars, frequently with the bare earth for the floor, less than six feet in height, with no windows which could let in light and air. Single rooms are occupied by four to seven persons. To the darkness and dampness of the rooms is to be added the filth that is assisted to gather by the sanitary devices brought from the West without any thought as to their suitability to Indian conditions.[1] What is worse, the activities of the new reforming agencies that have been set up in Bombay are all directed towards reproducing on a much larger scale the evils of slum life, instead of removing them. The new model chawls in concrete that have been set up by the Bombay Development Board, which will eventually accommodate about 50,000 workmen, are barracks, with one-room tenements, with not a single window which could be opened to let in fresh air and light, with not the slightest attempt at providing a garden or terraced roof for recreation; the kitchen crowded into the living-room, smoke overhanging them the whole day long, veritable dens of pestilence and epidemics, instead of being sanitary improvements on the chawls which were destroyed. They are the typical product of an age of machinery, which treats human souls as machines with a dull level of uniformity. These regimented tools of an industrialism resting on exploitation may one day turn

[1] The Industrial Commission of 1916–18 observed: "It is necessary to point out that there has been a good deal of exaggeration of the extent of the overcrowding (in Bombay city), and of the proportion which the buildings of the worst type bear to the total number. The worst type of chawl consists of a two-, three-, or four-storeyed building, with single room units either placed back to back or separated by a narrow gulley 2 or 3 feet wide, usually traversed by an open drain. The rooms, especially those on the ground floor, are often pitch dark and possess very little in the way of windows; and even the small openings which exist are closed by the inhabitants in their desire to secure privacy. The ground floors are usually damp owing to an insufficient plinth; the court-yards between the buildings are most undesirably narrow, and therefore receive insufficient sun and air. They are also very dirty. Water arrangements are insufficient . . . a most insanitary smell hangs round these buildings."

against the regime under which they have been brought up; they are fit material for the spread of anarchism and Bolshevism prepared by a society that dreads these as its mortal foes. It is tragical to behold in the building up of these barracks for future Bolsheviks the waste of millions which might have been utilised for providing at a low cost cottage homes with gardens in the areas surrounding the city.

The congestion and the evils of slum life are not so acute in other parts of India as they are in Bombay; but cities like Madras, Cawnpore, Nagpur, Ahmedabad, and Calcutta are likely to be faced with the problems which Bombay has had to face. Two things have to be kept in mind when we consider the housing question in industrial centres in India: in the first place, the laying out of garden cities with cottages suited to our climatic conditions is not an enterprise of such considerable cost as a similar enterprise in the West; and in the second place, such an enterprise could be more successfully carried out by local authorities and Government than if it were left to individual employers and industries.

When studying the environment under which the factory operative has to work in India, it must also be remembered that the operative is frequently obliged to leave his family in the village, that he has not only to spend on himself but to remit money to his family, and that he is exposed in the city to the temptations of city life. Deprived of the comforts of a home, in the strict sense, forced to work long hours in the surroundings of a cramped room, it is not unnatural that he should think frequently of going to his village, and have no heart in the work that he is doing. The migratory character of the labouring population in factories has been the subject of almost universal complaint in the country; the monotony of work in a factory and the stricter discipline to which the worker is subjected are undoubtedly considerations that can account in part for these migratory habits. But there is another consideration: we are told that in the Punjab

and elsewhere the agricultural labourers who belong to a village and have migrated to industrial centres have to return to their agricultural occupation during the harvesting period under fear of being otherwise turned out of the village for neglecting to take their place in the village economy. The relations of the worker to his employer are not healthy; the only employer whom he knows is the jobber who engages his services, and who makes him pay a portion of his wages as a commission for employing him; there are no ties of attachment which might induce the worker to stick to his job; and the conditions that thus prevail are exceedingly unfavourable to the building up of a steady, reliable class of operatives attached to the industry from father to son, and claiming the benefits of inherited dexterity and experience.[1]

[1] The only way to handle men successfully in industry is to bring about a family feeling between employer and employed. Let us consider what an army would be like if the intelligent and high-spirited men were to be driven to duty by the lash; and yet the employer who hires his men when they are a source of gain and turns them out when times are dull, who sets them to monotonous work without a word of personal appreciation and treats them as tools rather than men, is acting as short-sightedly as the general who expects loyalty and devotion from an army treated to the lash. In the West large-scale industry makes it impossible for the employer to be anything more than an impersonal entity to the army of his employees; in the infancy of industrial development in India, where the conditions are more favourable to the establishment of personal ties between employer and employed, it is regrettable to behold the waste of such opportunities by an ill-devised method of recruiting and failure to grasp larger issues.

Cf. in this connection the evidence of an Indian witness, S. Deb, Manager Calcutta Pottery Works (*Industrial Commission Report: Minutes of Evidence*, vol. ii. p. 49): "To my experience a little sympathy, fellow-feeling, and setting higher ideals of life before them and identifying their interest with the interest of the concern in which they are engaged invariably creates in them a sense of the dignity of labour. In industrial organisations, where men are considered as so many units to transform one article into another at a definite cost, these factors are entirely lost sight of, and naturally no sense of responsibility can grow in the workers, and that is always the difficulty of a floating population near our mills. The mill-hands can never identify themselves with the mill in which they are engaged for the time being."

The Paradox of Scarcity of Industrial Labour

The considerations that we have briefly indicated in the preceding lines also enable us to account for some of the paradoxical aspects of labour in India. As early as 1880 the Famine Commission had noted the existence of a parasitical population in the villages; "the numbers who have no other employment than agriculture are greatly in excess of what is really required for the thorough cultivation of the land." We might therefore expect that with the growth of industries in the country this surplus population would naturally be attracted to the towns to earn relatively higher wages. And yet there is not a single industry that does not complain to-day of scarcity of labour. The causes are not far to seek, and we have already indicated them in detail. The difficulties of housing in towns, separation from families, subjection to stricter discipline, and the monotony of work make the labourer seek the earliest opportunity to revert to the freedom of life in the fields; but to these must be added the natural conservatism of a population brought up to believe in the sanctity of the economic life in which one is born, and averse to changing it for another. In a province like Bengal, moreover, with a good and well-distributed rainfall and with fixity of tenure and rents, there is hardly any temptation for the rural population to migrate to the towns. The remedy for this state of affairs consists in the provision of shorter hours of work, more holidays, better housing, recreation, and, above all, the spread of education, and an attitude of sympathy, and not an attitude of distrust and suspicion manifested in the policy of withholding the month's pay of the operatives till nearly the end of the succeeding month.

Education

The skill of a workman is a sort of compound of general intelligence, special technical culture, and acquired

manual dexterity. All work, however manual, involves some amount of intelligence and is to that extent mental. The prevailing tendency to read into the term labour a dominant degree of manual and muscular energy must be guarded against. The good workman is essentially a thinking being, and it is his general intelligence that determines the resourcefulness, versatility, and precision on which efficiency is made to depend. Hence the immense industrial value of general education.[1] The intelligent workman understands better than the illiterate and ignorant workman the working of the tools that he uses, the material that he handles, and the purpose of his work. He takes more interest in his work and is less wasteful of his materials. The Massachusetts Board of Education procured from the owners of factories a report of the rate of wages paid and the education of the recipients, and the amount of wages was found to vary exactly as the rate of education: the lowest being foreigners who signed their names with a mark, the highest the girls who went to schools in the winter and worked in the summer. A mastery of the sciences cognate to the workman's occupation may give him greater interest in his work and add to his skill. As for manual dexterity, it is partly the result of special training, partly the result of practice. The apprenticeship system, which combines in a sense technical training with practice, has often been preferred to abstract knowledge of sciences and acquaintance with the liberal arts, such as general education may impart. Every civilised country has recognised the economic value of a system of national education, universal in the earlier stages and open to all fitted to avail themselves of it in its later specialised and advanced stages.

[1] "Modern large-scale civilisation cannot continue to exist unless every member of each generation acquires a definite minimum of reading, writing, arithmetic, language, history, and science, combined with a minimum of training in the conscious effort of thought and in habits of social co-operation; and unless a considerable percentage of those boys and girls who are fitted to receive it are given a course of higher education" (Graham Wallas, *Our Social Heritage*, p. 139).

But it is not merely on economic values that the case for education should be made to rest from the point of view of the worker and, for that matter, of the citizen. If efficiency means ability and opportunity to lead a full life, education is an essential preliminary to such a life. It is necessary for the mental and spiritual health of the individual. As " drawing-out " the latent potentialities of the soul it has always been necessary, but never more so than to-day, when the rush and the conflict of life leave too little time for the deeper needs of the spirit. It begins with life and can only end with life. It is called " the safety-valve of the subconscious mind," as necessary to the freedom of an industrialised population as food and shelter to its health.

That labour in India is mostly unskilled is due largely to the absence of general education in the first instance, and to absence of facilities for special technical education in the next place. It is futile to raise discussion as to the comparative value of general education and technical education. We want in India as much of education as we can have, of all kinds—general, special, technical. There have been critics, including Indians, who have maintained that our existing system of education is far removed from the actual facts of life which young men have to face when they are called on to do practical work ; that it is based on scholastic ideals and has a dominantly literary bent. Even if it is so, such education has its value in an age when the spirit of Western industrialism threatens to seize hold of our country ; and what we need is perhaps as much a supplementing of it by industrial and technical education as a remodelling of it. But the remodelling of our primary and secondary schools is not to be inspired by the ideas of efficiency that govern an industrialised society, but by the larger vision of human life which values acquaintance with the arts and the handicrafts as the media for creative work and self-expression.

But the plea for general education may be made to rest on even more cogent considerations than those already urged—and these centre round the very life and

health of the operatives. The wastage in the shape of mortality at an early age in India is enormous ; much of this wastage is the outcome of ignorance and illiteracy ; and where the life-blood and physical vitality of the operatives are in question, it is unwise to speak of securing, at the cost of general education and by an elaborate system of technical and industrial education, the supply of skilled labour. The diffusion of mass education is the only sound basis on which the structure of industrial prosperity can be raised.

Economic and Non-economic Incentives

There is no principle that has been so insistently preached in the last two centuries of a commercial civilisation as that wages are the price of a commodity called labour, and that this price must be regulated by conditions of supply and demand. We have also been told that under the operation of these laws the efficiency of the labourer will depend on the amount of wages that he receives ; the psychology that underlies the classical economics interested in the defence of a capitalistic organisation assumes that the incentive of personal profit alone keeps men engaged in useful work ; that this personal profit is to be measured in terms of a monetary standard ; and that man loves a condition of rest, so that he requires some external forces to set him in action.

We need not pause to demonstrate the falsity of this psychology. The conception of a thing absolutely and intrinsically inert has been transferred from the domain of physics, where it is hardly adequate, to that of economics, where it is totally out of place. Man is essentially an active centre of desires. To a healthy man inaction is the greatest of woes. A motive does not exist prior to an act, it is an element in an act viewed as a tendency to produce this or that definite consequence. Motives become as numerous as are our original activities multiplied by the diverse consequences they produce. If

to-day economics recognises one dominant type motive—that which concerns personal gain—it is bec the social conditions under which work is done put an unnatural emphasis upon the prospect of reward. Much of the productive work of our times is done under conditions that are irksome and uninteresting—work to-day for the masses involves a sacrifice so heavy that it is engaged in only because men fear they would starve, or hope to earn a reward.

Work, activity of some kind, is natural and agreeable to man; and if the activity of the factory operative to-day has become inherently unsatisfactory, requiring the stimulus of fear of starvation or hope of reward, the conditions under which work is carried on call for immediate revision. You may increase the amount of reward by raising the wages; organised labour has hitherto concentrated its attention on the demand for higher wages; and it has now gone further and rightly insisted on standardising the cost of living, and it has striven—shall we say in vain?—for defining a minimum standard of life. We say in vain, for so long as present social conditions prevail, with capitalism as their basis, and normal relations between employer and employed, the minimum wage defined in terms of money is misleading and will never solve the problem. For a higher money wage will not prevent depression of the standard of life if it is accompanied by higher prices; and even a minimum "real wage" measured in terms of things may be made exceedingly precarious under present conditions.

The only solution is to dissolve the connection between wages and work. If there is one truth that needs recognition to-day more than another, it is this—that so long as men are compelled to work by the coercion of fear, the fear that they would otherwise starve, or the fear that they would get less than their fellow-workers, they will not do the best work of which they are capable. Labour to-day has for its sole aim to do as little as possible for as much as

can be got from employers. There are two fundamental conditions for excellence in work—firstly, that the labourer shall enjoy the freedom which comes from a sense of security; and secondly, that he shall have a direct interest in the thing that he produces.

We have already indicated the sense of insecurity that attaches to the labourer's work under present conditions. There can be nothing more demoralising to efficiency of work than a system under which the employer regards the worker as a tool, which can be bought and sold at a price. Even the relatively conservative British Labour Party is to-day clamouring for the universal enforcement of a national minimum. "The first principle of the British Labour Party is the securing to every member of the community, in good times and bad alike (and not only to the strong and able, the well-born or the fortunate), of all the requisites of healthy life and worthy citizenship." It was this sense of security that made possible the achievements of the potters and carvers in stone and marble of ancient Greece, and of the masons and builders of the Gothic cathedrals and town halls of the Middle Ages, as it made possible the achievements of our own Indian artisans and craftsmen even as late as two or three centuries ago.

In the second place, what we need is a radical revaluation of our economic ideals and a reorganisation of the system under which industrial work is carried on. The workman must be made to feel that his work, however humble, involves and fulfils a social purpose. "So long as work is looked upon as a charity which the employing classes provide for the workers in order to save them from destitution, it is idle to talk of the dignity of labour."[1] Every trade and every industry is, or ought to be, serving a public need. That is the only justification for the existence of any industry; and the services of any one who belongs to the working class are not less dignified or less socially useful than those of the members of what

[1] Zimmern, *Nationality and Government*, pp. 257, etc.

are sometimes regarded as the learned professions. The distinction between the trades and the professions is not between manual work and brain work, for all manual work involves brain work, and all brain work involves more or less of manual work; nor does the distinction turn on the amount of education and training involved. It is a distinction based on a wrong valuation of ideals rather than a distinction of fact. "Success" in business is judged by the amount of riches a man acquires for himself; and yet we are ashamed of applying the same test to doctors and teachers and clergymen. Nay, a community whose life is organised on a commercial basis places even its religion and its politics on a similar basis. What we need is the idealisation of our commerce and industry, such as, for instance, was achieved during the progress of the late war, when production reached an unprecedented point, not under the incentive of high wages and enormous profits, but under the sense of social solidarity, of direct participation in a great social work when the country was in danger. If the sense of a great social work could acquire such great driving force in times of war, the same social outlook could be made possible by the systematic education of a couple of generations. With a change in our educational methods we could easily change our commercialised outlook and regard the business of feeding and clothing the people as being as much of a social work, and as much a part of public service, as the business of educating people or providing them with water or carrying their correspondence.

This revaluation of our ideals must be accompanied by a reorganisation of the industrial machinery. If politics is a social task to be carried out by a machinery in which the responsibility for the conduct of public business rests with the people, who may entrust its direction to ministers, industry is also a social task which must be carried out by an organisation similar in character. If democratic control is an ideal worth cherishing in politics it is worth cherishing in industrial organisation; and Labour to-day

in the West demands nationalisation of industries like railways, mines, and lands, and a democratic control of others. How this control is to be exercised, by whom it is to be exercised, are questions of detail to be settled by a reference to the conditions of each industry taken by itself; but what democratic control primarily involves is a recognition of social solidarity, so that every worker may come to realise that he is henceforth not a mere tool to be exploited by another, not a pawn in the game of production, but a partner in industrial work, possessing both the freedom and the responsibility of partnership.[1]

When we turn from these general reflections to the conditions governing Indian industrial operatives to-day, we find that the very evils against which the West is revolting are being gradually introduced into the country. The labour once absorbed in the arts and handicrafts, subsequently turned loose upon the land, is now being brought into the city, to work in one monotonous round of drab and dreary toil, for twelve hours in the day. The wages, once sufficient to ensure the decencies of existence, are now too small for keeping body and soul together. The old sense of co-operation between workman and master has given place to a competitive system of bargaining in which the worker always loses and in which all personal relations as between master and servant have disappeared. Life in the midst of the family, in the healthy surroundings

[1] *The Report of the Whitley Committee* (1917) focusses the larger outlook of British policy with regard to labour problems; and the general idea that permeates the whole Report is that industrial peace and efficiency demand candid and constructive treatment of the fundamental aspiration of labour for a greater influence and control over those parts of industry which most vitally touch the workman's interests. "We have thought it well," runs the Report, "to refrain from making suggestions or offering opinions with regard to such matters as profit-sharing, co-partnership, or particular systems of wages, etc. . . . We are convinced that a permanent improvement in the relations between employer and employed must be founded upon something other than a cash basis. What is wanted is that the workpeople should have a greater opportunity of participating in the discussion about and adjustment of those parts of industry by which they are most affected."

of nature's light and air, has given place to life in the slums of cities away from the influences of home. And yet in spite of all these changes the traditions implanted through ages have not entirely been eradicated. The Indian operative's needs are not so numerous and diversified as those of his fellow-workers in the West; and if these needs were satisfied by the provision of healthy and comfortable dwelling-houses, shorter hours of work, by playgrounds, recreations, medical aid and hospitals, above all by the assurance that the workers would be treated as men and not as tools, by giving them a voice in determining the conditions of work, we might succeed in avoiding all the ailments of Western industrialism whilst we reaped all the benefits.[1] The need for revaluation of ideals in our country is not so urgent as in the West; we are heirs to a tradition that does not look upon poverty as a crime, and that values the things of the spirit as infinitely more

[1] Lord Chelmsford's words of warning to the capitalists in 1920 in opening the Legislative Assembly will bear reproduction: "I would earnestly impress upon employers the necessity for sympathetic considerations of the claims of labour. It has too often proved the case that employers, after a long and ruinous struggle, have been forced to concede claims that they might have allowed with honour and with profit as soon as they were presented. . . . Workers are beginning to demand not merely the right to live in comfort, but a living interest in their work. This is a claim that must be taken seriously, and I see no reason why we should not make our new start abreast of the most advanced European countries. So long as Indian industry was organised on a small scale, the close personal contact between the master and each of his men secured intimate, if not harmonious, relations. With the inevitable growth of great factories this contact has become impossible, and there is a tendency to allow the bond between employer and employed to become a purely commercial one. It is essential that machinery should be devised which will re-establish under modern conditions personal contact and good understanding. One of the latest developments designed to meet this need elsewhere is the Works Committee, which is intended to enable the employer to realise the difficulties and hardships of his men, and to give the employed an opportunity of making known their needs and of influencing directly the policy of those who control the factory or workshops in which they serve. I have observed with pleasure that this idea has already commended itself to some of the leading employers in India."

precious than material comforts and wealth.[1] If the employer and the capitalist in India can have the imaginative insight, the vision that seizes upon the essentials of the economic situation, to link labour to themselves by ties of love rather than by the slender ties of wages and bargains, India may escape to a considerable extent, if not altogether, the serious complications that industrialism has brought with it in the West. If, however, the capitalist is not prepared nor enlightened enough to seize the opportunity, this country will have to face the same dreary round of an industrialism with its slums, its contrasts, its enormous wastage of national potentialities, as the Western countries have gone through; but this future will be still further darkened by the process of exploitation from without which has been going on for years past, and which will now be supplemented by an exploitation from within. The capitalist and employer in India are the product of Western influences; the spirit of Western industrialism has entered into their souls through the training they may have received, much more than through the wealth that they

[1] In the West those who are poor are looked on as the failures of life, as people who have not been able to adapt themselves to their surroundings and to do their duty. In India there are five millions of homeless wanderers who beg their daily bread from door to door, and who are not regarded as parasites living on the sweat of the industrious. Under the influence of Western ideals we in India may now look down on these as idlers, whose claim to live on the labour of others we have begun to question; but underlying the life of the Sannyasi is the ideal that treats all earthly possessions as of inferior value when compared with the gifts of the soul. There may be thousands to-day who discredit the ideal embodied in the Sannyasi's life; and the Bhagwad Gita may preach another type of renunciation, bringing the East into line with the West—a renunciation of self for social service, turning the humblest things of the world into the likeness of God, working through the world and not leaving it for the forest, finding God in the roadside flower and the evening glow and not merely in the temple. But there is a value attached to the old Indian ideal of renunciation which cannot be overlooked—more especially when we in India are led to judge of progress by the multiplication of the fripperies of life, by the value of our household furniture and dress, by the hurry and rush of a commercial civilisation, bent on producing more, not for use, but for the sake of further production.

have gathered or inherited. Will this spirit of commercialism, acquired by contact with the West, with Western imperialistic ideals, with Western modes of exploitation, be allowed to wipe off in them the racial memories of the Dharma, which bound together the craftsmen and the cultivators and the professional classes in the organic unity of economic life, which gave a unity of purpose to the different classes and brightened up their work by a sense of duty ? Shall we Indians, rich and poor, capitalists and workmen alike, accept economic conditions imposed upon us by others who have other ideals than our own, if we can judge of these ideals not by the warnings of their prophets and their saints, but by their institutions and their methods of work ? Or shall we be true to our own ideals of Indian co-operation and love, and adapt Western machinery and methods of production to glorify God on earth ? [1]

[1] See Rabindranath Tagore, *Nationalism*, pp. 95, etc. ; Jinarajdas, *The Meeting of the East and the West*, pp. 32, etc. ; Bipinchandra Pal, *The Soul of India*, pp. 61-62 (Madras).

CHAPTER XX

INDUSTRIAL CAPITAL

Capital

Capital has been defined as wealth which is not directly consumed and which is used for the production of further wealth. The first rude axe made by primitive man was capital to him ; perhaps an unusually good harvest made it possible for him to enjoy his leisure time up in the mountains chipping at a flint, and when the axe was made it was a permanent instrument in the production of fresh wealth. The seed which a farmer lays aside for the coming year's planting is capital to the farmer. Thus it would appear as if the distinction between wealth which is capital and wealth which is not capital turned upon the distinction between wealth consumed and wealth saved. But this distinction must not be too closely insisted on. If the use of a motor-car enables a man to reach town more quickly and saves time which could be devoted to productive activity, this consumptive use is as much of the nature of capital as the machinery in the business which he runs, the railway waggon which carries his goods, and the telephone wire which provides him with commercial information.

All capital comes from a surplus. Man is constantly consuming what he produces, and no progress is possible if what he produces is just enough for his consumption. The surplus of production over consumption may come

through harder work or great intelligence or through the bounties of nature. The essence of capital consists in the possibility of using this surplus for the production of fresh wealth. In our days, for the vast majority of men, a surplus is not so much directly used by the individual himself for further production ; it is usually invested in the shares of a company or lent to a bank. The bulk of the world's capital has steadily increased till to-day it makes up the entire paraphernalia of our civilised life.

The surplus out of which capital arises is in turn dependent on saving ; and modern saving differs from earlier forms in that, whereas in earlier days saving meant keeping stores of consumables for future use, to-day saving consists in investments which make industrial society store consumables for the individual, and enable him not only to take out of his social supply the full equivalent of his postponed consumption, but to receive an additional regular claim upon other consumptive or productive goods, called interest. This saving may and does involve human cost, if not for the rich whose power of acquisition runs far ahead of what they consume, at any rate for the middle and, more especially, for the working classes, for whom saving involves a literal coining of human life into instrumental capital.[1] For the working man saving means stinting of the prime necessaries of life, or of a possible rise in expenditure which would promote the health and the efficiency of the family. Thus the bulk of the new capital which finances industries and adds to the wealth of a country comes from the savings of individuals who do not spend their whole income. If the majority of such savings come from the middle and the poorer classes they need a reward for their service to the community, and they get a reward for the sacrifice they undergo in the shape of interest.

In the West far too great a proportion of the capital in every country is owned by a small number of people. These accumulations of capital in the hands of the few

[1] Hobson, *Work and Wealth*, p. 105.

have facilitated the process of exploitation of those who possess none at all, by placing power in their hands. Thus, for instance, three-fifths of the population in countries like the United Kingdom, France, and the United States are without ownership of any considerable property. In industrial cities probably 90 per cent of the wage-earners have no property of any kind. It is this inequality in the distribution of wealth, with its consequences in the shape of inequalities of opportunity, that constitutes the strength of the moral revolt of socialism in our own times; but the true cure for this may not lie in the abolition of all private ownership of capital so much as in a diffusion of the rights of ownership, in a more equitable distribution. It is undoubtedly true that our modern economic organisation, with its recognition of private property rights, with the right on the part of the individual of unlimited acquisition of wealth, has been largely responsible for the gross inequity as between man and man that marks our social relations, and for the system that makes it possible for the few who have, to use for their selfish purposes the many who have not, much as in earlier days the master lived on the services of his slaves; and we are told the only remedy lies in eradicating "Capitalism." If "Capitalism" is taken to carry the simple implication of the creation of capital in its modern form for the production of wealth, every sane thinker will admit the need of capital and will recognise its importance as a factor in production. It is an instrument that assists man in his work and makes life easier. If "Capitalism," however, implies a reference to the gross inequalities of property and possession that mark the modern economic structure, and abolition of capital means the disappearance of these inequalities, then every State in our times is working towards this ideal by the imposition of heavy death duties, which restrict the amount of capital that may be handed down from generation to generation by inheritance; by a system of graduated taxation that takes more from the rich than from the poor; by the levy of tax on excess

profits; and, on the other hand, by the offering of banking facilities for the man of modest means, by the encouragement of co-operative production, and by insisting on industrial companies offering facilities for investment by the workers.[1]

Statistics with regard to Industrial Capital in India

The total number of joint-stock companies with a rupee capital which were incorporated in India up to 1920 under the laws relating to registration was 8800. Of these 3668 companies were working at the end of the year, most of the remainder having been wound up or never having commenced business.

The following table gives the distribution of the aggregate capital in the principal classes of joint-stock enterprise in 1919–20:

Class of Companies.	No.	Authorised Capital	Paid-up Capital.
		Rs	Rs.
Banking and loan	556	94,03,37,000	9,35,06,000
Insurance	98	74,55,91,000	82,75,000
Navigation	31	39,93,90,000	1,49,88,000
Railways and tramways	52	16,42,90,000	13,68,000
Other trading companies	1,346	123,80,84,000	28,32,02,000
Cotton mills	247	51,38,98,000	19,79,82,000
Jute mills	55	19,36,46,000	11,65,26,000
Mills for silk, wool, hemp, etc.	21	7,56,75,000	1,23,51,000
Cotton and jute presses	141	5,64,50,000	2,67,83,000
Rice mills	36	3,45,36,000	1,22,32,000
Flour mills	35	1,40,00,000	74,10,000
Other mills and presses	84	7,67,81,000	2,14,71,000
Tea planting	385	12,37,91,000	6,81,98,000
Other planting companies	56	3,39,26,000	92,28,000
Coal mining	232	13,92,02,000	7,40,90,000
Gold mining	6	24,58,000	17,84,000
Other mining companies	98	41,56,05,000	7,54,92,000
Land and building	58	13,40,98,000	3,64,06,000
Sugar manufacture	24	2,14,08,000	87,35,000
Other companies	107	15,90,93,000	2,66,77,000
Total	3,668	548,22,59,000	109,67,04,000

[1] Ramsay Muir, *Liberalism and Industry*, pp. 44, etc.

It will be found that about one-third of the aggregate paid-up capital was invested in mills and presses, chiefly for working or pressing cotton, jute, wool, and silk. A great number of these mills and presses were registered in Bombay. The capital of mining companies was about Rs. 15,00,00,000, of which about 55 per cent was invested in companies registered in Bengal, most of it representing capital invested in coal mines.

In addition to joint-stock companies working in India and registered in India with a rupee capital, there were a total of 634 companies in 1919–20 working in India, but incorporated outside of India, with sterling capital. The total paid-up capital of these companies amounted to £420,000,000, besides debentures amounting to £100,000,000. Railways represented £35,000,000 of the paid-up capital and £42,000,000 of the debentures. Of the remainder the sterling share capital invested in the tea industry was £18,000,000 and in jute mills £2,400,000. The paid-up capital of banking and insurance companies was £153,000,000, and of navigation companies £23,000,000, but it has been pointed out that many of these companies have only a portion of their capital invested in India, and that exact information with regard to this portion is not obtainable.

Capital and Indian Industries

The primary factor in the development of industries in India, as everywhere else in the world, is an abundant supply of capital. Now the supply of capital depends on two factors. In the first place, the supply depends on the ability of the people to save. In a country where the large majority of the people live on a bare minimum of subsistence and where the *per capita* income works out at less than Rs. 4 per month, it is absurd to speak of savings. The fatal process, which we have so often noted already, of draining away the food produce and raw materials of the land, operating from year to year and decade after

decade, not only makes an economic surplus of production over consumption impossible, but even tends to impoverish the soil and to diminish the potentialities of further development. In the next place the agricultural classes, even when they have any savings, naturally prefer to invest these savings in the purchase of land and for the extension of agriculture. Moreover, banking facilities do not exist in the villages; and even where branches of banks exist in towns they hardly attract the savings of the cultivators. The Mahajan who acts as a sort of village banker has his attention confined to the cultivator, and advances money on the security of the land or of the produce; and even if he had the will he has hardly the resources to finance an industrial concern. Even the wealthier middle classes who live in the smaller towns, including the professional classes and the successful merchants and traders, prefer to invest their savings in landed property or in the Government securities which may assure them of an income which is beyond the vicissitudes of industrial and commercial ventures. Thus whatever capital exists outside the larger towns in India is unorganised, and the transfer of money is at the best a personal transaction between the payer and the recipient. Even where capital is available in the shape of savings by individuals it is either locked up in ornaments or hoarded or lent to needier neighbours for short periods.[1] It has also been suggested that much of the capital available is employed in financing agricultural produce, and that business men who think of venturing on new fields have to depend very largely on their own capital. In the larger towns, where banking facilities are provided on a big scale, capital is more readily available, especially where there is assurance that the business started would be properly worked. Indian capital has been freely invested in a large number of light railways, in banks, in enterprises like the Tata Iron and Steel Works, and above all in the cotton spinning and weaving industry. But even taking into account the

[1] *Industrial Committee Report*, p. 212.

resources of Indian capital in the bigger towns mobilised by the efforts of Indian banks, it is not unsafe to assert that they are totally inadequate of themselves for the huge work that faces them. It has been pointed out that India is annually exporting to foreign countries produce worth £100,000,000. If the country proposes to use these materials for establishing her own manufactures, she must embark on a policy of large-scale production with fully equipped industrial and commercial technique; and not all the resources of private enterprise can prove sufficient for the task. In all the enormous literature, official and non-official, that has grown up during the last twenty years on the question of Indian financial and capital resources, we have found only one solitary instance in which the opinion has been expressed that "the amount of capital available in India for investment was in excess of the facility for safe and conservative investment."[1] Sir Stanley Reed, when he expressed that opinion, was fresh from the experiences of commercial life in Bombay in 1918-19; the inflation of the war period, the extraordinary stimulus to industries given by war conditions, and large fortunes rapidly acquired, constituted a combination of conditions favourable to the flotation of huge concerns, sound and unsound. We know how rapidly this combination was dissolved.

In the second place, the supply of capital for industrial purposes depends on banking facilities. The lack of such facilities may be easily judged from the following figures. The total area of the country is 1,802,000 square miles, with 2253 towns containing 30,000,000 inhabitants, and 720,000 villages with a population of 290,000,000. The total number of banking offices does not exceed 500; many of them overlap in the larger towns. In the next place the Presidency Banks now amalgamated into the Imperial Bank of India are confined to the financing of trade. Their business is strictly confined within certain limits laid down in the Bank Act, and the underwriting of

[1] Babington Smith, *Currency Committee*, vol. ii. p. 240.

industrial capital and investing in or lending on the security of shares in industrial concerns is beyond the scope of their activities. The deposits of the Presidency Bank represent over 45 per cent of the total deposits. The exchange banks which come next in the order of importance have their activities likewise confined to the financing of foreign trade at the sea-ports. The deposits of these joint-stock banks constituted 33 per cent of the total deposits. The Indian joint-stock banks have rapidly multiplied since 1913 ; there are now ninety of them in existence, with 200 branches ; many of them are small concerns. But almost all of them finance trade, and the one bank that endeavoured to finance industry and was brought into existence for that specific purpose—the Tata Industrial Bank—was obliged to give up this work in favour of financing trade.

There are, moreover, no organisations in India to facilitate the purchase, sale, and negotiation of securities, with the exception of a stock exchange in each of the Presidency towns. There are no underwriting houses or institutions to lend freely on the shares. Investment in industrial concerns is therefore equivalent to a locking up of money, and shares become as difficult to sell at times as immovable property.

The total number of joint-stock companies with a rupee capital in 1920 was 3668 with a paid-up capital of Rs. 123,21,00,000 ; as against these figures for the same year the total number of companies incorporated outside of India but working in India was 634, with a paid-up capital of £420,000,000 and debentures amounting to £100,000,000. These figures carry their own story with them ; the average capital of a joint-stock company with indigenous capital is Rs. 3,30,000 ; the average capital of a company worked by foreigners in India on a sterling basis is Rs. 1,20,00,000. All large-scale business enterprise such as exists in India, whether in the shape of banking institutions, shipping companies, railways, insurance companies, or tea and coffee plantations and mining companies, is carried on with the help of foreign capital.

With the exception of the cotton industry, Indian capital has not yet been attracted to a single large-scale enterprise; and the depression that has set in since the war is not in any way favourable to the growth of industrial enterprise for some years to come in a country where even under normal conditions indigenous capital is not over ready to respond.

The Use of Foreign Capital

The rapid industrialisation of a vast country like India depends upon an enormous supply of capital; and if the indigenous capital available within the country, even assuming it to be all mobilised and ready for investment, is not adequate enough for this task, her industrial development would be accelerated by the employment of foreign capital. The Fiscal Commission, assuming a protective policy as a basis of discussion, contended in their report in favour of foreign capital that as a protective policy involves a sacrifice on the part of the consumer, Indian interests require that this sacrifice should not be prolonged unnecessarily; and that the employment of foreign capital would shorten the period of sacrifice for the consumer by intensifying the pace of industrialisation and importing into the country the technical knowledge and organisation which are needed to give an impetus to industrial development. The Commission point out the reasons for the distrust[1] of foreign capital—(1) That if as a result of protection foreign capital comes into the country its power will be thrown into the scale against the political aspirations of Indians, and (2) that foreign capitalists will

[1] "By admitting foreign capital freely India admits the most up-to-date methods and the newest ideas, and she benefits by adopting those methods and assimilating those ideas. If she tried to exclude them, the policy of industrialisation which we contemplate could with difficulty be brought to a really successful pitch. We hold, therefore, that from the economic point of view all the advantages which we anticipate from a policy of increased industrialisation would be accentuated by the free utilisation of foreign capital and foreign resources" (*Report of Fiscal Commission*, 1921-22, p. 158).

be reluctant to train up Indians in the technique of industries and business enterprise. They do not accept these charges but they go so far as to admit the reasonableness of limitations by law on the working of firms using foreign capital which receive Government concessions in the shape of monopoly or subsidy. The dissenting minority in their minute of dissent to the Report urge the extension of these limitations on all foreign capital employed in the country. They point out that the settled policy of the Government of India was indicated in 1922 when it was stated on behalf of Government in the Legislative Assembly that "No concessions should be given to any firms in regard to industries in India, unless such firms have a rupee capital, and have a proportion at any rate of Indian directors and allow facilities for Indian apprentices to be trained in their works." They urge that under a protective policy the right to establish an industrial enterprise behind the tariff wall is a concession in itself; that there is no distinction between granting bounties out of revenue collected through taxation and allowing an industry to tax the people directly by higher prices resulting from protective duties.[1]

The main objection to the employment of foreign capital in India has always been that it drains away the surplus production of the country in the shape of profits from year to year, and that whilst the raw materials of India are being used for manufacture in the country, in reality the result does not work out differently from that which ensues from the export of raw materials that come back to the country in the shape of finished goods.[2] The

[1] The conditions which the dissenting minute lays down with regard to foreign capital in manufacturing industries in India are: (1) that such companies should be incorporated and registered in India in rupee capital; (2) that there should be a reasonable proportion of Indian directors on the Board; and (3) that reasonable facilities should be offered for the training of Indian apprentices. These conditions are identical with those laid down by the Government of India itself in regard to all companies which get concessions under a free-trade policy.

[2] Writing in 1911, Mr. Chatterton, who was later on a member of the Industrial Commission, observed: "Protection would attract capital

Indian labourer may continue to receive his wages of bare subsistence, but the skilled labour is all foreign, and the surplus, the excess of production over consumption, does not remain within the country to be the medium in turn of further production of wealth. It does not seem possible to avoid this evil by the laying down of such restrictions as the dissenting minute contemplates on all foreign capital. The reasonable facilities to be offered to Indians for training in industrial technique cannot be enforced by regulation or legislation; Indian directors on the Board of a company whose shareholders are foreigners can hardly have the independence and freedom necessary to make themselves heard in the case of conflicting interests; and registration in India in rupee capital may further and foster the export of surplus profit as effectively as registration abroad with a sterling capital. The only method of obviating the evils of exhaustion and exploitation involved in the employment of foreign capital under present conditions seems to be a legislative ban on the existence of companies with foreign shareholders.[1] This does not involve a policy of the total exclusion of foreign capital; as the dissenting minute of the Fiscal Commission Report points out, there is a confusion between loan capital and ordinary capital; if the industrialisation of the country requires the use of foreign capital let us have it by all means, but let us have it on our own terms. Every

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from abroad, and with the capitalist would come the technical expert and the trained organiser of modern industrial undertakings. Success would undoubtedly attend their efforts, and India would contribute labour and raw material. The educated Indian would play but a small part, and he would in course of time realise that the protective duties mainly served to enable Europeans to exploit the country" (*Industrial Evolution in India*, p. 364); and so elsewhere: "India does not want a protective tariff to enable an artificial industrial system to be created, the masters of which will be able to take toll of the earnings of the country and establish a drain on its resources which will in the long run retard progress" (p. 55).

[1] We must recognise that such a legislative ban is not of much value unless public opinion in the country is prepared to enforce it in practice in a spirit of sacrifice.

civilised country to-day has its methods of borrowing capital from abroad ; we can borrow this capital at a reasonable rate of interest through our banks ; and if our private institutions cannot command this capital at market rates, let the Government with its credit and its resources be the medium of borrowing. If the Government of India could borrow money for the manufacture of powder and shot year after year, if it could borrow money for creating the instruments of destruction and the machinery for killing on a large scale, it can surely borrow money for the work of building up the industries of the country, for the productive purposes of peace times, for the constructive work of bringing health and prosperity to the body politic. There can be nothing stranger in the history of economic and political thought than the mentality which accepts unquestioningly in times of war a policy that can strengthen the national resources for destruction and killing human beings, and which looks aghast when that same policy is advocated in times of peace for strengthening the national resources, for saving human lives, and for the constructive work of industrialisation.

But even this resort to the measure of borrowing foreign capital on the credit of Government is not needed to meet the situation. The existing resources in the shape of a metallic reserve at the disposal of the Government of India are more than sufficient for the raising of a superstructure of credit fully adequate to the task of industrial development with a gold currency as the foundation. The metallic portion of the Paper Currency Reserve which to-day amounts to over Rs. 85,00,00,000 can be made the foundation of investments in industrial concerns through the Imperial Bank of India advised by a Board of experts. Instead, the gold portion of the reserve is withdrawn to England in increasing amounts to meet English wants and to relieve the stringency of the English market. While India clamours for money and the bank rate goes up, the Secretary of State for India keeps millions of Indian

money invested with the London bankers at a nominal rate of interest. The fiduciary portion of the Currency Reserve can be utilised by a national Government for the encouragement of industries, backed up by a reserve entirely made up of gold coin and bullion, with a further debasement of the silver coin, already reduced to the position of paper money. The profits arising out of this reduction of the amount of silver in the metallic money may be set apart for purposes of industrial development, or at any rate for easing the money market. These are all practicable alternatives open to a sympathetic Government with a national outlook; and if to-day the policy of the Government of India is directed towards deflation and contraction of credit resulting in the creation of conditions unfavourable to industrial development, we have only one more illustration of that absence of imagination and that tendency to drift which mark vested interests all over the world. But the Paper Currency Reserve is not the only metallic basis for a credit superstructure. We have to-day, in addition, the savings of the middle classes in the Post Office Savings Banks represented by the total of Rs. 30,00,00,000, most of which is of the nature of fixed deposits. This reserve, instead of being frittered away to meet the temporary necessities of the Government from year to year, might also serve as the foundation for the financing of industries of national importance. And over and above all there is the Gold Standard Reserve, amounting to £40,000,000, now invested in London and kept there for the dubious gain in the shape of larger interest, and for the imaginary danger of an unfavourable balance of trade frittered away through the reduction of the market value of the securities, which if transferred to India would not only help the growth of industries by credit facilities but might be of service to the London money market in times of stringency.

The Industrial Commission considered the question of the feasibility of industrial banks in India on the lines of those of Germany and Japan. It advocated the organisa-

tion of a bank of this kind with a paid-up capital high in proportion to its total business, giving out loans on plant, buildings, and land, providing initial capital and working capital with the advice of experts. If Germany could with its more limited resources organise its industries with the help of banks, with a proper machinery for underwriting of capital and distribution of risks, with a system of partnerships that link the banks with the leading industries, there is no reason why India, with vastly greater material resources and an immense reserve of financial strength, should not venture on an experiment in this direction with confidence.

CHAPTER XXI

BUSINESS ENTERPRISE

In the organisation of industries on a large scale, business enterprise or management takes a leading part. Management has become divorced from ownership. The owners are holders of corporate securities and have usually no direct interest in the property, nor do they give any personal attention to the care and management of the property. Managers work very often for a salary, but they are equally often interested as part-owners in the business. Directors of joint-stock companies are mainly interested in financial questions, leaving questions of labour, production, and technique to the managers, the superintendents, and the engineers of the plants. Business management to-day involves a threefold responsibility—to the public in the matter of quality of the goods and reasonable prices, to the owners in the shape of profits, to the labourers in securing to them a living wage, healthy conditions of work, and a creative interest in work. The modern business manager works not merely in the interests of shareholders, but in the interests of the public as consumers and in the interests of labour.

Of business enterprise in this sense, adapted to large-scale production, India possesses very little. Successful business management involves familiarity with the market conditions all over the world, foresight in the purchase of raw materials, a spirit of adventure, a power of prevision, alertness or readiness to take advantage of every fluctuation in prices, and a power of initiative. But business

management can be bought, like skilled labour and technique, and it is infinitely better that the resources of a national Government should be employed in purchasing these services from abroad till Indians have the necessary training and experience, than that foreign companies with a sterling capital should import business managers for exploiting the immense resources of the country. The acquisition of the skill for management is a question of gaining experience through trial and error; and a few failures, even though they be on a large scale, may not be too large a price to pay for the purpose. There is another consideration that must not be lost sight of: successful business management in our times requires not so much the ability to bring together large supplies of capital or labour, as the ability to establish market connections, the power of readaptation of supply to changing conditions of demand, and the stimulation of demand through imaginative insight. The work of obtaining the necessary capital and labour has been gradually transferred from the business manager to specialised institutions like banks and stock exchanges and labour exchanges; but the more characteristic and essential qualities require an insight into racial and group psychology and familiarity with local conditions which come more naturally to Indians than to foreigners. If business enterprise in India has been lacking in the past, it is only because the economic conditions of large-scale production and opportunities for the play of such qualities were hitherto lacking; the organism can only respond to a stimulus from the environment.

In the West, even before the outbreak of the war, two conclusions were slowly dawning on the minds of all thinkers who studied dispassionately the economic organisation of society under which people lived, more especially with reference to the organisation of industries. Firstly that, whether competitive or non-competitive, industry could not be trusted to run by itself—such a policy had resulted in the dehumanisation of labour in spite of trade

unions, and the sweating of considerable sections of society. Secondly, that intervention in the industrial process must sooner or later be based on some coherent general principle, which will take account of the relation to human well-being of the conduct of industry and the distribution of its fruits. Then the war supervened, and it has in the first place changed the outlook of society by its challenge of every institution and idea belonging to the past, and in the second place it has made it also clear that the State in future will play a more direct part in promoting the efficiency of industry and in furthering the prospects of national industries in the world markets—a policy which will involve direct action in education and in the technical and financial conditions of industry, instead of the old-fashioned conservative policy of a simple manipulation of tariffs familiar to Europe even in the seventeenth and eighteenth centuries. In the West after the war the nations are coming to a stage at which there will be a definite break with the traditions of individualism and *laissez-faire* which are lingering on into the twentieth century.[1]

In the East things move more slowly. *Laissez-faire* traditions ruled the policy of the British Government in India till the end of the nineteenth century, and the only way in which the Government interested itself was through a very imperfect provision of technical and industrial education and the collection and spread of commercial

[1] Cf. Hobson, *Evolution of Modern Capitalism* (1916): "The emergencies of the War have compelled the Government to interfere in various ways with the operations of the private business world, sometimes to aid and supplement private businesses, sometimes to regulate and restrain them, sometimes to supersede their private management. Nobody can suppose that the whole of this State action will simply evaporate after the War is over. The railways, which have passed into a single control . . . will not be likely to revert to the pre-War condition. . . . If the chief nations continue to make great armed preparations and to threaten or to fear a fresh outbreak of hostilities, there will be a very strong tendency to keep in being the War control already established, and probably to extend it in mining and certain so-called 'key industries.'"

and industrial information. When the Madras Government in the first decade of the present century entered upon an active policy for the promotion of Indian industries by encouraging handloom weaving, introducing new processes of tanning, and assisting private individuals to instal power-driven machinery and plant, the European merchants protested against this policy as involving a serious menace to private enterprise and as an unwarrantable interference in matters that were beyond the legitimate province of Government. Even the Secretary of State for India joined in the chorus of dissent against this policy of commercial venture and advocated in 1910 a rigid adherence to the traditional policy of industrial instruction. It was left to Lord Hardinge in 1915 to strike the first note of official approval of a large policy of industrial development. In his despatch to the Secretary of State he observed :

> It is becoming increasingly clear that a definite and self-conscious policy of improving the industrial capabilities of India will have to be pursued after the war, unless she is to become more and more a dumping ground for the manufactures of foreign nations.

This despatch culminated in the appointment of the Industrial Commission which submitted its Report in 1918 ; that Report asserted as the result of a careful inquiry :

> This account of the efforts made by Government for the improvement of Indian industries shows how little has been achieved, owing to the lack of a definite and accepted policy.

The Industrial Commission based their own proposals on the acceptance of two fundamental principles : (*a*) that in future Government must play an active part in the industrial development of the country with a view to making India self-contained, and (*b*) that it is impossible for Government to undertake that part, unless provided with adequate administrative equipment and forearmed with scientific and technical advice.

Even at the best the recommendations of the Industrial Commission do not go beyond the proposal for creating Imperial and Provincial Departments of Industry and an Imperial Industrial Service, and for setting up an Imperial Department of Stores for the purchase of such articles as can be manufactured in the country at competitive prices and qualities. The organisation of industrial banks with State credit at their back was a proposal too radical for the Commission, and even the dissenting Pandit Malaviya would not go beyond the pious wish that a few Indians should be trained as banking apprentices. Not even the daring flights of the more radical Indian members of the Commission could contemplate the possibility of utilising the Post Office Savings Bank Deposits and the Currency Reserve, let alone the Gold Standard Reserve, for the creation of credit in the country for fostering industrial enterprise. Whilst the rest of the world is absorbed in the problems of utilising its banking organisations to help production, the clearest brains on our side of the country would regard it as a heresy to speak of associating Government credit with the work of building up industrial wealth. Even the Professors of Economics who are imported into the country to give a lead to thought deprecate loans without interest and provision of share capital on grounds of limited revenues and absorption of capital in railway extension.[1] And yet the revenues are large enough to allow of wastage of millions in frontier expeditions of a doubtful type; and railway extension means the provision of further facilities for export of raw produce.

One can understand the mentality of His Majesty's High Trade Commissioner in India who looks with prejudice upon the comparatively innocent proposal for purchase of stores in India by the Government of India. Even the Industrial Commission referred to the question of competitive price and quality as determining criteria in the

[1] Gilbert Slater's written evidence before the Industrial Commission, vol. iii. p. 224.

purchase of stores. The High Trade Commissioner is concerned at the Government policy of purchasing articles locally made at prices considerably above the rates at which the same goods could have been imported. Such a policy would seriously conflict with the interests of British manufacturers; but the Trade Commissioner is also concerned and moved by the sacrifice of the interests of 88 per cent of Indian consumers for the sake of 12 per cent of the producers. He is entirely oblivious of the fact that the development of industries, by adding to the national wealth, increases the national purchasing power.

What we need is the clear enunciation in the first place of a comprehensive policy with regard to the development of industries, and in the next place an effort to see it carried through by the Government. If the development of industry in a country primarily depends on the supply of capital, it must be remembered that capital to-day means credit, or purchasing power. It has been said that India will have to look for capital abroad, in the absence of adequate resources of capital within the country itself. But she is not likely to get the capital as readily abroad as she was able to do before the war; and the country need not look abroad for the creation of such resources. Even assuming that on account of her backwardness in economic development India needs a considerable metallic backing for her paper currency and credit, there is a steady stream of gold flowing into the country from year to year in payment of the balance of trade, arrested though it frequently is by the manipulations of a foreign Government dictated by a short-sighted conception of its true interests; and all that a far-sighted Government need do is to divert this current into the Government treasuries to support this paper issue. On the basis of this additional reserve which will enormously strengthen the existing Paper Currency Reserve, Government could issue credit instruments for co-operative and industrial banks, for the purposes of industrial development; and when to this reserve is added the enormous amount kept in London in

the Gold Standard Reserve, the credit superstructure would be more than adequate for the industrial regeneration of the vast continent. The war has demonstrated that it does not serve the purpose—the only purpose—for which it is kept in London, namely, to give stability to the exchanges. India's small adverse balance comes round not oftener than once in ten years; yet to meet this small balance millions of pounds sterling are being locked up in London while India is starving. What the Industrial Commission failed to realise when it made its halting proposals was that the question of industrial development is essentially a question of finance, and that nothing short of a radical overhauling of the financial policy of the country can solve that question. You may have expert advice, and provide for another bureaucracy of industrial experts who will administer the industries with the same lack of imagination as the political bureaucracy administers the general policy; you may have greater facilities for industrial education and unwittingly make it possible for the foreign rulers to impede the spread of humane learning; you may have a fiscal policy and a well-devised protective tariff, which may be manipulated for other purposes by an irresponsible Government. These are not the devices which, even when they are successful, will of themselves bring about rapid industrialisation. For the latter you require a sympathetic Government with a single eye, using its resources for the raising of loans and for the creation of credit, so that the untold wealth of the country now buried underground or allowed to rot on the surface may be transmuted into the means of material comfort for the people, and release their energies for the larger life of freedom and creative enterprise which is promised unto every individual and every race.

CHAPTER XXII

COTTAGE INDUSTRIES

AMONGST the effects on Indian economic conditions of the increased imports of manufactured goods, the most serious are those produced on the cottage industries of the country. These effects, as the Industrial Commission point out, have not always been in the same direction. The import of brass sheets, for example, has reduced the demand for the services of the brassfounder, but has encouraged the brass hollow-ware business. In some cases the village artisan has disappeared; in others he has been transformed into a free workman seeking custom of his own. The influx of machine-made cotton goods not only of foreign but of Indian manufacture had even before the war cheapened the price of cloth in comparison with other commodities and had enormously extended its use by the poorer classes, but had prejudicially affected the class of weavers scattered all over the country in the towns and larger villages. Out of about 15,000,000 workers or artisans it has been estimated that 5,000,000 are employed in the hand-loom industry. There is no doubt that the commanding position which India once held in textile industry has been lost, through improvements in textile machinery and through the application of steam power to textile manufactures. There are thinkers, official and non-official alike, who tell us that if India is to regain her position as a great country she must accept the lead of European countries, follow in the footsteps of European

industry, revolutionise the working conditions of her traditional handicrafts, turn the village workshops into steam factories, and give up hand labour for mechanical power. They warn us that India's salvation lies in the wholesale introduction of machinery and in large-scale production, in entering the world-wide competition for securing foreign markets by the export of her manufactured commodities. Industrialism succeeded in Europe with large-scale production and machinery; therefore this is the only avenue to success in India.

Now, if this view is correct, the prospects for India are not very bright. In the first place the Indian artisan has been brought up under traditions which make it exceedingly difficult for him to take to the discipline of factory work in congested towns. If the economic greatness of India depends exclusively upon the ability of her people to compete in foreign markets, that greatness will be denied to her for a long time to come, in the absence of skilled labour, of financial resources, of business enterprise. Japan will be a more formidable rival to India in foreign markets than Europe or America.

But industrialism in the West has not been an unmixed good. It has brought with it, as we have already indicated, a degraded commercialism that measures all human efforts in terms of gold and silver; it has brought with it congested cities, a high-pressure life for production and not for consumption, poverty, destitution, gross inequalities in the distribution of wealth, bitterness of relations as between class and class, that sense of injustice which we speak of as social unrest. Great Britain, France, Germany followed one another in the race for industrial production; to be followed in turn by Austria, Italy, and South-eastern Europe, and finally by the United States and Japan. Each country as it enters the field endeavours to become industrially self-sufficient, and then sends its manufactured goods abroad. When the markets for Europe were closed the manufacturing countries sought for markets in the colonies; but colonies are soon ex-

hausted ; they too tend to become self-supporting ; there is not a second India in the world. China may still be a sound and reliable customer. But when China feels the need for cheap machine-made goods she will produce them for herself. Industrialism overgrown and overgrowing is bound to defeat its own ends ; and to-day the need for a revision of economic policy is forcing itself on the Western nations. It is being increasingly felt that the race for foreign markets must be abandoned, that it cannot continue on present lines, that each country might well think of making itself economically well-balanced if not self-sufficient, more especially so when there may be hundreds of thousands of Englishmen who have no opportunity of consuming Lancashire cottons and Sheffield cutlery, and hundreds of thousands of Frenchmen who do not wear Lyons silks. An overgrown industrial population must bring about, and has in the Western countries actually called forth, a correction by a return to agriculture, to redress the balance.[1]

It is on the other hand the correction of an overgrown agricultural population that we need in India ; and in the process of bringing about this readjustment industrialism will play a large part, even industrialism based on large-scale production with mechanical appliances. But whilst we recognise the place of mechanical appliances and large-scale production, industrialism need not be identified with it. India may well profit by the experience of the West and give up definitely any dream that her well-wishers in their enthusiasm may sometimes entertain of converting all her industrial potentialities into instruments of a policy of rivalry and competition for the capture of foreign markets. Hitherto such a policy has been based upon a one-sided exchange of finished commodities for raw materials ; such a policy could only end in the long

[1] Thus the War Cabinet in its *Report* in 1917 spoke of restoring agriculture to its proper position in the national economy of Great Britain : " After long years of neglect, its vital importance, not only for the production of food, but for the healthy balance of the life of the nation, has at last been recognised."

run in a cessation of all international trade, if every nation entered the race for industrialism in this sense. India need not in the industrial expansion that awaits her think of becoming a blind follower of the policy of national suicide.[1] There is a healthier industrialism that rests in the first instance upon a basis of a well-balanced population and upon an equilibrium of occupational distribution. In such an industrialism there is not the feverish rage for the production of standardised machine-made goods that desires to dump its surplus produce on foreign markets for the sake of profits. It rests primarily on the need of satisfying the requirements of its own people, and if it gives rise to international commerce, it is a commerce whose essence is not one country's gain at the expense of another, but a commerce based on equality of relations redounding to the mutual benefit of the parties concerned, consisting in an exchange of finished commodities of one kind or another, not an exchange of raw materials for finished goods. Wherever international commerce rests on the latter basis, as it has done in the history of European commerce in the last two centuries, it has involved exploitation and impoverishment of one party to the exchange: it has fostered racial and national animosity and bitterness, of which the war of 1914 was only the logical outcome and visible embodiment.

But a healthier industrialism such as that of which we are speaking aims primarily at economic self-sufficiency as the cardinal basis of national self-expression. It is the fear of war and possible starvation that is at present

[1] And yet we are afraid the President of the Fiscal Commission (1921-22) and the dissenting minority in their defence of a protective policy for India could not shake themselves free from the traditions of Western industrialism. "We would place before the country," they observe in the minute of dissent, "the goal to be aimed at, viz. that India should attain the position of one of the foremost industrial nations in the world; that instead of being a large importer of manufactured goods and exporter mainly of raw materials, she should so develop her industries as to enable her within a reasonable period of time, in addition to supplying her own needs, to export her surplus manufactured goods."

driving the European nations into a policy of economic self-dependence;[1] but such a policy need not be the outcome of the motives of fear and hatred and suspicion: it may be justified on the larger grounds of national welfare, it may be the outcome of the prompting of love and self-respect. As in the case of the individual economic freedom is the basis for a full human life, and economic dependence on another dries up the sources of growth and development, so in the case of nations economic self-sufficiency is the basis on which national life may grow and flourish and enter on the larger heritage which is promised unto every nation. And in an industrialism of this kind there will be room not only for the standardised large-scale production of factories run with mechanical applications, but also for cottage industries.

Coming more specially to the consideration of cottage industries in India there is still ample scope for the preservation of these industries in the country. As the Industrial Commission cautiously observe:

Apart from the beneficent changes brought about by the cotton mill, the rice mill, and the flour mill, modern industrial enterprise has left India in substantial possession of its cottage industries. The imports from abroad and the products of Indian factories have been absorbed by the largely increased demands of the country. . . . The artisans produce commodities which are in demand and so far have not been displaced by factory-made goods, and they work under conditions which they prefer to factory life. . . . A general review of the evidence confirms us in the conclusion that cottage industries are a very important feature of the industrial life of India;

[1] Thus Alexander Goddard, *Limits of State Industrial Control* (1919), p. 156: "We cannot foresee what further developments there may be in undersea warfare: as an island country we dare not risk being cut off from our food supply; and although we cannot look to be self-supporting, we should at least be able to produce at home a sufficient quantity of staple foods to make a submission, as the result of a temporary squeeze, impossible." And so the Earl of Selborne, p. 143: "The conclusion reached by the Committee (Agricultural Policy Sub-Committee) was that elementary conditions of national insurance demand that the country should become self-supporting in the matter of foodstuffs in the event of any further emergency."

that they are by no means so primitive as they are usually depicted; and that there is no real ground for belief that they are generally in a decadent condition.

Hand-loom Weaving

The hand-loom industry is the most important of these cottage industries. Though hand spinning has practically died out, accurate statistics are available for the production of yarn, the mill consumption of yarn, and the imports of yarn into India. From these figures it is possible to arrive at the total consumption of yarn available and actually absorbed by the hand-loom weavers. The average annual consumption for this purpose in the ten years 1906–16 has been 280,000,000 lb.[1] It is thus evident that the entire out-turn of the hand-looms very largely exceeds the total production of the mills. Though the condition of these weavers is far from satisfactory, though a great many are in the hands of moneylenders, though they have no facilities for marketing their commodities, though the looms that they use to-day have been used for hundreds of generations with no attempt at improvement, the hand-loom industry has held its own in the face of competition. The demand for cotton goods in India, with all the poverty of the population, is large and varied enough to admit of a prosperous cottage industry flourishing side by side with the mill industry. The artisans of India are hereditary craftsmen, still bound together with the customary ties of caste, who cling to their trade in spite of adversity, and who are exceedingly reluctant to abandon their occupation even for more remunerative work in the towns. They are skilful, patient creatures, "satisfied if by working most of daylight hours they can earn enough for bare subsistence."[2]

What vast potentialities for the revival of hand-loom weaving offer themselves if only those who have the

[1] Mr. Chatterton estimates the consumption at 400,000,000 lb. of yarn, and the value of the out-turn at Rs. 45,00,00,000 a year (*Industrial Evolution in India*).

[2] Havell, *Essays on Indian Art, Industry and Education*, p. 47.

moulding of the economic destinies of India would rise to the occasion and come to the help of the industry! The Indian craftsman is not averse to the adoption of improvements in his loom; the hand-loom workers of Serampore and the neighbouring districts, about 10,000 in number, have doubled their earnings and are in a fairly prosperous condition in spite of the fact that they are so near Calcutta, where day by day steamers unload thousands of bales of foreign piece-goods. It is because they have learnt the use of the fly-shuttle and a few labour-saving devices.[1] The sewing machine has been largely introduced into the country, and has forced its way into the villages; but the Government has been indifferent to an industry of far greater importance than all the other handicrafts put together. If the mechanical efficiency of the Indian hand-loom could only be improved by 15 per cent, this might be the equivalent of a 15 per cent duty on the imports of foreign piece-goods, and might largely set the industry on its own legs. There are to-day goldsmiths and jewellers, blacksmiths and carpenters all over India who use European labour-saving appliances and improved tools, but nothing has yet been done to help the Indian weaver.

On purely economic grounds the hand-loom will continue to exist and the workers continue to flourish so long as hand labour is cheaper than the cost of mechanical power; wherever in Europe the hand-loom has survived, it has survived on this ground. The figures connected with the total output of the hand-loom industry as compared with the total consumption of mill-made goods in India (including local mill production and the imports) from the year 1909–10 are very significant:

[1] Mr. Chatterton informs us that in 1911 there were 10,000 fly-shuttle looms in use in the coast districts to the north of Madras, and that the adoption of this method of weaving had greatly improved the condition of the weavers (*Industrial Evolution in India*, p. 231 footnote).

Year.	Total Consumption of Mill-made Goods in Crores of Yards.	Hand-loom Production in Crores of Yards.*
1909–10	301	95
1910–11	318	99
1911–12	340	110
1912–13	405	110
1913–14	417	113
1914–15	345	130
1915–16	341	120
1916–17	311	84
1917–18	286	87
1918–19	229	113
1919–20	241	61
1920–21	286	118

* This figure is arrived at by assuming four yards of cloth per pound of yarn. We are indebted for this table to *Bulletins of Indian Industry and Labour*, No. 16, November 1921.

These figures indicate at any rate the fact that hand-loom production in India has kept steadily rising with the general increase in the consumption of mill-made goods, and if the figures for 1920–21 are to be taken as representative—they synchronise with the Khaddar movement—the prospects for the hand-loom industry in India are far from discouraging. The proportion of hand-made goods to the total consumption of mill-made goods has increased from 1 to 3 in 1909–10 to 3 to 7 in 1920–21.

There are a great number of specialised types of cloth for which there is a limited local demand which only the hand-loom can satisfy, and which it would never pay to produce on a large scale;[1] and if by education, by experiments, by the free distribution of improved appliances, the weaver is familiarised with labour-saving mechanism, the hand-loom industry has a great future before it. But there is another ground on which the hand-loom industry has a claim to be preserved. In India during the last hundred years there has been a continuous decline of public taste, so that at the present time educated

[1] Thus, for example, the beautiful solid border cloths made in Salem and Madura cannot be produced in power-looms, and the weavers of these cloths have nothing to fear by way of competition from power-looms.

Indians have fallen far behind the civilised world in artistic understanding. There has been, as Mr. Havell pointed out, a complete neglect of art education and a corresponding decline in the higher branches of weaving, and many of the most beautiful fabrics for which India has been famous from time immemorial are no longer produced, because they have ceased to be appreciated. The Indian handicraftsmen are being beaten by the power-loom because in the first place weavers are totally ignorant of the improvements in hand processes that have been made in the last 150 years in Europe. No attempt is being made by Government to educate the weavers in the use of these improved devices; no attempt is being made through the co-operative societies to relieve them of their indebtedness. Secondly, the hand-loom industry is declining because the artistic understanding of the people has degenerated, and no systematic attempt is being made to train the Indian craftsman to better ideals —the ideals embodied in his own dim past in the work produced by his ancestors. All the achievement of Government in this direction amounts to the running of four schools of art for a population of 350,000,000 people. And all these years past the native craftsmen have been asked to follow their European leaders, the Public Works Department engineers, in building, the imitation of grotesque Gothic or classic ornamentation, and the use of standardised wall papers and hangings in place of the old processes of fresco decoration. Higher education in India has unfortunately excluded artistic culture from the province of its activities, and the Indian Universities, the schools, the colleges have excluded from the cultural training they provide the development of the emotional side of human life.

Sericulture and Silk Weaving

In 1916 nearly 2,276,000 lb. of mulberry silk was produced in India. With growing prosperity there will

be an increasing demand for all this silk ; large tracts of India are suited for the development of raw silk production ; and much of the silk, both raw and in the form of manufactured goods, now imported into India might be produced in the country. Disease among the worms seems to be the silk grower's principal difficulty.[1] The indigenous methods of silk reeling are crude, and there is scope for improvement. Sericulture is essentially a cottage industry, and experience in the past has been clearly against the establishment of large rearing houses. The Indian silk weaver is largely dependent on China for his raw material. The silk weaver, even more than the cotton weaver, is in need of special technical instruction. The industry is in the hands of an intelligent class of weavers, and there is evidence to show that the increasing demand for their goods has been accompanied by corresponding attempts to improve their methods of production.

The Case for Small Industries

The Judicial Commissioner of Burma in his evidence before the Industrial Commission, whilst he referred to cottage industries in Burma, enunciated in outline a policy which might well be applied throughout India :

> With reference to small industries, he observed, I think there is a wide field open to Government. There are numerous village industries in Burma, some of which are extensively carried on, and serve, or used to serve, the needs of the people throughout the Province, while others are more local in character. Such are weaving, pottery, slipper-making, umbrella-making, lacquer work, jaggery-boiling, and a number of others. Many of these are efficient in their own way ; but they are carried on in ignorance of what Western knowledge has achieved, and many of them are threatened with extinction. It seems desirable that, wherever it can be done, the craftsmen should be put in the way of learning such Western methods and improvements as may be of assistance to them. They are all village industries, and though some are

[1] *Industrial Commission Report*, p. 195, and Appendices, p. 82.

capable of concentration in large factories, it is in the direction of maintaining their present character that Government help should be given. The question of markets cannot be lost sight of,—as the ordinary villager is not capable of advertising his wares, of accumulating stocks, or developing new markets, Government assistance is probably necessary for these purposes. Here co-operative societies offer a means of development which may be of the greatest value.[1]

The prospects of a successful development of the village industries of India on economic lines are fairly encouraging. The Indian craftsman, conservative as he is, is ready to learn and to adopt improvements in his methods of work once these are made clear to him. The cultivator who grew sugar-cane and once used the inefficient wooden mills has readily taken to the use of cast-iron mills, which involve less labour and yield a larger percentage of juice. Wood-workers and metal-workers have adopted European tools; oil extraction is largely done in screw presses. Every tailor's shop in the village has a sewing machine. These are all evidences of a healthy spirit of adaptability to new conditions which are necessary for industrial regeneration. And if the material is rightly shaped and moulded by a system of primary education devised so as to include the handicrafts from the earliest stages, we have all the potentialities of industrialism in the labour of India. In the second place, if the artistic tastes of the population are once again educated through stress laid on the aesthetic side of human life in our schools and colleges, we have the necessary steady demand for a large variety of hand-made goods which alone can give scope for self-expression on the part of the men who make them.

But there is one other consideration that promises well even for power industries not only in India but throughout the world. The cost of power in our times has been enormously reduced in the case of small plants, so that the small user of power is in a much better position to compete with the large user than was possible a few years ago.

[1] *Evidence*, vol. iv. p. 617.

There are all over the country enormous water-power resources which would make it possible to create power industries combining the economy of power production with the opportunities for self-expression which hand-work offers. Ten years ago, in the last edition of one of his books, Prince Kropotkin pointed out how, scattered throughout Great Britain, France, Switzerland, and Germany—countries which had identified themselves with large-scale production—there existed small industries and petty trades, weavers of muslins, woollen and cotton stuffs of all kinds, cutlery manufacturers, basket-makers, coffin-makers, and a hundred other occupations, which brought the workshops into the fields and the gardens, and attracted men to activities suited to their tastes. These small workshops and industries did not employ men driven by hunger, were not run for the sake of extra profits, and did not count men as of less account than machinery. Production was carried on for the satisfaction of the genuine wants of men, and not for satisfying shareholders by high profits ; and if Europe, already enmeshed in the tragic consequences of a feverish industrialism, speaks through the mouth of prophets and seers of the hope of a future in which cottage industries will relieve the failure of large-scale factory production, we in this country, not yet enmeshed in capitalistic trusts and combines, might well think of setting our house in order in time, true to the noble traditions of an earlier age and yet free from the sloth and stagnation that gather around long-established customs and institutions.

For ultimately the case for cottage industries rests on the ground that it gives opportunity for self-expression to the worker ; the limits of the use of machinery are reached at the point where a man has to think more about the machinery than the work he is doing, and where those directing industry have to think more about how they are to keep their plant running than of the service which their activities render to the community.[1] And

[1] *The Return of Christendom*, p. 144.

modern industrialism has outstepped those limits with its soulless subdivision of labour. The Indian craftsmen are heirs to a tradition and training transmitted through the ages ; their environment has an unbroken continuity of culture. A slavish imitation of Western industrialism is the surest method of stamping out these traditions and destroying this environment. And this would be all the more tragic when it is realised that with contraction of foreign markets, and the growth of unemployment, the conviction is gaining ground that Western industrialism is becoming rapidly unworkable, and will break down of its own weight.

CONCLUSION

In bringing this book to a close we feel a sense of diffidence —we feel as if in the discussion of many of the questions that we have touched we have not made sufficiently clear the purpose that has animated this venture. We take this opportunity at the close to reiterate a few simple truths. The world is passing through a critical stage of evolution, when the old, sanctified institutions of an epoch that is dying out cling with all the tenacity of age to a soil which is being rapidly ploughed up by the economic and philosophic thought of the last twenty years. We are passing through a period when reconstruction is in the air; every country is feeling the need for a more or less radical overhauling of its social and economic organisation if it is to survive the consequences of the last war. What is missed is the sense of the need for a more radical change than change of political or economic institutions—the need for a change of heart, for a revaluation of human needs and demands. While the West is thus in the throes of a new birth, we in India find ourselves faced with a situation equally pregnant with wide issues. We find we are beginning our economic life to-day at the stage which the European nations passed through three-quarters of a century ago; shall we fail to profit by the lessons and warnings of these seventy-five years, or shall we be helped by this experience to shorten the period of agony and to reduce the measure of our national sacrifice? The answer to this question lies in the clear enunciation of a definite economic policy

for ourselves—and in the application of this policy to the detailed economic problems that face us. This is what we have attempted to do in the foregoing pages to a limited extent and in a somewhat incomplete manner. The history of humanity is the history of an age-long struggle of the soul towards its heritage of perfect liberty, —the one condition for the development of its potentialities. The realisation of liberty takes for granted a social and economic order radically different from that to which we are accustomed. In an age of unequalled commercial expansion men can hardly think of national life except in terms of power and prosperity. We must in the first instance shake ourselves free from the prepossessions of a commercial age and think in terms of the men and women for whom our social and national institutions exist. For us Indians born and bred in the traditions of the saints and Rishis it is not difficult to realise a compelling sense of spiritual values—to realise that machinery is a labour-saving device that should give us more time for reflection, and not a device for increasing our hurry; that property is an instrument for the expansion of life, and not an instrument for hampering and smothering life; that the first charge on the possession of property is not the preservation of private income and the promotion of individual interests, but the well-being of the society and the promotion of corporate interests. "Where there is no vision, the people cast off restraint." The Western nations cast off restraint in the systematic carnage carried on through four long years. If we in India are to be wise, we ought to have before us a vision of things; if in the elaboration of that vision we have sometimes been harsh in our judgements, it is not out of a lack of goodwill, but out of the limitations of our insight. We are ready to recognise that in the onward march of humanity towards the realisation of freedom and fellowship, facilitated in the last hundred years by the discoveries of science and the expansion of commerce, Great Britain has had a part to play of which it might

well be proud—and that the rule of Great Britain in India cannot be effaced from history without creating a chasm in the continuity of historical development. If in the detailed discussion of the economic problems that we have handled in the preceding chapters we have been warm in our judgements and outspoken in our criticism, it is not a perverse sense of national egotism and a fanatic national self-righteousness that have betrayed us into harshness; it is the desire to formulate a definite programme for the future, based on the one idea of making our country an economically self-sufficient organisation, touched with the passion of winning the nations into a commonwealth of peace and goodwill. In the working out of the programme we have confined ourselves in the present work only to some of the problems that face our country to-day; we hope to deal with others —the problems of distribution and exchange—in the future, if God gives us the leisure and the strength. Whether that hope is realised or not, we pray that in the near future, so full of promise for humanity, our country may prove true to its past traditions and serve to bring the nations together into the freedom of the larger life.

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Printed in Great Britain by R. & R. Clark, Limited, *Edinburgh.*

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