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THE
BASES OF INDIAN ECONOMY
A
SUGGESTION

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ALLAHABAD
RAM NARAIN LAL
PUBLISHER AND BOOKSELLER

Dedicated
**To the Service of Fellow-Students
of
Indian Economy.**

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FOREWORD

The present work is no more than an outline sketch of an important aspect of Indian Economy that awaits the pen of a mightier intellect to do it full justice. Each of the factors—like Geographical, Social, and Legal—is capable of scientific treatment on much wider scale than has been here attempted. I have merely suggested the lines of approach to the subject. And my object in submitting the work in its present form is to secure expert criticism and constructive suggestions, rather than to offer any conclusive opinions on the method of study and teaching of Indian Economy. And one thing that would afford me great pleasure indeed, will be frank criticism of a constructive nature so that in a subsequent edition I may be able to present to my readers something really useful.

Even as it is, it owes much to the helpful suggestions given to me by my friends and colleagues of the Department of Economics, University of Allahabad, specially Professor C. D. Thompson to whom I offer my grateful thanks.

ECONOMICS DEPARTMENT, SENATE HOUSE, ALLAHABAD,	} BRIJ GOPAL BHATNAGAR.
<i>April 1925.</i>	

CHAPTER I

INTRODUCTORY

When I began my career as a teacher of economics, the most important problem before me was how to teach Indian Economy. Had there been one common method of teaching the subject prevailing in the colleges in these Provinces, the problem would perhaps have never attracted my attention ; but as it is, the variety of ways in which it is being taught in the colleges and universities, and the great divergence of opinion existing among these as to the best method of teaching, spurred on my imagination to select for myself a method of teaching, at once simple and intelligible.

As a student I had studied under two methods of teaching. In a mofassil college, where I read for my B.A., Indian Economics used to be taught as an independent subject, in the second year of the course, when the class had finished the principles of economics. This I believe to be fairly representative of the practice in other affiliated colleges in the Provinces also. The idea is further supported by the clear line of demarcation drawn in the University papers, although in the question papers of recent years this tendency seems to be fading away. The method adopted in teaching it used to be to dictate notes, beginning with the broad physical features of India in their barest outline, and without expressing any relation of cause and effect or the complementary nature of the various regions. Then would follow a mere enumeration of the various agricultural and mineral

remedied. It partakes more of the nature of the art of economics or of a normative science,"¹ Or again : " Indian Economics may also include those questions of economic policy which will tend to better the economic condition of India. Thus if we admit the general distinction between science and art as valid, we shall have to put Indian Economics as an art."² In consonance with this changed outlook, I take the liberty of recommending the use of the term " Indian Economy," instead of " Indian Economics ". The term, if it finds acceptance in recognised circles of Indian economic thought, will remove a great deal of confusion of thought about the true nature of the subject. To me it appeals as both more expressive of what it stands for, as well as more scientific.

If we concede, as I believe we should, that this is the correct way of looking at Indian Economy ; and if we at the same time recall to ourselves the modern ideas about geography, then we should be able to realise the importance of Indian geography in the teaching of Indian Economy.

According to modern belief, " Geography is primarily the study of the various natural divisions or provinces of the earth's surface, as illustrations of the relations between the inorganic physical facts of the earth, air, and water, on the one hand ; and organic facts of the vegetable, animal, and human world on the other."³ To illustrate : the investigation of the

1 Kale : *Introduction to the study of Indian Economics*, 1907 edition, page 8, para. 2.

2 S. V. Ketkar—*Essay on Indian Economics*.

3 Ellsworth Huntington in *The Pulse of Asia*.

structure, origin, form and climate of a lofty plateau, and a neighbouring arid plain is not geography but geology, physiography or meteorology. Neither can the study of the methods of plant growth and animal nutrition rightly be called geography, but botany or zoology. When, however, we consider the fact that because of the elevation of the plateau, its climate is such that the grass grows abundantly in summer ; while the plain being lower has less rainfall, and bears only a sparse growth of grass in the early spring, we at once bring in the relation between the organic and the inorganic ; and the study becomes geography. For the purpose of geography it is only necessary to understand enough of the plateau, the plain, and the grass to gain a clear conception of how the one acts on the other. If animals inhabit the country, they must be such as can live on grass, or can prey on their grass-eating companions. Further, if the plain is waterless in summer, and the plateau is deeply buried in snow in winter, the animals must perforce migrate and a new geographic factor is introduced. When man enters the region, he finds it too dry in one part and too cold in another for agriculture. Hence he must live upon animals; either as a hunter or, when the population becomes a little denser and settled and the wild animals diminish in number, as a shepherd. In either case he must wander from place to place. Such a nomadic life induces certain moral qualities, such as gluttony, alternating with abstemiousness, hardihood under physical difficulties, laziness, hospitality, and others. Thus the physical features of the region give rise to certain kinds of vegetation, which in turn determine the species and movements of animals, and cause man

to adopt the nomadic life. And as a result man develops certain habits, physical, mental and moral. Or again, we might go to the well-watered Indo-Gangetic plain, with its rich soils, where it is easy to practise intensive agriculture, and to live a sheltered, easy life. All this, on one hand, tends to induce weakness of will, cowardice, immorality, and the weakening of those ties between parent and children which are required for the careful training of the growing generation ; and on the other hand to induce high religious speculation, fatalism, luxurious living, the practice of arts, and that wonderful village organisation, which is the peculiarity of the plain life in this land. Doubtless religion and other causes play an important part, but as we shall see later on, religion itself is very much influenced by the physical conditions of a region, and there still remains much in the character of the people of Hindustan which owes its origin more or less directly to physical conditions. Not that a single individual's character is directly influenced to a very great extent by the ignorant world around him. He inherits, or receives through the training of others, most of what he is. " Nevertheless inheritance or race qualities are merely the summation of past training " ¹—the influence of physical and moral forces. The training of the average man is strictly in accordance with the social order into which he is born, and the social order owes much of its character to the rivers, the plains, the forest, the mountains, or the factory by which the occupation of the majority of the people is determined. When all this is considered, it becomes almost impossible to assign limits to the influence

1 Ellsworth Huntington in *The Pulse of Asia*.

of physical environment upon the character of the people living in a particular region.

We may now say that modern geography is more than a catalogue of facts ; it is also a study of the relationship of these facts. The old idea of geography was that of the teaching of " what " and " where " ; modern geography also answers " why." " Modern geography lays great stress upon the human side of geography, and seeks to explain the relation of human life to the earth, *i. e.*, it asks what is the significance of the various geographic data, such as rivers and mountains, to man ; or we may say that it attempts to answer how the various geographic features of a country have influenced the activity of the people living therein. Modern geography then is the study of the earth and man as related to each other, and not a description of the features of the earth alone. It studies the features of the earth, so that the people may be understood, and the future possibilities of the utilisation of the environment to the increased well-being of man may be discovered. A national costume, a national occupation, racial structure and even a racial spiritual trait, may be traced directly or indirectly to the influence of climate." ¹

From the above discussion of the nature of the two subjects, it should have become clear that two branches of Indian Economy lend themselves pre-eminently to geographic treatment. One of these branches seeks to describe various Indian economic phenomena, such as the distribution of crops, the distribution of population, the existing development

¹ Holtz, *Teaching of Geography*.

of the industries, the varied habits, and the efficiency of the people. The other seeks to propose solutions for certain economic problems in India, such as the shortage of food relatively to population, and the influence on it of the adoption of scientific distribution, the development of the means of communication, industries, and hydro-electric works in certain parts of the country. All of these can be taught, one cannot say with what practical results, but certainly for the passing of examinations, by the method of notes and learning by rote, as they are being taught these days in most of the colleges. But it is an unreal, lifeless and impractical method by which it is difficult for the student to remember things for any length of time, and by which it is thoroughly impossible for him to make any practical use of his learning in after life. All these things should be taught with reference to a map, pointing out the reflex influence of environments on the delineation of present facts, and the explanation of the proposed changes. To illustrate: suppose we want to teach the distribution of crops, then it is not enough to give an inventory of crops raised in different parts of India, and in different seasons, but the reasons why they are grown in a particular region and a particular season should also be explained. This can best be done by means of a map, where one can touch upon the nature of the soil, the character of the rainfall, and the influence of the means of communication, all at a time ; and point out that such and such a crop is the result of such and such natural environments, and that given those environments one should expect that crop to be predominant there. Then again, while dealing with

the distribution of population, we should point out the determining influence of the soil, the climate, the rainfall, the means of communication, and industrial phenomena that are important in this connection ; and this is best done by means of a map where all these things are present in a common perspective. The student can see all these at a glance, and realise their influence on the central point simultaneously. By adopting this method, the student learns not only what he is expected to learn from notes, but something more ; and in a shorter time and with a greater surety of longer retention than in the previous method. He learns to argue out for himself the relation of cause and effect, and is helped a great deal in cultivating a broad and logical outlook, a thing very much to be desired in our students.

But there is a still greater importance in the geographic treatment of Indian Economy in its second sphere, where it seeks to find out possibilities of economic development in India, and where it proposes to put forward definite proposals for attaining definite ends. It is almost impossible to deny that industrial development primarily, though not exclusively, depends on matters described in geography—the natural products of a country, the character and efficiency of the people, and the means of communication which afford facilities for trade, and determine the extent of the markets. The beginnings of economic activity have always been determined by surroundings ; and it is only in advanced stages of economic development that man succeeds to a limited extent in modifying his environment to suit his needs. Man's power over nature being limited, it is desirable, from

an economic point of view, to adapt his activities to his surroundings, to utilize the natural forces to their best advantage ; and hence the importance of a close study of the natural environments before we start on any industrial venture.

From what I have said above, it should have been made clear that the geographic treatment of Indian Economy is very much to be desired. Not only is the student likely to learn things easily and quickly, but this method also helps him very much in acquiring a habit of gleaning information for himself from his environment—a quality which every nation should attempt to develop in its members, if it aspires to rise in the scale of civilization and the comity of nations. “The cultivation of the map-habit of thought is no less pregnant in the sphere of economics than it is in the sphere of strategy.”¹

Having discussed the importance of geography in the study of Indian Economy, we may pass on to discuss the significance of social and religious ideals in the study and the teaching of the subject. Economic activity is the result of human wants, the character and quality of which are very much influenced (1) by his physiological needs, and (2) by his environments ; and which are satisfied by commodities secured either directly from nature in a form suitable to meet the need of man, or by commodities made by the application of human force, independently of or in conjunction with the forces of nature, upon the objects secured from her. But with all this the higher wants of man are not the result of these elementary

1 Mackinder *Democratic Ideals and Reality*.

causes, but are greatly influenced by his ideals of life ; and the importance of the influence of those ideals increases with every advance in civilization. There are certain writers, most prominent of them being Buckle, who have unduly emphasised the influence of environment on civilization ; but we have to remember with Dr. Gilbert Slater and Prof. Patrick Geddes that, “ what exists in the district in which people live—seas, mountains, plains, forests and the like—determine what occupations are possible, and the occupations demand certain qualities in the people following them, and by natural selection enforce the attainment of such qualities upon the people. That is true, but it is only half the truth ; and the other half of the truth which is the one that it is even more important for us to bear in mind, is expressed by the formula—Folk-Work-Place. For the people can determine what they will be, by choosing what they will do, and having chosen their work, they can fashion the place ; they can mould the environment in harmony with the ideals.”¹ “ Our actions are governed by our mind and so also the actions of a country are governed by the sentiments and ideas that prevail therein.”² Therefore, if it is essential to get a thorough grasp of the natural environment of a country in order to understand its economic activity ; then it is equally essential, if not more essential, to study the religious and social ideals and institutions which inspire new wants, modify the rigour of pure economic dictates, and soften the hardness of purely elemental instincts. The extent to which economic issues are themselves

1 Slater and Geddes : *Ideas at War*.

2 S. V. Ketkar : *Essay on Indian Economics*.

determined, at any rate since mankind became reflective and self-conscious, by prevailing ideas, ideals, and aspirations, has perhaps, been underestimated. There has been a time no doubt, and such time may come again, when people wait the actual impulse of hunger to seek new resources by migration or conquest ; but in our civilization the movement of causation may almost be said to have been reversed ; we find that it is new activities which generally breed new wants. We can not, therefore, form a correct estimate of the economic conditions of a nation without giving due consideration to the part played by its socio-ethical ideals and aspirations. No doubt nature effects man, but the effect of man's activity on nature must also be recognized. If in the study of the positive aspect of national economy, an insight into these ideals is very necessary, then in its normative aspect, where we suggest new lines of reform, their consideration is indispensable.

The influence that religious ideals and philosophic doctrines have exercised upon the economic activity of the Indian people can be best realized by those who know something about the arts of India. In England, where philosophy is commonly held to have no practical bearing on life and policy, people used to think, and with the exception of very few, still think, that India had no arts ; and that whatever they saw in our statues of gods and goddesses only confirmed them in their belief. They never realized that the key to the understanding of Indian art was to be found in Indian religions and in Indian idealism. To the fortunate few, like E. B. Havell, who have succeeded in entering into the spirit

of the arts of the country, the four-headed, and tetra-handed figures become at once full of meaning and inspiration ; while to those who lack this simple knowledge, they continue to be but the grotesque efforts of a pagan race. But the influence of Indian religion and philosophy is far deeper and far wider than is seen in these statues and in the *stupas*. One can trace it in the very shape of our home utensils, our clothes, and our furniture. Many an industry in India flourishes because it provides commodities that meet the spiritual needs of the people, to wit, the industry that makes idols for the worship of the common people. The metal industry and many others make one and a thousand commodities that would never have been produced in any country other than India ; and even in India if she were, say, a Christian country.

Coming to sentiment, we have a very good example in the recent revival of the *charkha* and of the hand-loom. Not long ago people used to think that the weaver had no choice between the servitude of the power loom mill and the servitude of the village *sowcar* ; and if any one ever talked upon the revival of the hand-loom, people looked upon him as a foolish crank, and the votaries of the power loom and the modern factory used to remark that it was no use wasting sentiment on the village weaver. It is common for modern scientists to profess a fine contempt for sentiment. Sentiment, they argue, did not help the hand-loom weaver of Europe ; nor will it in the long run save the hand-loom weavers of India. But what has mere sentiment done in India, and that too in a space of two or three years and what it is doing ? To me it seems that sentiment has helped to save for

India an industry worth commercially more than the whole of Anglo-Indian industries ; and it will be this sentiment, if kept up, that would again bring to the weaving industry of India that artistic beauty which was its pre-eminent feature before western methods of manufacture were adopted. The destruction of Indian art which has been going on in India since the coming of the British is a loss to civilization and to humanity, which should and can be arrested, if Indian industrial reformers will bring to their work the true artistic spirit which England had to learn, through Ruskin and Morris, after the destruction of all her traditional art and after much waste of time and opportunities. Much of Indian art is still living, though it is fast dying, and it should not be necessary for India to continue to follow the bull-in-the-China-shop methods which we have too often applied in the name of European civilization, science and progress. If Gandhism is to teach us anything, it should be that sentiment has a place in determining national activity—economic, social and political ; and that we cannot and should not ignore it while deciding the practical problems of life.

The above discussion, slight though it is, must have given us an idea that Indian Economy should be approached through those fundamentals which underlie and condition all economic activity in this land, and these are to be found in the economic interpretation of (i) the Indian Geography, (ii) the social customs, (iii) the religious ideas and ideals of her people, and (iv) the various laws that bear upon her economic activity.

CHAPTER II

THE PHYSICAL BASE.

Section I – Natural Physical Features.

Study of geography of any country from an economic point of view may be defined as the study of the influences exerted upon the economic activity of the people of that country by the physical environments of the place. The physical factors, it is true, do not determine absolutely the character of economic life, but they exercise a control over it which is very clear in the early stages of human history, but which is no less real, although a bit removed, in advanced civilizations.

In order to pursue a study of this character it is necessary to have recourse to much information derived from other sciences. An appeal must be made to the geologist and the geomorphologist for many facts regarding the structure and the formation of the surface of the earth because unless one knows these one cannot very well understand the soil classification of different regions ; from the metallurgist and mining engineer must be obtained some knowledge of minerals and fuels accessible to man ; from the meteorologist he must borrow facts concerning climate, whilst the botanist and the agricultural chemist must supply him with the necessary information regarding the plant life. To the economic geographer belongs the task of correlating these different facts and estimating their influence upon human activity. He has to consider the extent to which man in his economic aspect is controlled by these various factors, and how far he is able to free

himself from their control, and consciously to adapt himself to his surroundings, and his surroundings to himself. It should not be hard for any one to realize that the task is a difficult one, and requires a very wide range of information. But we must remember that to give an idea of the economic significance of the physical features of India, it is not necessary to enter into the causes of the principles that have brought about the existing state of things. Here, as elsewhere in economics, we take these various facts as premises, leaving their proof to the various sciences to which they belong ; what is left to the student of Indian Economy is to correlate these facts, and give us their economic bearings. India being a very large country, it is not possible to give economic interpretation of all her different parts, within the purview of this little book, which is intended merely to indicate the lines of study and approach to the subject of Indian Economy. We, therefore, propose to give a specimen study of one of the many regions in India, and leave the study of others to those whom this particular method of study may appeal.

ECONOMIC INTERPRETATION OF NORTHERN INDIA

For the purpose of this work we would include under the term Northern India all that land which lies between the Table-land of the Deccan on the south and the Tibetan table-land on the north. This vast area is divisible into three distinct regions (1) the region of Northern Mountains, (2) the region of the Indo-Gangetic Plains, and (3) the region of Southern Highlands. The reason why we have selected such a big part of India for our study is not difficult to find, as the areas comprising these regions are

not independent of each other, but form what is known to geographers as a group of complimentary regions—each region depends upon the other in a variety of ways ; the nature of dependence will be made clear as we proceed further.

I. THE REGION OF NORTHERN MOUNTAINS.

The general relief of this region is very important

General Features.	Physical
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from an economic point of view. Taking a general view it may be likened to a three-stepped staircase wherein the first step is given to us by the outermost foot-hills or the Sub-Himalayan Ranges, the second by the Lower Himalayas and the third by the Inner Main Ranges.

(A) The Inner Main Ranges.

The Inner Main Ranges being very high are perpetually covered with snow, which melts during the summer and feeds the rivers of the plains below. They intercept all the moisture brought by the summer monsoon winds and thus act as the reservoir of moisture for India. The Indus, the Sutlej and the Brahmaputra, cut through them from the table-land of Tibet and bring a large volume of water from places outside India. Then again they stop the cold dry winds that blow over the Tibetan Table-land from coming to India.

(B) The Lower Himalayas.

They run to the south and roughly parallel to the Inner Ranges. They are not so high, and only their higher regions are covered with snow. They are clothed with forest trees, and act as the catchment area of the rain that falls in immense quantities

here when the monsoon winds rise towards the snow clad regions. The economic significance of this region to India may very well be explained by reference to that painting which is based on the mythological story of *Ganga-Avtaran* (or the coming of the Ganges) wherein God Shiva is made to stand, with his feet firmly rooted in the earth, in an attitude of firm determination, to receive the approaching Ganges from above. If the Himalayas had not this comparatively low and broad region, covered with huge trees whose roots ramify deep into the mountain sides, to receive torrential rains that fall here, and to arrest their fury, the plains down below would have been washed into the sea.

(C) The outermost foot-hills or the Sub-Himalayan Ranges.

They are not high and in some places are separated from the lower Himalayas by expanses of open country. The latter are at a somewhat higher level than the plains beyond the foot-hills. Here tea-plantations are carried on and there is a very great opportunity for the production of the fruits and vegetables of temperate climates.

(D) Products of the Mountain Region.

(a) *Agricultural*.—Agriculture in the Himalayas is carried on right up to the Inner Ranges, except the parts which are covered with snow for so large a part of the year that they can only be used for grazing. As conditions that determine what crops will be grown in a particular locality vary much within short distances owing to the differences of altitude, therefore, no definite statements can be made. However, with this reservation in mind, we

can safely say that in the valleys, though the soil is neither deep nor very fine, it is very fertile as it is renewed from year to year by sand and mud brought down from the higher parts. Soil on the foot-hills is very similar to the soil of the valleys, but it is comparatively thinner, and has more unbroken stones ; while the soil on the hill-side where fields are arranged in terraces, is generally poor. Speaking generally all the parts of the Himalayas, except the north-western parts ending in the vale of Kashmir, are well supplied with moisture from rains as well as from springs. In regions below six or seven thousand feet in the valleys rich crops of rice, wheat, barley, sugarcane, rape, linseed and tobacco are grown, while terraces in the same region grow such poor crops as maize, marua, kangni and bhatwas. But it is not common to find such a rich crop as sugarcane or wheat being grown on the terraces. As we approach higher regions the proportion of rice and wheat diminishes and that of barley, oats and buck-wheat goes on increasing till in the very high regions buck-wheat is the most important crop. A large variety of fruits such as bananas, oranges, peaches, apples, and vegetables such as beans and potatoes, are grown in large quantities, the latter increasing in importance as we go higher and higher.

(b) *Forest Products.*—The Himalayas are very rich in forest produce. Timber and wood of almost all kinds are met with here. There are forests of fir, pine, deodar, oak, sal, asaima and bamboo. These forests contain many wild animals, whose skins and furs are used by men for many purposes.

Babār grass, which is used for paper making, and many kinds of trees whose fruits and barks are used for tanning are also found in the lower regions of the Himalayas. A variety of gums, oils and resins is also secured from them.

(c) *Mineral Products*.—The Himalayas do not seem to be rich in minerals. Copper is met with in fairly large quantities from Kulu eastward, iron is found in Kumaon, and coal in Darjeeling. The presence of sulphur in many springs, and of small particles of gold and silver in the sand of many rivers, suggests that these mineral products lie hidden deep in the bowels of the Himalayas. Some parts of the Himalayas are rich in slate used for roofing, and high class quartz—a raw material of glass.

(d) *Human Beings*.—Population in the Himalayas is very scanty and it is only in the valleys or on the table-lands of the outermost ranges that people are found living in large numbers. They are strong, industrious and accustomed to hard work.

(e) *Animals other than wild*.—Cattle are not uncommon; the herds and flocks are pastured on the high ridges in summer and are brought down into the warm valleys in winter to feed on the straw of rice and wheat. Goats and sheep are everywhere met with.

(f) *Industrial Products*.—At present there are few industries worth the name but people of the mountains have been sending to the people of the plains such things as rice, wollens and ornamental wood carvings, and these are the chief industries of these

mountains. A large quantity of honey, fruits and ghee is also sent to the plains.

(g) *Means of Communication.*—The chief means of transportation so far, in these mountains are :—in lower regions man and the mule, in higher regions sheep and goats and the *yak*. But some parts such as Simla and Darjeeling and some of the lower valleys, such as the valley of Dehradun, and the foot-hills have been connected by railways with the plains. Some rope-ways are also being developed.

(E) Possibilities of the Region.

The possibilities of this region are very great. In the Preliminary Report of Hydro-Electric Survey of India the Himalayas have been characterised as the region of white-coal in India. They can, if their water resources are fully developed, become a store house of electric power for working the various metallurgical industries, like copper and iron, which can not now be worked for want of coal. Further this electric power can be used for the development of mountain railways and rope-ways, and thus provide cheap means of communication, which would help the development of other industries in this region. So far we have been in a vicious circle there ; having no idea of its weakest point to break it asunder : the country being mountainous it is both difficult and expensive to build railways ; and as the population is thin and mobility between the hills and the plains very little, all the expenses of building and maintaining railways would fall on the industries that may be developed. The expenses of production of the finished commodities would then unduly rise

and make it unprofitable to produce them. We can not develop industries because there are no cheap means of communications and we can not develop railways because there are no industries. If, however, we could develop hydro-electric power, we would be able to develop cheap railways and still cheaper ropeways as they get over the difficulty of uneven country, and thus help the development of all those industries, whose raw materials are found either in the forests of the Himalayas or the mineral deposits. Industries like sawing big logs of wood into planks of suitable sizes, pulp and paper making, pencil making, and glass making could be developed here, if we had cheap electric power, as the raw materials of all these are present in the Himalayas.

2. THE REGIONS OF PLAINS—OR THE INDO-GANGETIC PLAIN.

(A) General Physical Features.

The whole of the Indo-Gangetic plain is alluvial, that is, its soil consists of fine friable mud and sand brought down by the rivers and spread down on the low-lying lands. A part of this plain is renewed every year by floods. It is very flat and the thickness of the alluvium is very great. North of the river Ganges, it is more than 1,000 feet deep, while south of the river its depth decreases towards the central Highlands. This plain is one of the most fertile in the world. There are, however, some parts, which are very poor in productive capacity, either because of the absence of water or because the land is marshy and forest covered. The dry region consists of (a) the plains of Rajputana, (b) the south-western part of the

Punjab, specially those parts, which have not yet come under canal irrigation and (c) in continuation of the same the south-eastern part of Sind called the Desert of Thar. All other parts either receive sufficient rainfall or are supplied by water from canals.

(B) Soils.

Soils in the fertile parts vary in consistence from drift sands to clays, so stiff that drainage is entirely prevented and in certain cases injurious salts of soda and magnesia accumulate as an efflorescence (*reh*) on the surface and make the soil sterile. Many an *usar* so common in the Doab is the result of this. In between these two extremes, we have loams, soils which are neither very stiff nor very loose and which grow almost all the grains and pulses of India. It is in these that we come across beds of nodular lime-stone or *kankar* and if the *kankar* bed happens to be three or four feet below the soil, it hinders percolation of water, and results in water logging and the saturation of the soil with salts. Like the *usar* such lands also become unfit for cultivation. Then again lying along the banks of the rivers we have a region of ravine lands—a series of ups and downs—in which agriculture is impossible ; and then behind it a region two or three miles in width, of very poor land, where soils owing to the surface erosion have become very very thin, and can support only poor crops. Samples of all the various kinds of soils mentioned above, one can find in almost all parts of the plains, but there are parts which are predominantly sand, while others which are predominantly clay, and yet others where the soil is most loamy. Thus a very

large part of Sindh and the Punjab is light sand, while the greater part of the United Provinces, Bihar and Orissa is loam, and it is only in Bengal proper, that we come across real samples of stiff clay.

(C) Climate.

The climate of the Indo-Gangetic plain is not uniform. The rainfall decreases as we go from east to west and from north to south, and there are two well-defined seasons of rainfall, one extending from June to September, both inclusive ; and the other from the last week of December till about the end of January. The western portion of this plain is one of the driest regions in India and its climate is the most continental, subject to extremes of heat in summer and cold in winter, while in its eastern part the climate is more or less tropical. On the whole Bengal proper is very warm and moist but even here there are three seasons : the cold season which extends from November to February ; the hot weather from February to the middle of June ; and the rainy season from the middle of June till the end of October. In other parts rains cool both air and ground. In the later part of the rainy season, as the air and the ground are alike soaked with moisture, an unhealthy season follows, and people suffer very much from malaria. From December to June the climate is comparatively healthy.

(D) Artificial means of Irrigation.

Irrigation in the Indo-Gangetic plain is carried on either by water taken out of wells or from canals. Large tracts of land in Sindh and the Punjab which were

lying barren for want of moisture have now been reclaimed by the development of canals, and grow plentiful crops of wheat and cotton. The development of canals in the western part of the United Provinces has led to a great extension of the area under cotton, sugar-cane and wheat.

(E) Products.

(a) *Agricultural*.—The factors that determine the agricultural products of a particular locality vary in different parts of this plain, but speaking largely we can say that in the western parts, where climate is colder in winter than in other parts and where rainfall is also not so plentiful wherever water can be had, that is, either along the banks of the rivers or in tracts watered by canals, good crops of cotton, maize, sesamum, jowar and bajra are grown in the Kharif, and of wheat, barley, gram, rape or mustard and sugar-cane in the Rabi. Good winter crops are also raised in the north-eastern part of the Punjab where winter rains are received. Thus Sindh is growing very large quantities of high class American cotton in those parts where canal water is available ; while the Punjab canal colonies, where the climate in winter is cooler than in Sind, produce equally large quantities of high class wheat. Going east-ward towards the United Provinces, as the rainfall increases we find the proportion of wheat and rape decreasing, and that of barley and gram increasing in the Rabi while more jowar and cotton are grown in the Kharif. While in the northern districts of this region, where rainfall is more plentiful than in the southern districts, the proportion of

rice and sugarcane becomes greater. In the province of Behar, where rainfall is abundant and soil is very fertile we find such crops as rice, wheat, gram, mustard linseed and poppy grown during the Rabi, and sesamum, jowar and indigo, during the Kharif. Further eastward in the Province of Bengal where climate is almost tropical rice is the predominant crop, and in Eastern Bengal the cultivation of jute is predominantly practised. In the province of Assam which is further to the east and receives the heaviest rainfall, rice and jute are cultivated in the plains, while tea is grown on the sloping hill-sides. Thus although all the important crops are grown throughout this plain, yet there are certain parts where one or two crops predominate, and that because of the peculiar conditions of soil and climate. Besides these a large variety of fruits such as mangoes, melons, bananas, pine-apples, oranges and guavas ; vegetables such as potatoes, brinjals, pumpkins, *kakri* and *khira* ; and spices such as *zira*, red-pepper and *dhanya* are also grown.

(b) *Forest Produce*.—This region is practically free from forests, except that narrow belt of marshy land which lies immediately below the Himalayas and is called the Terai, and the deltaic portion in the extreme south-east known as the Sunderbans. The forests of Assam have a large number of wild animals, and the forests of the Terai are specially rich in wild grasses, some of which are used for paper making, and some for fodder. Here also we find a very large quantity of tanning materials. In the rivers of the Terai we find a kind of grass known as *siwar* which is used for sugar refining.

(c) *Minerals*.—The Indo-Gangetic plain has got no mineral deposits worthy of mention except of the nodular lime-stone (*kankar*) which is used for metalling roads and making lime for building houses.

(d) *Human Beings*.—The Indo-Gangetic plain is the most densely populated part of India. Density of population follows rain-fall very closely, but this statement ceases to be true after a certain point, for example, in the Terai where it becomes too damp, unhealthy and covered with forest. Otherwise density of population goes on diminishing as we go from east to west and from north to south. Thus Bengal on the east is the most thickly populated part of this plain, while Sindh and the Punjab on the west are very thinly peopled. Some of the richest and the most densely populated districts of the United Provinces are the sub-montane districts such as Gorakhpur, Shahjahanpur, and Saharanpur.

(e) *Animals*.—We have already noted that a large variety of wild animals such as tigers, leopards, elephants and wild boars are found in the Terai and other wild tracts of the plains. The inhabited parts are very rich in domestic animals, the United Provinces of Agra and Oudh are the richest in cattle, while the south-eastern part of the Punjab, known as Haryana is famous for its high class breed of milch and plough-cattle. Cows and bullocks of this region are taken to such distant parts as Eastern Bengal and Assam. Cattle found in the eastern half of the plain are diminutive in size, poor in physique and are not really good for either purpose.

(f) *Industrial Products*.—These plains have been the centre of highly developed civilizations

from very remote days ; but those civilizations were confined to a few cities and towns, and the bulk of the country then as now was engaged in simple agricultural operations or in simple village industries like the spinning and weaving of the country-cotton into *khaddar*. There are truly speaking innumerable industries going on in the plains but all of them can be classed under two broad heads. Either they are industries auxiliary to and directly dependent upon agriculture or luxury producing. Thus besides agriculture and cotton weaving we have oil-pressing, flour-grinding, cabinet-making and pottery spread all over the plains; jute-pressing and weaving in Bengal, indigo in Bihar and Orissa and sugar manufacture largely in the United Provinces. Some parts of the United Provinces, notably, Mathura, Benares and Moradabad are famous for their brass work, while the Punjab is famous for its inlaid wood work.

(g) *Means of Communication*.—Practically the whole of this region is very well supplied with the means of communication. At its eastern and western extremities it has two highly developed sea-ports, namely Karachi and Calcutta. The land lying in between these two is covered with a net-work of railways, chief of which are (i) the East Indian Railway passing through Bengal, Bihar, the Province of Agra and certain parts of the Punjab Province, (ii) The Oudh and Rohilkhand Railway, which joins the E. I. Ry. at Mughal-Sarai in the Agra Province and covers the whole of Oudh and Rohilkhand and the north-western districts of the Agra Province, (iii) the North-Western Railway

which joins the E. I. Ry. at Delhi and covers the whole of the Punjab and the Province of Sind right up to Karachi, (iv) the Rohilkhand-Kumaon and the Bengal and North-Western Railways which cover the Sub-montane districts of this plain and (v) the Eastern-Bengal Railway whose branches ramify through the Eastern portion of Bengal and the Provinces of Assam. Besides the railways we have a net-work of metalled roads, the most important of which is the Grand-Trunk Road, from Calcutta to Peshawar and the Afgan Frontier, some of the big rivers and canals are also used as high ways, specially for carrying such bulky things as timber, stone and fodder.

(h) *Possibilities*.—The possibilities of the Indo-Gangetic plain are great. For ages past it has been pre-eminently an agricultural region and so far as vision can penetrate the future, the chances are that it will continue to be first and foremost an agricultural country. This does not mean that other industries cannot be developed here; but it certainly means that agriculture must be the chief industry of this region. Although agriculture has been going on here for thousands of years, we have not exhausted all the possibilities of further progress. Development of canal irrigation in the Punjab has shown us what can be done in other parts of the plains similarly situated. Lands which were lying waste 10 years back are now yielding bumper crops of wheat and cotton. Researches and experiments carried on at the Government Experimental Farms of Lyallpur in the Punjab, Cawnpore in the United Provinces and Pusa in the Pro-

vince of Bihar have shown us how the productivity, both in quantity and quality can be increased by adopting better methods of cultivation, improved implements, better seeds and manures. For one reason or another very little use has been made so far of the great amount of useful information collected by the Departments of Agriculture. Then again vast tracts of ravine, eroded and *usar* lands could be reclaimed, and used for productive purposes. A very useful method of reclaiming the ravine land, of reducing soil erosion on the lands up the ravines and of stopping water logging on lands in the central parts of the Doabs, could be found in a combination of dams constructed at suitable intervals along the banks of the rivers and immediately touching the lower end of the ravines, of drainage scheme up the ravines and the planting of ravines with forest trees. This would regulate the flow of water and in the long run, say 20 or 25 years, all the ravines would be filled up and land covered with useful trees. That would yield plenty of fuel for the surrounding villages, in addition to many other products. The fuel problem in the plains is becoming acute every year and unless afforestation of the ravines is resorted to or cheap means of communication are developed between the plains and hilly forests no other solution seems possible. The need is pressing from another point of view, *viz.*, if the village cultivator could get some sort of fuel other than the cow-dung-cake which is as easily accessible and equally cheap, then the dung could be used for manuring the fields, and this would further increase the fertility of the plains. Or again

wherever the soil is *banjar*, because there is *kankar* (a bed of nodular-lime stone) underneath it we can reclaim it by taking out the *kankar* and washing out the extra salts. People have done these and many more things in countries like the United States of America and Canada and we could do the same. Then again much has yet to be done to improve the cattle of the plains. Leaving the tract of land beginning from the districts of Mathura in the Agra Province and up to Hansi and Hissar in the Punjab, where Nature brings forth splendid cows and equally splendid bulls, almost all other parts of the plains are poor in cattle. On Government Farms in India and specially in England, America and other countries, where a regular system of breeding good cattle is maintained, it has been found that by careful selection of cows and bulls a race of degenerate cattle can be improved. In villages of the plains even in Haryana itself, no conscious efforts are made to breed good cattle and every thing is left to chance. If a group of four or five or ten villages could combine to maintain a high class bull to serve the kine in the locality and if better methods of storing fodder in silos were adopted the cattle of the plains would become much more serviceable both as givers of milk and as draught animals than they are now.

Although the means of communication are very much developed in the Indo-Gangetic plain, the area is so big that many a thousand miles of railways and roads can yet be opened and that with advantage to the people of this land. What these plains need most at present is a system of feeder roads and feeder railway lines, that would connect

the out-lying rural areas to the central markets of the world and thereby raise the value of the agricultutal produce that can not come to the centres of trade for want of cheap and easy means of communication.

But it is not in agriculture alone that this region has great possibilities ; in manufacturing industries also there is a wide field for development. Large quantities of cotton are produced in these plains and the climate for the most part of the year being warm, the majority of the people use cotton-clothing. Almost sixty-six crores of rupees worth of cotton cloth is imported from outside India, and equally large quantities of raw cotton are sent out of India. We have, therefore, a very good field for the development of cotton spinning and weaving industries on modern lines. Or again people in the plains use large quantities of vegetable oils, and very large quantities of oil seeds are grown, a happy prospect for the development of oil pressing industry on modern lines. And so on with other industries that derive their raw materials from agriculture, like sugar-making, flour-making and rice-husking. Then again as the plains have a very large number of cattle there is plenty of the raw material necessary for the development of leather industries. Every year large quantities of hides and skins are exported to foreign countries, they could be cured and tanned here, finished commodities made out of them and sent abroad.

The above discussion, although not comprehensive of all that can be done in the Indo-Gangetic plains should be enough to leave an impression

upon our minds that almost all the industries that could be developed in this region directly or indirectly depend upon agriculture. This is a further reason why agriculture should receive our best attention for its development on better lines. Unless agriculture is developed all other industries will be starved.

3. THE REGION OF CENTRAL HIGHLANDS

(A) General Features.

South of the vast northern plains, we have a more or less hilly area, which may be said to extend from Cutch and Kathiawar, on the west, to Bihar and Orissa on the east. Southwards it is carried on up to the Satpura and the Vindhya Ranges. It has within its fold the Malva Plateau, and a number of hills and highlands detached from each other by river valleys. The shape of the country suggests that all this was once a great table-land and that the present hills and highlands are its detached parts.

(B) Soils.

This region is divisible into two parts according to the nature of the rocks it is built of. By far the largest part of this region is of sand-stone, giving rise to the crystalline soils, while in the south areas basaltic rocks make their appearance and give us the famous trap soils.

In the southern part of the Central Highlands, there is no very clear line of demarcation between these two regions and we find veins of basalt running into sand-stone. Even under basaltic

rocks sand-stone is found, an evidence of the fact that at some remote date the lava spread itself upon the sandy rocks. The whole of Berar, the Western half of Central Provinces and the whole of Malwa plateau is covered with trap soils. The trap area is very fertile and is capable of producing rich crops when properly cultivated and provided with sufficient moisture. Scattered throughout this tract are low trap hills and ridges, therefore on the slopes the soils are thin and poor. Here the disintegrated trap furnishes a light coloured sandy or gravelly soil, which is moderately productive only in years of favourable rainfall. The lowlands have deeper and dark coloured soils, which are constantly improved by washings from the highlands. True black cotton soil occurs in the lowlands and the river valleys. Owing to its dense consistence it becomes unworkable during heavy rains and is better adapted for *Rabi* crops than for *Kharif* crops.

The crystalline tract occupies the whole of the region outside the area of the trap. Roughly speaking it covers two-thirds of the Central Provinces, the Orissa and Chota-Nagpur Divisions of the Province of Behar, the Santhal parganas, the Birbhum districts of Bengal, and the Bundelkhand and Mirzapur districts of the United Provinces of Agra and Oudh. Soils on the uplands are light coloured, thin and stony, and produce the poorest crops, but the red-brown loams and clay loams of the lower levels are very fertile.

(C) Climate.

The climate of the Central Highlands is drier than that of the Gangetic plain and except from

the beginning of April till the setting in of rains in June the elevated tracts are comparatively cool. The rainfall is moderate, but seldom fails. The cool season lasts from November to March, and is less cold than in the Punjab.

(D) Irrigation.

Here irrigation is carried on both by wells and canals. But as a general rule canal construction has not found much favour in this region because of the nature of the country and the rapid flow of water in the rivers.

(E) Products.

(a) *Agricultural* :—In the crystalline tracts wherever soil is deep and moisture sufficient rich crops of wheat, grain, linseed, cotton, rice and sugar-cane are grown, while on the poorer soils crops like jowar are cultivated. In the trap areas wherever soil is well supplied with moisture and lies in low-lying lands, rich crops of cotton and jowar are grown as the staple Kharif crops, while on the poorer lands *jawar* and *bajra* are the main crops. Various pulses including Arhar and Khulrat are also grown. During the Rabi, wheat, gram and safflower are largely grown.

(b) *Forest Products* :—This region has a far greater area under forests than the region of the Gangetic plains. A large variety of forest trees is met with here, but the trees have a stunted growth. The forests of the Central Provinces grow a very large quantity of bamboos.

(c) *Mineral Products* :—The Central Highlands are the richest part of India in mineral production.

Here minerals including coal, iron, gold, copper, tin, lead, zinc and manganese are found. In the Central India Agency, specially in the state of Panna, diamonds are also found. At the eastern end of the region we have largest iron and coal mines actively working and it is this part and Central India, that recent investigations have shown to be enormously rich in high class iron ore and coal, which may rightly be called the two bases of modern industrial development.

(d) *Human beings and other animals* :—Population in the whole of this region is scanty as compared with the plains to the north, being between 116 to 169 persons per square mile. The same is true of the distribution of animals, specially cattle. There are however localities where good cattle are bred. Thus the *Khillari* and *Malvi* cattle are bred in the Satpuras, and other parts of Central India.

(F) Means of Communication.

This region is not so well provided with the means of communication as the Indo-Gangetic plain. However, the western part of this region is served by the Bombay Baroda and Central India Railway system. The central by the Great Indian Peninsula and the East Indian Railway systems, and the Eastern by the Bengal Nagpur Railway system. Besides railways, we have both metalled and unmetalled roads but they are neither so extensive nor so important, as in the north, and that because of the uneven nature of the country.

(G) Industrial Products.

Unlike the northern plains this region is not very rich in industrial products of the finer kind

that suit the rich in their luxurious halls. Most of the Central Highlands are as yet thinly peopled and that too by backward races whose wants are few and simple. Cotton spinning and weaving on ancient lines are carried on in the villages but high class products of the looms characteristic of the northern region are seldom met with here. Umaria in Nagpur is famous for its cotton cloth, as is Panni in Bandara. Of late, however, as high class cotton growing is becoming more and more fashionable, modern mills for ginning, spinning and weaving cotton are also making their appearance. Nagpur in the Central Provinces and Indore in the Central India Agency, are both developing as important cotton weaving centres. Damasceening is practiced in the state of Datia. The making of brass utensils, pottery and other simple industries also flourish. But as this is the richest region in India in mineral production we find industries depending upon mineral products largely practised here. At the western end of the Central Highlands we have large mines of coal and iron, and the largest works for making steel and iron ever developed in India are—The Tata Iron and Steel Works at Sakchi.

(H) Possibilities .

We have hinted above that this region is as yet thinly peopled and that people are mostly backward ; let us add to it that the resources of this region are not yet fully known. But even from what we know about it we can say that it has the makings of an industrial region producing large quantities of metallic wares. We find here enormous quantities of iron ore, coal and flux, the three things necessary for the

manufacture of iron and steel, on the development of which depends the development of all other industries of modern material civilization. India imports large quantities of machinery for carrying on its weaving, spinning and ginning industries, for pressing oil, for crushing sugar-cane, and for making glass—all these could be made and should be made in India itself. The raw materials are there, we lack knowledge and organization. Then again, India, we have seen, is pre-eminently an agricultural country, and agriculture needs implements and machinery as all other industries do. We could learn the making of these implements and make them out of our own iron and steel at a cheaper cost than we do now. Besides iron and coal, we have copper, manganese and other metals ; mining and metallurgy, leading to the making of commodities out of these could be developed in this region. As the Indo-Gangetic plain has been famous for industries, whose raw materials are drawn from agriculture, so this region has grand possibilities for the development of those industries which produce articles whose raw materials are drawn from the products of the mines. Then again, there are vast areas in this region of cultivable waste which if reclaimed and colonised by people from thickly populated tracts in the Indo-Gangetic plains, would at once reduce the pressure of population in the congested parts, and increase the food supply in the country, which as Mr. Daya Shankar Dubey* has calculated is not sufficient to go round the total population of this country.

* Vide his article " Indian Food Problem ", Published in the Indian Journal of Economics, Vol. III.

Conclusion.

Economic interpretation of Northern India or of the three complimentary regions of which Northern India is made up, carried out on the lines indicated above, should open before us a vast field of useful study as regards other regions in India. To be more exact, and to make our regional surveys of real practical importance, we should apply the above method of study to the large number of sub-regions in the Indo-Gangetic plain as well as in the other parts of India. Then we shall be able to get real insight into the economic possibilities of the people of India and shall have sufficient data to realise the social efficiency idea, so lucidly recommended by Mr. S. N. Phervani in his book "Social Efficiency" "India's Greatest Need."

The method recommended above is laborious and dry but unless one is prepared to go through it with patience one can never be sure of his knowledge of Indian economic conditions and can at best satisfy himself with a number of generalisations which may or may not be true for all the different and differing parts of the Indian continent, and therefore of doubtful practical significance to a nation-building engineer. The writer of these pages believes in this method of study and cherishes the fond hope that perhaps it may appeal to others as well and they may pursue the study further.

Section 2—ARTIFICIAL SURFACE FEATURES

They say that the chief difference between a man and a brute is that a brute adapts himself to his surroundings, while a man adapts his surroundings to his needs. The statement is largely true, and the degree of truth goes on increasing when applied to people of higher and higher civilisations. Speaking largely for the majority of the human race, as they are at present, one can say that they are not completely independent of the forces of nature, that is, they are as yet led by and do not lead the forces of nature, in their entirety. But all the same it is true that man is conquering nature step by step, and every step gained makes it easier for him to go upwards still further. One very important method by which man has made an attempt, and one may say a very successful attempt, to suit nature to his needs is to be found in the alteration of old and the addition of new artificial physical features. If there be a mighty river like the Nile in Egypt or the Indus in India, dragging its lonely existence through a vast arid tract of land it might compel man in the early stages of civilization to settle along its banks but the moment man will have learnt to think, he will cut it into channels and take it whither he will. He did so in Egypt of good old days and is doing the same in the India of the modern times. Then civilization used to spread with the rivers, we may now, with equal degree of truth, say that civilization takes the rivers along with it. What has been said of rivers applies with equal truth to other means of communications wherein we include such things as roads, railways, ropeways, ships, airships, telegraph,

postal system, wireless-telegraphy and such other schemes as drainage or hydro-electric installations—all these are but devices to extend the limits of the activity of the human hand, which was originally set by the forces of nature. It is of these devices in India that we should try to know something if we want to get a clear idea of how far man has advanced in this country and of what are the further possibilities of his progress along these lines. Such devices are so many, and facts about them are given in so many books and Government publications, that the only thing we can and should do here is to indicate the line of approach by making a specimen study of these things in one region. The study of these in other regions must be carried on by the student himself.

Specimen Study of the South West Dry Region of the Punjab

This region includes Multan Division, the districts of Shahpur and Mianwali, the States of Bahawalpur, Bikaner, Jaisalmer and Marwar. It covers one of the driest areas in the whole of India, the rainfall being from five to fifteen inches per annum. Though the soil for the most part in this region is alluvium and inherently very fertile, yet the absence of water had made the whole vast stretch of country a desert waste. The only exceptions were the fringes of the rivers where cultivation, though never very prosperous, was rendered possible to some extent by inundation canals and wells. It was and is, a region of extreme desolation. In unirrigated parts the water level is, for the most part, from eighty to a hundred and twenty feet below the surface of the soil. The vegetation consists mainly of dusty shrubs,

some of a certain value as fuel but others of no use either to man or beast, and grazing is, generally speaking, conspicuous by its absence. The only inhabitants of the region are indigenous nomads, a spare and hardy race who eke out a precarious existence by means of their camels and goats. It was in such a country that irrigation engineers lived and laboured for many years, and by making a number of canals have converted large areas from a wilderness into a garden.

The first attempt to improve this area was made in 1882, when the construction of Sidhnai Canal was seriously considered. It has its head on the Ravi in the Multan district, and irrigates a considerable area at the western extremity of the Ravi-Sutlej watershed.

The Sidhnai system consists of four canals the Sidhnai canal proper, and three small independent channels, the Koranga, Fazalshah and Abdul Hakim canals. The system is distinguished by one peculiar feature. Technically, owing to its permanent head works, it is not an inundation canal; practically owing to its position on the Ravi it is not a perennial one. The supply in the river during the cold weather season is insufficient for the needs of the upper Bari Doab Canal, which draws off every available drop of water at Madhopur, more than 300 miles higher up. It therefore happens that the Sidhani reach is dry for several consecutive weeks or even months, during the winter. The canal thus holds a position midway between that of a perennial and an inundation canal.

The area commanded by the system is 417,000 acres, of which 232,000 acres were Government waste. Colonization began in 1896, and for some time success seemed doubtful. A few prospectors came down and returned dissatisfied. The jungle waste looked uninviting and the indigenous inhabitants showed themselves decidedly hostile to the strangers. But with the arrival of a party of pioneer colonists from Amritsar the tide turned, and once a beginning was made no further difficulty was encountered.

The success of the scheme can be gauged by the direct financial returns to Government, which, of course, represent only a small fraction of the colonists profits. The capital account of the system stands at Rs. 13½ lakhs and, after paying all its working expenses and interest charges, it has returned six times this amount in the shape of net profits in the 35 years during which it has been in operation. In 1919-20, 284,000 acres were irrigated from it and it yielded a return of over 40 per cent. on capital. It was largely owing to the success obtained on the Sidhnai Canal that Government were encouraged to proceed with further experiments in colonization and on a far greater scale.

The next step forward in this direction was taken when the construction of Lower Chenab Canal scheme was finally sanctioned. The head of the canal is situated at Khanki, and it carries the enormous discharge of 107,000 cubic feet a second, which it distributes by means of a system comprising 427 miles of main canals and branches, and 2243 miles of distributaries. The Lower Chenab Canal can claim, with considerable justification, to be the most extensive

and successful irrigation system in the whole of India and probably in the world. It serves the watershed between the Chenab and the Ravi rivers. Colonization began in 1892, and the colonists in the earlier years had an even harder time than usual. There was no railway to the colony, and they had consequently to march there through a country nearly as waste as that to which they were going, inhabited by tribes which showed little mercy to immigrants whom they could waylay. This was however, only a temporary phase. Once the fertility of the virgin soil of the watershed had been demonstrated, the settlers began to pour in. The nomads soon found the colonists more than their match. A railway for the carriage of produce was commenced in 1895, roads came rapidly into being, and towns and manufactories began to spring up in the former desert. In ten years the population of the tract had risen from 8,000 to 800,000. Lyallpur the capital of the colony is now an important city with an enormous export trade. In 1919-20 the value of the crops grown on land irrigated by the Lower Chenab Canal was no less than 1,592 lakhs of rupees or nearly five times the capital cost of the work, practically the whole of these crops being raised upon land, which thirty years ago was barren waste where hardly a blade of grass would grow.

The capital account of the Lower Chenab Canal stands at Rs. 327 lakhs, on which it yields an annual return of about 45 per cent. It is by far the most remunerative of the larger canals of India, and its revenue account shows an accumulated profit, after paying all interest charges and working expenses, of

the enormous sum of Rs. 1,655 lakhs, which increases annually by about Rs. 130 lakhs.

The Lower Jhelum canal has its head-work at Rasul and irrigates the western portion of the watershed lying between the Jhelum and the Chenab rivers in the Punjab, known locally as the Jech Bar, and the district of Shapur. It is almost a rainless tract with a deep spring level, cultivation in which was practically impossible without artificial irrigation. Prior to the advent of the canal, the country was covered with a low scrubby jungle, sometimes dense and elsewhere scattered and thin. Here and there were small patches of indifferent dry cultivation in local hollows where rainfall water was expected to collect, where the chief occupations of the scanty population which inhabited the tract were limited to cattle grazing and cattle lifting. In 1897 operations were commenced on the Lower Jhelum, and the canal was formally opened in 1901 and the project was completed in 1908. The canal commands a gross area of about one and a half million acres of which 1,110,000 acres are designated as culturable of this 568,000 acres were crown waste. In 1919-20, 819,000 acres were irrigated and a return of $19\frac{1}{2}$ per cent. was realised.

The Lower Bari Doab canal forms part of the famous Tripplé Canal Project. Its main canals and branches are 132 miles long. It began to work in the year 1913, and commands more than fifteen lakh acres, out of which about fourteen lakh acres were waste land, in the Montgomery district of the Multan Division. In the year 1920-21, it actually irrigated 850,000 acres.

The Sutlej Inundation Canals :

These are on either bank of the Sutlej both in the Multan district of the Punjab, and in the Indian state of Bhawalpur. They draw their supplies from the Sutlej river whenever the water level is high enough to permit of it. There are no weirs at their heads and in many cases no means of controlling the volume of water entering them. Consequently while a supply is assured in a normal year during the monsoon months it is dependent on the seasonal conditions. But even in these adverse conditions, these works are of great value, and irrigate an average area of no less than a million and a half acres in the tract. The same is true of the lower part of the Sind Sagar Doab, in the Muzaffargarh District. Here we have a system of inundation canals known as the Muzaffargarh Inundation Canals. South eastern part of Dehra Ghazi Khan district is also irrigated by the inundation canals, which are named after the district. All of them are taken from the river Indus, and irrigate in all about 249,402 acres.

This is what man has been able to achieve so far in the once desert areas of the South-west Punjab, by constructing canals, and what are the results of this? While discussing the different systems of canals in this region we have tried to give some idea of their economic results. And although it is not possible to give a complete idea of the economic results of canal development in this area, yet some further idea may be gathered if we notice the increase of population, in some of the colonies. Taking the Chenab Colony, where colonization began in 1892, and which comprises the whole of the districts of Lyallpur, Jhang

the Hafizabad and the Khangah *tehsils* of the Gujranwala district, we find the condition of population as follows :—

Population in the Chenab Colony.

Name of the districts.	1881	1891	1901	1911	1921
Lyallpur ...	22,991	22,166	589,533	847,463	979,463
Jhang ...	390,630	402,341	425,534	524,526	570,559

Population in the Jhelum Colony, Colonization took place between the years 1901 and 1911.

Name of the district.	1881	1891	1901	1911	1921
Shahpur ...	421,581	523,796	529,760	687,366	719,918

Population in other districts where Canal Irrigation has been developed.

Name of the districts.	1881	1891	1901	1911	1921
Montgomery ...	402,342	477,065	479,563	501,510	713,786
Multan...	556,557	635,726	710,626	814,213	890,264
Muzaffargarh ...	441,217	493,914	527,681	569,461	568,478
Dehra Ghazi Khan ...	386,213	428,375	471,786	499,860	469,052

Population in those parts of this region where Irrigation has not been developed.

Name of the districts.	1881	1891	1901	1911	1921
Bahawalpur State ...	573,494	650,042	720,877	780,641	781,191
Mianwali ...	262,266	287,026	301,910	341,377	358,205

Railway development in the region :

The line from Lahore to Multan, which at that time was connected with Karachi by the boats of the old Indus Flotilla was opened in 1896 and since then railway development has continued well up to this time. Owing to the burden of maintaining the unprofitable frontier lines, this was the Cinderella Railway in India. However, the development of irrigation in this area transformed the North-Western Railway, and with the completion of the Chenab and Jhelum Canals, this railway became one of the greatest grain lines of the world, choked with traffic at certain seasons of the year and making a large profit for the state. This region now possesses specially in the Punjab portion, an extensive system of railway communications. The main line of North-Western Railway from Karachi enters the region in the South-West, whence it divides and connects up with a system of lines running more or less parallel with the great rivers. The only parts of this region which are not served by railways are the district of Dehra Ghazi Khan and the eastern part of the Bahawalpur State. The states of Jaisalmir and Bikanir, though connected by a light railway, are not well served by modern means of communication.

The Punjab portion of this region though well served by the fan shaped system of lines radiating from Samasta, lacks railway communication in a transverse direction. The presence of the rivers and the difficulties in connection with bridging them have prevented the construction of transverse lines.

Road communications are far less extensive and connected than the railway system. There is not a single big metalled road in this region, but we have a number of isolated systems of metalled roads in existence round about Lyallpur, from Multan to Muzaffargarh and thence to Dehra-Ghazikhan. However there are numerous unmetalled roads which traverse the country in all directions. These provide all that is needed for the transport of agricultural produce by bullock cart, but are of little use for lighter vehicular traffic or for motor transport.

The region in which we have been studying the artificial physical features is one of the kinds, where, if roads and railways had been developed prior to the development of canal irrigation, then its prosperity would have been very little increased. Its chief need was, and is, the provision of moisture, which it so sadly lacks ; and wherever it has been supplied prosperity has followed. A little reflection on the peculiar characteristics of different regions in India would show, that each of them seems to have its own Key Need which if satisfied, is calculated to open the productive capacity of that region. Thus there are parts of India such as the region of coal and

iron in south-east corner of Behar and Orissa Province where development of modern means of communication has led to a great productive activity, and there are others such as the iron region in the Central Provinces where if these are provided, a great development in productive activity would follow. Means of communication, therefore are the Key Need of these regions and there are key needs of other regions as well, which are to be discovered after due study of their physical features by the student himself.

In the region studied above, at least the Government have realised this peculiar relationship, and have therefore a large programme of irrigation works. The Sutlej Valey Project, when completed will transform the present inundation canals into a system of perennial and non-perennial* canals. This will provide irrigation to large tracts in the states of Bahawalpur and Bikanir tracts, which at present are entirely unirrigated and in consequence of very low rainfall, waste. The total area to be irrigated from the project is five million acres, of this two million acres will be perennial and three million acres non-perennial irrigation. About a million acres will be in the British territory and the rest in the States of Bahawalpur and Bikanir. In addition to the above there are several other projects under the consideration of Government for the construction of new canals or irrigation schemes in the *Province*. The

* By a non-perennial canal is understood, a canal to which supply is assured during the hot weather and monsoon though it is closed during the cold weather, when the volume of water in the parent river is low.

Thal Canal Project provides for the construction of a perennial canal off taking from the Indus at Kalabag to irrigate the entire Sind Sagar Doab down to the irrigation boundary of the Muzaffargarh Inundation Canals. It covers a gross area of five million acres of about one-twelfth of the gross area of British territory in the Punjab. The project is estimated to cost Rs. 9·3 crores, to give an irrigated area amounting to nearly two million acres, and to yield a return of about 18 per cent. on the total capital outlay.

Now they are also feeling the need of further railway and metalled feeder road development, as they find that the present means of communication are sadly behind the requirements of the rapidly increasing population of the canal irrigated parts. So far there is no definite programme of development in this direction, but the "Communications Board" is devoting serious attention to the improvement of unmetalled roads.

CHAPTER III

THE SOCIO-RELIGIOUS BASE

I have hinted in the Introduction that the social and religious ideals of the people of a country exercise a profound influence on their economic activity. Here I propose to develop that idea a little further. However, before coming to the subject proper let me digress a little to justify the mixing together of social and religious ideals. The conception of religion, which underlies the whole western civilization of to-day is very different from the conception of religion in the East, as it has been or as it is to-day, and is different even from that which prevailed in Europe itself during the Mediæval ages. Through the dominance of individualism the spirit of catholicity in the Christian Religion has lost its ground in the West, but in the East it still holds its own. Here religion has not yet narrowed itself down to that sphere of human relationship, which concerns itself with the relations of man to God. Our conception of religion is very wide, almost an all-embracing one. The sphere of religion to us is as wide as life itself, and we have always looked upon life as one indivisible whole. We have not yet been able to conceive life as divided into so many watertight compartments as social, religious, political and so on, where each is independent of the other, and where one can talk of his social code of life or of his political code of life, without taking into consideration the more fundamental relations of man and man, of one soul to another soul, and of each

to that Supreme Soul which goes by diverse names in diverse places and of which each one of us is but a part. As a matter of fact we do not have a word which could exactly convey the idea of the word religion as it is understood in the English language. Instead we have the word *Dharma* which seeks to lay down principles for all the various spheres of life of a man, and where each one of these spheres is conceived as an integral part of the life as a whole. Such being the conception of our religious thought it is not possible for us to study social activity independently of our religious ideals. The two are so mixed up in actual life that any attempt to isolate the two is likely to mislead, and the safest course therefore, is to treat the two together.

SECTION I.—Religion and its influence on economic life

I have hinted above that religious thought in India has a peculiar spirit of catholicism about it. This spirit has manifested itself in two more or less independent ways. One is that which I have termed its all-embracing character, with the result that it has far greater and far more intimate influence on the ordinary every day activity of the people of this land. And the other is what I may for the sake of convenience call its all-accommodating character: it provides for all the different grades of human development. Both of these have exercised a marvellous influence on the economic life of the people of India.

Catholicism of religion in the sense of all-embracing

As a result of the influence of religion on ordinary life, we find the consumption, production and distri-

bution of a particular class largely regulated by the *Dharma* of that class. Here every thing that a man does, be it ever so insignificant, as the morning toilette or the evening meal, or ever so great, as the marriage of a son or the transaction of the State business, each is a part of his religious duty. Each has to be done with the same degree of disinterestedness in one sense and with the same degree of devotion in another. Thus every action of man is hallowed by the same high significance and consecrated to the same high ideal, and man does whatever he does only so far as he finds it conducive to his duties of life. Neither is the element of pleasure in consumption able to hypnotise him into a modern believer in a high, very high, and yet ever rising standard of living, nor is his productive activity carried too far as an end in itself to produce commodities for the ever increasing wants, and thus never pushed to that point where it becomes a source of positive pain. That is why we find a peculiar atmosphere of serenity surrounding the Indian life, be it in the home, in the field, in the pasture, in the market or on the high road, nay even in the courts and camps of our potentates. As each individual is born and grows to maturity, he finds his place in society, and has his standard of living, his standard of work and every thing fixed. If an individual wishes to go beyond the standard of consumption of his class, and as a result becomes too much of an acquisitive person, both society and religion come down upon him, and by one and a thousand means succeed in getting a share of his superfluous possessions. And when one can not quietly keep to himself what he has earned

by the sweat of his brow, there is not much incentive left to spend time in producing more than what is just enough to give the requisite things of life. Modern students of Economics and lovers of production on a large scale might see in this a fruitful source of the low level of production, and in a sense it is so ; but if not carried to excess in the doctrine of renunciation or *tiaga*, it is a very wholesome principle, as it is based on the recognition of that elementary fact, which says that both consumption and production are means for the well being of man, and that man is not a means towards these. Religion has never allowed man to forget in India that he is the centre of all the problems around him and that whatever there is, or if not, should be, for his well-being.

A student of Indian Economy, if he ignores this aspect of religious influence on the Indian life is likely to fall into that common error, which has helped so many superficial observers from the West to characterise Indian Civilization as archaic, mediæval, and so forth, because, they judge her solely from her lack of development in material civilization. And when they find her backward there, they sit dead on it, and refuse to look into those other factors that go to make up the civilization of a country. How can a man to whom civilization consists merely in the kind and number of chairs, in the stiffness of cuffs and collars, or in the speed of a car, think of finding it elsewhere if these supreme tests of his high ideal are absent ? How could we expect that such a man would hope to find learning, culture and high spiritual development or even high skill in arts and science, in a man clad in plain Dhotee and Kurta,

trudging along the dusty roads of his native village, when he is accustomed to associate all these with high-heeled boots and equally high brimmed hats, both carried in a hooting car whirling along the stone paved streets of London or Paris ?

We have noted how religion in India tends to keep both consumption and production within reasonable limits. But apart from these general tendencies which regulate our industry and trade, which so to say have set the tone of the whole economic organisation, we can find its all embracing character in the making of our house-hold utensils and other requisites of life, which provide work and living for so many artizans and craftsmen in India. Whether it be the *Badhna* of the devout Muslim or the *Sagar* of the equally devout Hindu, whether it is made by the village potter for the poor country folk, or is made by the rich worker in brass in the city for the household of the rich, it must have a peculiar shape, because in both these communities religion lays it down that flowing water is ever pure, and the neck of the *Badhna* and the *Sagar* is always long, to make the water flow before it reaches the hands of the pious receiver. Or again take another religious practice amongst the Hindus of the gift of a *sand* (bull) on the tenth day of a persons' death. After this the bull became the property of the Community, and was treated with great indulgence. People looked upon him with reverence and left him to roam, and graze whither he willed. Nobody molested him and all recognized his claim to graze on the standing crops. This was very commonly done by well-to-do people of villages and towns some

twenty or thirty years back ; but now it is dying out as people are becoming more enlightened. At least they think so. It is true that people were not conscious of the economic significance of this simple practice and to them it had its sanction in myth, mystery, and mysticism, or what is the same thing, religious superstition, but all the same it did play a part in the organisation of agriculture in India. India is pre-eminently an agricultural country ; it has been so for ages past, and so far as the vision can see into the future, agriculture will continue to be her first and foremost industry. Every one knows that without good bullocks and oxen, good farming is impossible, at least in India, where horses and other expensive machinery are not used for ploughing and other agricultural operations. The released bull, fattened at the common expense, used to serve the kine of the village or town (and that perhaps was his only function) and thus maintain a continuous supply of high class plough-cattle. These are but isolated instances, out of hundreds that could be cited to indicate the degree of influence of religious thought in India on Indian home life on one hand, and Indian art and industry on the other. It surrounds us in every thing great or small, just as every particle of earth in the soil is surrounded by its thin film of moisture.

**The catholicism of religion in the sense of all
accommodating**

Another feature of religion in India is that it makes provision for the spiritual development of all sorts of people. There are some so highly evolved that to them abstract conceptions involved in the

relations of man and his soul and God as a Super-Soul are as real as chairs and tables to the more materialistic. For such it provides those high esoteric truths, for the contemplation of which no aids or instruments, except the aid of the human mind, are necessary. While there are many for whom only seeing is believing ; who can not think of things, much less understand them, unless they see them ; for these it provides the wonderful system of idol worship. And how many arts and industries, trades and crafts we owe to this peculiar feature of our religion ? Our best painters, our best sculptors, our best artizans in brass and clay of yesterday or today, have all been busy in producing images of gods and goddesses each conceived to suit the peculiar stage of development of a particular class of people. Let religion be different from what it has been for ages past in India and then we shall find its true significance to the economic life of the people.

Or again take the devout followers of Islam ; he must have a *Jai Nimaz* and his *Tasbih*, to help him in his daily devotions, and these provide flourishing trades to many an artisan in India. There are carpet makers in the districts of Agra, Jhansi and Mirzapur, making very high class cotton, woolen and silken *Jai-nimazes*, while people in Eastern Bengal make beautiful *Nimaz-Carpets* out of ordinary grass. Or take again the *Kabir-Panthies*, a religious sect in India that seeks to harmonise Hinduism and Islam. Each one of them must have a *Kanthi* around his neck and this has given rise to a flourishing craft in the city of *Mathura*.

The function of religion.

Having studied the economic significance of peculiar features of religion in India, let us pass on to study the economic consequences of the way in which religion has sought to discharge its own function. A little reflection would help us to realize that every human being has a two-fold existence. Each is a spark of fire—the fire of life or the primeval source of life call it God, Allah, Khuda or Ishwara or whatever other name you please to give it ; and each is a particle of dust, that is to say each has its soul, and its body of physical matter. Each acquires its present form from the Spirit and the matter behind him. He—the man is the result of the combined action and interaction of these two upon each other. Again all religions agree on one point at least, that spirit is greater than matter in the man. It is through matter that spirit finds its outer manifestation ; it is on matter that spirit works ; matter is therefore essential to it. But the real question is of supremacy. And the soul or spirit in man is supreme. The chief problem therefore before religion is to secure the supremacy of spirit over matter and to try to eliminate the evils that physical surroundings may tend to develop. While studying the influence of the physical features of India upon the people we noted that they tend to develop ease-loving and luxurious habits, a weak and fitful will leading to an unsteady character resulting in wayward play of emotions, leading to an incipient undermining of the physical constitution. How has religion sought to eliminate these ? In our Shastras it is definitely laid down that every member of society in India,

should at the age of six or seven leave his home and go to live with his Guru in the Guru's Ashrama or what is known as the Gurukul (the family of the Guru). Every one is enjoined to live there for fifteen to eighteen years and to lead a life of perfect continence amidst perfectly natural surroundings, and in almost a state of Nature. It is during this period that he is to pass through a very strict discipline and training of both mind and body. Here the different arts and sciences for which a particular individual may have an aptitude are to be taught. Here instruction in religion, in politics, in sociology and in a host of other useful sciences is to be imparted. And when at the end of this period of training he is to come out he must have developed a sufficiently strong body, and equally strong and trained will and intellect. The whole system of education in these inexpensive seminaries of learning when they existed, was so organised that before a man entered life, or the Grastha Ashrama they had made him strong enough to withstand the onslaughts of the worldly life. A comparative study of the important religions of the world, leads us to say that it is in Hinduism alone that we find this peculiar system of dividing a man's life into four parts, and then this extraordinary insistence on leading a life of Brahmacharja before taking any active part in the affairs of ordinary life, and then a set of very minute and detailed instructions to be observed during this early period of regulated instruction. Naturally the question arises why Hinduism alone amongst all the different religions of the world went out of its way to touch this

problem. To me the answer is suggested by the peculiar features of our physical surroundings. If religion had failed to indicate how to overcome the ills to which flesh in India is peculiarly subject, it would have certainly failed in discharging its function properly; it would have failed to secure the supremacy of the spirit over matter or of man over nature, which seems to be the main object of every religion. In other religions, such as Christianity or Islam, we do not find so much insistence laid on the ways and means to secure the supremacy of the spirit over the matter, simply because the region, where these religions were developed, was the region of difficulty, and the very long period of struggle with Nature, through which man had to pass before she began to yield her treasures to him in abundance, had succeeded in developing in him habits of self-control and self-reliance, had created in him the habit of looking upon Nature as his handmaid, had taught him that man was supreme and that his greatness and his well-being lay in overriding Nature by trampling her. The lesson that man was taught in the regions of difficulty by his physical surroundings, that very lesson was left here in India and other regions of plenty, to the spirit to teach, and the spirit has not failed to do it here. Whether we are taking advantage of it or not is a different matter, but there it is, and perhaps it is our failure to follow these very desirable teachings of our ancient thinkers that the present state of decay and degeneration in India is largely due.*

* "Everyone is aware of the consequences of sexual excess, the weakness of mind and body which results, and the extreme slowness with which restoration comes, if indeed it comes at all. Many

When I make the above statement it is in the spirit of all humility of a student who is anxious to learn by making a suggestion or two to provoke others to think on the problem, and then throw further light on it. However, the following points may be of interest in this connection. It is common

people seem to think that such excess is only harmful if unlawful; forgetting the fearful strain upon the constitution of a delicate girl of 14 years or even less, which results from the thoughtless incontinence of the newly married boy or, still more, the pitiless incontinence of the remarried man. Serious as these causes of strain are upon the health of the young married girl they sink into insignificance in comparison with the stress of maternity which follows. It is a truism to say that the processes connected with reproduction, which from one point of view may be regarded as the most important of the human functions, should be allowed to take place under the most favourable conditions possible. Surely it would seem to be of fundamental importance that these processes should be delayed until not only the special organs concerned, but also the body as a whole, shall have attained their full development and be prepared for this great crisis. For in no other crisis of life does the ultimate result depend so much upon the physical condition of the body. In this connection we have of course to think of the nourishment of the child after birth as well as of pregnancy and child-birth. Nevertheless custom is allowed to carry the day, and to dictate that all this strain shall be deliberately imposed upon girls at a period when it is obvious that their bodies are not as yet capable of enduring it with safety. It is of course argued that a warm climate favours precocity and that girls in India develop at an earlier age than in more temperate climates. Let even so much as two years be conceded, and in place of 18 years, which may be reckoned as the lower limiting age in ordinary cases of marriage in the West, let 16 years be the age which popular opinion shall regard as the normal one for marriage in this country. The result would be an incalculable gain in the health of the women of India and also in that of the children whom they bear. In place of this what do we find? With thankful acknowledgment of the success which has met the efforts of those who have already done so much in this direction 14 years is yet the upper limit of age for marriage in very many parts of India, which in multitudes of cases takes place at 13, or even 12 years. Well were it for these children if maternity when it came were accompanied by a minimum of risk and a maximum of loving care. But, alas, the reverse is too often the case."—Tuberculosis in India—Lankester, page 147.

knowledge that various parts of the human system reach their perfect state of development somewhere between the ages of twenty and twenty-five. In the case of females the length of this period is comparatively less. It is equally well known that those instincts in man and woman which begin to manifest themselves more distinctly at the so called age of puberty, and which in their fulfilment lead to a serious drain on the vitality of human system, make their appearance at an earlier age in tropical countries than they do in colder climates. If these instinctive promptings are not kept in check, as they are not likely to be unless controlled by a strong will, the drain on the system begins to take place, before a man or woman has really developed to full maturity. The prevailing ideas that the vital energy that seeks its expression in what is known as the sex instinct in itself is a sufficient index of the fitness of a man or woman to participate in the utilization of that fund of energy for the procreation of the human race, are not supported by the teachings of our Shashtras and these teachings are being very strongly supported by modern scientific research.

Our Shastras tell us that there is but one fund of energy in man, and that it finds its expression in various forms; the form of the moment depending upon the nature of the medium through which it is passing at that moment, just as we see the same fund of electric energy, manifesting itself in so many forms now as light, now as heat, or again as a cooling breeze of life-giving air, and all that through change of media. Even so with the fund of vital

energy in man: it may express itself in the form that leads to procreation of human beings, or transmute itself into flesh and blood, or again be changed into yet finer forms of intellect and emotions to give birth to yet more subtle forms of thought in song or philosophy.

Leaving the ancient teachers apart, even the modern science tells us that the human system has got a number of glands, a few of which have been discovered and studied so far. One set of those glands that have been discovered, has as its function the secretion of a kind of fluid, which when made to secrete through the processes of sex relations, gives rise to that particular form of vital energy which helps in the procreation of human beings. If the glands are not made to secrete externally then they secrete internally and the secretion is transmuted in the human system into bone and muscle. And if there is no room for its utilization in this form, then another set of glands helps it to change itself into intellect and other faculties of Head and Heart.

If the statements that I have made above are true, and there is overwhelming evidence to lead us to believe that they are true, then what awful waste of opportunities we make by yielding to the fitful freaks of over sensitive nature in India by making use of that fund in a less useful manner at an age (the age of puberty of man in India is somewhere between fifteen and eighteen and that of woman between twelve and sixteen) when it could be and should be transmuted into more bone and muscle, into more highly developed intellect and emotions, to give us the fully developed intellect and emotions,

to give us the fully developed man and woman, that now we so sadly lack. That we do use it is made perfectly clear by the table given below :

Showing the Population per thousand of each sex of all religions, who are married between the different ages. Adapted from the Census of India for 1891, 1901, 1911 and 1921

	0-5		5-10		10-15		15-20		20-30		30-40		40-60		60 and over	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1891	6	13	36	123	154	495	368	833	715	893	868	779	837	477	687	143
1901	7	13	36	102	134	423	334	777	686	868	847	765	816	484	669	163
1911	7	14	37	105	129	430	322	800	687	884	857	784	819	487	660	158
1921	6	11	32	88	116	382	298	771	663	870	835	769	797	493	641	174

The prevailing custom of early marriage in India, which leads to the loss mentioned above, is not in any way supported by the teachings of religion,

though there are millions and millions of people who believe that not to marry a daughter before the time of puberty is a sin. This misconception is the direct result of the prevailing absence of religious instruction on the traditional lines in our schools and colleges and the equally visible indifference to its teachings in the minds of the average people. The phenomenon of early marriage is again at the root of some of those labour problems, which form the subject matter of the Reports of various Committees and Commissions, that have been appointed from time to time to study the conditions of labour in India. Thus in the years 1905 and 1906, Mr. Fremantle, I. C. S. of the United Provinces, and Mr. Foley, M. A., I. C. S. of Bengal, enquired into the causes of shortage of labour in the two provinces, and both of them were emphatically of this opinion that as most of the labourers were married and generally their families lived in their native villages, they had of necessity to go there at regular intervals to take part in the social and religious ceremonies of the home. And as most of the fasts and feasts take place, during well-defined parts of the year, which are all determined by the semi-religious institution of astrology, the labour supply during those parts of the year becomes very much shorter than the normal. So long as the classes out of which labour in Indian mills is drawn continue to be as superstitious and ignorant of the true religion as they are now, no amount of effort on the part of mill-managers can change the things for the better.

Then again it is this very disregard of the teachings of our religion that has to account for that

pitiable state of things, which has been so vividly brought to our notice by Mr. P. K. Wattal in the following table :—

TABLE II
India and England : Average Life Expectation
In the years at decennial ages, deduced from the census of 1891,
1901 and 1911
(Taken from the " Population Problem in India " Page 18).

AGE.	MALE				FEMALES					
	INDIA			ENGLAND	INDIA			ENGLAND		
	1891	1901	1911	1901	1901	1911	1901	1911		
1	24.59	23.63	22.59	44.07	46.04	25.54	23.96	23.31	47.70	50.02
10	35.46	34.73	33.36	49.65	52.35	34.40	33.86	33.74	51.98	55.02
20	29.24	28.59	27.46	41.04	43.67	29.28	28.64	27.96	43.45	46.36
30	23.66	22.90	22.45	33.06	35.29	24.69	23.82	22.99	35.43	37.84
40	18.75	17.91	18.01	25.65	27.27	20.20	19.12	18.49	27.81	29.65
50	14.28	13.59	13.97	18.89	19.85	15.59	14.50	14.28	20.63	21.87
60	10.12	9.53	10.00	12.90	13.38	10.87	10.02	10.11	14.08	14.81
70	6.48	5.80	6.19	8.02	8.25	6.80	5.98	6.22	8.74	9.13
80	3.65	3.07	3.06	4.42	4.64	3.76	3.12	3.06	4.84	5.10
90	1.69	1.23	1.15	2.32	2.37	1.75	1.64	1.10	2.68	2.55

Here we find not only that the expected length of life at different ages in India is lower than in western countries, such as England, but also that it has been continuously decreasing during the last forty years. This means a progressive decline in the vitality of the Indian people, that is a decline in the labour power of the country. For those who have not got much faith in statistics, we would say "Go to any Indian family (where three or four generations are represented) and you will see a grandfather, strong and healthy even in his sixtieth year; his son more or less healthy at forty, but with arms and chest not half as broad as the grandfather's; and a grandson with a pale face and spectacled eyes at twenty one"*—a dismal evidence of the progressive degeneration of the Indian nation. And what are the economic results of this? It is in this that we look for an explanation of the comparatively lower efficiency of the Indian labourer. Even in some of the cotton mills of Bombay, where they are using as high class machines as in the mills of Lancashire, the comparative efficiency of the Indian labourer, as measured in terms of output per day, is lower; and other things being equal, that could only be due to the inherent lack of vitality and staying power of the Indian worker. Then again as the average length of life in India is much lower than in other countries, we get less return for the same expenditure of time and effort than in other countries where it is higher. To illustrate this point let us take a hypothetical example: suppose (1) there are two countries X and Y, (2) that average length of life in X is 50 years, while in

* Poverty Problem in India, by B. G. Bhatnagar, East and West.

Y it is only 35, (3) that people in both the countries are educated up to the age of 20 years, (4) that it costs rupees 3,000 to educate each individual and (5) that the earnings of each individual after education amount to say Rs. 100 per month. Now which of the two countries is better for its investment in each individual? Obviously X, for the same investment X secures Rs. $100 \times 12 \times 30$ or Rs. 36,000, while Y secures Rs. $100 \times 12 \times 15$ or Rs. 18,000 only. At this state of affairs, we may ask with Mr. Wattal, "Have we ever paused to consider what this means to us in the life of a nation as a whole? It means that people who alone by weight of experience and wisdom are fitted for the post of command in the various public activities of the country, are snatched away by death, and that the guidance and leadership, which in the countries of the west belongs to age and mature judgment, falls in India to younger and consequently less trustworthy persons." We have said enough to show the need for the study of basic facts about religion in India to a student of Indian Economy, and we would only add this much, that unless a man familiarises himself with the positive and negative sides of religion in this country it is not quite easy for him to grasp the 'why' and 'wherefore' of some of the existing economic institutions and activities and much less easy to recommend new lines of reform to bring about economic regeneration in this land.

Section 2.—THE SOCIAL CUSTOMS

(A) *The Caste System.*

I do not propose to enter here into the futile discussion as to the origin of caste in India. What does it matter to us as students of Economics, and that too at such a late date, whether the system of castes was developed when the Aryans had settled down in India or whether they had it in some form even before that happy event? The question whether the system of castes had its origin in religion (though personally I am inclined to think that it had its origin in religion, if religion itself is understood in the wide sense, we have explained in the last section) or in the division of labour, is of equally little significance to us as students of the science of wealth and well-being of man. It may have a paramount significance to a student of Social History but certainly very little to that of Social Economy. To us it is enough to know that India is caste-ridden, and then to study its influence on the economic activity of the people. But we cannot assume the same degree of indifference towards what I may, for want of a better word, call the history of its evolution.

Caste as it was.—Whether caste had its birth in religion or in industrial economy or in race, it was not exclusively hereditary in the beginning. Each man at the birth was born a *Shudra* and it was only after he was invested with the sacred thread the *Janeo*, that his initiation into a particular *Varna* of which there were four in the

beginning, as in theory there are four even now, definitely took place.*

The time to invest a man with the holy thread or to perform the ceremony of *Yagapavita* was somewhere between the ages of five and seven, in any case before the period of education began. By this time the society had enough time to study the aptitudes of a man, before definitely hall-marking him with the brand of a particular group of occupations. If he had the makings of a *Brahmana* he was invested with the white thread—an emblem of purity and self-sacrifice, the two most essential attributes for the service of his fellow-men. If that of a *Kshatriya*, the colour of the thread was yellow, and if a *Vaish* the thread was red, and if the man was fit for menial services only, then the thread was not given at all. This does not mean that the principle of heredity in the organisation of the caste system had no place, but only this that by having this important ceremony of *Yagapavita*, society made itself perfectly sure that the right man was being placed in the right group, and thus made an allowance for the one and thousand causes that bring about differences of aptitude in the children descending from a common set of parents or grand parents. After deciding the *Varna* of an individual, society left him free to follow a particular occupation out of the many occupations permitted for that *Varna*,—an occupation that suited the peculiar tastes and makings of that individual. There was no caste in the modern sense and it never sought to bind individuals to have marriage relations only amongst the members of a particular caste, following the same occupation,

* *Vide* Manu-Smriti.

or even belonging to the same *Varna*. There are numerous instances mentioned in our Shastras and Puranas where a Barhmana married a woman born of Kshatriya family or a Kshatriya married a Brahmana woman. As a matter of fact, women in India were supposed to have neither caste nor any definite religious faith, till they were married, and then they adopted the caste and peculiar religious faith of their husbands as in nine hundred and ninety-nine cases out of a thousand, they do even now both in civilized Europe and backward India. System of castes so regulated and realised in practice as a compromised resultant of heredity and social selection and the peculiar system of education that prevailed in those days was an unmixed good, and must have been an important factor in bringing about that high state of economic development, glimpses of which we see in the ancient Shastras and Puranas of this land. And how it could be otherwise when each man did that for which he was naturally fit, and when society undertook to train his aptitude to its highest limit, and provided opportunities for its exercise ?

That the principle of social selection existed in India during the Epic period is clear enough. As we read through the Epics we find both Rama and Krishna, and a host of others going to their Guru Ashramas and coming back as full-fledged Kshatriyas, while Sudhama lived with Krishna in the same Ashrama, but came out as a poor Brahmana. But the time when it disappeared is not definitely known. It is quite certain that it has no place in our own days in determining caste, that it had none

during the mediæval period of India, and that it had lost much of its significance even before the days of Gautama Buddha, otherwise why Lord Buddha went out of his way to preach the equality of man before God and Religion ?

Just as the system of caste, when it was the result of the combined action of heredity and social selection, was a source of great economic benefit to India, so now when it is the result of pure heredity it is a source of a number of evils. The chief function of the social selection was to make allowance for those freaks of unseen and mostly uncontrollable natural forces, that bring about children of varying aptitudes from marriages within the caste or from mixed marriages, and to allot the right man to the right place. When the institution of social selection disappeared or at least ceased to discharge its function in right earnest, caste became a mere heredity-governed phenomenon ; and it is in this form that we propose to study it in its economic aspect.

Alfred Marshall, while discussing the qualities of an ideal entrepreneur remarks thus : " He must have the power of first choosing his assistants rightly, and then trusting them fully, of interesting them in the business, and of getting them to trust him so as to bring out whatever enterprise, and power of organization be in them."*

This means that one of the most important functions of the organiser of an industry, if he wants to make profit out of it, is to select men for the various

* Principles of Economics, Vol. I, Book IV, Chap. XII, page 288.

kinds of labour that have to be done in the making of that particular commodity which is produced by that industry. If either the organiser has not got the requisite ability to discover the peculiar capacities of different individuals or if he wilfully neglects to do so, and instead of constantly being on the watch to find out proper men for the proper work, leaves it all to chance then the result will be failure. The Indian society by neglecting the factor of social selection in the distribution of different individuals to different castes has acted, and is acting, in very much the same manner, as the suppositious organiser did above, and there is no wonder therefore that India has become so backward economically, and there is such a hue and cry against maintenance of the system of caste on the present unsatisfactory lines.

It is true that by making marriages endogamous within a caste, whose present basis is very largely occupational, society has very largely succeeded in stopping the free mixing of men and women, born of families having differing aptitudes; but all the same this blind method of regulating the distribution of individuals amongst different occupations is by no means comparable to that discriminate social selection which we found working under the old social organisation. Human knowledge, specially in that particular branch which deals with the laws of their own procreation is so very limited that we can never prophesy that a carpenter's son by coming in sex relation with a carpenter's daughter is likely to breed children and that all of them will have in them all those faculties that go to make up a success-

ful carpenter. And the same is true of other occupations.

Even if we had perfect knowledge of all the different factors that go to create and develop a particular aptitude in a man—factors that begin to work from the moment of conception and continue to work till that man has taken to a particular occupation—even then we could never be sure of and could never control completely, the birth of carpenters in the families of carpenters, for the simple reason that there are many things done overboard and underboard, that society never comes to know and would never come to know, and therefore could never take account of them, either from the point of view of elimination or assimilation. The control of aptitude by making marriages endogamous within a caste, being beset with innumerable difficulties has proved a failure and we find great economic waste going on in society as there are thousands of men doing a particular work, under social compulsion, for which they are fit neither physically nor mentally, and many other thousands debarred from doing things for which they have natural capacities. Our great national workshop in India is suffering from the hopeless phenomenon of misplaced labour and that because the institution of caste in itself is not bad but because it has ceased to be a living organism. The soul that inspired it, the spirit that animated it, having disappeared, it is now but a heavy load upon the shoulders of those unhappy beings who have to carry it to its grave.

We have noted above that even under the system of caste, as it was, there must have been social

cleavage ; but the cleavage then was based upon real differences in the qualities of individuals constituting the different groups. It had very little in it, therefore, that could give rise on one hand to that false pride of superiority in the higher castes, which we find so common in these days, and on the other hand, that very natural sense of hostile contempt which we now find in the lower castes towards the higher. When a man or a group of men really deserves a certain thing, it is seldom grudged and still more seldom envied by those who have not got it, simply because they realise that they are not fit to have it. And the chances of these undesirable feelings taking root in the society of those days were still further reduced as each individual member could aspire, and that too successfully, to rise up to any of the higher castes. But now things have completely changed and the system of caste as it is, has lost altogether its power to grow by accretion from without. Only a man born within a particular caste can be and is considered a member of that caste, whether or no he has the requisite qualities in him. And it is this false basis of social cleavage that has given rise to a whole set of ceremonial ideas of purity and pollution to support itself in the absence of anything better, which have proved so very prejudicial to the economic activity of India.

“ The moment you divide men into water tight compartments on the mere accident of birth, irrespective of their temperaments and qualifications, and at the same time refuse them their birth-right to develop their natural capacities and faculties to the highest possible limit they are capable of, you deny

your nation all the advantages that otherwise would have added to the store of nations' wealth and well-being."* We do not know how much talent is left undeveloped or is left to waste itself on a lower kind of work. Or again we do not know how much harm is being done to the economic activity of India, by putting men in the wrong places. But certainly the disregard of the elementary principles of division of labour in our national activity must be causing an immense loss. The artificial social cleavage acts on economic life in three important ways. It acts as a bar to the development of a common life amongst the Indian people and has given rise to the very undesirable feeling of hostile contempt of one class towards another class. When the division of society into so many social groups was based entirely on the principle of division of functions, each group naturally looked upon other groups as complementary to itself and gave birth to what Dr. Radha Kamal Mukerjee has termed the "communal" or what I prefer to call the "social" outlook with its corollaries of fellow-feeling and sympathy towards the other members of society-working under other groups. And now when it is based on pure heredity or what Ketkar has called "The pure accident of birth", it has given birth to a large number of false ideas of superiority amongst the higher castes and has led them to guard this ill-begotten superiority by innumerable false ideas of ceremonial purity and pollution. On the other hand, it has given birth to feelings of jealousy and hatred in the minds of lower castes. And both these have resulted in developing

* S. V. Ketkar :—Essays on Indian Economics.

that peculiar spirit which in Western countries goes by the name of Individualism and which in India has expressed itself in making each group of producers or castes to look upon itself as the only important group in society, whose economic and social well-being is thoroughly independent of the wealth or well-being of the other groups. And the result is that instead of healthy cooperation between the different classes, we find a tendency towards selfish competition taking root, with all its attendant evils.

In the second place, as there is no possibility of men of one class passing into another class the standard of life of the socially lower (but not necessarily economically lower) groups fails to rise. Thus some of the *Chamars* in Indian villages, notably those of the Cawnpore District, have grown very rich, yet they dare not adopt better and cleaner ways of living, characteristic of the higher castes. The zemindar, who is generally a member of one of the higher castes, would not allow them to build either a *pucca* house or to wear costly clothing or to put on ornaments of gold and silver. The teachers in the village schools, in most cases, at the direct instance of the village higher castes, would not allow the children of the *Chamars* or the *Pasis* or other depressed castes to come and read, and thus close all the avenues of raising their standard of life to them.

Last of all, this caste cleavage prevents the cooperation of different classes in the production of commodities. We know that the nature of commodities required by different classes of people differs ; and as there are so many castes in India, it gives rise to so many classes

of people, having their peculiarities of consumption, a very large variety of commodities has to be produced, but all in comparatively small quantities. The result is that although the country is large, production on a small scale must be the rule. Then again for any production on a large scale, cooperation of intellect, manual labour and capital is necessary. This co-operation under the modern system of caste is difficult to secure. The Hindus specially have to suffer the most from this state of things. The classes representing these elements are represented by entirely different castes which do not come socially into contact with one another. The class possessing capital is entirely different from the classes possessing manual skill and technical knowledge, even though they may be of a very elementary form. Generally the skilled classes are found placed in a low scale of social organisation. This lack of correlation has been one of the most important causes of the slow development of industrial enterprise in this country.

We have noted above that the Hindus are the chief sufferers from the caste cleavage, but even among the Indian Musalmans there are occupational castes, like those of Darzis (tailors), Bhistis (water-carriers) and Jolahas (weavers). But these are not bound by strict regulations in matters of food and drink. But, though under the democratic constitution of Islam theoretically all men are equal, there are grades of social rank recognised amongst them just as they are amongst the Christians of the West. The higher class of Saiyads, that claims its descent from the Prophet considers itself superior to others ; and the descendants of those, who came direct from Arabia

or Persia, and settled here after the conquest, consider themselves superior to those sprung from Hindu converts. Most of these converts have brought with them some of the prejudices of their original caste, and many of the Muslim artizan groups are often, as strictly endogamous as the Hindu castes. But with all this, mobility from one grade to another grade amongst the Muslims is far greater than is to be found anywhere among the Hindus ; and is thus described in the well-known saying :—" The year before last I was a Jolaha, last year a Sheikh ; this year, if the prices rise, I will become a Saiyad ;" though the process of promotion is not so quick as the proverb would suggest.

We may conclude now with a few general observations on the significance of caste to a student of Indian Economy. Caste as it was, was an economic factor of great potentiality for good in India. It gave each individual his definite place in society, and once he was assigned to a particular group, with a particular occupation, the group organisation helped him in every possible way to learn the ins and outs of that occupation.*

In the caste, as it is, much of the productive organisation has disappeared, and whatever there is, is not effective. The caste Punchayat has very little left now of her trade functions, and has become an out and out social body. The introduction of the factory methods of production has further undermined the significance of caste Punchayats, and they play very

* Each caste had its Punchayat, which had very much the same functions, as the executive of the western guilds.

little part whether in the regulation of admissions to a particular trade or occupation, or in the regulation of prices. As a particular caste lost its power to grow from outside, the trade that it followed also lost its capacity for further development, and stagnation and degeneration set in. What is left is, that hard outer shell of restrictions on food, drink and marriage, and it is within this shell that the embryo of life that otherwise should have grown into a strong organism is being throttled to slow death. There are writers like Dr. Radha Kamal Mukerjee, who plead for the maintenance of the system of castes, and the resuscitation of all those features that once gave life to it, but certainly it is too late now to call back to life what caste system has lost, specially in view of the widely changed conditions of life and labour in India. Some sort of caste system there is met with in every country, and some sort of caste system we are bound to develop in India as well. But whether it will be the same as we had in ancient India, or purely occupational as we have in Islam, or again such as we have in England and America, is yet too early to forecast. But whatever form it might take in the future, we in India, should never lose sight of the desirability of bringing back into our new stratification of society that benevolent social spirit, which Dr. Mukerjee has characterised as communalism and which once animated our whole social organisation and which is still met with in the dealings of individual groups with each other in our villages.

(B) *The joint family system :*

The word 'family' in India, has a far wider sphere of influence than in the countries of the West. There the word family connotes a group of four or five people, consisting of a husband, a wife and those of their children, who have not yet come of age. In India, on the other hand, the average size of the family is very much larger than that, as it consists not only of husband, wife and their children, but may include members going one, two, or three generations backwards and forwards. To an Indian, it is no matter for surprize to find a grandmother, a mother, the father of the family, and the whole host of sons and grandsons, with their wives and children—all not only living under the same roof but sharing all their goods in common. They are "joint in food, worship and estate." In the Law relating to the joint family, Bhattacharjee says that "The Hindu family is a group of individuals related to one another by their descent from a common ancestor within seven generations in the descending line."

Each member of the family works according to his ability and capacity on the trade or occupation of the family, and whatever he earns, goes to the common chest of the family, and it is from the common chest that all the ordinary and extraordinary expenses of individual members are met.

In India, *the family* is the Economic Unit of Society. Thus, while in the West, each individual has his own scale of wants, his standard of comfort and activities, in India, the family mode of enjoyment and the family occupation are the main factors in determining the standard of living and activities of ar

individual. In a word, the joint family in India at work, gives us a practical demonstration of the life that communists have been trying, without success, to bring about in Europe and America on a large scale. An unsophisticated joint family in India—a family that has not yet begun to disintegrate owing to the action of some of the modern forces—gives us a complete idea of how the idea of community of goods, and common production is likely to work, if realized in practical life on a large scale.

FAMILY AT WORK IN CONSUMPTION

Wherever there is joint family, it has a recognised head, called the *Karta* of the family. Generally, not always, he is the eldest living member, and stands in the relation of *Pater-familias* to other members of the household. It is to him that all other members give whatever is earned by them. He is the master of the family-chest, and apportions the income to the different items of expenditure. As a general rule, the women of the house have a separate female head, who after receiving the incomings allotted for the household expenses from the *Karta*, manages the affairs of the *zenana*. In domestic matters hers is the final word. She decides what dishes are to be prepared on a particular day for the family, what clothing to be given to individual members, and what feasts and ceremonies to take place in the family. In fasts and feasts, in death ceremonies and marriage ceremonials, hers is the controlling voice. The prevailing idea, specially in the minds of foreigners and the highly educated classes, who are more or less out of touch with the social affairs of their country, that in India, women are victims to the tyranny of the males,

within the four walls of the house, is not really correct. No doubt she has very little influence now in shaping the political thought of the Indian gentlemen. Hers is not the deciding voice in the matter of trade, business or industry. These are more or less settled by the male members of the family, independently of her. But even in these outdoor matters, she has far more interference than is generally supposed. She has been and still is one of the most conservative (using the word in its literal and not the contemptuous sense) forces in our society ; and all sensible men, if they are anxious to maintain the harmony of the house, are seldom found to go very much against the wishes of the women. If a Brahman's son is anxious to go up for medicine, where dissection of frogs and other living animals is essential, and even if the male members of the house have consented to his going, yet, if the women make a strong stand then it is not possible for him to go up for it. An average Indian, be he a clerk, a teacher, a doctor, a business manager, a carpenter, a cultivator or a money-lender, always consults the women of his house, specially the leading women of the house in all important things, specially whenever he ventures on a new enterprize.

Then again, even from behind the thick walls of Indian masonry, she exercises a humanising influence on the business relations of the men of the family with other men. If it comes to her notice, that some male member is doing injustice to some one else, or is driving a hard bargain, her interference is always on the side of the weak, and is generally successful. When I say all this, it does not mean that the

treatment of women in India is ideal, or that there are not cases where they are ill-treated. There are heartless men in India, as in other countries of the world. But they have not yet learnt to cover their inner cruelty with outward courtesy, and that perhaps accounts for creating an impression abroad that women in India are badly treated, or completely ignored. And our modern educated lady, who is sometimes found speaking in eloquent terms of the ill-treatment of her sex, should never be taken seriously, as her sophisticated imagination is always comparing things in terms of the Western drawing-room, or the dropped handkerchief. Or again our middle class educated gentlemen should also not be taken seriously, as giving us a true picture of the Hindu home, when writing in the strain of Mr. M. N. Ghosh ; he says that " The Hindu home is a source of endless distraction and embarrassment. It has crushed many a spark of native fire, buried many a noble project The agitation of feeling caused by the living together of a large number of men and women, very few of whom are in sympathy with each other, and almost every one of whom has some grievance as against the rest, can not fail to deaden energies. The quarrels of women, the deep seated malice of men, the mighty contrasts, which rise from trivial things, give no rest to the unfortunate inmates of the Hindu home. The fight rages sometimes about a point of dignity, sometimes about money, sometimes about questions of authority and obedience. Occasionally of course, there is intermission of the above hostilities ; but no more peaceful condition is often reached than of armed neutrality." Such is no doubt

the condition in the middle class Hindu and Muslim homes, where increase in the cost of living, combined with individualistic ideas created by education in modern schools and colleges, is exercising its disintegrating influence on the joint family. But it is certainly not true of the vast bulk of homes in India.

FAMILY AT WORK IN PRODUCTION

Largely speaking, all that brings income to the family is done by men, but in the Indian villages women belonging to the masses, do help the men in their occupation. If it is the family of a cultivator, women may be seen in the field weeding or gathering crops, helping men in the distribution of water, and other light agricultural operations. If it is one of the village artizans, say a potter family, women may be seen taking the pots as they come from the wheel to the yard, where they are left to be dried before colour is given to them. When they are dried, it is the women's work to colour them up and make artistic designs on them. The same is true of other trades. Keeping this in mind, we may say that in the conduct of outdoor works man's place is more prominent than that of woman. Just as in the *Zenana* all the women of the house combine to carry on the ordinary duties of daily life, and provide ready-made-things for consumption, so outside the house all the male members of the family combine to carry on the business of the family. If it is a cultivator's family, the adults may be working at the plough, or sowing seed, or lifting water from the well, or thrashing the crop in the barn. If a blacksmith's, the men may be seen working in the foundry, one may be blowing the air bag, another hammering

the red hot iron and a third making horse shoes, or agricultural implements. The boys of the family are also employed. They do most of the work of pasturing the cattle, and collecting fuel and manure. In the artizan's family, the boys like their mother, can do much work. They are early trained as apprentices, and soon begin to pick up the rudiments of the trade.

In this respect the whole family may be looked upon as a small scale workshop, where each has his place and task according to his or her capacity. The services of each are utilised in the interests of the family business. The stock in trade, be it in the form of raw materials or instruments, is the property of the family, and whatever is received from the sale of goods produced is deposited in the family chest, with the *Karta*.

JOINT FAMILY—WHAT KEPT IT ON ?

The system of joint family was as Dr. Mukerjee has observed, "founded on the virtue of affection," but what gave it free scope to play its parts for such a long time in India is to be found in the peculiar conditions of life and labour in the pre-British days. The crude means of communication, the small scale industry and trade carried on in isolated and self-sufficient villages, and the absence of opportunities for individual members to go abroad and earn their living—all these—compelled the individual members of a family to stay at home, to live together, and to get their sustenance from the family occupation. Whatever the cause, the system tended to develop further the virtues of affection, self-control,

the spirit of self-sacrifice and mutual dependence, which, in their turn, helped to produce that peculiar social-outlook in the Indian economic organisation, which is quite opposed to the competitive individualistic spirit, the key-note of modern industrialism, and which perhaps is the only contribution of this system, which, the future economic organisation of India, should, as Dr. Radha Kamal himself very eloquently pleads for it, try to assimilate.

JOINT FAMILY SYSTEM—ITS ECONOMIC ADVANTAGES

Just as the system of caste in the big family of the Indian nation, provided a fixed place and a fixed occupation to every individual in society, so the system of joint family went into minor details and attempted to adapt the capacities of different individuals to the various kinds of labour in connection with the family consumption and production. But this does not mean that the nation went out of its way to adopt this system deliberately and consciously, to realize the minuter form of division of labour and specialization of capacity. Its true cause of existence must always be found in the tie of common kinship further strengthened and developed by the environment of those days. Just as natural environment of the plains and the prevailing insecurity of life and property gave to the villages in the Indian plains a compact form of physical constitution, so they gave a unitary form to all the descendants of common parents, and incidentally provided a potent factor to counteract the frittering tendencies of the inheritance laws.

The Hindu Law of succession provides that each son of a father gets an equal share in the family property, whether in land or in the fixed capital of the family trade ; and the law of succession amongst the Muslims, entitles the daughter also to a definite share. If in the days, when production on small scale was the rule, the individualistic tendencies could have gained a free play, the family stock-in-trade, and the family-land, would have been reduced to insignificant sizes, and resulted in all round misery on large scale. As it was, the system of joint family succeeded in keeping all the members of the family, with its land and capital, intact. The question of fragmentation of holdings, was never so acute in the pre-British days, as it is now, because the joint family was intact and few cared to divide their lands after the death of the *pater-familias*. Further the practice of common living, succeeded in providing ordinary means of living for all the members of the family from the comparatively small income of industry carried on a small scale. This resulted in great economy in consumption. Much in the duplication of all those things that go to set up a house was saved, and still more in every day expenses. Then again, the joint family organisation took care of the labourer in case of sickness, unemployment and old age ; and both the helpless orphan and the widow found shelter within its fold. There was seldom any need for the public to provide the modern old-age pensions, the widows' home or the great orphanage. These are the direct results of the new growth of individualistic families in India.

JOINT FAMILY SYSTEM—ITS ECONOMIC DISADVANTAGES

We have noted above that the system of joint-family in India, was never a deliberate organisation. It was but a mere expedient to meet peculiar conditions of environment. We find no mention of it in our sacred books, and our law givers, like Manu and Sankaracharya, provide nothing in legal codes to safe-guard its continuity. As a matter of fact, our succession laws provide well for its dissociation. Perhaps they fully realised the many social and economic evils to which the system tends to give birth. While studying the physical features of India, we found that they tend to produce a fatalistic habit of thought and to develop an attitude of helplessness against the forces of Nature. Certainly, they are not very favourable to produce the attitude of self-confidence in man. To counteract this pernicious result, we saw our religion making an attempt to develop the qualities of self-help and self-reliance, by taking extra-ordinary precautions in the early period of the life of an individual. Through the system of joint family, we find the environment making a further attempt, and, I should think, a successful attempt, to counteract the power of man, and trying to produce the self-same qualities of helplessness, through mutual dependence and sacrifice of the self to let the family work smoothly. Our law-givers saw that and tried to counteract this insidious move by introducing the system of equal division amongst all the sons. But as we failed to realise the inter-dependence of psycho-ethical development to the social environment, Nature got the

better of us, and all our good laws and customs were held in check, and want of confidence in oneself continued to grow with a cumulative force, generation after generation. The development of individuality in man, on which our religion lays so much stress, is continuously sacrificed to the well-being of the family, with the result that mediocrity has become the rule. In the beginning, it was environment that compelled people to stay at home, now, it is the family affection born of living in the family surroundings that forces many people to live at home, even though there are so many opportunities to go abroad and earn much better wages, and raise their standard of living. As it is, it is one of the strongest factors, that keeps the mobility of labour in India low, and prevents the development of wage-earning class, living permanently in the labour centres. The heart of the labourer is always at home, and he goes to the factory only to earn and accumulate wages to come back home, and then to spend his savings on common expenses of the family. And if he does not go back to the home, the members of the family manage to come to him, and thus increase his expenditure, and succeed in keeping his way of living just where it was when he left his village home. Thus all the advantages of the educative forces that work upon a man when away from home, and all the possibilities of advancement that greater resources open to a man are lost in the bread and butter, or in the fasts and feasts of the family.

So long as all the members of a family live in one place, and work jointly on a common occupation, there are few chances of friction, and all live in

harmony. But now when the development of means of communication and modern industries provide opportunities to individuals to go and live abroad, and earn a distinct income of their own, the causes of friction make their appearance and lead to many of those evils, which Mr. M. K. Ghosh has described. Whenever an individual in a particular family happens to earn more than other members, and at the same time has a fewer children than the rest, he is soon made to feel that the well-being of his dependents is being sacrificed to the well-being of others. The chief factors that bring this continuously to his notice and in the end succeed in securing a partition, are his wife and the idlers in the family. His wife is quick to bring the anomalous situation to his notice, while the idlers by their conduct soon convince him of the facts, and the conviction comes earlier if the income of the man happens to be such as to be enough to meet the higher standard of living of himself and his immediate dependents, but inadequate to meet the wants of all the members of the family. If, on the other hand, the income of the individual is large enough to go all round, then there is little friction in the family. The man who earns, his wife and children naturally acquire the leading position in the home, and others continue to feast on them, and doing all kinds of services in connection with the family. It is in such families that we find a number of people wasting their energies in mere eating and sleeping, while there is so much work to be done all round. There is an idea abroad that there is a very large percentage of the Indian population that is wasting its energy like this, but

actually it is not so. It is only in well off families, with some landed or other permanent income yielding interest, that drones are met with, and the number of such families is not very large in India.

But in one sense it is a serious loss to the nation. It is people of this class, who are in a position to qualify themselves for all those different activities, such as the pursuit of knowledge, development of co-operation, introduction of social reform and many other national and social service activities, which can successfully be carried on by what are known as leisured classes in other countries. Such activities require freedom from care, and both knowledge and culture to do them successfully. By birth, they are free from care and belong to a cultured class, by application, they can, if they care, acquire knowledge, and use it for the benefit of their own country. But they would not. On the other hand, they engage themselves in that very happy pastime of producing children and thus increase the stock of worthless men and women in India, who must eat, and yet do nothing to add to the stock of national income.

JOINT FAMILY IN DISINTEGRATION

But fortunately for India the system of joint family is now being broken. The spread of education, and to a greater degree, the development of the modern means of communication, and the organisation of industry and trade on large scale in big cities, where high wages are offered, all these are inducing individual members of the family to leave their homes and earn a decent sum of money—a sum which can easily be differentiated as the direct result

of the efforts of that individual. This leads the wife and children of that individual to think of enjoying in a better way the greater income amongst themselves. The development of this selfish or individualistic spirit is making for the disintegration of the joint family in India, and bringing into existence the individualistic family of the West.

The joint family as we have mentioned above, was a product of the peculiar physical environments of old India, and wherever those peculiar conditions are being broken, it is also giving way. Thus if we go to some of the Indian villages, be it in Bengal, or United Provinces of Agra and Oudh, we would find the system of joint family as the rule amongst the families of the cultivating classes, but amongst the village artizans, and the landowning classes, or what are known as the *Bhadra-Logs* in Bengal and the *Bhalemanus* or *safed-posh* classes in the United Provinces, it is getting rarer, whilst amongst the highly educated classes where most of the individual members earn their living independently of each other, individualistic families are the rule. There are some, who bewail the loss of joint family organisation, but we will not waste an iota of our energy to conserve this effete system, as the things that brought it into life are soon disappearing from this land, and we could never conserve it even if we would.

(C) *The Purdah system :*

The system of keeping *Purdah* or *Gosha*, in certain parts of India, notably, Bengal, Bihar and Orissa, United Provinces of Agra and Oudh,

Rajputana and other parts of Northern India, is the direct result of environment and owes nothing to the religious thought of the people. It was the direct result of the advent of the Muslims in India that the higher castes adopted the *purdah* system just as the classes that are now coming in contact with the Britishers in India, have adopted the peculiar dress and other modes of living of the ruling race. What the leading men in society do, and none leads in social matters like the ruling classes, others also try to follow, as it gives them an air of respectability. The Muslims had the institution of *purdah*, more or less like that we have now in India in their native countries, at the time they began to conquer India. They continued to observe *purdah* in India, probably just to keep up the prestige of the ruling race, and the classes in India like the Rajputs and the Kaisthas, who came in close contact with them also adopted the same. After that it became the fashion of all those who rose into respectability, whether because of increase of wealth or because of advancement in education. Up to very recent times, in the Provinces named above, the *purdah* system was confined to people of the middle classes, and in rural India, the women of the cultivating and artizan classes did not observe it. They used to go out of the house freely, and work in the fields. And if the cultivators happened to belong to the Brahmana, or Kshatriya caste then the females used to keep *purdah* and did not take part in agricultural operations. But during the last twenty-five years *purdah* has become more fashionable, therefore any family or a group of people, that can make two ends meet hastens to

adopt it. Some of the members of the so-called depressed classes in these provinces, such as the Kahars and the Kachies, whose females used to work outside the house have held conferences, and have decided to keep their women in *purdah*. The present tendency in Northern India is that the classes that used to observe *purdah* are now realising its disadvantages, and therefore trying to get rid of it, while the classes, that had no *purdah* are now adopting it, as they are rising to a higher economic status. Even in Southern India where there was no *purdah* system, the influx of people from Northern India has succeeded in introducing this system in big cities like Bombay and Madras. But all the same Southern India is free from this evil.

THE INFLUENCE OF THE PURDAH ON ECONOMIC LIFE

The influence of the *purdah* on economic life is that a large number of light occupations which are performed by women, in those parts of India, where there is no *purdah*, notably the Central Provinces, Madras and Bombay, are done by men in the parts where it exists, and the energy of the women fails to be utilized. Then again if the males of those parts of India where the *purdah* is observed, go to the cities to work in factories, they cannot generally take their wives for want of decent living arrangements with the result that the absence of women leads those people to all sorts of undesirable activities, and is one of the most fruitful causes of immorality, drink and disease, so common in the labour population of the industrial cities of India. If to these, we were to add the cumulative effects of the *purdah* on the health of the people, then we would get some idea of its effects

on the national economic activity. The *pardah* confines the women within the four walls of the house, with the result that each successive generation grows weaker and weaker both physically and mentally. The influence of the mothers' experiences during the period of gestation on the child is difficult to deny, and the experiences that it gets during this period in those parts of India where *pardah* is observed are at the best narrow and lacking in freshness and novelty. The want of sufficient exercise and pure air for the mother, while the child is in the womb, makes the child weak in constitution, and the absence of opportunities to the mother to exercise her emotional and mental faculties makes the child a dwarf mentally. Perhaps the system of *pardah* amongst the middle class people of India, out of which the organisers of industry in other countries are largely drawn, is largely responsible for that lack of dash and enterprize, which has been hitherto seen in India.

CHAPTER IV

The Legal Base

Leaving apart those general laws that provide, so to say, the background of security of life and property, and of freedom and sanctity of contract, so very essential for economic development in every country, each country has some laws peculiar to her genius, and bearing intimately on her economic activity. India is no exception to this, and we have our laws of succession, our systems of land tenure, the laws regulating the work of labourers in factories, mines and workshops, the laws dealing with credit and contract, the laws governing the organisation of business, such as the Joint Stock Companies' Act and the law providing for co-operative activity—all these condition in a direct way the development of economic life in India. And he who cares to understand the economic conditions as they are in this country, and more so to recommend lines of further development, needs necessarily pass through a critical study of these in their essentials. That it is necessary to do so, will be clear when we have examined in its barest outline, the influence of the Hindu and the Muslim laws of succession on the development of large scale industrial enterprise in this country. The spirit of our religion, the spirit of our social customs, as revealed in every day life of the people seem to be inspired by an almost socialistic idealism, which has always tended to suppress the accumulation of large wealth in the hands of individuals. It is the same spirit which has revealed itself in the Hindu and the

Muslim Laws of inheritance. Amongst the Hindus the laws of succession provide that each male descendant in the direct line is to get a share in the ancestral property of the deceased, while the self-acquired property, though capable of being bestowed upon any one, the owner chooses, is yet generally inherited in the same way. Amongst the Muslims the peculiar democratic tendencies of Islam, have gone a stage further, and succession to ancestral property is not confined to male descendants in direct line only, but the female descendants are also entitled to a definite share.

The result is that many a time a successful business enterprize which flourished well during the lifetime of an individual, goes into liquidation soon after his death, because the capital which once formed the undivided stock of one man, and was essential for the successful running of the business, needs now be divided into a number of shares all determined by the interest of descendants in the family-tree, and some of them want to invest it somewhere else, or in an independent business. The evils of our laws of succession are not so prominent in industries other than agriculture, because as a rule causes of friction are not very great in them, and the classes that engage in them are more intelligent than the classes engaged in agriculture. But agriculture in India is by far the most important industry, giving occupation to something like seventy per cent. of the population. It is here that our laws of inheritance enjoining the system of equal division of the ancestral farm amongst all the heirs of a cultivator have done, and are doing, a lot of harm. Let me explain by a

concrete example :—In a village there was a *ryot*, who had about $18\frac{1}{2}$ *bighas* of occupancy land. He owned his own *jowara* (one *hal* and two bullocks). He used to sow his own seed, to provide his manure, and could maintain himself year in and year out without going to the *mahajan*. He died some years ago. His three sons divided the occupancy land between them. All the agricultural capital was sold and the proceeds divided equally between them. Each had to provide his own live-stock and other agricultural capital. The money left by their father, though sufficient to keep and provide for one independent farmer could not provide for three, the result was that all the three had to take some help from the *mahajan*. Besides each of them took some land as tenants-at-will, because a plot of six *bighas* is not sufficient to keep occupied one *hal*. Their present condition is that they sow seed borrowed from the *mahajan* and are in debt. How can this be explained? They are using the same old methods as did their father; everything is exactly the same. Some might reason out that it is due to their cultivating a part of their land as tenants-at-will. But this can not be, because we find many a tenant-at-will, as prosperous as was this occupancy tenant. Secondly that the sons of occupancy tenants in general, who split up into independent cultivators become indebted and poorer and poorer every year. The explanation is to be found then, in the equal sharing system. It not only reduces an economic holding into many of uneconomic sizes, but also compels each of the co-sharers

* The name of this ryot was Dhanpat. He was a native of the village Bijaipura in the Firozabad Tehsil of the District Agra.

to become agriculturist and thus increases peasant indebtedness. If the field as a whole with all the agricultural capital had passed on to only one of the sons we would have had at least one prosperous farmer, and from the point of view of good agriculture as well as of the increase of national wealth, one prosperous farmer is far better than three indebted ones.

This is not all. Our laws of inheritance do not only tend to bring about a multiplicity of small farmers, each cultivating an uneconomic holding, which has been recognised on all hands to be a great evil from the point of the development of agriculture on improved lines, but they are also very largely responsible for the equally undesirable phenomenon of scattered holdings, which one meets in almost every village of India. And so long as our laws of succession continue to be what they are, all experts agree that no permanent consolidation of agricultural holdings is possible, however much the friends of rural India may desire it. Or again take a seemingly unconnected fact, the development of sugar factories in the sugar zones, which is so very desirable for the success of sugar industry in India. In the sub-montane districts of the United Provinces, sugar-cane is very extensively grown, but it is not grown on extensive and continuous fields. It is grown in patches of a few *bighas* each by so many cultivators in a village. It is not grown as in Java or Mauritius round about a central sugar factory on thousands and thousands of acres. And if somebody wanted to do so, it would not be easy for him to secure a large continuous area, without changing the existing rights of occupancy, that is, the existing tenancy laws.

So deep-seated is the relationship of some of our laws to the economic activities of the people of our country that unless one has a fairly intimate knowledge of those laws, it is not possible to grasp the meaning of life and labour in India. Here again we shall adopt the same old policy of indicating the line of approach to legal facts pertinent to Indian Economy by giving a few specimen studies to put the student on the track. The study of other legal factors must be done by the student himself.

SECTION I

Perhaps the United Provinces of Agra and Oudh would be the best specimen for an intensive study of land-tenures in the zemindari provinces of India. In the permanently settled districts of Benares Division we have representatives of the land-owning as well as the tenant classes met with in other permanently settled areas. In the Province of Agra, we have what is known as the *Mahalwari* system, while in the Province of Oudh the *Taluqdari* system is in full working order.

(A) *Land Tenures in the Agra Province.*

Here the system is called the *Mahalwari* because the unit of assessment is a *mahal*, and the intermediary, who is technically called the landholder, mind you, not the landlord, is recognised by the Government as the owner of the land. Sometimes this landholder is a single person, at other times a joint body of co-sharers, descending from a common ancestor. They receive rents from the actual cultivators, and may under certain conditions to be described later, enhance or alter them. Their only

serious liability is to pay revenue and cesses, which are assessed every thirty years on their land, to the State. Ever since the passing of the "Saharanpur Rules" in 1855, when the half assets rule was first of all substituted for the practice of assessing at sixty-six per cent. of the rental, the policy of the Government in this Province has been to take something like forty-five to fifty-five per cent. of the landholder's assets. But a study of the Settlement Reports during the last twenty-five years leads us to say that generally it is forty-five per cent. Then again before these rules came into force, generally the Settlement Officers used to assess on prospective assets. This practice has now been set aside in all recent settlements. In practice allowance is further made for improvements carried out by the landlord, for precariousness of cultivation, for indebtedness or poverty of the landlord and for severity of enhancements. Moreover, where the landlords cultivate themselves, rebates of varying amounts are generally allowed on their *Sir*, and the arrangements now made, for the graduation of their assessments when any substantial increase is made in the revenue demand are extremely liberal. The ordinary rule is that for the first five years of a new settlement the revenue should not exceed by more than 25 per cent. the demand previously payable, and that if the enhancement exceeds forty per cent. there should be two progressive steps of five years each. As regards the cesses which now form the most important source of income of the District Boards, the District Boards' Act of 1923 provides that for meeting the expenditure on development services, the Board

may levy cesses up to 10 per cent. of the Revenue that a landholder is liable to pay.

Although at the time of fresh assessment, the landholder, speaking legally enters into an agreement with the Government, whereby he agrees to pay the sum assessed on his land, and the Government agree to allow him to hold land for the next thirty years, yet in practice the tenure of the *zemin-dar* may be said to be proprietary. It is inheritable according to the Hindu and the Muslim laws of succession as the case may be, saleable, and disposable by will in the absence of legal heirs. The following varieties of this tenure are recognised by law : (1) Single *zemindari* ; here we have only one proprietor or landholder who is solely responsible to the State for the payment of revenue assessed on his *mahal* (a *mahal* means the unit of assessment. It may be a village, a group of villages or a portion of a village). (2) Joint *zemindari* ; here we have more than one proprietor, generally the descendants of a common ancestor, living under the system of joint family, and holding the land in common ownership. (It is these as Mr. W. Bennet, I. C. S., in his Settlement Report of Gonda, has pointed out, that led Baden Powell to speak of village communities in India living and cultivating the village lands in common. We who know the Indian villages, know very well what an insignificant part a joint family of the land-owning classes plays in the actual cultivation of village lands). One of the co-sharers is appointed by the State as the *lambardar* (leader of the co-sharers) and he represents the family before the Government, and is liable to pay revenue for the whole *mahal*. (3) However, when

a Joint zemindari breaks up owing to partition of the family lands it becomes a *pattidari*. Now the interest of each co-sharer is recorded separately, and is determined according to his fractional share in the genealogical table of the family. Each *pattidar* may be severally responsible for the payment of his share of the Government revenue, which is determined on exactly the same basis as his share of the family property, or he may pay his quota of revenue through the *lambardar*. However, so far as the Government is concerned all the *pattidars* of a *mahal* are jointly and severally responsible for the payment of the revenue assessed on the *mahal* as a whole. If the *lambardar* collects rents for the *pattidars*, and pays the revenue, he is authorised to deduct five per cent. from the share of net assets (income of the zemindar after payment of revenue) due to others, as *haq-lambardari*. (4) *Bhaiachara*: This is but a modified form of *pattidari*. Here also the proprietors are more than one and once formed the members of a joint zemindari. After the partition, they hold their lands separately, but their share is determined by the area actually in the possession of each. Unlike *pattidari*, it is not determined by the place in the family-tree but by area *de-facto* in possession, and that again determines their share of liability for revenue payment. (5) Last of all we have what are known as *Imperfect Pattidari and Imperfect Bhaiachara*. Here we have more than one landholder, and each of them holds part of the land in joint ownership and part separately on either tenure.

Although for all practical purposes the landholder is owner in full, yet by no means is he absolute in

his powers. On the one hand, he cannot, even if he decides to do so, leave his lands uncultivated with impunity as a landlord in England, who has only to pay a certain percentage of his actual income as tax and a land tax can do, because Land Revenue here is assessed per *mahal*, and not per income and that too for a period of thirty years, and the landholder is bound to pay whether his lands yield him income or not. It is true that in bad years, whenever there is a serious dislocation of agricultural industry in some area owing to some causes beyond the control of the landholder, Government forego part or whole of the revenue for that year, but all this is due to the willing grace of the State, and not a privilege of the zemindar. On the other hand the rights of the tenants below the landholders have been defined by law, and he (the landholder) can not go beyond the limits set by the State. Thus in India in the zemindari provinces it is rather difficult to say definitely who is the owner of the land, whether the Government, or the landholder or the cultivator? All the three are, as it were, inextricably bound up in an indefinite and undefined relationship.

On the basis of their rights we find the following classes of tenants in the Agra Province :

(i) The Ex-proprietary Tenants. To this class belong all those tenants who were once landholders of the *mahal* or in the *mahal* in which their present holdings are situated and who lost their proprietary right either by sale or otherwise, but who at the time of the passing of the Tenancy Act of 1901 had either the right of *Sir* or had cultivated continuously for twelve years the lands of which they are now tenants. It is a growing class of

tenants, and to this belong all those who may have cultivated land for twelve years at the time of sale of their property. They have got the right of occupancy in their farms, and pay 25 per cent. less than the rent which a non-occupancy tenant would have to pay for the land of the same class. So long as they continue to pay their rent, they can not be ejected, and their rent cannot be enhanced arbitrarily, and when once enhanced either by the landholder with the consent of the tenant or by some competent court, it cannot be enhanced for the next ten years. The rights of the tenants of this class are inheritable according to the prevailing laws of succession, but they are not transferable in execution of a decree of a Civil or Revenue Court. But they can be transferred by voluntary transfer between persons in favour of whom as co-sharers in the tenancy such right originally arose, or who have become by succession co-sharers therein.

An ex-proprietary tenant can sublet his holding for a term not exceeding five years, and is forbidden by law to sublet it again within two years from the expiry of any such sub-lease. If the sub-lease is for a term exceeding one year, it can be made by registered instrument only.

The rent of an ex-proprietary tenant can only be enhanced or abated either (a) by registered agreement or (b) by decree or order of a Revenue Court. Once enhanced or abated until ten years or such longer period as may have been agreed upon has elapsed, or the assessment of the *mahal* has, before confirmation, been revised by order of the Local Government it can not be enhanced.

The landholder of an ex-proprietary tenant may sue for enhancement of rent on one or more of the following grounds, and on no others :—

- (a) that the rate of the rent paid by such tenant is more than four annas in the rupee less than the rate generally payable by non-occupancy tenants for land of similar quality and with similar advantages in the neighbourhood,
- (b) that the productive powers of the land held by an ex-proprietary tenant have been increased by an improvement during the currency of the present rent, otherwise than by the tenant or at the expense of the tenant, and
- (c) that the area of the tenants' holding has been increased by alluvium or by the tenants' encroachments. His rent may be abated on the following grounds :—
 - (1) that the productive powers of the land held by the tenant have been decreased by any cause beyond his control during the currency of the present rent, and
 - (2) that the area of his holding has been decreased by deluvium or by encroachments or by the taking up of lands for a public purpose.

EJECTMENT OF AN EX-PROPRIETARY TENANT

A tenant belonging to this class can be ejected on one or more of the following grounds :—

- (a) if he fails to pay rent, and there be a

decree against him or his predecessors or in the same interest, and

- (b) if he sublets it or otherwise transfers it against the provision of the law.

(ii) Occupancy Tenants. The right of occupancy in the Province of Agra is a growing one as the tenancy law (1901 Tenancy Act) provides that all cultivators admitted to a holding in future, and if allowed to hold the same land for twelve years, shall acquire the right of occupancy. The word *same land* has been defined as the land under the same landholder. However, if a tenant holds a farm as a leaseholder under a registered lease, for a period not less than seven years, or as a *thekedar* (agent of the landholder) or as a sub-tenant, then he can not acquire this right. Nor does the right of occupancy arise in the *Sir* or the home farm land of the landholder. The right of occupancy is heritable, subject to the provisions of law ; but it is not transferable in execution of a decree of a Civil or Revenue Court. However, it is transferable by voluntary transfer in favour of co-sharers in the tenancy, as well as to those who become by succession co-sharers therein. The right of occupancy extinguishes :—

- (a) when the tenant dies leaving no heirs entitled to succeed him,
- (b) in land from which the tenant has been ejected in execution of a decree or order of a Court for non-payment of the rent,
- (c) in a holding, which the tenant has abandoned, or surrendered, and

- (d) in land which has been acquired for a public purpose or a work of public utility.

ENHANCEMENT OF AN OCCUPANCY TENANT'S RENT

The landholder of an occupancy tenant may sue for enhancement of rent on one or more of the following grounds, and on no others :—

- (a) that the rate of the rent paid by such tenant is below the prevailing rate paid by occupancy tenants for land of similar quality and with similar advantages,
- (b) that there has been a rise in the average local prices of staple food crops during the currency of the present rent,
- (c) that the productive power of the land held by the tenant has been increased by improvements, during the currency of the present rent, otherwise than by an agency or at the expense of the tenant, and
- (d) that the area of the tenant's holding has been increased by alluvium or by the tenant's encroachments.

ABATEMENT OF RENT

The tenant may sue for abatement on any one or more of the following grounds :—

- (a) that there has been a fall in prices,
- (b) that the productive power of the land held by the tenant has been diminished, or that the area of his holding has been

decreased by diluvium or by the encroachment of the landlord.

Sub-letting.

Occupancy tenant shall not sub-let for any term exceeding five years, and shall not again sub-let the whole or any portion of his holding within two years from the expiry of any such sub-lease and if the sub-lease is for a term exceeding one year, from year to year, it shall be made by registered instrument.

EJECTMENT

An occupancy tenant is liable to ejectment on one or more of the following grounds :—

- (a) if there be a decree against him or his predecessor in interest for arrears of rent,
- (b) on the ground of any act or omission detrimental to the land in that holding or inconsistent with the purpose for which it was let, and
- (c) on the ground that he has sub-let or otherwise transferred the whole or any portion of that holding. This does not apply to fixed-rate tenants.

(iii) Non-occupancy or the Tenants-At-Will. To this class belong all those who have no permanent right to the farm they cultivate. Their ejection and the enhancement of their rents depend upon the will of the landholder. They cultivate the land from year to year and at the end of any year they can be dispossessed or they can leave the farm, provided the party intending to discontinue the tenancy gives notice

to the other party one month before the beginning of a new *fasli* year, that is, sometime late in April or early May, say one month before the setting in of the rains, which set the new agricultural cycle in motion. But the trend of the Act of 1901 is to give some sort of security and continuity of tenure to the tenants of this class as well. It provides, for the continuity of tenure by enacting that if a man holds a certain farm on a registered lease for seven or more years, then he can not acquire the right of occupancy in that farm. This to enable the zemindar to give land continuously to tenants-at-will, without fear of their acquiring occupancy rights. Further the law provides that rent may be enhanced by mutual agreement and if this fails and if the tenant refuses to vacate the farm also, then the matter may be referred to a Revenue Court. If the object of the landholder is merely to secure a higher rent, and not ejection, then the tenant shall be entitled to hold the farm at the decreed rent for a period of seven years after the date of the decree, and the tenant shall be understood to hold the farm under a registered lease. If, however the landholders' object is to have the tenant ejected, then the court shall decree that and the tenant shall have to go.

(B) *Land Tenures in Oudh.*

The tenure of the zemindar here is known as *Taluqdari*. It is very similar to the tenure of the Agra zemindars, but it carries with it an air of dignity, which is due to the fact that most of them are rather territorial chieftains, and the tenants are practically at their disposal, subject only to the condition inserted in their title-deeds that "you will

so far as lies in your power, promote the agricultural prosperity of your estate, and that all holdings under you shall be secured in the possession of all the subordinate rights they formerly enjoyed." And other important distinction in the case of all Taluqdari estates is that here the unit of assessment is the *Taluqa* as a whole and not the village or the *mahal*. This does not mean that there are no zemindars in Oudh. That class is also fairly well represented, but the major part of Oudh is under Taluqdars. Then again in some of the estates Government Revenue has been permanently fixed in consideration of some service rendered to the Government. Then there are some estates to which the law of primogeniture is applicable.

Under the Taluqdars there are zemindars of one, two or more villages. They may be individuals or co-sharing bodies like those of Agra Province. Their position in relation to the Taluqdars is very similar to the position of permanent tenure-holders in relation to Bengal landlords, with the exception that the amount of money that they have to pay to the Taluqdar is not permanently fixed. It is fixed at the time and for the thirty years of the settlement by the Settlement Officers. Besides these there are ex-proprietary and occupancy tenants with the same rights and obligations as in the Agra Province. However the right of occupancy is not growing in Oudh, but a landlord can by a registered document confer on any person other than an under-proprietor the rights of occupancy. Besides this the occupancy tenant in Oudh is a privileged tenant, his rent being fixed at two annas in the rupee below the rent of

the statutory tenant cultivating the same kind of land. But the most important class of tenants here is what is called the "Statutory Tenants." To this class belong all those who do not belong to any of the above classes and who are not sub-tenants. They are entitled to retain possession of the holding occupied by them at the commencement of the Amendment (of the Oudh Rent Act of 1886) Act of 1921 at the rents then payable by them, for a period of 10 years from the date of the last change in their rents or of the last alteration in the area of their holding, or where no such change or alteration has taken place, then from the date on which the tenant was admitted to the occupation of the holding. To this class shall belong all those who occupy a holding after the commencement of the Act of 1921. They shall be entitled to retain their holding for a period of 10 years, from the date of admission, at a rent agreed upon between them and the landlord and their rent shall not be enhanced within the statutory period. The statutory right is heritable, but only for the unexpired period of the statutory tenancy. After that the rent may be enhanced, according to certain well-defined laws. A statutory tenant can also claim compensation for unexhausted improvements made by him.

(C) Land Tenures in Kumaon.

(i) In the most common type of village, we find a proprietary body representing the original community of cultivators. These are generally of one caste and more or less inter-related. In such villages the settlement is practically 'ryotwari'

as Mr. Traill first remarked. In practice all proprietors *qua* proprietors are known simply as *hissadars*, whatever form their proprietorship may take. The unit of settlement is the village, and all the proprietors of the village are jointly and severally liable for the land revenue assessed on the whole village. But out of the proprietary body (*the panch hissadaran*) one or more *padhans* or *malguzars* are appointed. The *padhan* collects the land revenue from the co-sharers and is entitled to certain dues, over and above the income from his own lands. He usually manages the *Gaon Sanjait* or the common land on behalf of the *panch hissadars* and generally keeps the income from it to himself. Although any member can get his land and share formally separated off, and recorded separately by applying to the courts for partition, yet perfect partition is altogether unknown in the hills, and we have a village proprietary system resembling in the commonest cases either pure *pattidari* or imperfect *pattidari*. This is due to the presence of *Gaon Sanjait* or the common land of the village. The *hissadari* right is transferable, and inheritable according to the peculiar customs of succession in the Kumaon Hills.

(ii) Above the *hissadars*, there are the *thokdars* or *kaniurs* or *sayainas*. All these three mean the same thing, and they represent a class of revenue farmers in these hills. They are not the proprietors of the soil, but have the right of revenue collection, and the privilege of receiving a certain percentage of rents collected by them, plus certain other customary payments in kind and cash. Their right also is transferable and inheritable.

(iii) Below the *hissadars* there are (1) the *Khaikars* a class vrey much resembling the occupancy tenants of the plains and (2) the *Sirtans* or the tenants-at-will. In the *Khaikari* land all that the *hissadar* can sell is his right as proprietor to receive a percentage on revenue as *haq-a-malkana*, with a possible prospect of the land reverting to *khudkasht* in the absence of direct heirs to the *khaikar*. In Almora and Nainital a *hissadar* receives 25 per cent., while in Garhwal 20 per cent. upon the revenue.

(1) A *khaikar* may be defined as a tenant with a heritable right, but non-transferable right. His rent is fixed at the time of the settlement and cannot be altered during the term of the settlement. The *khaikari* right may be acquired by means of a registered agreement given by the *hissadar* on payment of a premium. Of more recent date is the custom of Government exercising the power of conferring *khaikari* right on tenants who have broken up and improved unmeasured Government lands.

(2) *Sirtans* or tenants-at-will. This class of tenants is a very insignificant one in the Kumaon hills. About 94 per cent. of all the land is cultivated by *hissadars* or *khaikars*, and only 6 per cent. by *sirtans*. They have no right of occupancy and can be ejected at the will of the *hissadar*.

LAND TENURES IN THE BENARES DIVISION

A zemindar as constituted by the permanent settlement means "A land-holder possessing a zemindari estate which is heritable and transferable by sale, gift or bequest, subject under all circumstances to the public assesment fixed on it, entitled after the

payment of such assessment to appropriate any surplus rents and profits which may be lawfully receivable by him from the under-tenants of land in his zemindari, or from the alteration and improvements of untenanted lands but subject nevertheless to such rules and restrictions as are already established, or may be hereafter enacted by the British Government for securing the rights and privileges of ryots or other under-tenants of whatever denomination in their respective tenures, and for protecting them against undue exaction or oppression." The extent of the right conferred on the zemindars by the Permanent Settlement was the subject of animated discussion for some time, but ultimately it was agreed upon "that zemindars never were, never were intended to be, the absolute proprietors of the soil but that they at all times have held subject to the rights of various classes of ryots, whom they had no power to eject as long as the proper rents were paid by them." Lord Cornwallis writing in 1789 said "I understand the word permanency to extend to the *Jama* only, and not to the details of the settlement, for many regulations will certainly be hereafter necessary for the further security of the ryots in particular." Then again the right of the zemindar is limited by the power of summary sale vested in Government, in case he fails to pay his quota of revenue on the fixed date.

This gives us some idea of the position of the zemindar in the permanently settled areas. Besides the Zemindari tenure there is the *La-khiraj* tenure, the incidents of which are identical with those of a zemindari estate (revenue paying estate), but as it

pays no revenue to Government, it is not liable to sale for arrears of revenue.

The Bengal Tenancy Act of 1885 divides the holders of interest subordinate to zemindars into three classes (i) Tenure-holders (including Under-tenure-holders), (ii) Ryots and (iii) Under-ryots. A tenure-holder is an intermediary interest between an estate and a holding which has been defined as the interest of the cultivating ryot. A tenure-holder can freely transfer his right, while that power has been denied to ryots except those who are fixed-rate tenants and a certain favoured class called occupancy ryots whose interest is alienable according to custom. The onus of proving custom lies on the party who alleges its existence. In regard to sub-letting too the tenure-holder is allowed a free hand, while the ryot labours under certain disabilities.

Tenures are known under a variety of names, and may be divided into two classes:—(i) Permanent Tenures created since the Permanent Settlement and some existing before that, and (ii) Patni Taluks. (1) Under the permanent tenure, the rent on which land is held can not be enhanced except upon proof of a special right by custom to enhance, or of a right depending on the conditions of the grant. If the rent has never been enhanced since the Permanent Settlement it can not now be enhanced. These are broadly speaking minor zemindars under big zemindars, whose interest is transferable and heritable. (2) Patni Taluks: they are in substance perpetual leases of zemindaris, the rent being fixed in perpetuity, and tenure being saleable by the Collector at

the zemindar's instance for arrears, precisely in the same way as the parent estate.

Under these we have a large variety of ryots, most important of which are the following :—(i) The Fixed-rate tenants :—the position of this class is very much the same as that of the Permanent Tenure-holder but instead of intermediary zemindari interest they belong to the cultivating class. The rate of their rent cannot be enhanced above that, which was fixed at the time of the Permanent Settlement. However a landholder may sue for enhancement of the rent of a fixed-rate tenant only on the ground that the area of the land in such tenant's holdings has been increased by alluvium or by the tenant's encroachment. And a fixed-rate tenant may sue for abatement of his rent only on the ground that the area of the land in his holding has been diminished by diluvium, or by the taking up of land for a public purpose, or a work of public utility. The interest of this tenure is heritable, as well as transferable. Besides the above we have the Ex-proprietary, the Occupancy and the Non-occupancy (or the tenants-at-will) ryots. In the case of an occupancy tenant, enhancement by contract is restricted to an addition once in 15 years of not more than one-eighth of the previous rent, and only a Civil Court can on the grounds specified below enhance the rent :—

- (a) that the rate of rent paid by the ryot is below the prevailing rate paid by occupancy-ryots for land of a similar description and with similar advantages in the same or neighbouring villages,

- (b) that there has been a rise in the average local prices of staple food crops during the currency of the present rent,
- (c) that the productive powers of the land held by the ryot have been increased by an improvement effected by or at the expense of the landlord during the currency of the present rent and
- (d) that the productive powers of the land held by the ryot have been increased by fluvial action.

The operation of the laws of enhancement is subject to an important proviso which runs thus, "Notwithstanding anything in the foregoing sections, the court shall not in any case decree any enhancement which is under the circumstances of the case unfair or inequitable."

The money rent payable by an occupancy tenant may be reduced on two grounds only :—

- (a) that there has been a fall, not due to a temporary cause, in the average local prices of staple food crops during the currency of the present rent and
- (b) that the soil of the holding has without the fault of the ryot become permanently deteriorated by a deposit of land or other specific cause, sudden or gradual.

The right of occupancy, here, as in the Agra Province, is heritable, but in default of heirs, it extinguishes, and the land lapses to the landlord.

The Bengal Tenancy Act authorises the occupancy ryots, as well as tenants at fixed rate to carry out any improvement, which is defined as "any work which adds to the value of the holding, which is suitable to the holding and consistent with the purpose for which it was let, and which if not executed on the holding, is either executed directly for its benefit, or is after execution made directly beneficial to it." It has further been laid down that the following works shall be presumed to be improvements :—

- (a) the construction of wells, tanks, water channels and other works for the storage, supply or distribution of water for the purposes of agriculture or for the use of men and cattle employed in agriculture,
- (b) the preparation of land for irrigation,
- (c) the drainage, reclamation from rivers or other waters, or protection from floods or from erosion or other damage by water, of land used for agricultural purposes or waste land which is culturable,
- (d) the reclamation, clearance, enclosure or permanent improvements of land for agricultural purposes,
- (e) the renewal or reconstruction of any of the foregoing works or alterations therein or additions thereto and
- (f) the erection of a suitable dwelling-house together with all necessary out-buildings.

Some further incidents of the occupancy-right are that it is exempted from escheat and protected on the sale of tenures for arrears of rent. No contract made after the passing of the Act can bar the acquisition of occupancy-rights. These provisions restraining the freedom of contract are intended for the protection of the weak and illiterate ryots from the strong hand of the landlord.

The status of the "non-occupancy" ryots calls for a passing notice. The term means and includes the large class of ryots who do not fall under the definition of ryots holding at fixed rate or occupancy-ryots. A non-occupancy ryot is liable to pay such rent as may be agreed on between him and his landlord at the time of his admission. He is liable to ejection for failure to pay rent, misuse of land or breach of covenant and also on the expiry of the term of a registered lease or of the term for which he is entitled to hold land at a fair and equitable rent determined under section 46. The right of a non-occupancy ryot is not protected by the Revenue sale lands, but under the Tenancy Act of 1885 his right to hold for 5 years at a rent fixed by the judicial or revenue authorities under Chapter VI or X, constitutes a protected interest not liable to be avoided on a sale for arrears of rent. The Act has not defined any further incident of the tenancy and questions on which the law is silent must be determined by a reference to custom or to the rules of equity and good conscience.

SECTION II—DEFECTS OF THE LAND TENURE SYSTEMS OF THE UNITED PROVINCES

Some are of opinion that the present system of land tenures and land assessment, “does not secure to the cultivator full fruits of his labour,” and that his rent is increased for no just or sufficient reason. This, as we have seen, may be true, and is to a certain extent true of the non-occupancy tenants, in the Province of Agra, but certainly there is no justification for this belief so far as the occupancy and other privileged classes of tenants in the United Provinces are concerned, nor could it be said of the Statutory tenants in Oudh. Here the law neither fails to provide for continuity of occupation of a piece of land nor does it allow enhancement without sufficient cause. As a matter of fact the law does not err here, it errs elsewhere as we have pointed out, while introducing the study of legal facts in connection with Indian Economy.

There are others who are of opinion (like Mr. J. E. O’Conor) that, “the state demand is too high and that it should be reduced by one-third of what it is at present, care being taken that this benefit would go to the actual tiller of the soil.” Yet others, who seem to be the admirers of the zemindars, think that all the present evils would disappear, if only the Government were to stop the practice of periodical revenue revisions as Lord Cornwallis did in *the case of Bengal in 1793*.

Taking, these views one by one in the reverse order we will see how much weight there is in each of them.

The idea of introducing a Universal Permanent Settlement is at once unscientific and unjust. It is unscientific as it keeps for ever fixed the share of the state in that increment to the income from land, which is due to the general development of society, while the responsibilities and the expenses of the state go on increasing. It is unjust in as much as it would benefit the landlord at the expense of the community and the cultivator—the two classes in India which, if anybody does, deserve relief and need funds for their fuller expansion. There is, therefore, no necessity for a permanent settlement, if the revisions are made after sufficiently long intervals of say forty or fifty years, and if the zemindars are not compelled, at the time of revisions, to sue their tenants for the increase of rents, as was done (so we read in the papers at least) during the settlement operations in the Fathepur District of these Provinces in the years 1915-16. It is only legitimate that the Government should share with the zemindar the profits from land due to the general development of society, and independent of the improvements made by him. If the income from land were not to keep pace (as would be the case if permanent settlement were made in these Provinces) with the increase of general expenditure (which is bound to take place with the general progress of society), persons other than the zemindars will have to suffer for that, and that does not seem to satisfy the canon of equity.

Coming to the proposal of Mr. J. E. O'Connor, we may note its ambiguity first. Either it may mean that the present rents paid by the tenants are high, and the Government should reduce them by one-third

and then not permit enhancement up to a certain definite period of time, or it may mean that in future the Government should always remit one-third of the land revenue received and have it distributed amongst the cultivators in proportion to the rents paid by them to the zemindar. If Mr. O'Connor meant the first, then it would only be a temporary relief for the cultivator, so long as the rules determining the enhancement of rent in these provinces remain what they are and so long as the demand for land continues as strong as it is now. If, however, Mr. O'Connor, meant the second then the only possible ways, in our opinion of realising the end in view would be two:—one that each year the Government after collecting its dues at the present rate of revenue assessment, should give back one-third of them to the cultivators ; apportioning it in such a way that each receives in proportion to the rent he pays to the zemindar. The other way to secure this would be a notification to the effect that “as the Government do not propose to take so much of the land revenue, the tiller should not pay the amount to the zemindar.” Now if the Government were to leave this present system of enhancements and ejectments in tact, they will have to call the “tillers” twice every year, if they adopt the one, or they will have to issue *parchai muafi* twice every year, if they were to adopt the other.

However, I personally do not consider the second method desirable as its adoption would mean nothing more than the giving of a gift to the tillers of so much money every year in view of their straightened circumstances—a kind of charity. And you should

not deal with the problem of national poverty in terms of pauperism, as such methods are apt to demoralize the receiver of the gift. I would rather recommend the adoption of methods that would increase the productive capacity of the cultivator, and thus leave him a greater margin both for paying higher rents, and raising his standard of living. Moreover if the second method were adopted, we may be sure that the zemindars and the patwaris will use indirect means to secure the Government *muafi* to themselves—if not all, then in part at least. They have great power over the poor and illiterate cultivators, and it will be difficult for the cultivators to keep all of the reduction for themselves. Facts are facts, and we should not ignore them. Besides, this method will add much to the work of the already overworked revenue officers.

Coming to the question whether the system of land-tenure is defective, we have to remind ourselves of another question, defective from what point of view ?' A system may be very good from the point of the zemindar, and yet woefully bad from the point of view of community, as is the permanent system of Bengal. Or again a system may be very good from the point of individual cultivators for the time being and yet ruinous in the long run to the interest of the nation as would be the system of peasant proprietorship in a backward country, with such laws of succession such as we have in India. The first point therefore which we must decide is from what particular standpoint we are going to judge the existing systems of land tenures in the Provinces of Agra and Oudh.

The unit of human sympathy has always been commensurate with the stage of economic development reached at any time in a country. During the days of Tribal Economy, when each tribe wandered from place to place, taking catch crops now here and now there, the unit of human sympathy was the tribe, and when these tribes settled themselves in fixed habitations called villages, which were at once isolated and self-sufficing, the unit was extended to and confined within the area of the villages ; when these villages for one reason or another expanded into towns and cities, the same expansion and limitation of the unit was met with. Then the development of the means of communication within various countries, and outside first tended to create a national and then an international stage of economic development, and with these running concurrently were the waves of nationalism and internationalism. Before the great war the growing tendency was towards Internationalism or what has been sometimes called Cosmopolitanism ; but the severe shock of that huge armageddon rudely pushed back this rising wave, leaving an open sea to the other. The wave that now surges in the hearts of men is that of nationalism and all the countries of the world are hammering out schemes to attain the highest possible national development. Any method of reform, therefore, which one may suggest in any walk of life is to be subjected to the supreme test of nationalism—a term which to my mind connotes that the interests of the nation as a whole are to be given the priority over international, as well as individual or communal interests. A scheme of reform that may be capable of securing a

very high degree of development in a particular branch of national activity or that may be supremely advantageous to a particular community, if it is not calculated to have a beneficial effect on the all-round activity of the nation, is to be rejected, and another capable of securing a higher national advantage, although its influence on a particular branch of activity may not be as beneficial as of the former, is to be adopted. To put it in a nut-shell the doctrine of nationalism would subordinate the interests of an individual unit of society or of an individual industry, to the interests of the nation as a whole. A line of reform advocated, therefore, is not to be judged on its own merits alone, but its reflex influences on other branches of national activity are also to be taken into account.

We would therefore judge the existing systems of land-tenures in the Provinces of Agra and Oudh from the point of view of community and the first consideration, therefore to be constantly kept in mind while criticising the existing system of land-tenure would be to make it such as may secure on the one hand, the fullest possible development of the agricultural resources of these provinces, and on the other help the manufacturing and commercial activities of the country. In any case the system should not in any way act as a drag upon the other activities of society.

It has also been found by experience in these provinces that as the interests of more than one class of people clash together in agriculture, the result is that that industry suffers by mutual unnecessary interference. And side by side with the above it

has been noticed that whenever there is a joint demand for the services of more than one thing or group of people, then generally one of them (and that necessarily the weaker one) becomes dependent upon the other, with the result that the prosperity of the weaker depends upon the stronger. This we find in actual life in the existing relations of the tenants and the landlords in these provinces. This is very undesirable, and in devising a new system we should try to eliminate this dependence as far as possible. The system of land-tenures should ensure to each class of worker in the agricultural industry as much freedom of action as may be compatible with the highest national interests.

Then there should be no compulsion upon any man to follow this or that occupation. Every one should be perfectly free to follow that work in life to which his natural interests lead him, as a man is sure to do that best for which he has been fitted by Nature. The existing system of land-tenures, wherein the division of land after the death of a particular cultivator, or a landlord, takes place, according to the Hindu and the Muslim laws of succession, compels people to become agriculturists, whether they are fit or not by throwing before them the very tempting bait of a share in the agricultural land. This very phenomenon of equal sharing amongst the zemindars has led to the sub-division of zemindaris, and a class of parasitic zemindars has sprung up which while compelled to live in the cities to supplement its meagre income from the landed property by working as clerks and so on, yet continues to extract rents from its tenants without doing any thing for them

in return. Looked at from an economic point of view the share of agricultural income that at present goes to the zemindars is a dead loss, at least that much of it which goes to absentee zemindars, and to those, who, while living in the villages, yet do nothing for the industry that supports them. Further the right of occupancy from generation to generation militates against the development of capitalistic farming of such commercial crops as cotton, jute and sugarcane, and is one of the greatest stumbling blocks in the way of consolidation of agricultural holdings, without which no serious improvement in the present methods of cultivation is possible.

THE IDEAL SYSTEM OF LAND-TENURE FOR THE ZEMINDARI PROVINCES

We have studied above some of the defects to which the systems of land-tenure prevailing in the United Provinces of Agra and Oudh are open. We will now try to devise a system in which an attempt will be made to eliminate these defects, and yet without interfering too much with the existing state of things.

ESSENTIALS OF THE IDEAL CULTIVATORS' TENURE

(1) Continuity of Possession

In order to secure the highest possible development of agriculture it is essential to provide some sort of continuity of possession. Although Arthur Young believed, and there is much truth in this saying, "that the magic of property turns sand into gold," yet I am inclined to agree with Morison, that it is not essential that the man who tills the ground should be made the owner of it, in the sense in which

the word ownership is generally used—it carries with it the idea of the power of sale, mortgage, lease, inheritance, etc. But it may be taken as an axiom that the longer and more certain the continuity of possession the greater would be the expenditure of capital and effort that a cultivator would be disposed to put on his farm. In the opinion of experienced rural economists like G. F. Keatinge, Harold Mann and others, anything which will secure to the tenant a sufficiently long tenure will be just as efficient to provide the incentive for better farming. I would, therefore, recommend life-time-tenure system, because this would secure for us practically all the advantages of a universal occupancy right and incidentally will get rid of the inherent disadvantages of the latter, that is, (i) the equal sharing among the sons. [This must continue, unless of course we change the existing laws of succession. To me it seems that as the laws of succession both amongst the Hindus and the Musalmans are the result of religious or at least semi-religious faiths and beliefs, it will not be possible to modify them. Therefore, to adopt the course of least resistance, we may do away with the right of occupancy as it is, and give life tenures instead.] And (ii) the pledging of the land as security and the consequent indebtedness of the ryot.

Continuity of possession necessarily involves some external regulation of rents, for, if the landlord could raise the rents at any time and to any amount he thought fit, he would, when competition is active, drive out the cultivator by fixing the rent impossibly high. The two conceptions are as a matter of fact

interdependent and any administration which undertakes to secure continuity of possession, for a sufficiently long time or for a life-time, should also undertake the regulation of rents.

If the principle that the longer and more certain the continuity of possession, the greater would be the expenditure of capital and effort that a cultivator would be disposed to put on his farm, were to be carried to its logical conclusion, it would lead to the confirmation of the right of property in perpetuity, and the researches of Arthur Young, Seebohm and others in the systems of land-tenures of various countries and the prevailing state of agriculture there, also point in the same direction. But the rigour of this is to be modified by an equally important principle: every cultivator should be free to give up or to take in as much land as his resources in men and money may warrant at a particular time. (The import of this principle is that an economic holding of which we hear and read so much, is not something that could be expressed in absolute terms as so many *bighas* or acres per cultivator. It is, as Mr. Keatinge has well pointed out in his book, *The Rural Economy of the Bombay Deccan*, a relative term. A farm of twenty *bighas* (*pukhta*) may be classed as an economic holding when it is being worked by a family of two men, one woman and one or two children, a pair of country bullocks, and other usual agricultural capital. But this very farm may become thoroughly un-economic holding, either because the number of persons working and depending upon this farm may increase or decrease, or because the same persons have begun to use better or worse agricultural implements,

or they have substituted better or worse methods of farming, and so on. The number of people, working, and depending upon a farm, the kind and quality of agricultural capital, the methods and systems of farming—all these—go to decide the economic size of a holding.) Further the import of this principle is that although the cultivator may be free to adjust his scale of industry to his resources, he should be made independent of any outside pressure to adopt a different scale. This of course, as far as practicable. The practical realisation of this principle would necessitate some such legal provision as is met with in the *ryotwari* systems of southern India, which provide that so long as an "Occupant" pays the land revenue, assessed on his land every thirty years, he may without fear of any ejection continue to cultivate his land, but may whenever he so desires, give up a part or the whole of his land, the amount of revenue being decreased proportionately. Or we may adopt some such system of periodical re-adjustments of the size of individual holdings, as was prevalent in Russia during the days of *mir* tenure. Whatever system we adopt, there should be some provision to meet the necessity of a farmer. If at any time a cultivator finds his resources to have increased, and if he is desirous of taking up more land, he should have every facility to do so provided such addition is not liable to affect prejudicially his fellow cultivators.

(2) *Contiguous System of Fields*

The disadvantages of a holding composed of fields scattered here and there and the advantages of a

contiguous holding have been fully realised in thinking circles, and much has been written on the subject during the last ten years ; it is enough therefore for me to refer to it and say that the new system of land-tenures should provide the right of cultivation in a solid block of land only and should never allow cultivation of scattered fields.

(3) *Inheritable, but only by one heir*—The holding of the farmer after his death, may be inheritable, if there is any one of his heirs ready to carry on agriculture, but only by one of his sons or daughters, whoever has natural aptitude for agriculture. It should never be left to be divided amongst all the sons, as is now done under the wasteful Hindu and Muslim laws of inheritance. The evils resulting from these have been so fully discussed and set out in the recent literature on the subject that I may not dilate upon them here. But I may be permitted to add, as I have pointed out at the beginning of this chapter, that I look upon them as one of the most important causes of agriculturists' poverty and indebtedness. Not only the land, but all the agricultural capital also, should devolve upon him who succeeds to the tenancy, and the rest of the property may be equally divided amongst the others. Although the land should remain with one of the successors of the deceased, as far as possible, because this would ensure continuity of good agricultural practice, however it should never be capable of being mortgaged or sold in parts. During his lifetime a tenant may transfer it, but only in one lot, and only to him who means to cultivate it himself, and not to sub-let it.

(4) *Improvements made by the cultivator exempted from enhancement of rent*

While discussing continuity of possession, we have remarked that as an adjunct to it, we should have external regulation of rents. The changes in rent should only be allowed, in general, at the time of re-adjustments, or new settlements, and while assessing new rents the improvements made by the cultivator on his land should be exempted, and the rents once enhanced should not be allowed to be raised again until a certain fixed period has passed away.

Re-adjustments as well as alteration in rents in particular cases and on special grounds should be permissible even during the time intervening between two readjustments, provided such readjustment is possible without inconveniencing others, and provided the changes in rent are justified on very special grounds such as the deterioration of land owing to some natural calamity or improvement in land owing to some capital improvements made by the proprietor of the land. Who should be responsible for this, and how this is to be effected would be discussed later on.

Is the maintenance of an intermediary proprietary interest desirable ?

We now pass on to discuss whether or no it is desirable to maintain a proprietary interest between the actual cultivator and the Government. Let us first start with the assumption that there is no intermediary, and then see what other measures besides the tenure detailed above, would have to be

undertaken to ensure the full development of the agricultural industry. The fixity of tenure and consolidated economic holdings would not by themselves bring about all that is desirable, although they would facilitate it, as now their absence blocks the way of progress. But all these would go a very little way indeed if the cultivator were left uneducated in the advanced methods of agriculture, and ignorant of the advantages of using specialised machines, as they are invented every now and then, of improved seeds and various agricultural products of better quality capable of being grown in a particular locality. And all this educative effect would result in nothing, if the cultivator did not possess the capital necessary to make these improvements. To begin with, therefore, the Government will have to provide some agency for the diffusion of sound education, and to control and guide it. Another to spread knowledge about improved seeds, agricultural machinery, and other discoveries as they are made in the Central Government Experimental Farms. For this, if it is to be done properly, demonstration farms will have to be opened for each contiguous group of four or five villages. Experimental farms, with provision for demonstration will have to be provided at convenient centres for each group of villages constituting a homogeneous region. And it may be found necessary to have still bigger experimental farms, say for a district or a group of districts, or a province, the size of the area of influence being determined by the nature of the climatic and other agrarian conditions, such as the quality of the soil, etc.

Then again the individual farm will need to be provided with various other capital improvements, such as drainage and irrigation works which are beyond the means of an individual farmer, however prosperous he may be. Even in a rich country like England, farm buildings, enclosures, and other big works are made by the landlords and therefore the Government will have to do these things here. The reason why even prosperous farmers fail to make these, is not far to seek. When property breaks into small pieces—as it is bound to do when we have peasant proprietors—the savings also break up, and are easily squandered; but when they gather together in a respectable mass in the hands of a landlord, they are not so easily wasted.

Another function which the Government will have to undertake in the absence of an enterprising intermediary as they have been compelled to do now, would be that of organising co-operative activity. Had the intermediary been conscientious and enthusiastic about his business there would have been no necessity for the Government to take initiative in the movement, and it would have been saved its present rigidity of form and a departmental character. It is an open secret that people in the villages look upon their co-operative credit societies as an institution of the State, maintained to provide cheap money for them. The general attitude of the Government Inspectors and others lends a strong support to this belief. They have not yet learnt to look upon the society as their own, and this is the weakest point of the system.

To secure all the above desirable things, Government will have to maintain at least three different and independent agencies, one to spread education, supervise and control it, and it may be found convenient to entrust to this the diffusion of ideas about sanitation, co-operation and improved agriculture. A second, to organise, guide, and control co-operation in its various forms and in practical life. And the third, to work the experimental and demonstration farms. To *this* may be entrusted the planning and carrying out (assisted in bigger projects by the P. W. D.) of capital improvements, like drains and canals, as well as farm buildings.

Now, for all these three agencies, we shall have need of a very large staff of officials, which would be very expensive, and at the same time not as keen about its business as a conscientious and enthusiastic intermediary with a proprietary interest is likely to be. For this reason, and for others to follow, I consider it desirable to have an intermediary. Here somebody may pertinently remark that so far these intermediaries have, by no means, shown any marked enterprize, in providing education—general and agricultural—and have taken no interest whatever in the development of agriculture or co-operation. Of course, they have not. But that has been due to the prevailing ignorance of the class, and the resultant absence of *the sense* of duty, as well as to certain serious defects in their tenure. The enlightened landlord has done much for his tenantry in England, and we have every reason to believe that, if his ignorance is removed, and he is given a secure and reasonable tenure, the landlord in

these provinces would also do equally as well for his tenants.

Besides being less expensive, an intermediary would be more efficient, as there would be no division of responsibility and he would take a personal interest in all this work. No Government official, however, well-paid and conscientious he may be, can equal the zeal of a zemindar who looks upon the land as his own. All these considerations impel me to say that the maintenance of the zemindar, is highly desirable.

Essentials of the Tenure of the Intermediary

(1) Proprietary interest to extend over a contiguous group of villages

He should have a proprietary interest extending over an economic unit of a group of villages. Just as it is desirable to entrust to one farmer a consolidated block of land for good farming, so it is equally desirable to put in charge of an individual zemindar a group of contiguous villages with an area neither too large nor too small to be managed by him. Generally a zemindar who has a large number of villages under him has enough and to spare, and the marginal utility of money is low to him. If he is not given to the common vices of the rich, he cares very little for getting more by developing his estate, and the nation loses what would have come to it in the form of increased revenue if the zemindar had a strong incentive for getting more. If the zemindar happens to be a man of extravagant habits then to him his chief function is to get more and more rent out of the cultivators, and to eat, drink and be merry.

Even if a big zemindar be enlightened, conscientious, and sympathetic, he cannot look after the affairs of his property, and has perforce to employ agents, who cheat him and cheat his tenants. The sufferings of the tenant under the personal care of a bad zemindar are not comparable to the sufferings of those put under the best agents. My experience of estates managed by agents leads me to say that they almost always tyrannise over the cultivators and care more for their personal gain than either for the development of the property or the well-being of the tenants. And if the different villages of a zemindar happen to be scattered in different tahsils of a district, or in different districts, then even the remote chance of a zemindar exercising some control is out of question, and all the evils of management by agents are intensified very much. He who wants to have a first hand knowledge of these evils, should go to one of the taluqdari estates of Oudh, or to a big zemindari estate in the Agra Province, and see for himself the state of affairs there.

(2) Inheritable according to Primogeniture

The zemindari interest should be inheritable but always according to the law of primogeniture. Only one son having aptitude for agriculture, and having previously received the education prescribed lateron, should succeed the father, others being left to do whatever they please, after due provision has been made for their education in what they are fit for. Besides the land and the agricultural capital which is to go to only one issue, all other property, should devolve equally upon others, according to the prevailing laws of the caste or tribe to which they belong.

The zemindari may be transferable and mortgageable but never leaseable. It should never be allowed to be sold in parts.

(3) *Powers of the Zemindar*

The zemindar may have certain powers over his tenantry, but never amounting to absolutism. He may, if he makes some capital improvement, enhance the rent, provided it is mutually agreed upon. If no mutual agreement is reached, the matter may be referred to some authority considered competent for the task. But to attain this there should be no expensive procedure and no stamp duties, as they needlessly add to the expenses of the poor. Besides the enhancement of rent in case of mutual agreement, the zemindar may be entrusted with certain other magisterial and judicial powers, up to a certain limit.

While discussing the tenure of the cultivator, we have remarked that as a general rule changes in rent should be allowed only at the time of periodic re-adjustments or new settlements, and that for special reasons detailed there they may be allowed in between two re-adjustments. Now these re-adjustments and changes in rent should be made by the zemindar, assisted by the village *patwari*, and in collaboration with the circle *kanungo*. After this the new scheme of re-adjustments should be submitted to the tahsildars for ratification. The tahsildar, before ratifying it should take measures to acquaint the farmers concerned with the changes proposed in it, and should within fifteen days of this decide any objections to it, and then finally declare it sanctioned, after modifications have been

made. The length of the period after which these re-adjustments should be made, should correspond more or less to an agricultural cycle, the approximate length of which is between twelve and fourteen years. Three or four times of this may be fixed as the period for settlement of land revenue, but here the Government should definitely fix a percentage of the assets that it is entitled to. There should be no uncertainty about it and no long procedures in arriving at the new figures of revenue demand for the future period.

(4) Responsibilities of the Zemindar

He should be responsible, on the one hand to the Government for payment of land revenue assessed on his land from time to time, and on the other hand to the tenantry for the maintenance of an agricultural farm, the supervision of schools and co-operative societies in the area under him. He should be responsible for making capital improvements on individual farms, for providing roads and bridges, constructing wells and canals, dams and drains wherever necessary. He should look after the police, the panchayat, sanitation and hygiene of the various villages put under him. In short, he should be a constant source of inspiration and guidance to the cultivators under him.

(5) Compulsory education for succession

But to ensure that the intermediary would be enlightened, conscientious and really effective it is very essential to make it a legal necessity for him to get a thorough education in the science and art of agriculture, in estate management, as well as in

other kindred branches of knowledge, such as co-operation and village sanitation, before he is allowed to assume charge of his office. To attain this there should be agricultural colleges, not as at present one in a province, but scattered throughout the country districts at convenient centres, where prospective zemindars may be educated, and the curriculum should be so arranged as to prepare them for their future work.

Conclusion with special reference to the General Considerations

The scheme of land tenures discussed above, would, in the opinion of the writer, not only provide facilities for the fullest possible development of the agricultural resources of these provinces but would also create a middle class substantially rich both in material belongings and intellectual attainments amongst the sons and daughters of the zemindars. This middle class would be capable of giving very great help to the state at the time of emergency, and would be a perpetual source of culture and advancement to the country. Men of this class will have enough to live in comfort and to spare, and they will be able to pursue knowledge for its own sake. Even if education be freely provided by the state, it is only those who have got sufficient monetary resources to buy books and papers, and to live up to that standard of living, which makes the pursuit of knowledge possible that can derive full benefit from it. It is people of this class alone who can add any thing original to the world's store of knowledge. That leisure is essential for high

achievements in sciences and arts, is difficult to deny, and is well supported by the high development of both in Bengal, and that leisure would not be possible for the sons of even prosperous farmers is as difficult to refute. Therefore for the creation of a leisured, I don't say a luxurious, class, we have to look to the zemindari interests or to high commercialists and industrialists of a country. That freedom from monetary anxieties is very essential, for, the production of original work is very clearly supported by the fact that so far, leaving Bengal and the city of Bombay aside, very few Indians have succeeded in producing anything original, or in even becoming great politicians. I for one do not believe that the Indian has not got in him the requisite gifts of originality, of initiative and of invention ; and the reasons why so few are met with are to be found in our defective system of education and in the host of anxieties that begin to weigh a man down before he has passed his teens. Given a leisured class, with proper safeguards to ensure its energies being directed into the right channels, we shall have not only a cheap central and very efficient agency to look after agriculture and other village activities, but also a permanent flow of well-trained and well brought up young men and women ready to take their part in other avocations of life that require a high standard of intelligence and offer a high standard of living.

APPENDIX

REFERENCES FOR FURTHER STUDY

INTRODUCTORY—CHAPTER I

The Teaching of Geography :—By H. MAKENZIE.

The Pulse of Asia :—By E. HUNTINGTON.

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