

ECONOMICS
OF
AGRICULTURAL PROGRESS

(With Reference to Conditions in the Deccan)

BY

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PREFATORY NOTE

It is with considerable diffidence that I take this occasion of placing my views on Indian agriculture before the public. I have made no new discoveries nor have I any novel remedies or nostrums of my own to offer.

My object is to marshal, in a small volume like the present, some of those considerations which form the background and the foundation of agricultural prosperity, and how far that object has been gained I leave it to the reader to judge. I have the highest respect for those persons whose views, not coinciding with my own, I have taken the liberty of criticising. But it was the writings of some of these very authors which first directed my attention to the subject of Indian agriculture and I have great pleasure in acknowledging my indebtedness to them.

Willingdon College, }
Sangli. }
16-10-26.

B. G. S.

AN EXHORTATION

I want the people, having regard to the vital importance of the subject, to heartily co-operate with the Royal Commission on Indian Agriculture. Nothing would give due momentum to any movement for agricultural reform unless the whole people are imbued with enthusiasm for the subject. No Government Department, no Royal Commission, can galvanize into life the moribund industry of an entire nation if it have no popular support behind it. It is necessary to emphasize this point at the present moment when preoccupation with diverse political and communal questions is likely to make us forget other matters of equal, if not of more, importance. The history of Ireland well shows how the best brains of that country were carried away by the cry of "Home Rule" and few cared to enquire into the *real* economic grievances of the peasantry. Sir Horace Plunkett tells the story of a peasant in the West of Ireland who ceased planting potatoes on hearing that the Home Rule Bill of 1893 had become law. We are not much wiser than that Irish peasant, for we have neglected our main—and what has now remained to us the *sole*—industry in our perpetual talk about *Swaraj*. Not only that, but over-emphasis on the political issue has called into dangerous prominence the many fissiparous tendencies that divide castes, sects, parties, and communities in India. We shall find in agricultural improvement not only more bread, but more cement. It will as firmly bind us

as it will fully feed us. Hindus and Mahomedans, Backward Classes and Advanced Classes, Capitalists and Labourers, Exporters and Importers, Cooperators and Non-Cooperators, Swarajists and Responsists, will find in Agriculture their common Mother.

It was perhaps the intuitive perception of this identity of interests of all concerned with regard to Agriculture that taught the 'higher statesmanship' of England to send a Farmer-Viceroy to India to succeed a Lawyer and a Judge. The identity is strikingly illustrated by the willingness of the greatest Non-Cooperator of the day to place at the disposal of the Royal Commission his profound knowledge of, and sympathetic insight into, Indian rural conditions. Viceregal discourses upon Improved Implements, Fragmentation of Holdings Canal-irrigation, and Hybridization, have now taken the place of dissertations upon Responsible Government, Racial Discrimination, Communal Representation. Nor would I personally regret this change if the present Viceroy and Governor-General, alive as His Excellency seems to be to the needs of the masses, could say at the end of his term of office that he left the people of India better fed and better housed than what he found them to be when he assumed charge of his high office. The glories of feeding a population are not less worthy than those of dealing 'Justice' to them, or of holding a bayonet at them.

Our people do not yet realize what mighty efforts are being made in the West to place agriculture upon its right footing as a great national industry. The reasons for this agricultural revival are many. In the first place, there is a natural reaction against excessive

industrialization. A large part of modern manufactures are no 'wealth' at all in the sense that they do not 'avail towards life'. Let me remind the reader of the noble words of Ruskin. "Production does not consist in things laboriously made, but in things serviceably consumable; and the question for the nation is not how much labour it employs, but how much life it produces". And again, "All England may, if it so chooses, become one manufacturing town; and Englishmen, sacrificing themselves to the good of humanity, may live diminished lives in the midst of noise, of darkness, and of deadly exhalation. But the world cannot become a factory or a mine...So long as men live by bread, the far away valleys must laugh as they are covered with the gold of God, and the shouts of His happy multitudes ring round the winepress and the well."*

Secondly, it is being realized, as Sir A. D. Hall points out, that 'a population dependent entirely upon manufactures gives rise to an unstable State, subject to comparatively violent fluctuations of employments from causes which are likely to affect all industries simultaneously; an agricultural community alongside the industrial one serves as a reservoir for labour, absorbing the fluctuations because its own variations depend upon different factors, and so equalising the demand.'†

Thirdly, many find in agriculture an escape from the conflicts of political parties, of labour and of capital. Thus the late Viscount Milner advocated

* *Unto This Last (Ad Valorem).*

† Page 16.

the formation of a National Party which would assign the foremost place in its programme to the fostering of agriculture. He thought that of all forms of productive capacity there was none more vital, indispensable, and steadying than the application of human industry to the cultivation of the soil. "And if there is one point at which order seems beginning to emerge from the present confusion of our political and social aims, it is precisely with regard to this fundamental necessity of making a better use of the greatest of all national resources."*

Finally, the Great War showed that food-supply is more important than torpedos and aeroplanes.

I have devoted two chapters of the book to show that we want industries, and also agriculture. My position, in view of the present peculiar stage of our development, will not be found inconsistent with what I have stated above. To a large extent the burden of fostering our industries and agriculture must fall upon the educated class. This class is ridiculed when it presses for industrial development because it is itself not an industrial class; it must be prepared for similar opprobrium when it agitates for agricultural reform, because it is not an agricultural class. The educated minority at present is neither industrial nor agricultural. It threatens to be a serious parasite on the community, and would deserve little sympathy for its present unemployment, unless it throws itself whole-heartedly into the great work that lies before it—work of agricultural improvement, industrial development, social reconstruction, political

* Introduction to "Land Problems and National Reform" by Christopher Turnor. The Bodley Head.

uplift,—in which work it will find its real justification and true reward.

I plead for agriculture upon even more fundamental considerations: agricultural improvement will prove a solvent to many of our *political* and *social* problems, problems of Local Self-government, local taxation, Decentralization, Representation, Primary Education, Untouchability. These problems can never be solved unless the standard of living of the *rural* masses is raised, which improved agriculture and industries alone can do. It is the poverty—economic, intellectual, moral—of our rural life that is the greatest 'brake' upon our progress.

Finally, I would, with all humility, invite the Royal Commissioners to approach the subject of their labour with these larger considerations in mind.

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ECONOMICS OF AGRICULTURAL PROGRESS

(*With Reference to Conditions in the Deccan*)

INTRODUCTORY

(1) *Origin of the Book*:—The appointment of the Royal Commission on Indian Agriculture first suggested to me the idea of presenting to the public my views, in a book form, on the subject. The Agricultural Problem has manifold aspects: scientific, administrative, economic. It is only the last that will be dealt with here. By the economics of agricultural progress I mean the study of those direct and indirect conditions relating to land, labour, capital and organization in the absence of which there will be little or no progress in the agriculture of a country.

(2) *Methods of Study*:—A word has next to be said as to the method of study I have adopted in this book. Even within the bounds of an economic enquiry two distinct methods are possible: intensive and extensive. The former consists in the detailed study of the economic conditions of, say, a village. We have examples of this method in Dr. Mann's "*Land and Labour in a Deccan Village*" No. I and II, or Mr. E. V. Lucas' Study of Kabirpur or Mr. Balla's Survey of Bairampur, both being villages in the Punjab, or Dr. Gilbert Slater's collection of studies of "*Some South Indian Villages*." In such studies the unit of economic life *vis.* the village is kept under the microscope, as it were, and its diverse relations

minutely examined and described. This method requires patient investigation and long and first-hand acquaintance with the subject of study. A non-official agency has not all adequate means to undertake such a study which, to be of any use, has to be thorough. On the other hand, proposals to use the District officers connected with Settlement or Revenue operations for making an economic enquiry into villages have been opposed (*e.g.* in the Madras Presidency) on the ground that such enquiries would be resented as being inquisitorial. The results of such investigation are valuable, though they are not capable of wide generalization. We may well say that the relation of such studies to the whole problem of the economic improvement of a people is that of histology to the science of medicine, or of petrology to that of geology. The villages are the tissues of which the body social is formed. In addition to examining the tissues we must also understand the larger organic functions on which life depends. Or, turning to the other analogy, the villages (and towns) are the *debris* formed by great economic changes silently taking place, just as the rocks are the result of the forces of denudation. We must appreciate these larger forces if we would understand the changes in the composition and structure of towns and villages as they were in former times and as they are at present.

The other method consists in extending the field of enquiry so as to include a whole district or province, though the enquiry may be directed to a specific problem *e.g.* indebtedness, or fragmentation of holdings etc. We have examples of such studies in Mr. A. C. Jack's "*Economic Life of a Bengal District*", or in Mr.

Darling's "*The Punjab Peasant in Debt and Prosperity*". A useful modification of the extensive method consists in utilizing all available information—officially or non-officially collected—regarding a district or province, and also comparing it with information about neighbouring or distant countries with a view to elucidating a particular economic phenomenon. We have models of such studies in Mr. Keatinge's "*Rural Economy of the Bombay Deccan*" and "*Agricultural Progress in Western India*", or Mr. Calvert's "*Wealth and Prosperity of the Punjab*".

(3) *My Method*.—As for myself I have not made any detailed personal investigations into the conditions of any villages in the Deccan. At the same time I thought it advisable to limit my enquiry to the Bombay Deccan not only because what personal knowledge of the country I have is confined to this tract, but also because this part of the Presidency has an individuality of its own which has many interesting features. Nor need one feel insufficiently equipped to undertake an enquiry of the scope here attempted if one has in one's hand such a Government publication as "*The Statistical Atlas of the Bombay Presidency*". It is a monumental work—descriptive and statistical—containing a mass of information about the agricultural conditions of the different Divisions of the Bombay Presidency.

(4) *Plan of the Chapters*.—To a somewhat detailed study of agricultural conditions in the Deccan is devoted the latter half of this book. In the first three chapters an attempt is made to invite attention to those larger (architectonic, I may say) forces that have convulsed our economic life. Our agriculture as well as our industries are being profoundly affected by

certain causes which are analysed in the first chapter. In the second chapter I examine the conflicting views of those who either want India to be industrialized or ruralized. In the third chapter I proceed to examine the value of certain criteria to judge and measure agricultural progress. In the remaining last three chapters my object is more practical : it is to examine the special difficulties of the Deccan in the way of agricultural improvement, to indicate the work being done by official and non-official agency, and, in a few cases, to suggest measures for further progress.

CHAPTER I

REVOLUTION IN NATIONAL ECONOMY (1860-1920)

(5) *Introductory.*—The latter half of the Nineteenth Century and the first quarter of the Twentieth represent a very important period in the economic history of our country. Territorial annexations were over; internal peace had been established; a centralized bureaucracy was evolved. Internal and external means of communication began to be sufficiently improved to throw the whole country open to foreign exploitation. Free play was given to the forces of fierce competition both within and without the country which, internally, had a social organization based upon custom and status and 'an isolated economy' characteristic of villages; and which, externally, was known to the world as the chief source of fine cotton fabrics, tropical spices etc. But suddenly competition began to assail custom and status, and the various component parts of society proceeded to take the utmost advantage of the new forces; and externally also, all the nations of the world vied with each other to participate in the trade of the country which was now invitingly thrown open to all and sundry upon the most approved Free Trade principles of the Manchester School. India soon came to occupy an important place in international trade as a considerable customer of the manufactures of the industrialized and progressive countries of the

world, and also as the latter's chief or only source of a variety of raw materials. This twofold rôle of India has already greatly affected her old industries and is now beginning to affect her agriculture also. It is necessary to analyse and examine these economic changes that are going on in the country if we would understand the agricultural problem in its true perspective.

(6) *India before Railways.*—We must first picture to ourselves the economic life of the people before it was affected by railways.

The unit of this life was the village. The distribution of occupations in it was of the simplest kind. The village grew most of its food supply and provided from its own resources or obtained from close at hand its few simple wants. As the Census Report of 1911 (Page 408) puts it, "until the recent introduction of western commodities such as machine-made cloth, kerosine oil, umbrellas and the like, each village was provided with a complete set of artisans and menials, and was thus almost wholly self-supporting and independent. Its Chamars skinned the dead cattle, cured their hides, and made the villagers' sandals and thongs. Local carpenters made their ploughs, local blacksmiths their shares, local potters their utensils for cooking and carrying water, and local weavers their cotton clothing. Each village had its own oil-presses, its own washermen, and its own barbers and scavengers. Where this system was fully developed, the duties and remuneration of each group of artisans were fixed by custom, and the caste rules strictly prohibited a man from entering into competition with another of the same caste. The barber, the washerman, the blacksmith etc. all had their own

definite circle within which they worked; and they received a regular yearly payment for their services, which often took the form of a prescriptive share of the harvest apportioned to them when the crop had been reaped and brought to the threshing floor."

These conditions are not found, of course, in the outlying parts of India. A village of the type described above would require money only for the payment of the Government dues or for the purchase of the precious metals and luxuries. "This money was found by the sale of surplus food grain or of agricultural and forest products required by neighbouring villagers. These exchanges were effected and financed by the country traders who were found mostly at the larger villages or small towns that formed the centres of a series of economic circles, the radius of each of which was measured by the distance to which the few local imports and exports could be profitably carried.

But there were a few large centres of trade situated on the recognised routes of land-transport, on navigable rivers, or on the sea coast where a market existed for the articles to which their rarity or costliness lent sufficient value to offset the expense of carriage from a distance. These were few, for communications were difficult and insecure. Precious metals, artistic manufactures, and a few rare drugs and dyes made up the bulk of this traffic, which was mainly directed to the ports from which trade with foreign countries was carried on, or to the inland military and administrative centres or capitals of the ruling Princes."*

* Report of the Indian Industrial Commission, Page 2—3.

(7) *Salient Points in the Foregoing.*—We may note the following salient points in the self-contained economy of Indian life as regards both industry and agriculture before roads and railways lifted up the different parts of the country and threw them open to internal and external competition.

In agriculture the dominant characteristic was that crops were raised mainly for domestic consumption. There was no regular market as such for them. The cultivator paid the village-artisans in kind, and the customary rents also (if he had any landlord at all) were paid in kind. He felt the need of money only when the demand of the State had to be paid in cash. Again, each tract had to depend upon itself for its food supply. Consequently whenever there was failure of crops due to droughts, devastations etc., the deficiency was keenly felt. The level of prices (such as it existed) was liable to violent fluctuations. As a protection against such calamities people were in the habit of storing large quantities of grain which served as an effective insurance against famines. The limitations of food supply also put a limit to the growth of population which was further held within narrow limits by constant wars, epidemics, disease. A rough approximation was thus maintained in a given tract between the available resources and the dependent population. The main energies of the people were devoted to the production of food crops. The cultivator would also devote small strips of his land to grow cotton, oil-seeds etc. to meet the requirements of his family and his cattle. He was also in the habit of raising "mixed crops" which made his mostly vegetarian diet sufficiently varied and sustaining and served the further purpose of

a rough insurance against the vagaries of the season. The vegetarian diet of the 'higher' castes put a ban upon the improvement of the sources of animal food e.g. cattle, sheep, pigs, deer, poultry, fish etc. There was also a strong religious sentiment against the destruction of 'life' of any kind. Cattle was, therefore, valued for milk, butter and ghee, and sheep, for its wool. The cattle, of course, were indispensable for work upon the fields. The cows and oxen were held in great reverence. They were reared with considerable care and fodder as well as oil-seed cakes were freely used to keep them in good condition. The peasantry as a rule took great pride in their fine stock and the numerous ceremonies and festivities in which the domestic cattle played a conspicuous part bear testimony to the high value—economic and religious—attached to them.

Though the agricultural implements were of the simplest, the methods of cultivation were far from primitive. A great variety of crops was raised. The principle of rotation of crops was well understood. The value of manure was appreciated. Irrigation was extensively practised. The system of agriculture was no doubt the open field system, each peasant having a number of strips intermixed with those of others in the village. The fields were without any permanent fences. Temporary fences of dried branches of *babul* etc. were put up when the corn was growing; but when the harvest was gathered the fences were removed and the cattle roamed freely over the fields. There was a considerable division of land even then. But extreme sub-division and fragmentation were held in check as population did not press too heavily upon land. The obvious

drawbacks of the open-field system and of sub-division and fragmentation of land were partly compensated by cooperative labour on the part of villagers for a variety of objects *e.g.* ploughing, embanking, constructing *bandharas* etc, also watching the growing corn, protection against wild animals and thieves, threshing etc. The village also enjoyed common rights of pasture, of supply of wood from the neighbouring forest etc.

In Industries.—Thus the life of the people was centred in villages a vast conglomeration of which formed India. It would be wrong to conclude from this, however, that the population was entirely rural in habitation and agricultural as regards occupations. Numerically, of course, a very considerable portion depended upon land then as it does now. But there were peculiarities. Firstly, in the *villages*, the various “artisans” were servants of the village-community, holding small patches of land of their own and also receiving a customary share in the produce from each cultivator. With them, therefore, agriculture was a ‘subsidiary’ occupation, between which and their customary duties they were kept sufficiently employed for most part of the year. This arrangement secured regularity of service to the villagers, and at least a customary minimum of subsistence to the artisans. It also developed the sense of solidarity and contributed to the contentment of each caste. On the other hand, as each artisan was *born* into a certain occupation, followed it on traditional lines, and supplied a strictly local demand, there was no incentive for improvement, no pressure of competition from within or without, little division of labour and little adaptability. The state of rural industry was

very backward.

It was otherwise in the *towns* of which there were many. They were places of pilgrimage (and as such many were of ancient origin), or seats of native Government, or centres of trade and commerce. The demand for the wares of most towns (and not a few had specialities of production known far and wide) *viz.* fine cotton silk and woolen fabrics, metal utensils, work in gold and silver, arose from the large number of pilgrims found peregrinating the whole country, and from the court and aristocracy which were to be found in the capitals of native kingdoms. Even then the urban industries had hardly progressed beyond the handicraft stage. But excellence of workmanship was secured partly by rules of each caste which, industrially, represented different handicrafts, and which served all the purposes of a mediæval guild in European countries, and partly by the comparative independence of the artisan.

Such was the web of Indian life before railways: a self-contained agricultural economy of villages diversified by the pursuit of traditional crafts on the part of the village-artisans, and connected with a number of small and large towns each of which was a 'market' for the agricultural products of the surrounding tract, and also the home of some special handicrafts.

(8) *Beginning of the Revolution.*—It would be profitless to examine the commercial policy of the East India Company which impaired this diversified life of India. The pages of R. C. Dutt (which contain nothing that is not officially authenticated) tell that painful story. The Company had realized the importance of India as a source of such raw material as

jute, cotton etc. and also as a market for the manufactures of England. But there were necessarily narrow limits to the success of the policy of the E. I. Co. imposed by the paucity and wretchedness of the means of communication in the country. There were few roads and no railways. Lord Dalhousie supplied both the wants by aligning and partially constructing the trunk railway routes, and by establishing the Public Works Department for road-making. He also realized the importance of 'opening' up the cotton tracts of India. He says in his famous Minute: "In the possession of Berar and the neighbouring districts of Nagpur, the British Government, it deserves to be remembered, has secured the finest cotton tracts which are known to exist in all the continent of India: and thus has opened up a great additional channel of supply, through which to make good a felt deficiency in the staple of one great branch of its manufacturing industry."

It was not long before the foresight of Lord Dalhousie was amply justified by the outbreak of the American Civil war.

The supplies of American cotton which almost exclusively kept the Lancashire factories going were suddenly cut off, and naturally the English manufacturers turned to India. Government made every effort to increase and improve the stock of Indian cotton, and imports of raw cotton into the United Kingdom increased from half a million bales in 1859 to a million and quarter in 1865. The price of cotton rose from As. 2-7 ps. per lb in 1859 to As. 11-5 ps. in 1864. This brought about a great extension of the area under cotton. Thus there was a sudden wave of prosperity in which the cotton-growing tracts

principally—and others to a less extent—participated. For the first time the importance of the agricultural products of India in the markets of the United Kingdom—and of the world at large, was strikingly demonstrated. A few years later the Suez Canal was opened and it brought the supplies of Indian wheat, rice, jute, cotton still nearer to the markets of the world and since then the foreign markets have continued to dominate the conditions of Indian agriculture.

(9) *Other Contributory Forces.*—These improvements in communications not only encouraged the exports from India but they also helped to take the imports of manufactured articles from abroad to the farthest nooks and corners of our country. Before we consider the effects of such imports and exports upon the economic life of our people, let us enumerate all the forces that were rapidly increasing the sea-borne trade of India.

The sea-borne trade of India received an impetus not only by the construction of railways but (1) by differential railway rates which on the whole favoured the imports of manufactures and the export of raw materials; (2) removal of all transit duties within the country which impeded the free movements of goods; (3) a fiscal policy based on the principles of Free Trade; (4) stabilization of Indian exchange, especially after 1899, and finally (5) changes in public taste due to "Western Education".

(1) *Railway Rates.*—With regard to the rates even the Indian Industrial Commission admit: "Before the War, the major portion of Indian railway traffic flowed in two streams—~~raw~~ products moving towards the ports for export, and imported manufactured articles

moving upcountry from the ports. Of these the first was by far the greater. The policy of the railways has been based on this position and has followed and tended to stimulate these movements of trade. Large volumes of trade can, it is true, be more economically handled than a number of casual dribbles; but there has also been rivalry between Bombay, Calcutta and Karachi to supply, in the imported goods, the debatable land which their respective railway systems respectively touch, and to attract produce from it for export. The competition between cheap river transport by the Ganges and the East Indian Railway which runs along side that river has caused the latter to lower its rates in some cases, leading to a corresponding reduction of rates by the Great Indian Peninsula Railway. The influence of the large shipping companies has also not been without its effect on the railways serving the ports; a line of steamers naturally wants goods conveyed to it as cheaply as possible, and can offer a railway serving its port of call important help in attracting traffic to that port. Coastwise traffic has also in many cases had a considerable influence on railway rates. In consequence many inequalities have arisen between goods for export and imported articles on the one hand, and goods for internal use and locally manufactured articles on the other, in areas where railways compete with one another or with water transport; and speaking generally, favourable rates for raw produce moving to the ports have resulted. The fixation of railway rates on imports has followed much the same lines as those we have discussed in the case of exports." Pages 204-05.

(2) One impediment to the free movement of goods within the country was due to the practice of

levying duties on the transit of goods, not only on the frontiers of Indian States, but in British territory itself. A great barrier, known as *the Inland Customs Line*, stretched from the Indus to the Bay of Bengal and was elaborately patrolled, the principal justification being the difference in the rate of salt duty in different parts of the country. This barrier and other duties were abolished in 1879 and these goods now freely moved on the expanding lines of railways.

(3) *Fiscal policy*.—Corresponding to the abolition of these internal duties, there was brought about a great reduction in the Import and Export duties levied in the ports. By 1875 the import duty was reduced to 5 p.c., and in 1882 it was, except for a few special articles viz arms and ammunition, liquors, opium and salt, abolished. Similarly by 1875 there was only an export duty of 3 p. c. on oil, rice, indigo and lac. The duty on wheat was abolished in 1873, and those on indigo and lac remitted in 1880, leaving rice as the principal duty-paying export. It was only the continued depreciation of the rupee that led, in 1894, to the reimposition of 5 p. c. duty on imports, including a 5 p. c. excise on Indian cotton manufactures. The duty on cotton (imported and locally manufactured) was subsequently reduced to $3\frac{1}{2}$ p. c. Machinery, railway material, gold, food grains, coal, raw cotton, raw wool, cotton twist and yarn, etc. were free of duty.

It was only the pressure of War that led to a general revision of the Indian tariff in 1916 and since then import and export duties have been enhanced and more articles of trade subjected to them. But it is quite clear how Free Trade tariff enormously increased the trade of the country.

(4) *Stabilization of the Exchange*.—It would be

unnecessary to go into the intricacies of the Indian exchange. But the result of the depreciation of silver (and of the rupee in consequence, so long as the Indian mints were open up to 1893) was to encourage exports from India and discourage imports. The constant fluctuations of exchange introduced an element of speculation in the overseas trade of India (and also in the remittance of the Home Charges to England) and accordingly in 1893 the Mints were closed to the coinage of rupee and by 1899 the rupee had become equivalent to the legally fixed ratio of 1s. 4d. This stability of exchange was maintained (at the ratio Re. 1 = 1s. 4d.) by the complicated mechanism of the sale of Council Bills and the Gold Standard Reserve. Whatever the merits or demerits of the "Gold Exchange Standard" that thus came into existence, there is no denying the fact that it gave a powerful impetus to the growth of sea-borne trade.

(5) While the whole mechanism of trade and commerce (Railways, ports, steamships, posts, telegraphs, currency, tariffs) etc. was being elaborated, a subtle but powerful factor was operating within the country which profoundly affected the conditions of demand for indigenous and imported articles: I refer to the disappearance of the old aristocracy of the country and the rise of the 'educated' middle class. I have already said that the best customers of the products of urban industry were the host of Indian rulers and their numerous courtiers. The arts and crafts decayed when there was no longer a wealthy aristocracy to set the standard of fashion. This standard was now set by the alien Bureaucracy. It had no room for indigenous products. It was entirely based upon the use of Western articles—of food,

drinking, clothing, etc. This Western standard of living was introduced into the country by the Bureaucracy serving as an example, and by the spread of education. Against its many undoubted advantages must be set the fact that Western Education created new wants which could only be satisfied with articles manufactured abroad. It changed the fashions and standard of living of the educated classes in the first instance, and their influence is permeating the masses. For the commonest necessities and conveniences of life we now depend upon imported articles.

(10) *Volume of Imports in 1923-24.*—With what success the result has been achieved can be seen from a few figures of the Import Trade of the country. The total imports were valued at £ 17·9 millions in the quinquennium 1854-59 and at £ 122 millions in 1914-19. In terms of Rupees the value of imported merchandise was about 183 crores in 1913-14 and 120 crores in 1923-24. Cotton manufactures top the list of imports with a value of 67·5 crores in 1923-24. The bulk of them comes from the United Kingdom, Japan following a long way behind. Next to cotton come machinery and mill-work, valued at 20 crores in 1923-24. About 84 p.c. come from the United Kingdom, the United States following at a great distance. Third in order come iron and steel manufactures valued at 17·86 crores; about two-thirds of the supplies come from the United Kingdom, and the rest from the European continent and America. Sugar was valued at 15·5 crores, about 90 p.c. coming from Java. Next in order of importance come railway plant and rolling stock valued at 14 crores, about 95 p.c. of which come from the United Kingdom. Next come mineral

oils, comprising mainly kerosene, fuel oils and lubricants. Next come raw and manufactured silks valued at 1·2 crores in 1923-24. More than 90 p. c of the total come from the Far East. Then the hardwares were valued at 4·42 crores. Motor cars of the value of 2·05 crores come next. Finally among miscellaneous we may notice instruments and apparatus (3·26 crores), liquors (3·15 crores), paper and paste boards (2·71 crores), provisions (2·80), salt (1·10 crores), dyeing and tanning substances (2·51 crores), glass and glassware (2·46 crores), tobacco and cigarettes (2 crores), precious stones (89 lacs), matches (146 lacs), cement (75 lacs).

(11) *Their Effect on the Standard of Living.*—The Indian Industrial Commission has thus described the effects of these imports on the standard of living of our people. “Vessels and implements of iron, brass and copper are now commonly used in the villages, and their price is within the reach of all classes. Petty articles of domestic use or personal ornament, such as scissors, mirrors, bangles, and the thousand and one cheap and glittering trifles with which the rural huckster decks his stall, have poured in from abroad. Drugs and patent medicines of all kinds, Indian and Foreign, command a ready sale. Sewing machines are found nearly everywhere, and bicycle are in ever-increasing demand. The enormously extended use of cotton cloth, especially of the finer counts, of woolen clothing, the introduction of kerosene oil, matches, collapsible umbrellas, and of better and cheaper cutlery and soap, have added appreciably to the comfort of the people.” Page 7.

(12) *Effects on our Industry.*—But at what price has this ‘appreciable’ rise in the standard of living of the

people been purchased? It has been nothing less than the irretrievable decline of our urban handicrafts.

(1) Let us first consider the state of our *urban artisans*. Their most important classes were those of weavers of cotton, silk and wool fabrics, makers of copper and brass vessels, workers in gold and silver thread, and finally, artistic workers in gold, silver, ivory, sandalwood, marble etc. Not a few have lost their occupation either because the demand for their specialized products has altogether vanished or greatly diminished, or because they cannot successfully compete with the cheaper imported articles. Those artisans that still stick to their occupation do so under changed conditions. Under the stress of foreign competition the handicrafts are adapting themselves to the 'domestic system' or the 'workshop' system, and some account will be given of this adaptation in the next chapter, where also a word will be said about the new 'organized' industries that are slowly rising in the country. But except the few that are absorbed by them, there is no alternative before others than to swell the volume of the urban proletariat.

(2) We should next turn to the village artisans and see how they have suffered under the changed circumstances. The Census Report 1911 (Page 409) admits: "The village is no longer the industrial unit which it formerly was, and many disintegrating influences are at work to break down the solidarity of village life. The rising spirit of individualism which is the result of modern education and Western influences, is impelling the classes who perform the humbler functions in the economy of village life to aspire to higher and more dignified pursuits. There is also a tendency to

replace the prescriptive yearly remuneration by payment for actual work done. Improved means of communication have greatly stimulated migration and the consequent disruption of the village community, and by facilitating and lowering the cost of transport of commodities, have created a tendency for industries to be localized. The extensive importation of cheap European piecegoods and utensils, and the establishment in India itself of numerous factories of the Western type have more or less destroyed many village industries. The high prices of agricultural produce have also led many village artisans to abandon their hereditary craft in favour of agriculture."

Thus though a few migrate to the towns, and some become agriculturists, many are deprived of their means of livelihood and they go to swell the growing class of the rural proletariat.

(13) *Concentration upon Land*.—The decay of urban and rural crafts and the consequent concentration of the population on land as their principal or secondary means of occupation are brought out by the figures of the Census of 1921.

"India is essentially an agricultural country and agriculture proper supports 224 million persons, or 71 p. c. of the population. If to this is added pastoral and hunting occupations the percentage rises to 73. Industries support 10 p. c. of the population, but the bulk of these are engaged in unorganized industries connected with the supply of personal and household necessities and the simple implements of work. Organized industries occupy only one p. c. of the people. In trade and transport, on which less than 6 p. c. and 2 p. c. respectively depend, a not inconsiderable number are connected with the disposal of the various

kinds of agricultural products. The administration and protection of the country engages $1\frac{1}{2}$ p. c. of the population, and the remainder are supported by domestic, miscellaneous, and unproductive occupations."

(14) *Exports in 1923-24*—Let us next turn to the consideration of the exports which pay for these enormous imports—whether they be in form of manufactures directly consumable, or of plant, machinery etc. And the figures here also are interesting. The exports were valued at £17·2 millions in 1854-59 and at 154·3 millions in 1914-19. In crores of Rupees, they were valued at 244 crores in 1913-14 and 240 in 1923-24. These exports mostly consist of raw material furnished by various extractive industries viz., agriculture, mining, forestry, etc. The chief articles and their values in 1923-24 were as follows: cotton (raw and manufactured) 109·4 crores. Japan was India's best customer, taking 46 p. c. of the total exports of raw cotton. The chief customers of Indian cotton manufactures are Mesopotamia, Persia, Straits Settlement, and Ceylon. China has ceased to be a market. Next come jute and jute manufactures, valued at 62·25 crores. Germany was the greatest purchaser of raw jute, and Australia of ganny bags. The third commodity in order of importance is food grains and flour, whose exports were valued at 51 crores, the principal customers being United Kingdom and Germany. The exports of tea were valued at 31·5 crores. Oil seeds ranked fifth with a value of 29·8 crores, the principal buyers being the United Kingdom and European countries like Germany, Italy and the Netherlands. The exports of 'hides and skins'—raw and tanned, were valued at 13 crores. The value of lac exported was 9 crores.

(15) *Results of Exports.*—(In production). As the exports consist mostly of raw products,—in the case of agricultural products,—of food grain and pulses, of oil-seeds, of cotton and jute, of tea, coffee, rubber, and other commodities—they have brought about a great, almost revolutionary, change in the basis of Indian agriculture. We may call this change by the name of commercialization of produce. Other causes bringing about the same change were already long at work. When the customary rents in kind were replaced by competitive or contractual rents in money, and when the cultivator had to meet the rigid demand of the State by a cash payment, he was obliged to dispose of for cash a part or whole of his crop which in former times he used to retain for domestic use. He could the more easily sell his crop as the opening of communications developed the existing markets or created new ones. A class of money-lenders and merchants was also ready to take advantage of this changed situation. Often the merchant was also the money-lender and then he marketed the share of the produce which he appropriated for himself. Whatever the cause, there is no denying the fact that a very large proportion of the agricultural produce was brought to the market soon after the harvest.

One result of this commercialization was partial specialization in cultivation. A cultivator did not now grow a variety of crops in small quantities for his own use; he would now grow one or two crops which had a ready market and for which his land was suitable e.g. cotton, sugarcane, wheat, etc. and buy grain for his own use in the open market. When a large number of cultivators thus began to grow

special crops, they became 'localized'. This was facilitated when the tract had special advantages of soil, climate, rainfall, irrigation, etc. For example cotton in the Khandesh district and in Berar, sugarcane along the canals in the Poona district, wheat in the Punjab, groundnut in the Madras Presidency, etc.

This process of commercialization and localization is most observable in those crops which are largely grown for the foreign market *e.g.*, rice in Burma, jute in Bengal, wheat in the Punjab, tea in Assam, and cotton in Khandesh, Gujrat, Karnatak, Berar, etc.

Not only has there been specialization in crops, but a considerable extension in the area under cultivation. We will consider in the third chapter how far this extension has been an unmixed blessing to the people but there is no doubt as to its reality. A considerable part of this extension is due to the construction of great irrigation canals as in Sind and the Punjab. The railways have opened out large tracts in the more inaccessible tracts of the country as in Burma, Assam and the Central Provinces. Naturally where irrigation facilities have been provided, the land has been put to the growing of valuable crops like wheat, sugarcane, cotton, etc. So far, of course, as land previously lying waste is brought under cultivation and utilized for growing 'commercial' crops, there is no diminution in the supplies of food grains available for local consumption. But when, on account of a rise in prices, there is a substitution of non-food crops *e.g.* cotton, jute, groundnut, other oil seeds, for food crops on any large scale the deficiency is keenly felt. The area under such 'commercial' crops contracts when the prices fall, or the foreign demand is diminished or cut off on account of some

extraneous cause. The existing level of prices—both of food grains and of commercial crops—is coming to have a decisive influence upon the use of land for one or the other crop. The area under cultivation expands and contracts in response to changes in prices with particular sensitiveness with regard to the 'commercial' crops that have an international market. While the prices are rising the area increases, often at the expense of food crops; but any sudden change in demand or supply is rapidly transmitted to the countries concerned and the area falls off. An element of uncertainty is thus introduced in the raising of those crops that have a distant foreign market.

Not only is agriculture commercialized, but it is being slowly—rather very slowly—'industrialized.' Crops are raised not only for being sold in the market at any price, but at a profitable price. Agriculture tends to be a "business" like any other industrial concern undertaken with a view to minimise the cost of production and maximise the profits. This "industrialization" of crops, however, is only just beginning, though the tea and coffee plantations are managed on 'business' lines.

But while on the one hand increasing exports and the extension of the internal markets are bringing about the 'commercialization' of crops and in a few cases its 'industrialization', satisfactory progress in this direction is being checked by that pressure of population on land which is the direct outcome of the prostration of our indigenous industries. This pressure brought into prominence the evils of subdivision and fragmentation of holdings and the indebtedness of the cultivators, evils which, in my judgment, are the chief stumbling blocks in the progress of Indian agriculture.

They will be examined in detail in a subsequent chapter; but they have been mentioned here to complete the enumeration of those tendencies in Indian agriculture *e. g.* extension of area, commercialization, industrialization, substitution of non-food for food crops, sub-division, fragmentation, and indebtedness, which have become prominent during the period under review.

(16) *On Marketing.*—The export trade has affected agriculture not only in the matter of production but, even more profoundly, in the organization of marketing. In the marketing of export-crops particularly the agents of European firms have so thoroughly entrenched themselves, and made themselves indispensable not only to the large class of Indian middlemen, but also to the cultivators themselves. It is worth while considering the marketing organization of one or two important export crops. Thus about jute we read: "Between the cultivator of jute and the shipper many middlemen intervene. The cultivator disposes of his jute to a *bepari* or petty dealer who has received advances from a *mahajan* or broker on the understanding that he gets as much jute as he can for the latter. The intervention of the *bepari*, if not that of the *mahajan*, between the cultivator and the wholesale buyer is unavoidable because the individual holdings are generally small. The *mahajan* sells to the big buyer who may be the representative of a large exporting firm or of a mill, a baler or another broker, by whom the preliminary sorting, thading and bulking are effected"* About the marketing of rice in Burma, we read: "As a rule

* Page 107 Handbook

the paddy is taken over from the cultivator on the threshing floor either by middlemen acting on behalf of mills, by speculators, or by local traders known as jungle brokers. The mills which own their own boats advance money to their paddy buyers on the security of the latter's land or other property. In some cases the paddy buyers mortgage their boats against the moneys received. As soon as the buyer obtains a boat he proceeds to the district, buys grain and brings it to the mill for measurement."* The agents of the foreign firms are similarly active in the trade of cotton (in which they own their ginning presses), of wheat (in which they have their flour mills), of groundnut, etc. and even of raw hides and skins, bristles, etc. The European merchants have exclusive associations of their own of a general nature such as The Chambers of Commerce; or Commercial Associations for trade in jute, cotton, oil-seeds, etc; or Planters' Associations. There are also exclusive associations of Indian merchants, and in a few the European and Indian merchants have made a common cause. Not only is thus the trade in the exports of agricultural products well-organized, but a preponderating share in the financing of this trade is enjoyed by European banks and agency firms. The export-trade is financed by the British, Colonial and Foreign Exchange Banks which have many up-country branches which buy the Exporters' Bills. They act in close cooperation with the Imperial Bank which has a large share in the internal trade of the country. We must bear in mind the whole of this elaborate organization—financial and commercial—controlled in all essential respects by European merchants, and

* Page 139 Handbook.

also the equally elaborate net-work of railways, etc. that has made the export trade of the country possible. Only a small part of the price realized for these export crops reaches the actual cultivators. The Indian Industrial Commission admit this state of things. "The export trade from country districts generally suffers from the existence of an undue number of middlemen, who intercept a large share of the profits. The reasons for this are various. In the first place, it must be remembered that a great number of Indian cultivators are indebted to a class of traders who not only lend money, but lend, purchase and sell grain, and sell such articles, as cloth, salt, and oil to small consumers. The position of a peasant farmer, with grain, seeds or cotton to sell, and at the same time heavily indebted to his only possible purchaser, effectually prevents him from obtaining a fair market price for his crop. Even when the farmer is not burdened by debt, his business with the dealer is still very often on a *per contra* basis, his purchases and sales being alike reckoned in cash in the dealer's books, at a rate which is not always known to the customer at the time. The farmer, owing partly to poverty and partly to the extreme sub-division of land is very often a producer on a so small a scale that it is practically impossible for him to take his crop to the larger markets, where he can sell at current market rates to the agents of the bigger firms. This is especially the case in Bengal, Bihar and Orissa, and the United Provinces. Here most of the articles of export are purchased from local dealers by the exporting agencies. The larger markets are usually frequented by an unnecessary number of brokers and touts; and there are almost

always one or more intermediaries between the purchaser who moves the grain to the point of consumption or export, and the producer or other person who actually brings the crop into the market".*

(17) *The Punjab: an Illustration.*—The opening up of a Province by means of Railways and its consequent development and prosperity are well illustrated by the history of the Punjab. Railways and Irrigation have contributed immensely to the prosperity of this province as can be seen from the following table given by Mr. Calvert. (Page 54).

Year	Railway Mileage	Canal Mileage	Miles of metalled Roads	Cultivated area in Million acres	Land Revenue in Rs. (lacs)
1872-3	410	2,744	1,036	18.8	201
1882-3	600	4,583	1,467	23.4	206
1892-3	1,725	12,368	2,142	26.7	223
1902-3	—	16,893	—	26.8	230
1912-13	4,000	15,935	2,614	29	360
1919-20	4,441	19,664	2,938	30	400

Similarly the imports which were valued at 710 lacs in 1882-3 rose to 5,287 lacs in 1919-20 and the exports from 373 lacs to 4,405 lacs for the same corresponding years. The exports consist mostly of wheat for growing which the Punjab has special facilities. The

* Page 6 Report

money-value of the annual exports is roughly 10 crores of Rs. which is received in manufactured cloth, in gold and silver, and in other commodities. The commercial classes made large profits on the export and import trade. As a result of the rise in the value of the produce of land, there has been an increase in rentals and in land-values generally. This, in its turn, has brought about the concomitant evils of increase in tenancy, fragmentation of holdings, and indebtedness.

The marketing of the wheat also has been so organized as to respond very sensitively to prices prevailing in Liverpool which is the centre of international trade in wheat. The daily prices in Liverpool are telegraphed to Karachi and Lahore and the local price is below the Liverpool price just by the cost of transport. Almost the whole trade is in the hands of foreign firms which dictate the prices. During the War trade in wheat was controlled on behalf of the British Government. The Punjab thus well illustrates the economic revolution that has taken place in the other provinces as well.

(18) *Position of the United Kingdom in our External Trade.*—We have now completed our survey of the effects of imports and exports upon the economic life of the people. But though it is this aspect of our sea-borne trade which is of special interest to us, European mercantile community in India and, only to a less extent, the Government of India are interested in that trade so far as it affects the position of the United Kingdom. When the figures of our sea-borne trade are analysed from that point of view they assume a special significance, and it is worth while looking into the matter in some detail.

As to the imports and exports of British India, the following table shows the variations in the share of the principal countries of the world from 1909.

	1903-14 Average		1914-19 Average		1921-22		1922-23		1923-24	
	Imp.	Exp.	Imp.	Exp.	Imp.	Exp.	Imp.	Exp.	Imp.	Exp.
United Kingdom	63	25	56	31	57	20	69	23	58	25
Other parts of British Empire	7	17	9	21	10	21	7	18	7	14
U. S. A.	3	7	7	12	8	10	6	11	6	9
Japan	2	7	10	11	5	16	6	13	6	14
Java	6	...	8	...	9	...	6	...	6	...
France	..	7	...	4	...	4	...	5	...	5
Germany	6	10	1	1	3	7	5	7	5	7
Other foreign countries	13	27	9	20	8	22	10	23	12	26

The outstanding feature is the dominating position of the United Kingdom in the Imports. But it is finding powerful rivals in Japan, the United States and Germany. Thus the share of the United Kingdom in 1853-54 was as much as 76 p. c. and France was the only other European country which had any considerable share *viz.* 3½ p. c. In 1903-04 the percentage of the United Kingdom fell to 64.9 p. c. and Belgium and Germany were assuming importance. When the continental supplies were cut off when the War broke out, the United States, and Japan particularly, found their opportunity. Japan has not been able to maintain her gains in all the lines, while Germany is regaining the lost ground.

Thus whereas in 1923-24 the United Kingdom supplied 58 p. c. of the total *imports* into India, she

only took 25 p. c. of India's exports. Mr. T. A. Ainscough, H. M. Senior Trade Commissioner in India and Ceylon in his *Report on Some Aspects of British Trade in India* (1923-24) commenting on this disparity between imports and exports says "It is a great potential source of weakness that the British Isles should only take from India less than one-half of the value of goods which she exports to India. Apart from economic laws, there is a growing tendency all over the world for a country to purchase its imports from those countries which are the most important customers for its own produce. India's most important markets, apart from the United Kingdom, are Japan, the United States, Germany, Italy and France, and there is every likelihood that she will tend to buy more and more from those countries." Page 19.

(19) *Lessons of the Great War*—The Great War has decidedly increased the share of the United Kingdom in the Indian exports. In the first place some of India's principal Continental customers e.g. Germany and Italy were cut off and the exports were diverted to England. Also the War showed in a striking manner how the agricultural resources of India e.g. jute, wheat, oil-seeds, etc. could be mobilized, under Official control, to meet the requirements of England. Again the War demonstrated the danger of England's dependance upon foreign supplies of food and raw material. This danger will be minimised if the United Kingdom depends upon her own Colonies and Dependencies. There is a widespread movement to bind the Empire more closely and organically, not only politically but economically. Nothing would contribute more powerfully to this consummation than larger exports from India of all that England wants.

Let us analyse the degree of importance of these exports to England.

Raw Cotton.—The main supplies of this raw material for the mills of Lancashire come from the United States and Egypt. It has been calculated that in the quinquennium 1910-15 the annual production of cotton in the U. S. A. was roughly 14.5 million bales of which $5\frac{1}{2}$ millions were consumed in the mills of the States, leaving an exportable surplus of nearly 8 million bales. But in the next three years the internal consumption rose to 7.6 million bales and the production fell to 12.9 millions, which meant an exportable surplus of only 5.3 million bales.

“The view has for some time been held that the production of cotton has scarcely kept pace with the increasing demand for cotton cloth, and it will be necessary for Lancashire in particular, if she is to maintain her place as a manufacturer of cotton goods, to tap fresh sources of supply. In this connection no country in the world offers such potentialities for making the additional contributions to the world’s cotton crop which are necessary to restore equilibrium as India, but the problem is complicated by the doubt as to what extent Indian short staple will really relieve the situation, even if, without any increase in the area cultivated, reliance upon more prolific types of plant, better agricultural practice and a more liberal use of fertilisers were to guarantee the proportionate increase in outturn which the situation demands. This problem was one of those referred to and considered by the Indian Cotton Committee ”*

Grain and Pulses—Although under favourable seasons barley, millets and pulses are exported

* *Handbook* Page 114

in considerable quantities from India, the most valuable exports are *rice* and *wheat*. Prior to 1910-11 the average exports of *rice* did not exceed two million tons; but subsequently the trade expanded and though during the first three years of the War the exports fell off, there was a subsequent recovery. The Handbook says "A satisfactory feature of the statistics of exports to Europe is the increasing volume of exports direct to the United Kingdom." Page 134.

Wheat.—The United Kingdom has been the principal recipient of the Indian exports of this valuable food grain. At one time Indian wheat had a bad reputation in the English market on account of admixture of dirt. But there has been great improvement since 1907-08 and the quality of the grain also has been improved. Government control was established over the export of wheat during the War, export to foreign countries was prohibited, and the Wheat Commissioner made all purchases for the United Kingdom.

Oil-seeds.—Here also, before the War only $\frac{1}{3}$ by weight of the total exports was absorbed by the United Kingdom, and only $\frac{1}{3}$ in point of value as the principal items were the relatively cheap seeds, linseed, cotton seed and castor seed. For these as well as for the more valuable seeds France and Germany were the principal customers. France mainly took groundnut and Germany mowra seed and copra. The War has taught the value of the seeds—and also of the oil and cake—to the United Kingdom and the exports of these articles are bound to be on a larger scale in future.

Tea.—With the possible exception of China, India

is the largest producer of tea in the world. Though the internal consumption of this article is steadily increasing, the larger part is exported and there has been a striking increase in the exports to the United Kingdom which were only 100 million lbs. in 1890-91 and 282 millions in 1918-19. The world-demand for tea is increasing particularly as the United States have entered upon a Prohibition programme. An overwhelming portion of this industry is in British hands.

Hides and Skins.—In 1913-14 Germany took 35 p. c., Austria 21 p. c., the United States 14 p. c., Italy 10 p. c., and the United Kingdom only 3 p. c. of the exports of hides and skins. In fact this trade was controlled by a small ring of German merchants in Calcutta. But as a result of the War 'a number of prominent British firms have been persuaded to interest themselves in this market' and the capacity of the English tanneries has also been extended to deal with the increased supplies of raw hides from India.

Thus when we consider that Indian agriculture has to satisfy the elemental needs of food and clothing of 300 millions of human beings within the country, when we further consider that she has to part with a substantial and increasing portion of her annual production to pay for her imports, and when we reflect that the share of the United Kingdom in the exports will also increase in future, the significance of the Royal Commission on Agriculture becomes evident.

The Viceroy on the Position of India.—We also see the full meaning of the words used by H. E. the Viceroy when on the 27th of May 1926 he inaugurated the Conference of Provincial Ministers at Simla, (the object of which was to make preliminary arrangements

for the Royal enquiry.)

“India now has a definite place in the markets of the world. Her position as a source of supply of cotton, jute, wheat, oil-seeds and other raw products is likely in future to be increasingly important to consumers in other parts of the world, and the expansion in the quantity and the improvement of the quality of Indian agricultural products is a matter of serious concern in the general economic structure of the world’s supply of food and clothing. The development of India’s agricultural potentialities has now become essential to the maintenance of her commercial position. It is vital to her financial position and to the economic welfare of her people. India has to bear in mind the possibility of organized competition from other quarters in certain lines of supply where she now meets a part of the world’s demand and receives a substantial income in return. Fluctuations in the bulk of her supplies or inferiority in quality as compared with supplies from elsewhere might at any moment cause her to lose a market with those disastrous repercussions on her commercial, financial, and economic position which a contraction of exports must involve.”

CHAPTER II

AGRICULTURE *v/s* (?) INDUSTRY

(21) *Introductory*—In the preceding chapter we traced the decay of our indigenous industries under the pressure of imports and the beginnings of commercialization and 'industrialization' of agriculture under the pressure of exports. An important question that now arises is this: whether substantial results can be anticipated in the direction of agricultural progress in the *absence* of a proper regeneration of our industries. As this question has become the subject of keen division of opinion it deserves to be examined at this stage.

(22) *Intimate Connection between Industry and Agriculture*.—Now I hold that there is an intimate relation between industry and agriculture. Not only agricultural progress owes its origin, historically, to the development of industries, but certain positive advantages to agriculture flow from the diffusion of the industrial spirit among a people.

Reference has been made to the fact that, especially in Western countries, the very object with which agriculture is carried on now is quite different from what it was in years gone by. Formerly it was regarded as a means of getting an insufficient food-supply for the family by a none-too-exacting cultivation of the soil; but now it is regarded as the scientific raising of varied and valuable crops for the *market* with a view to earning *profits*. This revolution in the

basis of agriculture is shortly described by saying that agriculture has been 'industrialized'.

What brought about this 'industrialization' of agriculture? It was caused by the reaction of modern industry upon agriculture. When capitalists began to make use of steam and electricity to drive their machinery, when they learnt to economise labour by the use of machines, to elaborate a division of labour within the factory itself, and when they laid under contribution the latest results of scientific research for the improvement of technical processes, and when, finally, they perfected a marketing organization for the disposal of their mass-products in local or distant markets, then similar methods were adopted by the more enterprising among the landholders. They also began to look upon agriculture as an "industrial enterprise." They applied enormous capital to land in the form of its improvement, draining, embankment, use of machinery, etc. Agriculture became a capitalist enterprise. This development was specially marked in England and Sir J. A. R. Marriott has well brought out this close connection between industry and agriculture in his "*Ethics and Economics*".

In England the self-sufficient manorial system was broken up by the end of the 14th century and in the place of the feudal hierarchy of lord, freeholder and villein, there definitely emerged the new classes of landlord, tenant-farmer, and the landless wage-paid labourer.

The second revolution in English agriculture was initiated in the 16th century by the spirit of commercialism. The discovery of America and trade-routes to India and the demand for English wool on the Continent gave a new importance to international

commerce. "This demand naturally reacted upon English agriculture, and supplies the key-note to the agrarian revolution of the 16th century: agriculture was for the first time commercialized; pasture to a large extent took the place of tillage, and men were evicted to make room for sheep."* The evicted agricultural population passed through a period of acute distress in spite of legislative and administrative measures. England, agriculturally, was a self-sufficient country in the middle of the 18th century. But then ensued a great growth in population due to the rapid expansion of industries. A new wave of enclosures set in during the reign of George IV. The object of these enclosures was, however, the reverse of that which the 16th century reformers had in view. Then it was the increase of wool. Now it was the increased production of wheat. The beginnings of scientific agriculture are to be found in their desire to produce bread, beef, mutton, cheese, butter, milk, etc. to feed the growing urban population of England.

It is important to remember that only in England did agriculture enter upon this phase of 'high farming.' England could do so because she alone had the requisite capital to sink in land. As H. D. Irwine remarks: "This is at the root of the essential difference between the modern history of landholding in England and in every other country of Europe: in England agriculture has been made almost wholly a capitalist industry; in all other countries it is still mainly controlled and its means of production are chiefly owned by small producers. From about the end of the 17th century the agrarian history of England became exceptional."†

* Page 32. † Page 126.

There the very ideal of agriculture changed. By the "progress" of agriculture was now meant increasing the yield and lowering the cost of production. The initiative in bringing about this progress was taken by the landlords who alone had the necessary capital and knowledge. William Coke of Norfolk, Jethro Tull, 'Turnip' Townshend, and Robert Bakewell are famous as the pioneers of agricultural progress in England.

It is thus clear that, historically, agricultural progress owed its inspiration to the Industrial Revolution of the Eighteenth Century and was made possible by the application of the accumulated capital resulting from commerce and trade. In Continental countries *e.g.* Germany, Austria, industrial, as well as agricultural, progress was put off by full 50 years because they had not the necessary 'capital.' It was when the Co-operative movement—for urban and rural credit—made rapid progress in these countries that the lack of capital was overcome, and since then industrial (and agricultural) progress has been rapid, thanks to the benevolent activities of the State in providing legislation and also, in some cases, funds.

(23) *Condition of Industry in India.*—What is the state of industries in India at present? Reference has already been made to the decadence of the indigenous industries. The displaced population has been unemployed, partially employed, or driven upon land, because of 'organized' industries there are only a few to absorb a fraction of the population. Let us first consider how far the place of the lost handicrafts has been taken by modern industrial enterprise within the country itself. We may distinguish two forms of such enterprise—the plantation and the

factory. In tracing the development of these two forms of organized industry we really trace the growth of European enterprise in India for the two things were, until recent years, nearly the same. It was the *Indigo* industry that first attracted the European planter. He did not directly cultivate it, but controlled its cultivation by the ryots in Bengal, Bihar and Orissa by advancing them money. The ryots virtually became the serfs of the planters and their deplorable condition has been the subject of frequent complaint and enquiry. The industry was at its height of prosperity in the Nineties of the last century until "German laboratories, thanks to an accident, found themselves in a position to produce indigo synthetically on a commercial scale in 1897." In 1896-97 the area under cultivation was 1,689,000 acres. By 1914-15 it had fallen to 150,000 acres. There was a temporary revival of the industry when the War cut off German supplies but it will not be able to hold its own against renewed German competition.

The *Tea* industry, on the other hand, has been steadily increasing ever since it was firmly established, after a feverish period of speculation, in the Sixties, in Assam. Government actively helped this industry till 1865 when it began to stand on its own legs. In 1923 the estimated acreage under tea was 710,300 acres and the production 375 million pounds. The labour force, roughly a million strong, employed in the Tea-gardens of European Planters in Assam is recruited from distant sources in the United Provinces, Central Provinces, Bihar and Orissa, and the East Coast. No description of the miseries of the labourers is required when it is stated that until

1915 the 'indentured' system of recruitment obtained. Since then the labourers are recruited by local agents and garden *sirdars*.

The cultivation of *Coffee* was vigorously undertaken by Europeans from 1860 and the plantations lie in a continuous chain in Mysore and South India. The acreage under coffee in 1922-23 was 131,655 and its exports amounted to 218,000 cwts in 1923-24. The daily average number of persons employed in the plantations in 1921-22 was roughly 70,000.

Latterly the *Rubber* plantations also are becoming more important.

We may next turn to the *factory-type* of industrial enterprise and briefly refer to the cotton and jute industries. The first stages of the *Cotton Mills* in Bombay were adversely affected by the rise in the price of raw cotton during the American Civil War. Since 1872 there has been steady progress. The number of mills in 1877 (for the whole of India) was 51. In 1923 it had risen to 333. It gives employment to roughly 300,000 labourers. In addition to these spinning and weaving mills which have been concentrated in places like Bombay, Ahmedabad, Sholapur (in the Bombay Presidency) a host of small factories for the ginning and pressing of cotton has sprung up in the areas that grow cotton. Considering the numbers employed and the amount of capital invested in the industry it is no doubt an important one, but from the point of view of the development of the country it has little value: the labour employed is mostly casual and agricultural; the employment is confined to the cotton 'season'; and finally, the industry does not convert raw produce into a manufactured article, but only facilitates and cheapens the

that have come to grief have been mostly Indian. As regards *ownership* "European Companies own the majority of the tea gardens of Assam and Bengal, but Indian enterprize is growing in regard to the private ventures. Indigo in Bihar and Orissa, coffee in Madras and rubber in Travancore are mostly in European hands, but the coffee plantations of Mysore are largely owned by Indians. Most of the large collieries of Bengal are held by European Companies, but 65 out of 73 private concerns belong to Indians. The cotton industry of Western India is almost entirely Indian; while the jute mills of Bengal are in European hands though the small presses are mostly owned by Indians. The rice and flour mills and the brick and tile factories, with the exception of a few large concerns, are in the hands of Indians."*

As in the case of ownership, the European element preponderates in the *management* and *supervision* of the larger industrial enterprizes. Indians, with a few exceptions, are mostly to be found in the clerical and labour lines.

(25a) *Extent of Vrbanization*.—These 'organized' industries employed roughly a total of 26,81,000 persons, *i.e.* just one per cent of the population. These figures throw interesting light upon the progress of 'urbanization' that is said to be going on in the country. In Western countries the most powerful factor that has developed large towns has been the localization of industries in them. In India only the ports are increasing in size, and only a few inland cities like Ahmedabad, Cawnpore, Jamshedpur, Sholapur. The majority of

* Page 267, Indian Census Report 1921

the older towns of India are either stationary or declining unless they happen to be the capitals of Provinces. The Census of 1921 shows that only 10 p. c. of the population is urban and 90 p. c. is rural. The *rate* of urbanization also is very, very slow, being about 1 p. c. in the years 1911-1921.

This microscopic extent of urbanization is further discounted when we examine its stability. A scrutiny of the males and females in urban areas in Bengal and Bombay brings out the distressing fact that there the females are disproportionately low in number—as few as less than 500 per mille in some—which clearly shows that the urban population is migratory, and that the males, while in towns, are exposed, in the absence of a normal family life, to all the vices of town-life. Millowners and Mineowners frequently complain that their labourers are essentially agriculturists. Ten to fifteen per cent only stay permanently in the towns. The remaining migrate to the towns in search of employment and return to the villages as soon as the rains set in, or their small piles are made, or—not rarely, when their savings are exhausted.

(26) *Contrast with Conditions in Western Countries.*—I am not sure if there is any other country in the world where the evils of transition—in Industry and Agriculture—were so distressing as in India. In Western countries great changes took place in the systems of landholding as well as in industries. Proprietors of land were turned into tenants, or their holdings were reduced in size, or they were turned into landless labourers. Similarly, large numbers lost their handicrafts in their competition with the cheap products of the factory. But in all these Western

countries, the population displaced from land or handicraft industries was sooner or later absorbed in (1) the rise of capitalist farming; or (2) the development of organized industries within the country, or (3) finally, a stream of emigration to the New World.

H. D. Irwine has well traced these migrations of populations in her "*The Making of Rural Europe.*" After examining the main forces that were revolutionizing the agriculture of the Western countries of Europe she says: "The same forces which turned independent farmers into tenants, or reduced the size of their farms, also brought into existence the landless agricultural labourer—*viz*, the loss of common rights, the disuse of communal enterprize, the break-up of families, the sub-division of small holdings, mortgaging, sub-letting, the decline of village industries other than agriculture, and of cottage-industries. Each of these meant that some peasants had to leave their own land and depend entirely on wages, while a large number came to depend upon them partially."*

In Western countries certain favourable circumstances saved them from unemployment and starvation, though the period of transition was one of great distress.

(1) In England for instance 'capitalistic' farming created a new and permanent demand for agricultural labour. The numbers that could find this employment were, of course, small, and many had no work to do. The conditions under which they lived were most deplorable and there was an increase of crime. The Reform of the Poor Law in 1834 did not touch the

* Page 156

root-cause of wretchedness and crime which lay in that Agrarian Revolution which turned small peasants into landless labourers.

(2) A second favourable circumstance was the growth of industrialism. "Industrialism opened an enormous market for labour and made large towns, the tentacular towns which draw the country-men by their sociability, their distractions and their conveniences, and by their varied and many opportunities for prosperity and adversity. The modern social phenomenon known as the rural exodus is a direct result of industrialism. It is exactly true that in proportion as a country is industrialized its population is attracted from the rural districts to the towns, that in industrial countries the urban population progresses in inverse ratio to the rural population. In the most highly industrialized countries, England, Belgium, France, and parts of Germany and Austria, there was such a drain of population from the country to the towns that the supply of rural labour fell below the demand for it.

(3) In some of these countries *e.g.* England and Scotland, rural depopulation assumed such proportions that attempts were made to retain the rural population in the country-side by the creation of small holdings. It was Arthur Young who first discerned in the landlessness of the rural class a grave social danger. He advocated Allotments—a cottage and a plot of from one to five acres of land for every poor family. Since then, by dint of legislation and liberal subsidies, such Allotments have been multiplied in England, Scotland, Ireland, etc.

But in the non-industrial countries of Europe, conditions were not so favourable. Neither the growth

of industries nor of capitalistic farming was available as a means of employing those who had lost their lands. There was consequently widespread unemployment. Some of its worst features were mitigated by the migration of labour from one part of the country to another, and before the Great War the political boundaries were no insuperable barriers to such movements.

This seasonal migration of companies of agricultural labourers from one part of Europe to another can be at most a palliative. It has been supplemented in modern times by a stream of overseas emigration—to the United States, Canada, South America. "The great body of the emigrants is made up of peasants from the countries of West Europe, and in the United States the majority are absorbed by the towns. A Scottish emigration, mainly to Canada, and an Irish emigration, mainly to the States, began on a large scale in the middle of the last century, as a direct result of the potato famine and of agrarian troubles. The Spanish and Portuguese emigration to South America, Cuba, and Mexico is traditional, but has been greatly increased in recent years by the ease of travelling. The great Italian emigratory movement, which is directed to the States and, in less degree, to South America, set in about 1880, and had brought the Italian population of the States to close on two millions in 1912. As travelling became less adventurous and news was more rapidly disseminated, the attraction from overseas spread to Central and Eastern Europe, whence also there was a considerable peasant emigration before the War. In fact, in non-agricultural countries, the lands across the Atlantic seem to be destined to

perform the function discharged in industrial countries by the tentacular towns, that of drawing off the surplus supply of rural labour." *

(27) *Concentration upon Land.*—Are any of these channels available in our country to drain off or absorb the population of our country? We have already considered the position of industries and of the towns. There is little or no exodus from the country-side to the town in India. In Western countries this exodus assumed such proportions as to constitute a positive menace to social well-being and a reaction has set in there. Efforts are being made to retain the population in the villages either by the creation of small holdings or by decentralization of industries. Witness the Country Life Movement initiated by President Roosevelt in America. Compare also the following protest of Mr. R. Rider Haggard against the extreme urbanization of England. "What all countries now require are not more town-dwellers but more land-bred folk. They require them for defence; they require them for purposes of national health; they require them for steadfastness in the midst of the shifting developments of a neurotic age. Without an adequate supply of land-dwellers to replenish and support their city populations, people must deteriorate and in due course fall." †

But though the dangers of excessive urbanization are real, equally harmful are the effects of ruralization with which India is threatened. As the late Justice Ranade put it, ruralization means rustication. There are, no doubt, streams of migration of labourers

* H. D. Irwine, Page 166

† Lessons from Agricultural Denmark—Page 221

going in search of employment—either on the fields at harvest time, or in the towns for casual or permanent jobs. But of that considerable relief to the population which Western countries *e.g.* Ireland, Scotland, Italy, etc., got by emigration to foreign countries, India had had a very small share. Not only foreign countries, but even the Colonies of the British Empire have shut their door against Indians or only kept it open on conditions which no self-respecting Indian would care to accept. Thus neither can they emigrate (except as coolies to Ceylon, the Straits Settlement), nor are there industries within the country spacious enough to absorb them. They thus vegetate upon land. And not having a 'minimum' standard of living below which they *refuse* to fall, they are, as to their growth, on an inclined plane.

(28) *Resulting Poverty of the Indian Rayat*—This, in my judgment, is the crux of our whole economic problem: a huge population—without adequate outlets for absorption in industry, or for emigration—and driven upon agriculture as the only precarious means of occupation and also livelihood. This is the explanation of the poverty of the Indian *rayat*. Of one thing only he has more than enough and that is, leisure. In other words there is enforced idleness and unemployment. He earns little, spends little, and thus is inefficient. As Dr. Slater says "The fact remains that the Indian workman earns very low wages, has a very low standard of expenditure, and attains a very low level of efficiency, and these three characteristics of Indian life are so interconnected, that it is impossible to say which is cause rather than effect."*

* Some South Indian Villages. Page 17

Though the writings of the late Mr. Digby and the late Dr. Dadabhoy Nowroji which called the attention of the world to the extreme poverty of the Indian rayat were then disbelieved and sought to be discredited, recent calculations as to the amount of food available per head in a normal year show that a large number of people lives dangerously near the margin of subsistence. There ensues an acute distress whenever famine causes a deficiency in the food supply. Mr. Arnold Lupton (in his *Happy India*) calculates 665 lbs. as the amount of food per head per annum, part of which is consumed by the cattle also as there is insufficiency of fodder. Dr. Slater's figure for the Madras Presidency is 554 lbs. per head, and Sir Gangaram's figure for the whole country is 560 lbs per head per annum.

Figures like these show that not only with regard to the consumption of food, but in clothing, housing, sanitation etc. the standard of the mass of the people is remarkably low. Not only it is low in itself : but it yields to every adverse pressure. This explains how in many *purely* agricultural parts of India (particularly in the rice-growing tracts) it is possible for the density of the population per sq. mile to be as great as 1200 to 1500. Mr. Thompson, the Census Commissioner of Bengal, makes some valuable remarks on the relation between density and standard of living. "With the progress of civilization and the improvement of communications, the standard of living adjusts itself to variations from place to place in the capacity for production, whether in agriculture or industry. The standard of living maintained in agricultural populations in Europe seems to have been adjusted to a density of not more than some 250 persons to the

sq. mile. The surplus population is drawn off into other industrial and commercial enterprises, and the standard of living among agriculturists maintained and even considerably raised. In India, a stage of civilization has yet not been reached at which such enterprise draws off even a small portion of the labour not absolutely required for agricultural purposes. A stage has been reached in which the land available for cultivation is not sufficient to give full employment to a great multitude who see no occupation but agriculture to which they can turn their hands. The next stage threatens to be a long time before it is reached, and the time must necessarily be the longer on account of the fact that so large a proportion of those engaged in agriculture own substantial rights in the little plots they cultivate, and will not readily give them up when the time comes to give up agriculture for another occupation. In Europe, the maintenance of the standard of living places a limit on the increase in the numbers who continue to support themselves by agriculture, but in India this is not the case.” *

It is thus clear that any satisfactory solution of the problem of Indian poverty must contemplate the establishment of industries to draw off the superfluous population from land. A rise in the standard of living will follow the opening out of employments. The industrial regime will have a bracing influence upon the population. Our present position is very much like that of Ireland before the great Agrarian Reforms, the Co-operative Movement initiated by the late Sir Horace Plunkett, and the revival of industries

* Page 51, Indian Census Report 1921.

which all came together towards the end of the last century and put new heart into the people. In our country, as in Ireland of the last century, "the real problem is one of poverty: not only economic poverty, but poverty of industrial character and of social life."^{*}

(29) *Waste: Another Cause of Poverty*:—I can not bring myself to find fault with the people for their poverty so far as it is the result of the absence of opportunities for useful employment and consequent low productivity. But the happiness of a people depends not only upon *how much* they produce, but *how* they spend their earnings and what part thereof they *save*. In this matter of spending and saving our people have to learn a great deal. It is no exaggeration to say that they will go under unless their whole outlook on life is revolutionized. This is a big subject but a few remarks may be offered. In the first place we must realize the basic importance of thrift in building up individual, as well as social, wealth. Curiously enough, it is often the poorest that are least thrifty. But we should save, be our earnings ever so small. It is the modest savings of the poor—when properly mobilized through the banks—that are the basis of industrial wealth. Saving, of course, is not hoarding, though the latter is better than foolish expenditure.

As to the numerous sources of waste in the mode of our expenditure, Mr. Calvert has given a long catalogue in his analysis of the causes of poverty in the Punjab. He points out how the poorer sections of society in Europe live upon such cheap food as

* Page 1. "The Rural Reconstruction in Ireland."

potatoes and pigs (the latter being a bye-product of dairy farming). The Australian consumes mutton which is a bye-product of wool-making. A rich diet is not necessarily as sustaining as its money-value would suggest. A change in the diet of the people in the direction of greater consumption of vegetables, potatoes and meat would be more economical than the consumption of milk and ghee. At any rate the subject of devising the most economical, and at the same time equally nourishing, foods is one of national importance.

Not more than a passing reference is possible to that considerable waste that takes place on religious and social festivals and observances.

There is also a great deal of social waste—represented by the large death-rate of our population: who can count this human waste?; waste represented by preventible sickness, by the ravages of plague, cholera, malaria, etc.; the diminution of the 'national dividend' caused by the exclusion of the females from all honourable forms of labour; the waste represented by too many men doing the same job; the waste represented by the enormous expenditure on useless litigation and so on.

There is not the least doubt that even with the *existing* scale of production, people would be much better off economically if their lives were ordered upon well-considered lines of national usefulness.

(30) *Paucity of Capital*.—But though the vital importance of consumption can not be gainsaid, it is more usual to direct attention to the methods of *increasing* production than to those of *improving* consumption. Inquiries directed towards the first object have better chance of becoming *immediately* successful

than those directed towards the second. From this point of view, therefore, we are justified in dwelling upon those factors alone that have contributed to the low productivity of our labour—namely, the loss of our industries.

Revival of industries is impossible without accumulation of wealth in the form of 'capital.' Our low productivity militates against our having anything to 'save'. How then to explain the hoarded wealth of the people? What about the steady imports of gold and silver into the country year after year and their mysterious disappearance from circulation? Dr. Leake is right when he understands by the hoarded wealth of the country—"that indefinite but very large sum made up of the innumerable small sums held in cash or jewelry, by the millions of small cultivators who form the bulk of the agricultural population of India."*

An essential problem before the people is to establish banks of the ordinary type or on the Co-operative principle which will draw out a part of this hoarded wealth for the development of agriculture and industry.

But if we Indians regard this hoarded wealth as the prospective source of capital without which no economic development is possible, the European merchants regard it as so much latent 'purchasing power' for their imports. Thus Mr. Ainscough—the Senior Trade Commissioner—after alluding to the heavy imports of gold to the value of 67·58 crores, and of silver to the value of 51·58 crores in the three years ending March 1924, says that this immense 'purchasing power' was not invested in foreign piece-goods,

* Foundations of Indian Agriculture, Page 232.

yarn etc. because of their high and unsteady prices, but that it would be so invested as soon as prices fall.”* Such is the vicious habit of looking upon every rupee in the pocket of an Indian as so much ‘purchasing power’ for imported cloth, yarn, cigarettes or liquor. Can it not be spent in any *other* way to raise our standard of living? But most Europeans regard Indians from the strictly commercial point, as the suppliers of so much agricultural and mineral produce and as the buyers of so much manufactured stuff.

Every scheme of Development (?) or Improvement (?) within the country *e.g.* Reclamation (as in Bombay), Railway-construction or Irrigation or other Public Works, is primarily viewed from the point of its possible bearing upon British Trade, and, only incidentally, of its bearing upon the happiness and prosperity of the people. All human or ethical valuation is lost in thus viewing a whole country as an object of exploitation and its population as a market for the dumping of goods. One is reminded of the bitter words of Ruskin with which he rebuked the English merchants of his time: “you would fain sell canvas as well as coals, and crockery as well as iron; you would take every other nation’s bread out of its mouth if you could; not being able to do that, your ideal of life is to stand in the thoroughfares of the world, like Ludgate apprentices, screaming to every passer-by, “What d’ye lack.”? †

Unless and until, therefore, what little ‘surplus’ wealth annually ‘saved’ by the people is made to accumulate in the country (and not converted into the purchase of imports as the foreign merchants would have it) and until the capital so formed is

* Some Aspects of British Trade. Page 10

† Sesame and Lilies—§ 34.

turned to the development of our industry as well as agriculture, no progress is possible.

(31) *Mr. Calvert's Views Examined.*—To some it would appear that I have unnecessarily laboured this point of the importance of industrial development to our country. To others my remarks would appear as irrelevant to the subject of agricultural progress. Unfortunately, however, an important school of writers *denies* that industrial progress is either desirable or feasible in the case of India, and maintains that agriculture can progress in the absence of industries. As an example of this attitude I will take the views of Mr. Calvert who has devoted two whole chapters of his "*Wealth and Welfare of the Punjab*" to examine this case of agriculture v.s. (?) Industries.

The gist of the discussion is, in his own words, this: "that no immediate relief from the present economic position can be expected from the development of industries. There are many factors necessary for success, and no amount of State aid or State protection can produce everything as with a magician's wand. It is not denied that the State could, by heavy expenditure, bring about a rapid change, but the advantage would not be lasting, and the subsequent collapse would be inevitable. The example of Japan shows the great danger of the artificial stimulus of industry where all the necessary factors are not present in the proportion required."*

Mr. Calvert uses the miseries of the industrial life of Japan as a bugbear to us. Japan's over-population (55 millions over 15 millions of cultivated area), her

over-taxation (Rs. 15 per head) and her large national debt (Rs. 50 to 60 per head) *compel* Japan to work hard. There are also present in Japan the great evils of sweated labour of women and children and excessive State-interference which, Mr. Calvert says, are unthinkable to a Britisher, and would be intolerable in India.

In reply to these remarks it is permissible to say that industrial development has enabled Japan to increase her population, and the capacity of the latter to bear heavy taxation and the burden of a National Debt. The case is exactly analogous to that of England where industries support a humerous population. With regard to the evil of sweated labour, its prevalence is to be deprecated, but it would seem to be a necessary concomitant in the *early* stages of the industrial growth of a nation, and England herself had had to pass through a protracted stage of unregulated labour in the factories. As regards State-interference, not only is such interference now tolerated in all countries, but it is justified on grounds of national stability and well-being; and as to its being resented in India, who would deny that Government, whenever *their own* interest, stability or safety is concerned, exercise an amount of interference which is often irksome and sometimes exasperating?

Mr. Calvert propounds a new theory of international trade when he examines the nature of trade between India and Japan. Referring to the *growing* volume of manufactured imports into India, and of raw exports from India, he says "the real point, however, is not the state of articles exported or imported, but the advantage accruing from exchange.

From one point of view it would appear that, if India imports articles ready for use in exchange for articles which require the expenditure of much labour before they can be used, *India* is the gainer."*

Now the entire theory and practice of international trade as carried on by Western countries, and by England in particular, the whole history of the War of American Independence, the modern progress of Germany—contradict the view of Mr. Calvert.

Mr. Calvert next says that the cry for industrialism proceeds not from the artisan class but from the educated class which has no industrial tradition. This is, unfortunately, true. But the reason is that our artisan class is illiterate and does not understand those mysterious operations of modern industry and competition which are depriving it of the only means it had of earning a livelihood. But it is this class which is the greatest sufferer on account of that economic revolution which was explained in the first chapter. The educated class on the other hand, was naturally the first to understand this change and protest against it. The illiteracy of the artisan and the divorce of the Indian intellectual from industry are matters for commiseration, and not ridicule.

Mr. Calvert then proceeds to examine some 'local obstacles' that will limit the industrial development of the Punjab *e.g.* its geographical position, want of facilities for generating motive power *e.g.* coal, electricity etc., want of capital, inadequate labour supply etc. He also says that the Great War has made international competition far more acute, and people that are not efficiently equipped will not be able to

* Page 161

hold their own in such a fierce competition. He, therefore, advises the people of the Punjab to devote themselves to small industries subsidiary to agriculture e.g. the preparation of hides. "It will probably be found that the devotion of the resources of the province in men, intelligence, capital and enterprize to these industries will provide ample training ground for the faculties required in other pursuits. If the Punjab is to have a great industrial future, the beginnings must be small, the foundations carefully laid and construction must not outpace the capacity of the people. Little but failure and disappointment will result from any attempt to compress six hundred years of the industrial history of Europe into a short period of State-subsidized industry." *

Whether indeed the State will be successful in regenerating Indian industries or no may be doubtful: the work of construction is always slow: but not so the work of destruction. Half-a-century of Free Trade Policy and Railway Construction destroyed industries that had flourished in India for many centuries. If the contention that the Government of India by their fiscal and other policies contributed to the decay of our industries has any force, then it becomes their *moral duty* to do all they can to put new life into our industrial enterprizes. All the difficulties pointed out by Mr. Calvert—and nobody denies their existence—only add to the responsibility of the State in this matter.

Again the limitations of the Punjab have no significance for the whole country. When a plea for industrialization is put forward, we have India as a

* Page 176

whole in mind, and not any particular portion thereof. The industrial possibilities of a province like the Punjab may be, for aught I know, limited; but so may be the agricultural possibilities of Rajputana. India is a vast country with varied mineral and climatic advantages. Some parts of the country have an industrial future, others an agricultural future, still others may have both, and a few may have neither. We must not go on saying "there is a lion in the path" but begin at once.

Nor need we quarrel about the scale on which industries are to be started. Mr. Calvert seems to favour small industries subsidiary to agriculture. Other writers pin their faith on the future being with concentration and integration of industry. In my opinion both kinds of industry have scope in India, though, considering the agricultural aspect of the whole country, decentralization of industries would be more suitable from the point of view of giving occupation to the rural population. The labourers, in that case, would not be violently wrenched from their simple surroundings and thrown into the vortex of town-life.

Let it not be supposed that I am pressing for any Socialistic reconstruction of our industries, so that the State should manage everything and the people should become mere tools in the hands of an omnipotent Bureaucracy. In no other country is the danger of such a state of things greater than in India. Nor, in recommending the decentralization of industries, do I put forward any utopian schemes of the revival of our old industries which is impossible under modern conditions. Our social structure—the caste system, the joint family etc.—must adapt itself to the new

industrial regime. The people must give up for ever, on pain of extinction, their old-world ideas. Their leaders, especially, must teach them the value of discipline, initiative, self-dependence. They must remember that a price has to be paid for industrial progress—the price, namely, of labour, efficiency, discipline, enterprize and energy. Not that we are unwilling to pay this price but we find our efforts going to waste on account of the adverse *conditions* resulting from the policy hitherto followed by the Indian Government. If they have been unwittingly aggressive in destruction in the past, are they not now bound, in fairness, to be paternally active in construction in the future?

(32) *Views of the Fiscal Commission.*—As a rejoinder to the objections of Mr. Calvert some of which I have already examined, I may be allowed to quote here the advantages of industrial development as lucidly stated by the Indian Fiscal Commission. (1) It will increase the productive wealth and enrich the country generally. (2) It will help to redress our present excessive dependence upon agriculture. (3) Apart from the question whether the profits of industries or the profits of agriculture are greater, it may safely be asserted that the profits of industries are more likely to go to the creation of fresh capital than are the scattered profits of agriculture. (4) Industries will also provide additional employment to labour. As the Commission points out, there is a paradox about the supply of Indian labour: there is a surplus of it compared with the requirements of agriculture; and yet there is a general complaint of Indian industrialists that the labour supply is insufficient. The explanation of this paradox is to be

found (a) in the extremely unsatisfactory condition of housing in the towns which discourages labourers permanently settling in the towns, and (b) in the conservatism of the agricultural classes, in their attachment to their own homes and the traditional village life, and in their dislike of regular hours of work and industrial conditions generally. (5) It will increase the real wages of the labourers by (a) supplementing the income of their families some members from which migrate to the town for work and (b) by directly raising the rate of wages of agricultural labourers by diverting a part of the local labour supply to the town. (6) Again, so far as industrial development increases the national wealth, it will, of course, increase the taxable resources of the country and bring increased revenue to the State. It also produces wealth in a form in which it is likely to yield a relatively high revenue. Agricultural wealth is taxable only through the land revenue, which expands but slowly. The profits of industries, on the other hand are taxed mainly through the income-tax, and also, after distribution to individuals, contribute largely to the customs, and both these are sources of revenue which respond immediately to increased wealth. (7) An important result of industrial development can not be measured in term of money. A country industrially undeveloped tends to suffer from a certain intellectual deadness. The outlets for diversity of talents are few. Those who might have shone in a wider sphere have their energies and ambitions cramped in the mould of uniformity. It is hardly too much too say that a certain measure of industrial life and opportunity is an essential condition for building up a vigorous national character. And with regard

to India the effect on the national character is likely to be particularly marked and particularly beneficial. It has long been felt that education in India has not been producing a type of mind with a sufficiently practical grasp of affairs, and industrial training is calculated to provide the corrective required.”*

(33) *Conclusion.*—It has thus been shown that the regeneration of our industries is indispensable for increasing the efficiency of our people, imparting a ‘tone’ to their life, for the accumulation of capital, and, finally, for bringing our efficient labour and increased wealth to bear upon the improvement of our agriculture.

It is not to be supposed that in exalting industries I am disparaging Agriculture. Not only it is even now the basis of all industries in most parts of the world, but in a country like ours its importance can not be over-estimated. For centuries to come it will remain with us our principal source of wealth. Properly organized it has immense possibilities in the future. It is precisely because I am anxious to see agriculture coming to occupy the high place to which it is entitled, that I am pleading here for a wide diffusion of industries and the resulting spirit of enterprize and organization as handmaids to agriculture.

(34) *Recent Changes in the Policy of Government.*—I have examined at some length the views of Mr. Calvert as his presence on the Royal Commission on Agriculture is certain to give them a measure of practical importance which otherwise they might not have possessed. It is to be hoped that they will not

* Paras 42—50 Fisc. Com. Report.

bring about a new orientation in the industrial policy which the Indian Government is slowly coming to adopt in the light of the recommendations of the Indian Industrial Commission and Indian Fiscal Commission. The policy of fixing railway-rates also is being revised. A Railway-Rates Tribunal has been recently set up to judicially inquire into grievances arising on account of unfair discrimination.

As a direct result of the recommendations of the Fiscal Commission and under the pressure of public opinion in India and Parliamentary declarations in England, the policy of "Discriminating Protection" has been adopted by the Government of India. Tariff Boards have been formed to inquire into particular industries. The present Royal Commission on Agriculture would be welcome if its labours were to be complementary to those of the Fiscal Commission. But its *raison-de-tre* would be justly misunderstood if the public saw in it a veiled attempt to pooh-pooh the importance of industries and concentrate upon agriculture.

That our misgivings are not ill-founded will be clear from the following quotation from the Report of H. M. Trade Commissioner for India. He says that though increased duties would be imposed for the protection of Indian industries "there does not seem to be any ground for immediate alarm. The number of industries which would satisfy the three conditions (for protection) is limited, while,—on the other hand—important industries such as cotton, jute, and tea do not require protection. The Government of India are not likely to sanction any extreme measure of protection, relying as they do on import, export and excise duties for a large part of their revenues. Further-

more, the responsibility of protecting the interests of the vast body of agriculturists, who are the backbone of the country, but whose greatest need is for cheap clothing and other necessities, still rests with Government. The interests of the cultivator are directly opposed to those of the industrialist in this matter, and when one considers that over 70 per cent. of the people depend upon agriculture for their livelihood, their interests must tell in the end. It is quite likely that after a few years of Protectionist agitation the representatives of the Indian people will come to the conclusion that their best interests lie in the application of science to agriculture than with the artificial stimulus of industries, which drain their labour into larger towns, and whose claims for protection raise the cost of living throughout the country".*

I take it that in spite of such views of H. M. Trade Commissioner, there is no warrant for interpreting the appointment of the Royal Commission as the virtual abandonment or side-tracking of the Industrial programme, and would refer the Royal Commissioners to the concluding para of the Minority Report of the Fiscal Commission which may be taken to represent the considered opinion of educated Indians. "The economic problem of India must at least now be examined in a spirit of broad-minded statesmanship. India, inhabited by a fifth of the human race, can be of tremendous value, economic and political, both to herself and to the Empire, if development proceeds on lines best suited to her own conditions. If in the process of her attaining her full stature, there is any risk to the immediate interests of the British manu-

factors, that risk must be faced. We think that the risk is remote, not because India is likely to concentrate 'on the simpler forms of manufactures' but because by an intense effort at industrialization, she will grow rapidly prosperous and her requirements of manufactured goods will largely increase. The growing prosperity which will result from the rapid development of industries will create increased demand for manufactured articles, both for those which she can manufacture herself and those which she must import, and the trade relations between the two countries will be put upon a sound economic basis, mutually beneficial to both".*

CHAPTER III

CRITERIA OF AGRICULTURAL POLICIES PROGRESS AND PROSPERITY

(A) OF AGRICULTURAL POLICIES

(35) *History of English Agriculture (1860—1914)*:— We saw in the preceding chapter how in England improvements in agriculture were, in part initiated, and almost wholly fostered, by the growth of industries and large towns. The history of English agriculture during this period (1860—1915) is interesting in that it illustrates the meaning of agricultural progress and also furnishes us with a valuable criterion as to its utility from the national point of view.

The repeal of the Corn Laws and the throwing open of English markets to the supplies of wheat from America, Russia and India had the effect of lowering the price of wheat in England to such an extent as to render unprofitable the growing of wheat on all but the best land in England. The cultivation of wheat in Ireland also, which before the introduction of American wheat was England's most important source of supply, was rendered unprofitable on account of the same cause. In both countries, accordingly, we find a considerable shrinkage in the arable land and an increase in pastures. Thus Sir A. D. Hall calculates that the arable land was roughly 15 million acres

in 1872 in England, and it had fallen to 11 million acres when the War broke out. The English farmers found it more profitable to convert the land into pastures for the rearing of cattle to meet the increasing demand of the towns for meat, milk, and milk-products. Again the number of labourers employed upon pastures is far smaller than that required upon arable land, and on this account the wages-bill of the farmer was greatly reduced. Nor is the farmer called upon to make any considerable outlays upon the improvement of land *e.g.* draining, manuring etc. if it is to be put under grass. The result of this was that the farmer was satisfied with the considerable profits he got "by skimming a large area of cheap land" by putting it under grass. He was not induced or compelled to increase his profits, which he could certainly have done, by a more intensive cultivation of the land. Sir A. D. Hall finds fault with the English land-owners for allowing the tenant-farmers to hold the lands on easy terms and not compelling them to make the most of the land by exacting from them the maximum rents.

Whatever the apportionment of blame as between the English land-owners and their tenants, there is no denying the fact that England had come to depend to a very large extent upon foreign supplies of food when the War broke out.

Sir A. D. Hall gives the following table to show the degree of dependence in various articles of food.*

* Page 12

Imports and Home-production of certain articles
for 1910-1914.

	United Kingdom.	British Empire Overseas.	Foreign Countries.
	Per cent.	Per cent.	Per cent.
Wheat	19·0	39·3	41·7
Meat	57·9	10·7	31·4
Poultry	82·7	0·2	17·1
Eggs	67·6	0·1	32·3
Butter (including margarine)	25·1	13·3	61·6
Cheese	19·5	65·4	15·1
Milk (including cream)	95·4	0·0	4·6
Fruit	36·4	8·3	55·3
Vegetables	91·8	1·1	7·1

English statesmen were not perturbed by this extreme dependence upon outside supplies of the necessaries of life as they had firm confidence in the supremacy of their Navy. But the Great War showed that an effective submarine campaign might seriously endanger the overseas food-supplies of the country, that the protection of the trade-routes might prove a serious distraction to the Navy at the very time when all its energies were required for fighting the enemy on the sea, and finally, a protracted War might so seriously cripple the exports from England and so inevitably augment her needs for imported food stuffs and requisites of War as to completely dislocate the 'balance of trade' and give rise to a financial crisis of the first magnitude. Ever since the War, therefore, the attention of England has been fixed upon the improvement of agriculture with a view

to diminishing, as far as practicable, her dependence upon others in the matter of food supplies.

(36) *Proposals of Sir A. D. Hall*:—Perhaps the greatest advocate of the policy of increasing food production within the country at *any* cost is Sir A. D. Hall, at one time the Director of the well-known Rothamsted Station for Agricultural Research in England. He starts with the postulate that grass land is less productive than arable land. His contention—supported by actual demonstrations—is that the crops grown upon a given area will maintain more cattle and sheep than the grass which is grown on the same area without cultivation would do.

He then proceeds to elaborate five different methods for the intensification of agriculture in England—(1) The creation of extensive farms of anything from 2,000 to 10,000 acres which are to be organized and managed as business enterprises. He sums up the obvious economies of such large-scale farming as follows: (a) economy in management; (b) economy in labour by the use of motor ploughs etc; (c) economy in buying and selling wholesale, in avoiding waste, in preparing for market by methods that are only remunerative on a large scale; (d) economy in the use of land by doing away with the numerous hedges and banks that divide small fields etc.

In addition to these direct economies to agriculture Sir A. D. Hall points out two further advantages of such industrialized farms *viz.* that they will raise the efficiency of agricultural labour and, therefore, its remuneration. There will be no disparity between a field-labourer and a factory-hand. Again, the existence of a graded system of managers and under-

managers upon large farms would provide openings for young men of trained intelligence but without capital. Such large farms will solve the problem of finding employment for those who leave agricultural colleges with a degree or diploma. Such students (who, even in England, come from classes that are not the owners of land) look up to posts in administrative departments or in the teaching line. They can be usefully employed on such farms, as the products of the technical schools and colleges are employed in the factories.

(2) Sir A. D. Hall next advocates the establishment of colonies of small cultivators. Already, in England, a number of persons have been set up on land as cultivators under the Small Holdings Act with a view to retaining them in the countryside and preventing their exodus to the larger towns. The advantages of a small-holding system are perhaps more social than agricultural: They make for the independence of the farmer; they provide a starting point for agricultural workers who begin at the bottom, but have the capacity for rising; they call out great reserves of hard work and ingenuity in their occupiers and the children of the latter also get early used to hard work and are protected from evil effects of town life; finally, the setting up of small holdings generally brings about an intensification of the farming of the land on which they are situated.

On the other hand, Sir A. D. Hall sums up the disadvantages of small holdings as follows: (1) The independence of the small holder is often purchased dearly at the cost of the excessive labour of the occupier and the 'sweating' of his family. (2) There are many losses and failures, both at the starting and

when a series of bad years occurs. (3) In themselves, small holdings are necessarily uneconomical units for dealing with land. (4) Small holdings are only likely to answer for such forms of agriculture as produce a large gross return per acre, and when the proportion that manual labour bears to the other costs of production is high. This almost confines successful small holdings to the production of vegetables, fruit and flowers; as regards the production of meat and corn, and to some extent of milk, the small holder can not compete with the large. But it may happen that the supply of vegetables etc. may soon exceed the demand. (5) The small holder, with his limited capital, is at a disadvantage both in buying and selling.

Some of these disadvantages of small holdings can be removed by the adoption of Co-operative principles both for cultivation and trade, so that the whole area of a small-holding colony would become a single economic unit, combining the advantages of wholesale management with the individualism and hard work fostered by separate ownership.

Sir A. D. Hall advocates that the State should take the initiative in organizing such co-operative agricultural colonies which will bring about a better utilization of the land, both in the way of the increased production of food and the support of a larger rural population.

(3) The third way of agricultural improvement suggested by Sir A. D. Hall is the intensification of agriculture under the existing system. He refers to the carelessness with which a number of English farmers managed their lands. He attributes this to the remissness on the part of the land-owners

to exact the maximum rent from the tenants. "Of course the statement that higher rents make for better farming is not true as a general proposition; but it is sound to say that a condition of no competition for farms, so that the owner has to take any rentals he can be reasonably sure of, is generally accompanied by low farming and restricted enterprise on the part of the tenants."* But the landowners would not have discharged their duty merely by increasing rents. They must equip themselves with agricultural and business education to manage their estates in an efficient manner. Sir A. D. Hall would go so far as to suggest that the State should take upon itself the direct management of all lands which show signs of inefficient management.

(4) His fourth suggestion is for the reclamation of large areas of uncultivable land. Prussia has reduced the reclamation of land to a system. She has also spent vast sums of money on the colonization of such reclaimed land. It has been recognized that a study of the chemical constitution of the soils, and their rectification by the use of cheap artificial manures must form an indispensable feature, in addition to the mere mechanical work of levelling, draining etc., of any scientific programme of reclamation.

Sir A. D. Hall emphasizes that such work of reclamation should be made to afford a considerable volume of employment for large gangs of unskilled labour during the preliminary period of actual reclamation.

(5) Finally, Sir A. D. Hall deplors the decay in the country side of the minor industries depending

upon agriculture. To some extent the decay was inevitable, because of the competition of centralized production. But such industries as can most properly be carried on in close proximity to the land from which the raw material is derived, must be revived in the interest of the rural population. Examples of such industries are the preparation of flax and hemp fibres, the canning of fruit, the drying of vegetables, basket-making, the utilization of timber waste, the growth and extraction of drugs, the conversion of certain crops into industrial alcohol, the preparation of starch.

Sir A. D. Hall also considers the economic aspect of a vegetarian and a meat diet. His conclusion is that the production from a given area of land in the form of corn and other vegetable materials will support about *eight* times as many men as will the meat obtainable from the same land. As he says, about eight to ten pounds of absolute food of vegetable origin are consumed in making one pound of absolute food in the shape of meat. He does not, of course, advocate vegetarianism, but pleads for every effort being made to make England self-supporting with regard to her food-supplies. Farmers will not reconvert their pastures into arable land if it is unprofitable to do so. This depends upon the price of wheat obtaining in England. If foreign supplies of wheat bring down the price wheat can not be grown in England except upon the best land. Sir A. D. Hall advocates the giving of bounties to the growers of wheat to put them on a level with the foreign producers of wheat. If it be argued against bounties that they represent so much payment to private individuals for which the State receives no direct

quid-pro-quo, Sir A. D. Hall would cut the Gordian knot by proposing that the State should itself become the universal land-owner. As he argues: "It is necessary to insist upon the fact that the extent of arable farming is dependent upon the prices for produce; that if the State for its own safety must obtain a maximum of arable land, it may find it necessary to extend some measure of assistance to the farmers, in which case it could secure itself from unnecessary loss by at the same time taking over the land with any increment in value due to its own action."^{*}

(37) *Criticism of Sir A. D. Hall's Views.*—It will be seen from the foregoing proposals of Sir A. D. Hall that he would subordinate every consideration to that of the maximum production of food-supply on the limited amount of land that is available for cultivation in England. The extra cost entailed by this policy *e.g.* the bounties to be given to the farmers, he would regard as *part* of the cost of national defence, in the same sense in which expenditure on the Navy is part of the cost of national defence.

But it may be argued whether there are not other considerations equally important to be kept in view when we deal with problems connected with land. As is well-known, land as a factor of production has three characteristics: it is a free gift of Nature, it is limited in quantity, and it is indestructible. We need not stop here to examine those modifications that have been suggested in this theory of regarding land as a peculiar factor of production, modifications that would have the result of assimilating land with capital. Even with regard to capital, a significant

change has taken place in the attitude of social thinkers towards its rôle in national economy. Formerly (*i.e.* in the beginning of the capitalistic regime) attention was exclusively directed to maximise the production of wealth; now, though production is not lost sight of, equal importance is attached to the *conditions* under which wealth is produced, and the *distribution* of that wealth. If such is the change with regard to capital (which, in a real sense, is the result of human effort and volition; which, though capable of indefinite accumulation, is rapidly undergoing destruction; and which, in spite of a dangerous tendency towards concentration in the hands of a few, does not form the monopoly of a particular class) we must have a very cautious attitude towards land, both as an agent of production, and as a claimant for a share in what Marshall calls the National Dividend.

(38) *Sir J. A. R. Marriott's Criteria.*—I can not find a better statement of the various considerations to be kept in mind when dealing with land than what is contained in the following extract from Sir J. A. R. Marriott's "*Economics and Ethics*":

"The land policy of a country is not always judged with reference to the primary function of land *vis.* the yielding of food. It is expected to subserve purposes other than purely economic. Of other criteria commonly suggested, the following are samples: Does the system of land-tenure promote a sound organization of national life? Does it contribute to the social contentment and general well-being of those classes of the community which live and labour upon land? Does it breed and maintain a population sound in body and mind, and sufficiently numerous to supply the rapid wastage of the great industrial

centres? Does it increase the stability of the social fabric and buttress the structure of the State?"

Sir J. A. R. Marriott applies these criteria to three changes that are at present taking place in the ownership of land in England. (1) The rise of the industrialist who purchases land from the older aristocracy of England. (2) The *tenant-farmer* who, in many instances, is *purchasing* land, instead of merely *renting* it. And (3) the creation of Small Holdings.

With regard to the first, namely, the acquisition of landed property by the industrial capitalist: "If his ambitions are merely social, their satisfaction is a matter of indifference to the community. If, on the other hand, the capitalist brings to the ownership of land a high sense of civic duty, combined with experience and business-skill, and technical knowledge of agriculture, the change of proprietorship is calculated to serve the interests of the nation at large".*

With regard to the second change: "If the new cultivating owners are found to possess, not only the capital necessary for the purchase and the ordinary cultivation of their farms, but also sufficient reserve capital to enable them to encounter the vicissitudes of a very precarious occupation, the change may be all to the good."

As to the creation of Allotments, though as many as 130,000 have been created, under no conceivable arrangement will England be able to supply land to all who want it or feed her teeming population.

Sir J. A. R. Marriott states the different issues involved in determining the right land policy in these words: *Politically*, it is important that the land of the

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country should produce the maximum amount of food of which it is capable, without too much regard for the cost at which it is produced; *Socially*, it is important that the ownership should be so far diffused as to give the maximum degree of stability to the Commonwealth, and at the same time to contribute to the happiness, satisfaction, and general well-being of its individual citizens; but *Economically* the community is interested in the home-production of food and other raw materials only in so far as they can be produced at home more cheaply than they can be bought from abroad. If this latter condition be not fulfilled it might be to the public advantage, from the purely economic point, that every acre of agricultural land should be derelict."

Sir J. A. R. Marriott insists that the three issues should be kept distinct, though in determining the final policy with regard to land due weight should be given to each, to the requirements of national defence as much as to the considerations of opulence, of social contentment, and of individual happiness. But the three issues should not be mixed up. As he puts it, they have been indicated "in order to emphasize the argument that it is essential to the formation of a right judgment to study these questions in the dry light of the laboratory, and in scientific isolation, before the considerations appropriate to each aspect of them be combined in the synthesis which should guide opinion and inspire policy."*

(39) *Illustrations from Other Countries.*—It is not difficult to refer to countries that have emphasized one or the other aspect of the land policy. We may instance *Germany* before the War as a country that

directed her agricultural policy on *political* considerations. Her preparation for the expected War was so thorough-going, that every effort was made—by colonization of waste land, scientific agriculture etc.—to make the country self-sufficient with regard to food-stuffs and the other requirements of war.

Next *Ireland* is a country where the *social* aspect of the land-problem has been steadily kept in view during the last fifty years. A great volume of Agrarian legislation was passed, special administrative machinery set up, and vast sums of money spent from the national exchequer, to secure the contentment of the Irish peasantry. We need not consider here the causes of the wretched poverty of the Irish masses. They were to be found in the presence of alien landlords and the adoption of Free Trade by England. The Irish landlords found the growing of wheat so profitless that they turned their arable land into pasture. The Irish tenants were driven from the land as they were no longer needed. Many emigrated to America. It has been calculated that in the course of the period from May 1851 to the end of December 1913, as many as 4,278,000 Irishmen left the country. The depopulation of the country was proceeding with alarming rapidity, and those who remained in the country were rack-rented. Some relief was granted to the Irish tenantry by the Act of 1870 which provided against arbitrary eviction by granting them compensation. But the most important measure in the direction of improving the Irish *as* tenants was the great measure of Mr. Gladstone of 1881 which was called the Magna Charta of Irish tenantry. It secured to them the three F's—Fair Rents, Fixity of Tenures, and Free Sales.

It became evident, however, before long, that no legislation would permanently solve the problem of Irish poverty which did not aim at converting the Irish tenants into proprietors. Hence the series of measures beginning with the Ashbourne Act of 1885 which, at a total cost of nearly 200 million pounds sterling, has converted a rack-rented tenantry into a prosperous peasantry.

There were certain districts in Ireland, particularly on the barren West Coast, where the population was too poor and congested to be improved by measures of the kind described above. For them special "Congested District Boards" were constituted and large funds (£250,000 per year) placed at their disposal for ameliorating the lot of the poverty-stricken people. The powers granted to these Boards were commensurate with the problems they had to tackle. "The Board might aid in emigration, or in immigration to more fertile holdings; it was to develop agriculture, forestry, fishing, weaving; was, in fact, to concern itself in every possible way with the welfare of these peoples. The aim was not the immediate relief of exceptional distress, a policy whose worthlessness had been indicated by various activities of the Board of Works—but rather by the employment of constructive measures for the development and lasting improvement of the backward districts."*

In *France*, we have the example of a country which is sufficiently large to adequately feed her stationary population. Nor is there to be found "the land problem" in any acute form, thanks to the thorough-going work of the Revolution. Property in land is

* Page 32, Rural Reconstruction in Ireland.

diffused. The size of the farms of the peasant-proprietors is neither too small nor too large. The French tenants also are well-off owing to the *metayage* system of land tenure (which consists in a fair distribution of the *produce* between the owner and the tenant). Thus neither the *political*, nor the *social*, aspect became prominent, and agricultural progress has not been disturbed by either consideration. As Prof. Nourse puts it "France has thought more in terms of individual prosperity of her farming population as furnishing the raw material of national well-being. Agricultural economics has been viewed as the culmination of a mighty effort on the part of agricultural science to put in the hands of the *cultivateurs* of France the most complete intellectual equipment possible for the pursuit of their calling."*

In the *United States of America* also, on account of their vastness and diversity of natural resources, and freedom from the encumbrances, anomalies and anachronisms of social structure, the *political* and *social* aspect of the land-problem has been kept in the back-ground. Indeed there were vast stretches of land awaiting clearance and occupation at the hands of an enterprising people. Not only the rapidly growing manufactures on the Eastern Coast of the States but the progressive industrialization of England created an enormous demand for agricultural produce of every description. Scientific agriculture, therefore, made rapid progress; the whole country was studded with agricultural colleges. In the United States accordingly we have a harmonious combination of industry and agriculture. Their goal "is the most productive use of natural resources, and a proper

* Page 8 Nourse. 'Agricultural Economics,'

balance between extractive, commercial, and manufacturing industry."*

(40) *Lessons for our Country*:—What lessons shall we derive from these examples? Our country resembles the United Kingdom in the density of the population, but we have neither its industries nor an Empire to absorb our increasing numbers. We resemble Ireland of fifty years ago in her poverty but have none of the Celtic faculty for agitation for the redress of political and economic grievances, and are too far removed from England to loom large in her politics. Nor have we the facilities for emigration which Ireland had. We resemble France in the wide diffusion of landed property but there can not be a greater contrast between the thrifty, industrious, and intelligent French peasant and the improvident and stolid Indian rayat. We resemble the United States in their vastness and natural wealth, but in the place of a mobile and enterprising population that makes the most of the gifts of Nature, we have a population that is the *debris* of five thousand years of foreign invasions and internal commotions and that has not thought worth its while to utilize the generosity of Nature for material purposes. As some one has said, we are a poor people inhabiting a rich country.

It is clear that the *political* aspect of the land-problem will never exercise our minds. It is in industries that our dependence upon others is woeful, and may become disastrous in a period of international crisis. In agriculture we shall be able to meet our own wants and spare for others for years to come. With us the *social* aspect is important; but equally

* Page 13, Nourse.

important is the *scientific aspect of increasing the productivity of land.*

(41) *Policy of the Indian Government: Social Aspect.*—

Let us now see what have been the policy and the achievements of the Indian Government in both these directions. It must be realized to begin with that the Government occupies a peculiar position with regard to this subject. It is the biggest landlord and capitalist in the country. It also combines with all the resources of western science a keen sense of responsibility for the well-being and contentment of the millions of people entrusted to its care. We must put to its credit the establishment of internal peace and protection from external aggression; the administration of an even justice; the codification of a complex body of laws to regulate the manifold relations of modern life; the extension of education and improvement in sanitation; a uniform system of currency; an efficient Post and Telegraph Department; the building up, in short, of a form of administration which though alien and bureaucratic to begin with, has not proved incapable of being adapted to satisfy the growing aspirations of the people. The importance of these achievements which are the foundations of material progress can not be exaggerated.

Within the narrower field of Agriculture Government had no comprehensive policy in the beginning. Its position was like that of a distant heir who comes most unexpectedly into the possession of a vast estate. Its energies were absorbed for years in augmenting its revenue from land. It looked little beyond its fiscal interest. It organized an elaborate survey of its property, prepared a cadastral register of its tenants, defined the basis of assessment, and

set up the Revenue Department for the collection of its share of the produce of land.

It was in connection with the ascertainment and collection of its share that Government came to regulate the relations between the tenants and the landlords. In those provinces where there is a powerful landlord class *viz* in Bengal, Oudh Division of the United Provinces, Central Provinces, Northern Madras etc. there exists an extensive body of Tenancy laws for the protection of the tenants and the smaller proprietors. In these, as in *Rayatwari* provinces of Bombay and Madras the right of all persons in any way interested in land have been entered into a comprehensive Record of Rights.

It was also in connection primarily with revenue that Government undertook the protection of the country against famines. The construction of railways and of irrigation works was undertaken partly as a provision for relief-work during periods of famines, and partly as a protection against that calamity. Among minor activities of Government in the same direction we may mention the grant of loans for agricultural improvement, of *Takavi* advances for enabling the impoverished rayat to tide over periods of distress; and finally the establishment of Co-operative societies. The State has undoubtedly done a great deal to secure social contentment by these and other methods. We shall not dilate upon this aspect of the activities of the State as it has been excluded from the purview of the Royal Commission on Agriculture.

(B) OF AGRICULTURAL PROGRESS :

(42) *Government Policy as to Agricultural Progress.*—

Let us then turn to the activities of the State directed to increase the productivity of land. These, I gather, are to come within the scope of enquiry of the Royal Commission.

The history of Government policy in this respect has been lucidly set forth by Sir James Mackenna in his "*Agriculture in India*," 1916. It was at the instance of the Manchester Cotton Supply Association that in 1869 Lord Mayo's Government was urged to establish a Department of Agriculture in each province, primarily for the improvement of cotton. However, only an additional Secretary was added to the Government of India and placed in charge of revenue, agriculture, and commerce. In 1879 the new Secretariat was absorbed in the Home Department, and attention was mostly devoted to the collection of statistics. There was no real progress till 1904. The object aimed at was to increase the revenues of India by the improvement of agriculture; but nothing was done for that improvement, and the expansion of the Land Records staff, and the compilation of statistics almost entirely occupied the attention of the provincial Departments that had been created on the recommendations of the Famine Commission of 1880. Indeed no substantial progress was to be expected in the absence of a trained body of agricultural experts or any line of policy on which they were to work. As Sir James says: "The vast problems of Indian agriculture were being attacked by a mere handful of isolated workers with no trained staff and no organization to give effect to their recommendations. The general impression one gets from the records of these early efforts is that men were groping in the dark. The problems were so numerous and overwhelming that they did

not know where to begin.”*

It was not before the establishment of the Agricultural Research Institute at Pusa in 1904 and of Agricultural Colleges in places like Poona, Cawnpore, Nagpur, Lyallpur and Coimbatore that organised efforts became possible, and also fruitful, on account of the annual grant of Rs. twenty lacs from the Government of India for agricultural improvement.

It is in the Central Institute or the Provincial Colleges that research is started with regard to a particular problem. When the investigator becomes sure of success in the laboratory, “his results are then tested on a field scale. The experiment proved, the stage of demonstration is reached. These processes apply, whether the subject be chemical, agricultural or botanical. Finally there is, in case of seed, distribution from seed farms, where the improved seed is multiplied. There is thus the laboratory, or the small research plot which is the agriculturist’s laboratory; the field test on a small scale, still under strict supervision; the demonstration farm, where the improvement can be brought home to the cultivator; and the seed-farm, where the improved seed is multiplied and distributed”.†

Considerable progress has been made in the improvement of seed either by selection or by hybridization. The improved seed, or it may be, any practical reform which has reached the stage of direct application, is then brought to the doors of the cultivator either by the Agricultural Department or by the Co-operative Department. The two Departments are the vehicles by which the results of research are carried to the field of the cultivator.

(43) *Actual Results.*—A comparative table like the following showing the yield per acre of some of the principal crops grown in England and in the Bombay Presidency serves as a useful index of the lee-way that we have yet to make in scientific agriculture.

England *		Bombay Presidency †		
Crops	Average yield per acre 1915-24 pounds	Crops	Irrigated	Unirrigated
Wheat	1915	Wheat	1250	510
Barley	1635	Rice (Clean)	...	1230
Oats	1500	Jowari	1550	670
Beans	1725	Bajri	...	400
Peas	1523	Gram	1200	410
Potatoes	13,665	Linseed	...	360
Turnips	28,000	Til	...	400
		Groundnut	2500	1150
		Sugarcane	6950	...

A glance at the latest Report on Agricultural Operations in India (1924-25) shows the results that have been obtained in the direction of agricultural progress. As already noted, the most fruitful line has been the spread of selected or improved seed. It would appear, from Appendix I to that Report, that in *Bengal*, improved varieties of paddy that give a heavy yield, and of jute that give finer quality and greater quantity of fibre have made great progress. In the

* Agricultural Statistics 1925 Vol. LX. Part II Page 49.

† Statistical Atlas of the Bombay Presidency 1925, Page 43

United Provinces, varieties of wheat (Pusa 4 and 12, Cawnpore 13,) that are high-yielding and rust-resisting, of cotton that give better lint and higher ginning percentage, of sugar-cane that give more outturn of cane per acre and 50 p. c. of *gur* more than the local canes, have made considerable progress. In the *Punjab* the greatest progress has been made by improved varieties of wheat (Punjab 11 and 17 and Pusa 4 and 12) that ripen early and yield heavily, and of cotton that give long-stapled lint. In *Bombay* improvement in crops is seen in cotton, wheat, groundnut and sugarcane. In *Madras* paddy, sugar-cane and cotton have been improved. In the *Central Provinces*, improved varieties of seeds of wheat, paddy, cotton, groundnut, all of which yield more heavily than the *desi* seeds, have made progress. It has been calculated that the acreage under the improved seeds in the whole country was as follows in 1924-1925.

		acres.	} If Rs. 10 per acre be taken as the additional profit made from the adoption of these varieties, it is estimated that the annual value of the agricultural crops has been increased by seven crores of rupees.
Cotton...	...	3,011,447	
Wheat...	...	2,282,120	
Rice	569,908	
Jute	299,520	
Sugarcane	75,334	
Other crops	521,970	
		6,760,299	

For a connected account of the other activities of the Agricultural Departments in the year 1924-25 reference is invited to the Report in question. Departmental activities are manifold and important. A great deal of work is necessarily of the character of research and investigation. It is maturing for

practical application on the fields. It comprises soil-study, the action of manures and fertilizers, the study of crop-diseases and insect pests. Another branch of the activity of the Departments is represented by agricultural engineering. This takes the form of well-boring, mechanical lifting of water, and the improvement and popularization of agricultural implements. The Departments also run a number of schools and colleges for spreading agricultural education. Finally, they devote attention to the prevention and treatment of diseases of cattle. The results of their work in these and other lines are conveyed to the cultivator by a net-work of District and Taluka Associations and of Co-operative societies.

(C) OF AGRICULTURAL PROSPERITY

(44) *Some Suggested Criteria*:—When we were discussing the right agricultural policy or the measure of progress attained in that direction we had smooth sailing. But we enter upon the high seas of controversy when we take up the subject of measuring agricultural prosperity.

To begin with we note a very useful distinction that has been drawn by Mr. Keatinge between progress and prosperity. "The progress which any country may be making is not, of course, the same thing as its prosperity. The former term denotes the movement that is taking place at the present moment, the latter term the state of advancement that has been achieved by past effort."*

A number of criteria are put forward to demonstrate that we are getting more prosperous, agricul-

*Page 1. Keatinge's *Agricultural Progress in Western India*.

turally and industrially, to which a reference must be now made.

We may set aside such superficial tests as increase in the earnings of the railways, growth in the volume of the sea-borne trade of the country, and finally, expansion of the customs revenue. The increase in each case has been a very substantial increase, but whether it is a sign of *our* prosperity or otherwise would depend upon the view we take of the economic revolution that is taking place in the country. All I shall say would be that there is another side to the shield.

Then there are other criteria which, in the peculiar economic condition of our country, appear still more plausible. They are (a) Extension of area under cultivation; (b) Rise in rentals; (c) Rise in land revenue; (d) Rise in land values; (e) Increased indebtedness and (f) High prices.

It is of the utmost importance to appreciate the causes and effects of each of these phenomena and their interdependence, and we must be very careful in drawing inferences from them. The fundamental cause is to be found in the opening up of internal and external markets for agricultural produce of all kinds. The linking up of the country internally had the tendency of steadying the prices of agricultural products from year to year, and of making them pretty uniform from province to province. External trade tended to raise internal prices—thus stabilized and equalized—to the level of international prices of agricultural staples (allowing, of course, for the cost of transport.) The creation of markets (internal and external) imparted a money-value not only to the crops, but to the land upon which they were grown.

(45) *Extension of Area.*—One result of the rise in prices has been the *extension of area* under cultivation. From the following table we can get an idea of the extension.

	Population millions		Total cropped area million acres		Cropped area per head of population. Acres	
	1890—	1921	1890—	1922-23	1890—	1922-23
Madras ...	32·32	42·8	23·15	43·21	·7	1·01
Bombay ...	17·44	26·7	26·92	43·12	1·5	1·6
U. P. ...	45·74	46·5	33·69	38·42	·7	·82
Punjab ...	19·96	25·1	20·72	29·38	1·1	1·17
C. P. ...	10·52	15·97	13·87	27·68	1·2	1·7

But certain things have to be borne in mind. As a matter of fact the area under cultivation considerably fluctuates from year to year with the nature of the rainy season, but its steady increase is no doubt a sign of prosperity. Reviewing broadly the condition of agriculture during the last century we may say that the first fifty years were a period of depression and shrinkage in area. With the construction of roads and railways, a period of prosperity set in which lasted from, say, 1858 to 1872. During this period, as the late R. B., G. V. Joshi calculates, the cultivated area increased by 80 p. c. from 9·78

million acres in 1852-53 to 16.19 millions in *Madras*; by 110 p. c. from 12.7 millions in 1850-51 to 26 millions in 1871-72 in *Bombay*; by 15 p. c. from 21.3 millions in 1851-52 to 24.84 millions in the *United Provinces*; and by 20 p. c. from 11.1 millions in 1858-59 to 13.3 millions in 1870-71 in the *Central Provinces*. The years 1870-78 mark a period of widespread famines and shrinkage in area. In the following period 1878-99 there was a considerable recovery, but the extension was more than counter-balanced by the growth of population. The worst corner was turned when the famines that marked the closing years of the last century were over. There was revival between 1904-1918 when again there was a great famine.

It will be seen from the table that the cropped area per head has slightly improved. In Bombay Presidency this was due to extension of irrigation in Sind and to the ravages of plague in the whole Presidency. Thus it is calculated that in the decennium 1911-21 plague carried off 2,58,000 persons from the Deccan alone, and the severe visitation of the Influenza in 1918 was responsible for an additional toll of 4,50,000. The pressure of the population has thus been partially relieved. The population of the Deccan was 63,76,150 in 1911 and only 60,45,803 in 1921.

On account of paucity of labour, and the high mortality of cattle, the proportion of fallow land to cultivated land has increased, and this has to be set against extension of cultivation. Again 'the double cropped' area in many villages has dwindled because of wells and *pats* going out of repair. Construction of new works of the kind, of course, adds to the area. These things have to be taken into account before

calculating the *net* extension of cultivation.

When one turns from the extension that has taken place in the past to the *possibility* of further extension in future, one finds that there is little scope. Thus for the Bombay Presidency we have the following figures.*

LAND DETAILS 1922-23

	Cultivated, per cent	Cultivable, per cent	Uncultivable per cent
Sind	30·9	20·3	48·8
Gujrat... ..	73·5	4·5	22·0
Konkan	45·7	1·4	52·9
Deccan	70·2	1·7	28·1
Karnatak	82·2	1·6	16·2
Total	54·3	8·9	36·8

The 'cultivable' area is thus very small in three Divisions of the Presidency. *All* area except forests and free pastures, land incapable of cultivation, and land occupied by river-beds, *nallas*, building sites, is classed as 'cultivable.'

The 'cultivable' area appears appreciably *smaller* than it actually is because of the practice in the Bombay Presidency to place all available culturable waste

* Statistical Atlas, Page 4.

under the Forest Department. Out of 13,839 square miles of Forest area, only 10,309 are of forest proper; about 3091 square miles are pasture reserves, and 439 square miles fuel and fodder reserves. But only 50 p. c of the 'Forests' are of commercial importance; the rest is 'forest' by courtesy only. The withdrawal of all this land has caused great hardship to the populations of those areas. Also the retention of pastures in the Forest Department is a source of grievance. The plea of the Forest Department is that "by placing all available and suitable land under the Forest Department, the people at some cost of present difficulty are thrown on their own resources, and better cultivation of their present land is made imperative, while a reserve exists in the forest areas, part of which may hereafter, on necessity, be made available for cultivation."* The reason for including pastures in the Forest is that grass is made available during times of famines. I would only say that the whole policy of classifying land as forests needs re-examination. Let the 'real' forests be conserved by all means. But land which is 'forest' only figuratively should be made available for cultivation or pasture. Indeed the whole of this vast land can be so utilized as to further the cause of agricultural improvement. At any rate such land will divert to more fertile lands a part of that labour which is being applied to the poorest lands at present.

Even if the cultivable land now included in the forest-areas be made available for cultivation it will not materially lessen the pressure of the population on land. Indeed the relation between land available for cultivation and the dependent population is not

* Page 7. *Statistical Atlas*.

so simple as appears on the surface. In the first place, as the late Mr. Sedgwick points out (Appendix T to the Report on Bombay Census) the forests and pastures are *indirect* sources of food *e.g.* milk, cattle etc., and then there might be subsidiary sources of food-supply *not* connected with land *e.g.* fishing, and finally, there is the possibility of food grains being obtained from outside sources. But we may point out that food-grains can be imported only in exchange for products of local industry. If the latter be unimportant or inelastic in growth then the area *available* for cultivation may be taken as a *rough* indication of the pressure of population on land.

But even then a *rough* indication only. For we must take into account the intensity of cultivation of the land and the standard of living of the population. With a given density per square mile, a tract may be under-populated when regard is had to what the tract is *capable* of supporting, and over-populated with the existing low standard of living. There are disadvantages of over-population as well as of under population. In the former case the population is at the mercy of every economic cause that diminishes the resources of the people. In the latter case it does not get the full advantages of cooperation and division of labour. Between these two evils, as the late Rt. Hon. W. F. Bailey suggested, "the population of a country may be considered as having come to a happy equilibrium when it has reached the maximum number that will allow to each person a proper standard of living, that will give to every one who can work good food, clothing and housing, and a reasonable amount of leisure and enjoyment of existence."*

* Page 10. Bailey.

The general conclusion, so far as the Deccan is concerned would seem to be that with the extension of irrigation, and better cultivation of the available land, and with the release of part of the land at present included under forests, the standard of the existing population can be improved, or, with a stationary standard, larger numbers can be supported.

Turning now to the effect of extension of cultivation upon pastures, it has first to be remembered that the plains in the Deccan have little pasture which is mostly confined to the hills and the valleys of rivers. A great deal of this pasture-land in the hills has been included under forests, but in many villages where such is not the case, cultivation has extended at the cost of pastures. It is true that land becomes more productive when cultivated than when it is left to itself. From this point of view conversion of pasture-land into arable land may be welcome. But we must consider the crop which is raised upon land. If the new area is devoted to grow non-fodder crops like cotton, ground-nut etc. then the supplies of cattle-food would be seriously diminished at the very time when stronger and more cattle is required for cultivating the extra acreage. One of the crying needs of the moment is the cultivation and storage of green fodder of various kinds to compensate for the loss of pasture-land.

Nor must cultivation encroach upon the supplies of fuel, especially in a country like ours where wood is the only fuel used for domestic purposes. Difficulty of getting fuel compels the farmer to burn cowdung. The whole question of manure-supply will be taken up in the last chapter. But it may be indicated here that trees capable of rapid growth and suitable as

fuel must be artificially *planted* and thus cheap fuel must be brought within the easy reach of the cultivator if he is to be weaned from the ruinous habit of burning cow-dung.

Sufficient attention, I hope, has been drawn to such considerations as growth of population, intensity of cultivation, substitution of non-fodder crops for pastures, diminution in the supplies of fuel etc. that have to be taken into account before striking the net advantages of extension of the area under cultivation.

(46) *Rise in Rentals.*—If we may regard rise in prices as the immediate cause of extension of cultivation, increase of population and its growing dependence upon land have brought about a great increase in rentals. It is remarkable that rents have increased in all parts of India, in Zamindari tracts as well as in Ryotwari tracts. In Zamindari tracts the class of middlemen between the cultivator and the State has greatly increased by the process of what has been called sub-infeudation. This has greatly diminished the average income of a rent-receiving family. Thus Mr. Thompson (the Census Commissioner for Bengal 1921) points out that the average annual income of such a family in Bengal is only Rs. 620. "It will be realized that most of the landlord and middlemen class in Bengal are by no means well-to-do."

In the Punjab the conclusions of Mr. Calvert as to the growth of tenancy are: that the number of tenants is increasing; that the area cultivated by tenants to total cultivated area is increasing; and that cash rents are decreasing in proportion to kind rents.*

When we turn to the Bombay Presidency we find the greatest difficulty in tracing the growth of tenancy

* Pages 86-87

on account of frequent changes in the system of classification in the Census Reports. In the latest Report those dependent upon agriculture were classified as landlords (receiving rents only), cultivating owners, cultivating tenants, and cultivators unclassified. The following table gives the numbers for the 4 Divisions.

	Landlords	Cultivating owners	Cultivating tenants	Cultivators unclassified
Sind	44,966	79,162	518,056	7,472
N. Division ...	35,970	326,952	219,193	65,601
C. Division ...	62,293	768,238	90,593	274,130
S. D. (Karnatak Districts)	42,712	383,998	88,366	21,210
S. D. (Konkan Dists.)	30,028	168,759	409,223	62,859

As Mr. Sedgwick pointed out, such a classification was rendered difficult first, by many cultivators having 50 p. c. of their own land, and 50 p. c. of rented land; and secondly, in addition to the ordinary types of ryot and tenants there is a great variety of Inam tenures, sub-tenancies, and part-shares. All such varieties were included in the last column (cultivators unclassified). It will be seen that this class is very large in the Central Division where also the

tenants are rather few. On the other hand in Konkan the tenants form the large majority of cultivators.

What is the cause of the low proportion of landlords and of the cultivating tenants in the Deccan? Is it what Mr. Sedgwick thought it to be? "Is the truth of the matter simply that land in much of the Deccan is so poor in outturn that it can not be sold or mortgaged, and the ryot is, therefore, driven even against his own will to cultivate his land instead of realizing money on it, and squandering that money on *tamashas* and on silk *saris* for his women-folk?" *

But in spite of the low productivity of the soil, the practice of sub-letting land is on the increase in the Deccan villages. The cause is to be found in the sub-division and fragmentation of land due to growth of population. Peace-times encourage this growth and Dr. Mann goes so far as to connect the condition of the country with the number of holders of land, by saying, that the more peaceful the time the more the number of land-holders, and the more disturbed the conditions the smaller the number and hence larger the holdings." †

The size of the holdings has considerably diminished. "In the pre-British days and in the early days of British rule, the holdings were usually of a fair size, most frequently of more than 10 acres, while individual holdings of less than two acres were hardly known. Now, (Dr. Mann is writing of the Village *Pimpla Soudagar*) the number of holdings is more than doubled, and 81 p. c. of these holdings are under 10

* Page 217 *Report, Bombay Census 1921.*

† Page 44 *Land & Labour in a Deccan Village, Study No. I.*

acres in size, while no less than 60 p. c. are less than 5 acres.”*

The evils of sub-division are accentuated by the fragmentation of holdings, and by the fragmentation of cultivation. The economic aspects of these evils will be considered in the fifth chapter. But they have been referred to here to explain the growing practice of sub-letting. Land becomes so minutely sub-divided and fragmented that it ceases to support the holder. He must then abandon the village altogether in search of employment. But he is too firmly attached to his village and his land to take this heroic step. He would sub-let his strips to those who remain in the village and himself would go for employment to the town. The numbers of those who migrate is small, and those who remain in the village are equally anxious to increase *their* own small holdings by leasing out those of their migrating neighbours. The conditions of leasing are of diverse kind. Sometimes the land is given for rent on paying the assessment only (this is true of the poorest land); sometimes it is given for a share of the outturn *plus* the assessment; some times there is a cash rental. The rent is vary high wherever there are irrigation facilities. In the absence of any other alternative occupation *in* the village, or of opportunities to migrate, the villagers bid for such strips of land and rents mount high.

But such rents can hardly be regarded as a sign of prosperity. Such tenants are tenants at will and they pay a contracted and competitive rent. The experience of Ireland shows that there is no limit to the rise of rents under such conditions. “As is natural in a country in the greater part of which there is no other

* Page 46

employment or industry than that of agriculture, the competition for farms is so keen that very large sums—often far in excess of the value of the land, if measured by any standard of productive capacity—are paid for the mere right to occupy.”*

Nor should we forget the fundamental difference in the nature of the payment made in the form of ‘rent’ by the tenant according as his holding is ‘economic’ or ‘uneconomic’. Postponing the discussion of an ‘economic’ holding to a later occasion, we may simply define it as “one of sufficient productivity to support a family at a reasonable standard of comfort *without help from outside sources*”. When the holding is ‘economic’, the fairness of the rent is a matter of great importance, for the rent is an ‘agricultural’ rent. But when the holding is ‘uneconomic’, the rent paid is not strictly ‘agricultural’ rent, but, as the Rt. Hon. Bailey observed, ‘more of the nature of house-rent paid by workmen in towns who, out of the wages that they earn in their various employments, spend certain portions in food, clothing and shelter.’†

Cultivating tenants of such ‘uneconomic’ holdings are worse off than the landless labourers. The latter can go where they like for employment and hope to get better wages. The former, on account of their small strips of land, are tied to the village where there is no scope for employing their extra time, and where accordingly, they soon fall below the proper standard of living.

Such are the causes that have brought about the growth of tenancy and the enhancement of rentals. As the tenants are rarely able to pay the agreed rent (indeed, in many cases, it is an impossible rent), they

* Bailey Page 21

† Page 37

run into debts and we can hardly imagine a more inefficient cultivator of the soil than a rack-rented and indebted tenant of an uneconomic holding.

(47) *Rise in Land Revenue.*—The whole subject of the relations between the landlord and the tenant has been excluded from the purview of the Royal Commission, and so also the subject of Land-Revenue. Each is, no doubt, a vast and complex one, and any attempt to deal with either would undoubtedly clog the enquiry into the main problem of agricultural improvement. At the same time we must not lose sight of the bearing the two subjects have upon the condition of the cultivator who, after all, is the chief agent whose, and through whom, improvement is to be effected.

If the analysis of the causes of the rise in rentals be correct, it shows the unwisdom of making such rise the basis of assessing or revising the land revenue.

This basis has, no doubt, received the seal of approval of the Indian Taxation Enquiry Committee which recently reviewed the whole subject of Land Revenue. It has certainly the merit of convenience, but the inferences to be drawn from it may be unwarranted. In any case the Taxation Committee does well in limiting the assessment to a standard rate of 25 p. c. of the rentals. The proposals of a Committee appointed by the Bombay Government in 1924 to go into the question of its Land-revenue policy are not so liberal. The Committee recommend the discarding of the "profits of agriculture" which is at present the basis of assessment, and the adoption, in its stead, of the "rental value of land." The Committee dwell upon

the impossibility of calculating the 'net profits' or 'net produce' of land. The rental values' on the other hand are easily determined by reference to actual leases that are current in the locality. The Committee do not propose any statutory maximum limit to the percentage of rental value to be taken as the assessment. As to the limit of enhancement at a revision, they recommend 50 per cent. in the case of those lands where the second revision has not yet taken place, and 25 per cent. where it has taken place. The Committee are afraid of any attempt at diminishing the Land revenue. "Land Revenue is the chief source of income to the State. It is also the most stable source. The demands upon the treasury of late years have been on an ascending scale and the Committee are strongly of opinion that no sentimental objection should be allowed to come in the way of a legitimate and fair increase of the State's revenue from land assessment in order to satisfy the growing needs of the nation-building Departments, while maintaining the administrative Departments at their present standard of efficiency".*

I am not one of those who advocate the permanent settlement or the abolition or reduction of Land revenue as the panacea for all the ills of our rural economy. Nor do I wish to dogmatize upon this subject of land revenue. I will only offer a few remarks in the light of the recent authoritative enquiry into this subject,—I mean, that by the Indian Taxation Enquiry Committee.

An important canon of taxation is ability to pay the tax. It has been said in this connection 'that

* Report of the Committee on Land Revenue Policy, Bombay Government, 1926. Page 22.

land revenue is essentially a tax *on things* and not *on persons*, and as such it is not a tax to which the doctrine of progression can be applied. The canon of ability can thus have only a limited application in this case."*

Now if there be any truth in the contention urged in the preceding pages that in the absence of alternative occupations people are *driven* upon land, and that as many as 73 p. c. live by its cultivation, then land revenue partakes of the nature of a *compulsory* levy upon the rural population. If it is a tax upon occupation, the occupation is of such a nature that people, in the absence of any other, cannot *help* resorting to it. Land as a factor of production is as indispensable to the rural masses as salt is as an article of food. The land-tax thus resembles the salt-tax in its universal incidence. It should, therefore, be as small as is consistent with the minimum demands of the finances of the State. This is the *real* test of the pitch of assessment.

Again it is the poorest cultivators who feel it most. This is particularly true in a tract like the Deccan where rainfall is so precarious. What may not be an unbearable charge in good years (of which there is *one* in every *five* years) becomes so in bad years. No doubt the policy of Suspensions and Remissions has lately introduced an element of elasticity in the collection of revenue. But the burden of showing that either Suspension or Remission is necessary has been thrown upon the rayat. I would rather wish that the Land revenue is collected *only* when in a given locality the crops are admitted to be worth, say, 8 annas.

*Page 72. Report.

The Taxation Enquiry Committee has put the case of the poor cultivator in these words: "At the other end of the scale comes the cultivator of the uneconomic holding, in whose case the system of reducing the State's share from a share of the crop of the year to a cash average, coupled with the collection of land revenue at harvest time has led to extravagant expenditure by an improvident class in good years, followed by indebtedness and transfer of lands to the money lenders in the lean ones. Meanwhile, one of the most elaborate cadastral surveys in the world has facilitated transfers, while the elaboration of the Settlement systems has often resulted in producing arrangements which the ryot cannot understand. Even in cases where the assessment has been light, the lightness itself has aggravated these evils, since it has had the result of converting many a land-holder who would have had to cultivate his land if the State's share had been larger into a rent-receiver living on the proceeds of another's labour. The net result has been the creation of a very large number of uneconomic holdings, the holders of which pay land revenue which would be inconsiderable if cultivation were intensive or on a large scale, but rests as a heavy burden upon a small and impoverished holder.

"At the same time, the pressure of the land revenue is by no means the sole or even the main cause of a state of affairs of which low production, heavy indebtedness, and excessive fragmentation of holdings are the chief symptoms. These must be attributed in the main to other causes, such as increase in population, paucity of alternative employments, the law of inheritance, the attachment of the people

to the soil and their unwillingness or inability without assistance to form their estates into economic holdings.

"Nor does it appear that the entire exemption of the small holder from land revenue, which has been suggested in several quarters, would carry the benefits which are generally claimed for it. The exemption would either have to be given at Settlement or from time to time as holdings were broken up below a fixed limit. If given at Settlement, the effect would be to free certain pieces of land from revenue for a period, and the probabilities are that these would be sold by holders, who would be able to secure a bonus equal to the capitalized value of the concession. If they were not sold, the net yield being *pro tanto* increased, the probabilities are that, if the conditions above recited continued, there would be further fractionization and the original conditions reproduced. If the exemption was given from time to time, as individual cultivators were able to show that their holdings were less than the minimum, a premium would be put on fractionization of economic holdings. Moreover, the heavy loss of revenue which would be incurred would have to be made up from other sources, and the burden of the relief would probably fall on industry and so *pro tanto* retard its development and curtail the demand for labour. In the result the position of the poorest holders who remained on the land would be no better than before, while their chances of alternative employment would be diminished." *

The clear statement of a problem is half of its solution and I shall, therefore, leave the subject here.

* Pages 77-79.

(48) *Rise in Land Values.*—Connected with rise in prices and in rentals is the phenomenon of a great increase in land values. It is to be seen in all provinces. The important questions are: has the rise in the value of land helped or retarded agricultural progress? Has it benefited the tenants?

The causes of the rise are not far to seek. As previously explained a very large portion of the agricultural produce (the whole, in the case of the commercial crops) is marketed and prices were steadily rising. Land, therefore, acquired a new value. Its transfer was facilitated. At the same time a new class of capitalists—consisting of traders, professional men like pleaders, doctors etc. and Government servants—was arising which was anxious to acquire land. There were not enough industries in the country in which the accumulated wealth of the rich could be invested. Nor was there, until lately, a wide range of Government paper to absorb the savings. In the absence of such alternative modes of investment, in the absence of banking, and on account of the conservatism of the people, the purchase of land became the main eligible method of using one's wealth. The Indian investor looks to *safety* first, and the continued appreciation in the value of land left nothing to be desired. Further, as long as there is a keen competition among tenants for holdings, there is no difficulty in getting a handsome income from investment in land. Purchase of land thus becomes more profitable than the mere hoarding of one's wealth, or keeping it in the form of ornaments. Even gold may depreciate but not so land, it was thought. Finally, the possession of landed property has always been regarded in India as a mark of

social prestige. A new flow of money was thus directed *from outside the village* towards the acquisition of land, and hence a rise in its value.

Another set of causes was working *within the village*. With the conclusion of Land Settlements and fixity of Government demand for a period of thirty years, the ryots found themselves in the possession of a valuable asset which they began to mortgage for the purposes of borrowing. Sometimes they borrowed to spend foolishly, sometimes to pay the assessment, sometimes to tide over a period of famine. Whatever the object of the loan, such loans became frequent and the village money-lender was always ready to advance money. He did not wish himself to cultivate the land but only get it cultivated by the mortgagor who in course of time became his indebted tenant. So long as there was some margin between what the land produced and what the Government took as its share together with what was just required to support the tenant, it was paying to the *sawkar* to purchase more land. A growing demand on the part of the *sawkars* for more land and more tenants is the second cause of rise in the value of land.

A third cause arose out of the subdivision and fragmentation of land. This evil drove a large or small number of villagers from the village in search of employment. It would be the ambition of the holders of 'uneconomic' holdings to extend them by purchase of additional land. Sometimes they would save enough by employment in the town; sometimes they would dispose of all ornaments etc., and buy the land; sometimes they would borrow from the *sawkar* the requisite money. The prices of small patches of land which a neighbouring tenant or holder wants to

buy naturally tend to rise, often times out of all proportion to their intrinsic value. But such 'fancy' prices are paid.

We must discriminate between the various kinds of purchasers of land. If the new purchasers are *bona-fide* purchasers, they should be encouraged. If they are money-lenders who are taking undue advantage of the necessitous position of their clients, such expropriation should be restricted. Finally, if the purchasers be drawn from the class of cultivators who wish to recover their own holdings or extend their existing ones by additional purchase, every facility should be given to such persons.

Again the rise in prices of land is not a subject of congratulation. As Mr. Calvert points out, (1) a part of the rise is due the *expectation* that prices will rise. Many buy with a view to sell later on. Such speculative demand aggravates the evil. (2) A great deal of capital that has been invested in land has been directed to its acquisition, and not improvement. Such capital neither adds to the area under cultivation nor increases the produce from the present area. Speaking of the Punjab he says "It is remarkable that the rapid rise in price, demand for purchase, and the wealth seeking investment have not resulted in any marked movement towards reclaiming waste areas, draining swamps, recovering land damaged by torrents etc. A very large area of the Province is at present not cultivable, but a goodly portion of this could be made so by judicious expenditure of capital. The almost complete dearth of enterprize in this respect deserves more notice than it at present receives."* Finally (3) inflated land values render it

practically impossible for the small owner or tenant with a little capital to obtain land.

To brighten the prospects even of agricultural improvement, therefore, we want industries for (1) they will divert a part of that capital which is now being unfruitfully sunk in land; (2) they will create a demand for labour and thus draw off a part of the superfluous rural population; and, finally, (3) they will lessen the competition for holdings, moderate the present hectic tendency of rents to rise, and thus, indirectly, lower the prices of land.

(49) *Debt and Prosperity*:—Closely connected with the rise in land-values is the evil of increased indebtedness. But indebtedness has been put forward by some (e.g. Mr. M. L. Darling, I.C.S. of the Punjab) as a sign of prosperity. "The Punjab is agriculturally the most prosperous province in India, and it is probably also the most indebted." *

We need not for our present purpose analyse the causes of indebtedness. The fact cannot be gainsaid. Mr. Darling says: "If the *existence* of debt was due to necessity, the *volume* depended upon credit" and everything conspired to expand the credit of the peasant: the moderation of the demand of the State; ease of transferring land; increase in the price of land; rise in general prices; growth in the volume of resources at the command of the money lenders. The greater the credit, therefore, more the debts. A tenant-at-will who has little credit is indebted to a less extent than the proprietor of a few acres; and the latter is less indebted than the proprietor of many acres. The more

* Page 232. *The Punjab Peasant in Prosperity and Debt*. Cf. the whole Chapter XI.

land a man has, the more he *can* borrow, and the more he *does* borrow. Anything that *contracted* the credit of the peasant e.g. restriction of the right of alienating land as in the Punjab was found to have the effect of *temporarily* diminishing the volume of debts incurred.

Now nobody denies the close relation between credit and debts. A pauper can never incur debts unless he succeeds in imposing upon others. But *why* should credit be exercised? Credit is a curious thing: it is most useful when it is least used; it is like a spring whose force lies in its compression; once let the spring go, and all is over. Credit is like a cake which you can not at once have and eat. Now it does seem to me that the people of the Punjab (and of the Deccan also) are at present eating their cake; indeed very little of it is left. Credit has disappeared, debts have remained. Indebtedness *is* a sign of prosperity when the borrowed amount is used *productively*. We may, thus, rightly measure the prosperity of a successful *business man* by the heavy load of debt that he carries lightly over his head. But when debts are incurred to pay Government assessment, to pay high rents to tide over a period of distress, to meet extravagant social expenses, or to maintain an impossible standard of living, *then* they are a sign of adversity, probably of demoralization, than of prosperity.

In other countries enhanced credit has *not* been followed by growing debts. When the Irish peasants were converted from indebted and rack-rented tenants into independent proprietors at *public* cost, and when an enquiry was made into their condition after a few years of their emancipation, it was found that great

improvements had been made to the land, that the peasant-proprietors had become better off. "They had increased their stock, they had paid off debts to bankers and shopkeepers, and they could get money more easily on loans. *A noteworthy proof of their improved financial condition was the caution they showed in using this increased credit.* The insolvent man can borrow where and when he can; the man with a property which can be made liable acts with more circumspection. The tenant-purchasers avoided incurring liabilities which they did not clearly see their way to meet, and limited their expenditure on improvements to what they could supply themselves."*

(50) *High Prices and Prosperity.*—A word has finally to be said about another alleged cause of our prosperity, the prevalence, namely, of high prices. It would be going too far into the intricacies of the question of Indian currency if I were to dwell upon the *causes* of high prices. The fact of high prices is patent to all. The relevant question is how it has affected different sections of the community? We shall confine ourselves to the agriculturists only. In this connection the results obtained by Dr. Mann and his collaborators in the study of two Deccan villages are illuminating.†

The method adopted was to trace the effect of a rise of prices upon the families in the village. The families were divided into three groups: Group I consisted of families which were able to maintain themselves, at a standard of efficiency and respectability which they considered satisfactory, from the

* Page 26, W. F. Bailey.

† Land and Labour in a Deccan Village, Study No 2 Chapter VIII

income from land and cultivation alone. Group II consisted of those who were, at their own standard, still in a solvent condition, though income from land had to be supplemented by income from their labour to make them so, while Group III (the most numerous) included all those families who could not maintain themselves, at their own standard, even from income from land combined with income from labour, without going into debt. Now it was found, on the assumption that *both* prices and wages of labour rose 50 p. c., that (a) families in the first group became much better off; (b) families in the second group also improved their condition, the improvement being slightly greater than the rise in prices; (c) the general effect on the village population was to *lower* their economic position; (d) with a rise in prices, the gulf between the solvent and the insolvent classes tended to widen, the solvent becoming more solvent and the insolvent more insolvent.

The villages selected by Dr. Mann grew crops for local consumption. The condition of those villages which grow cotton, wheat, sugarcane etc. was not specifically studied. In such cases the cost of production increases *pari passu* with rise in prices, the interest charge is a heavy item, the prices are more uncertain, dependence upon a *bepari* or middleman is greater, and the share of the increased prices that actually reaches the cultivator may be small. Again cultivators of such 'commercial' crops have to purchase the necessaries of life from the bazaar and pay enhanced prices for them. Their *own* cost of living thus increases which is not the case if they grew crops for domestic consumption. It is clear, at any rate, that a rise in prices adversely affects the cultivators of 'uneconomic'

holdings (and they form the great majority) and also the labourers, as rise in their wages always lags behind rise in prices.

(51) *Land Improvement*.—Let us next turn to another set of criteria of agricultural prosperity, *viz.*, the improvements which the cultivators have made in the land. We shall not say anything in this connection about what Government does for the improvement of land. It is the *voluntary* effort of the ryot that is an unmistakable sign of agricultural prosperity. The ryot may (1) construct embankments etc. or (2) sink wells or (3) construct small irrigation channels called *Pats* and *Bandharas*. Are there evidences that such works are being undertaken on an adequate scale? Want of capital can not be pleaded as an excuse for Government advances loans on reasonable terms for such agricultural improvements of a permanent character. It also gives *Takavi* advances during times of famines. Such advances were on a small scale in the beginning, but in the last twenty-five years they have assumed considerable proportions. In the two years 1896-98 about 56.5 lacs of Rs. were advanced; in 1899-1900 over two crores of Rs. were distributed in the famine-stricken area; again in 1911-12 seventy lacs of Rs. were advanced; in 1918-19 more than a crore and half of rupees were distributed; and in 1920-21 the sums advanced amounted to over 70 lacs.*

We may roughly take half of this sum as spent upon permanent improvement of the land, chiefly in the form of sinking of wells. And yet the total number of wells (for irrigation purposes) in the Deccan is just about 1,73,880.

* *Statistical Atlas*, Page 7

	No. of villages	No. of holdings	No. of wells for irrigation	Average size of holding
W. Khandesh ...	1488	58244	10,562	25·8
E. Khandesh ..	1803	121524	26,239	16·0
Nasik ...	1695	125250	25,176	17·8
Ahmadnagar ...	1375	146475	35,238	19·0
Poona ...	1203	162921	25,423	14·5
Sholapur ...	719	100115	23,160	23·5
Satara ...	1356	220377	28,083	7·9
Total ...	9,639	9,34,906	1,73,881	17·8

Thus roughly there are about 18 wells per village, and about 5 holdings of 17·8 acres each per well. About one-third of these wells are *kachha* wells. The sight of wells that are not in use is frequent; and even the wells that are in use may not be fully utilized because (1) owing to the subdivision of land, the wells usually belong to several co-sharers in what was originally one holding; and (2) owing to the supply of water being insufficient or precarious, the necessary bullocks etc. are not always maintained, and (3) again a good deal of money and energy have to be expended upon land before it is ready for irrigation.

The same evils of fragmentation again come in the way of levelling of land, its embankment,

or the construction of water-channels. Such works are, no doubt, to be seen here and there, but we may conclude generally that, except for well-sinking, there is little attempt made at the permanent improvement of land.

(52) *Improvement in Live-stock and Implements*:—An evidence of agricultural prosperity might be furnished by improved cattle and improved implements. Any permanent improvement of the cattle is rendered impossible by the frequent occurrence of famine or scarcity which is keenly felt by the cattle as fodder is difficult to obtain and the famine of 1918 was particularly destructive of cattle. As can be seen from the following table, the cropped area per plough-cattle has appreciably increased.*

	Cropped land per plough cattle.	
	1915-16	1919-20
W. Khandesh	17·1	19·4
E. Khandesh	18·5	19
Nasik ...	14·2	16·5
Ahmadnagar	18·9	22·7
Poona	17·5	21·2
Sholapur	25·6	25·8
Satara	18·5	19·4

Even in 1915-16 the plough-cattle was absolutely inadequate for the work. The disparity was intensified

* Statistical Atlas

by the ravages of the famine of 1918. In the single village of *Jategaon Budruk* (studied by Dr. Mann and his collaborators) this famine caused the direct loss by death of 59·7 per cent of the bullocks, of 80·5 p. c. of the cows, and of 74 p. c. of the buffaloes.

With such ravages and deterioration among draft-cattle, improvements in agricultural implements are either impossible or useless. Indeed the recurring famines are the greatest enemies of improvement of any kind—of land or of the people.

What rude disturbance a famine means in the economy of a village can be seen from the effects of the famine of 1918-19 upon *Jategaon Budruk*, a typical 'dry' village of the Deccan, with a population of 736 in 1917 and a cultivated area of 2272 acres.

(1) the borrowing of Rs. 6000 by *takavi* loans, of which Rs. 3000 was for well-sinking and repairing, and Rs. 3000 for the purchase of cattle.

(2) the mortgage of 335 acres of land by 26 people for Rs. 7,021 which is an addition to the existing debts of the village.

(3) the sale of $65\frac{1}{2}$ acres of land by five people for Rs. 2,137.

(4) the loss of cattle noted above.

(5) 300 people leaving the village for work during the famine, 200 going to a local famine camp the rest going to industrial centres.*

(53) *Test of Real Prosperity*:—After having reviewed the various criteria of prosperity, it is proper to lay down what I regard as real prosperity of a nation. The prosperity of the capitalists or of the land-owners may not mean the prosperity of the labourers—industrial or agricultural. In this connection I would

* Page 135, Land & Labour in a Deccan Village, Study No. 2.

emphasize the *social* criterion laid down by Sir J. A. R. Marriott. Thus we learn from the account of a tour to the Formosa, Java and Hawaii islands by Mr. Keatinge that in the first island the sugar-industry has made great progress. But though it has brought profits to the Japanese manufacturers who wholly control it, it has spelt hardship and ruin to the indigenous Chinese farmers who are *compelled* to put a large portion of their land under sugarcane. Coming nearer home, the tea, indigo, and coffee industries are highly profitable to the European planters but the conditions under which the Indian coolies labour upon these estates are, to put it very mildly, far from satisfactory. To me wealth by itself is no sign of prosperity unless it is known *who* benefits by that wealth. We may as well call an ass 'prosperous' because it carries a load of gold. We should not also confound the *physical* development of a country *e.g.* the exploitation of its forests or mineral wealth &c. as though it necessarily meant the material and moral development of the *native-born* of that country. It is the prosperity of *Indians* that I have in view, and of the *largest* number of Indians. I am by no means hostile to the prosperity of foreign merchants provided that in augmenting their profits they contributed to our prosperity and elevation.

We must not, in conclusion, forget the *moral* significance of wealth. To quote the noble words of Ruskin, "It is impossible to conclude of any given mass of acquired (and I may add, produced) wealth, merely by the fact of its existence, whether it signifies good or evil to the nation in the midst of which it exists. Its real value depends on the moral sign attached to it, just as sternly as that of a mathematical quantity depends upon the algebraical sign attached to it.

Any given accumulation (and I may add, production) of commercial wealth may be indicative, on the one hand of faithful industries, progressive energies, and productive ingenuities; or, on the other, it may be indicative of mortal luxury, - merciless tyranny, ruinous chicane. Some treasures are heavy with human tears, as an ill-stored harvest with untimely rain; and some gold is brighter in sunshine than it is in substance".*

* Unto this Last §37--§39

CHAPTER IV

MAIN PROBLEM OF THE DECCAN: IRRIGATION

(54) *Retrospect.*—In the last chapter we made a careful distinction between progress and prosperity and referred to certain obstacles that were coming in the way of our progress. Before proceeding to consider how best they are removed it may not be out of place to reiterate what was urged in the first two chapters: the necessity, namely, of (1) a wide diffusion of a higher intelligence and the spirit of enterprize among our people; (2) this is best brought about not by the spread of literary education, but by the sterner discipline imposed on an adequate proportion of the population living under urban and progressive surroundings; (3) this urbanization, in its turn, is the result of industrialization. No official agency—however efficient and altruistic,—would be half so successful in inculcating the value of organization upon the people as the actual conduct of industries by them and for themselves. To the extent to which industries are admitted to contribute to the efficiency of labour, to that extent are they an indispensable stage of schooling for what is at present an amorphous, ignorance-ridden and poverty-stricken mass of mortality.

(55) *General Conditions of Agriculture in the Deccan.*—The ground being thus prepared let us at once take up what is, for the Deccan at any rate, the most important problem of agricultural progress, namely, Irrigation. How necessary it is in the Deccan can be

seen from the following short account of the geographical configuration and condition of rainfall, abstracted from the *Statistical Atlas*.—Deccan is part of Peninsular India bounded in the West by the rugged line of the *Sahyadris* which run parallel to the coast line for many hundred miles. Behind these lie the scantily-watered tracts of the Deccan plateau, for the most part an almost tree-less plain, sloping from the rock-bound *ghat*-edge towards the level fields of Berar and Hyderabad. The hills arrest the progress of the south-west monsoon and the land thus left unwatered yields to much labour a bare measure of subsistence. In the valleys of the large rivers, where population clusters near the banks in busy villages, the soil is more productive, but the country is ever haunted by the spectre of famine. The Deccan districts are Khandesh-East and West, Nasik, Ahmadnagar, Poona, Sholapur and Satara. But Khandesh is more akin to the plains of Central Provinces and Berar (especially in its rich fields of black cotton soil, growing excellent cotton and wheat) than to the Deccan. The Deccan possesses large tracts of rocky and uncultivable land. To the West, near the ghats, where the rainfall is heavy, the main crop is rice grown in terraces in the broken country known as the *ghat-matha* or *maval*. Over the greater part of the *desh* or level tracts to the east of the above, a light rainfall, if seasonable, produces good crops of cereals chiefly *jowar* and *bajri*. The ghats are the head-waters of the Krishna and the Godavari, which, after collecting the waters of many tributary streams, some of considerable size, after crossing the Deccan proceed on their way to the Bay of Bengal.

Next to these geographical features, are the

conditions of rainfall which being so uncertain expose the greater portion of the Deccan to the dangers of famines. Careful examination of past records shows that we may distinguish three tracts in the Deccan according as they are immune from, less liable to, or chronically liable to, famine. (1) The *Western* portion called the *Maval, Dongri, or Dangs*—in the vicinity of the Sahyadri and receiving heavy rainfall. (2) The Eastern portion is the *desh*—where the rainfall is scanty and uncertain, and which, therefore, is the famine tract. (3) Between these two lies the '*transition tract*' which holds an intermediate position both regarding certainty and sufficiency of rainfall.

The distribution of area according to liability to famine is as follows.

	Very liable to famine.	Less liable to famine.	Practically safe from famine.
Khandesh W.	—	The whole district	—
Khandesh E.	—	The whole district	—
Nasik Talukas	Yeola Nandgaon Malegaon	$\frac{1}{2}$ Nasik Sinnar Niphad Baglan Kalvan Chandor	$\frac{1}{2}$ Nasik Igatpuri, Dindori Peint
Ahmadnagar „	The whole district except Akola Taluka	$\frac{1}{2}$ Akola	$\frac{1}{2}$ Akola
Poona „	$\frac{1}{4}$ Haveli $\frac{1}{4}$ Junnar $\frac{1}{4}$ Sirur $\frac{1}{2}$ Purandhar Baramati Dhond Indapur	$\frac{1}{2}$ Haveli $\frac{1}{2}$ Khed $\frac{1}{4}$ Junnar $\frac{1}{4}$ Ambegon $\frac{1}{2}$ Purandhar	$\frac{1}{4}$ Haveli Mulshi Maval $\frac{1}{2}$ Khed $\frac{1}{2}$ Junnar $\frac{3}{4}$ Ambegaon
Sholapur „	The whole district except Barsi	Barsi	
Satara „	Khandala Valva Man Khatav Khanapur Tasgaon	$\frac{1}{2}$ Satara Koregaon Wai Karad	$\frac{1}{2}$ Satara Javli Mahabaleshwar Patan Shirala

It will be seen that the Western tract is rather narrow and always mountainous. The rainfall is however heavier and more regular than elsewhere and herein lies its comparative immunity rather than

in the richness of the soil or skill and providence of the cultivator.

The 'transition tract' is less hilly and crossed by many streams, though, as in Khandesh, it is more extensive, and almost absent, as in Ahmadnagar. It is in this 'transition tract' that best cultivation is naturally to be expected. Its rainfall is considerable, the streams are many, and subsoil water abundant. The soil also is fertile and can yield a great variety of crops. Here the cultivation is not so speculative as in tracts further east, and the cultivators are able to practise forethought and system in their agriculture.

But in the 'desh' proper, rainfall is precarious and cultivation speculative. The soil is rich but careful rotation is impossible, for the character of the crop is decided chiefly by the prospects of the season. Subsoil water is scanty and fails often. The general economic condition of the population of such a tract is well seen in the whole of the Sholapur district. "The precarious rainfall of the whole district places the population in an inferior condition to that of other Deccan districts, and the hazardous uncertainty of the seasons discourages the cultivators from enterprise and the practice of good tillage or regular rotations. The continuous uncertainty of rains has compelled the agriculturists to leave their villages for employment in the mills or other industries nearby. The district is still overrun with Marwari and Gujarathi money-lenders attracted by the fluctuations of the seasons which encourage the improvidence of the cultivator, who, however, readily repays the usurer in the alterations of the bumper harvests. The low rates of the Government assessments which average less than nine annas per acre

add a further inducement. The residents who join the ranks of the money-lenders can not hold their own against the keen unscrupulous Marwadi who is nowhere in the Deccan seen to worse advantage than in this district. ”*

(56) *Small Progress of Irrigation*:—We should expect from the preceding conditions of land and rainfall in the Deccan that progress of irrigation is bound to be slow. We have four main kinds of irrigation-works: Wells, *Pat Bandharas*, Tanks and Canals. Of these the first is the result of individual private enterprise (assisted, in many cases, by Government), and the second of communal or joint enterprise; there are many old tanks in the country and a few have been constructed by Government as famine-relief works. The Canals are entirely Government works. In the last century Government undertook the construction of such canals as promised to be *productive*. Experience showed, however, that such works have little prospect in the Deccan: A number of canals undertaken as *productive e.g.* The Lower Panjrah River Works, Kadwa River Works and others had afterwards to be styled as ‘failed productive.’ Indeed the main function of irrigation in the Deccan is to *protect* the people from famines, and only incidentally, to *produce* (interest). This protective aspect of irrigation for the Deccan was emphasized by the Irrigation Commission of 1902-04. If by dint of irrigation you could protect a tract to such an extent as to dispense with expenditure on famine relief, then the capitalized value of such expenditure divided by the protected area would give “the direct protective value of an irrigated acre.” But as the

* Page 105, *Statistical Atlas*.

introduction of irrigation is also indirectly useful to the tract (in increasing humidity of the air, and raising the spring level in wells) and as irrigation confers advantages *e.g.* prevention of the horrors of famines which cannot be measured in terms of money, the Irrigation Commission concluded that, in general, it would be permissible to spend up to a maximum of three times its 'direct protective value' for each acre irrigated, to which may be added the capitalized value of the net revenue anticipated from each acre in payment for the water provided. The sum of these items is the so called "permissible capital outlay per acre" which a 'protective' work must not exceed.*

Armed with this test of the financial soundness of irrigation projects, the Bombay Government entered upon a programme of canal construction which also was broadly indicated by the Commission. The Pravara Canals, the Chankapur Tank, the Godavari Canals, Nira Canal including Shetphal Tank, Mhaswad Tank, etc. are works of this kind. The Pravara Canal has just been finished and the Nira Right Bank Canal is under construction.

In addition to these 'Protective' works, there are the so-called 'productive' works, and also 'minor' works (for which separate revenue accounts are not kept). Figures for the Deccan in 1920-21 were as follows.

Net cropped area = 21,409,000 acres.

Irrigated by <i>Govt.</i> works = 431,000	{	Productive	57096
		Protective	154456
		Minor	219158
			430,710

i. e. about 2 p. c. of the cropped area.

* Page 91—Triennial Report of Irrigation 1918-21 (whole of India).

When this low percentage is compared with the percentage in other provinces of India, our backwardness becomes obvious. Thus according to the latest Irrigation Report (1924-25), the figures are :—

	Net cropped area 000 dropped	Govt. irrigated 000 dropped	Percentage
Madras	37,924	7,110	18·7
Bombay Deccan ...	25,120	428	1·7
Sind	3,950	3,725	94·3
Bengal	23,528	97	0·4
W. Province ...	34,517	2,272	6·6
Punjab	31,720	10,100	31·8
Burma	15,839	1,741	11·0
Bihar and Orissa ...	24,897	826	3·3
Central Provinces ...	17,885	451	2·5
N. W. Frontier ...	2,514	356	14·1
Rajputana	350	27	7·6
Baluchistan	276	23	8·3
Total ...	218,520	27,156	12·4

(57) *Comparative Value of Different Kinds of Irrigation Works.*—How to improve this low percentage of irrigated land is the problem. From the nature of the source tapped, the Irrigation Commission classed Government works as

- (1) Canals with Ghat-fed storage-works
- (2) Canals without such storage-works
- (3) Rainfed tanks.

The general conclusion of the Commission was that works of the first kind were peculiarly suited to the Deccan. The Commission regarded storage-works in the Ghats as doing in an humble way the function of glaciers in the distant sources of the snow-fed rivers of North India. The Commission regarded works of the first class as at once more *economical* and more *reliable* than works of the second; and as for tanks, "they are useful only if suitable sites for them can be found in the zone of unfailling and torrential rains, or when they can be fed from a river or canal."

(58) *Canals*.—Now do the Canal-works possess the advantages claimed for them? That as works of engineering they are a source of ornament and utility to the country must be admitted. But what is the relation between their *cost* and *utility*? It becomes difficult to work out the cost per *irrigated* acre as we must consider (1) the gross area commanded (2) the culturable area commanded (3) the area *irrigable* by the project when completed (4) the area *irrigable* at present and finally (5) the area *irrigated* in a given year. One would expect the last to be constant from year to year under a given stage of the completion of a project. But it is a peculiarity in the Deccan that this area fluctuates violently from year to year. It depends in the first place upon the quantity of rainfall and the filling of the storage-works. Again as the works were meant to be '*protective*', the Irrigation Department interpreted that word strictly, and there was hesitation on its part to supply water for such crops as sugarcane &c., lest there should be shortage at the end of the year. Water was more freely given to the *kharif* than to the *rabi* crops. On the other hand the cultivator looked upon the water as a costly luxury, to be taken

when there was no alternative, and even then to the minimum extent. Thus if the rainfall was favourable he would do without water, or take it later on when there was a prolonged break or a complete failure of rain. Thus water was charged according as it was taken once, or for four months or during the hot weather, or for eight months. In the Deccan, it should be remembered, irrigation does not mean rice cultivation as it does in Gujrat. Water is taken for a variety of crops and according to the exigencies of the season—and hence the extraordinary variations in the amount of land under irrigation from year to year.

Nor is the area actually *irrigated* the same as actually *irrigable*. In some of the older works the two amounts approximate, but it takes a lot of time before the water of a canal comes to be habitually taken by the cultivator.

Again some of the canals and tanks are not entirely, or even manily, for the purposes of irrigation. The Mutha Canal Works supply water to Poona City and Cantonment, and the Ekruk Tank supplies water to Sholapur. The cost of construction of such works is much greater than it would have been if they were built for irrigation alone. Many works were also partially or wholly done as famine-relief works. The Irrigation Commission estimated that "within two hundred miles of the Western Ghats the provision in the Bombay Deccan of assured irrigation by canal will require a capital expenditure of not less than Rs. 200 per acre, out of which the revenue realized will pay interest only on Rs. 50 in addition to working expenses. The net cost to the State will be at least Rs. 150 per acre of canal-irrigated land."*

* Page 52 Irrigation Commission Report.

It must be admitted, of course, that the estimate of the Commission has little significance now, for the rupee has greatly depreciated since then, and the *cost* of construction itself is not a rigid thing. Every improvement in the method, every use of more and more mechanical power for digging, carrying, filling &c. means *less* cost. Some of the latest works *e.g.* those in connection with Sukkar Barrage and the Sutlej Canal are taking advantage of such improvements. Our only regret is that the requisite tools and plants (as in the case of railway construction) are ordered out from abroad and the supervising agency also is mostly European. If only our Public Works had been constructed with one eye upon their utility and another upon regarding them as affording excellent opportunities for encouraging *Indian* enterprize and *Indian* brains, our position would not have been what it is at present.

As it is, gigantic works are begun and finished not to relieve unemployment *in India* but in *England*. A period of industrial depression in England always synchronizes with the expansion of works upon Canals, Developments, Dockyards, Railways, Reclamations, Reconstructions, Remodellings, Renewals, Reorganizations, Repairs.

In a plain country like North India canal-irrigation has immense possibilities, but in Peninsular India the limits are narrow. There are the *physical* limits. In many parts of the Deccan canals are simply impossible at *any* cost, and in other parts, the canals though physically possible are *financially* impossible. The idea that *all* the water that falls on the Western Ghats should be impounded and used is a chimera. As Lord Curzon put it "only a fraction of the surplus

water from the opened doors of heaven can be harnessed for the purposes of irrigation. The rest will spill its unused and unusable abundance into the Arabian Sea and the Bay of Bengal.”*

The more eligible of the sites have been already utilized and the cost would increase if storage-works were to be constructed in the more unsuitable places.

It is not merely the storage-work that is difficult and costly. As Mr. Mollison, at one time Director General of Agriculture in India and who had eleven years' experience of the Bombay Presidency, points out (1) on account of the rolling and hilly character of the country, soils which are suitable for irrigation occur in patches and are at great distances from the catchment areas. (2) The course of the canal, especially near its head-work, has to be tortuous to reach these patches, and therefore, the capital cost is great. (3) The distributing water channels have to be made through light soil not suitable for irrigation. There is leakage of water.

(4) But the real difficulties of canal irrigation begin when the water is led to the fields (often at great cost, and after considerable leakage). The first evil is that of self-efflorescence. It has thrown out of cultivation hundreds of acres of land that have been thus affected. The evil was carefully considered in connection with the Nira Canal by Dr. Mann and Prof. Tamhane and their conclusions are: that the salts are due to the rise in the water-level due to canal, and that the evil can be mitigated by the provision of an effective system of deep and narrow trenches to carry off the salts to *nallas* and other channels of natural drainage.†

* Budget Speech, 1905 † Bulletin No 39 of 1910 (Bombay Government.)

Indeed this and other evils of canal irrigation have become so serious that a "Special Irrigation District" has been created in the P. W. Department to make researches. "The worst affected land can be completely reclaimed at a comparatively small cost by a system of permanent drains, combined, in the first few years, with the restoration of the physical texture of the soil by means of surface-washing or 'leaching' of the salts, suitable initial plantation, green manuring, admixture of coarse vegetable matter etc. Such land has been reclaimed at an average cost of Rs. 146 per acre."*

The evil has appeared in the Punjab also where canal irrigation has made most progress. One method there adopted for lessening the danger of water-logging is the sinking of "tube-wells" of the pattern invented by Major John Ashford, from which water is pumped out by hydro-electric power. This involves of course cost. In India water-logging means Malaria, and responsible persons attribute the deterioration in the health of Poona to the canal passing along the higher outskirts of the town. In any case, it is a poor method of irrigation which, in the absence of costly remedial measures, either poisons the land with salts or kills the people with malaria.

(5) Again it is not merely enough to take canal water to the fields. Are the fields sufficiently large, levelled, prepared and manured for the reception of water? Have the cultivators the necessary capital to spend upon land before they take water? In answering these questions we are confronted with the evils of fragmentation of land and of the indebtedness of the cultivators of

* Page XLII of P. W. D. Report Part II (Irrigation) 1923-24

which more anon. So long as these evils persist canal water cannot be fully utilized. As Mr. Keatinge points out, the evil is cumulative. Water-rates cannot be raised so long as land is broken-up and the peasantry indebted and inefficient; and so long as the rates are low there can be no funds made available to equip the canal areas with an adequate system of drainage or roads without which the canal cannot be fully utilized.

It would indeed seem that the canals represent an advanced type of productive agency to which the peasantry would be long in adjusting itself. Mr. Keatinge refers with approval to a scheme worked out by Mr. Inglis of the Irrigation Department. Its essence lies in Government taking up a large area of land under each canal, levelling it and providing it with requisite roads and drains. Government are to return to each landholder in this area *one-third* of the land which he formerly owned, with this difference that whereas his previous holding consisted of unimproved land with no irrigation possibilities, the area now returned to him would consist of land properly laid off for irrigation and with rights to a permanent water-supply attached to it. The rest of the area would be reserved by Government for leasing to sugar companies. In this way the essential improvements to the land can be made, the requisite skill and capital can be attracted, a profitable sugar industry created, and many of the difficulties removed from which the present system of canal administration suffers."*

The scheme is admirable but it offends against the criterion of *social* justice suggested by Sir J. A. R.

* Keatinge—Agricultural Progress in Western India, 82-88.

Marriott as explained on a previous page. It amounts to the expropriation of the peasantry in the interest of industrial enterprize, probably financed and controlled by foreigners,

(6) A similar danger of prematurely thrusting an advanced means of production upon the peasantry is indicated by the reply of Mr. Keatinge to an enquiry made by the Government of India in 1918. At that time the question of *rapidly* increasing the outturn of food-crops for war purposes was being adumbrated and the opinions of the provincial Directors of Agriculture were invited. Mr. Keatinge suggested as one method of doing so, that Government in all cases where they control irrigation water should issue it *only* for food crops.* Not that the suggestion was adopted. But what can be done under the stress of War can be done under the stress of any other calamity, and the ryots can be *compelled* to grow food as well as commercial crops on pain of canal water being cut off. Can, in that case, Government interference go farther? And yet Mr. Calvert, I.C.S. would say that State-interference is unthinkable to a Britisher and would be resented in India. I am, of course, pointing out here a *theoretical* evil.

(7) Yet another problem is suggested by the possibility of a storage-work in the Ghats being utilized either for the purposes of irrigation or of electric generation. The importance of Ghat-water as a source of electrical energy was realized by the late J. N. Tata and subsequently emphasized by the Indian Industrial Commission. Unfortunately the 'tail-water' which falls into the Konkan side of the

* (Bulletin 84 of 1918) Government of India

Ghats has little irrigational value. Such water would be invaluable if it could be laid on to the thirsty and fertile fields on the *desh*, but in that case "the fall" would not be effectively available for purposes of electricity. I do not know if storage-works can be so constructed as to subserve both irrigation and industry. In an indirect manner no doubt the electricity can further the cause of agriculture—I mean by the "Fixation of Nitrogen" and the production of fertilizers therefrom. These and other possibilities of the Ghats are immense, but the question is whether they do not come in conflict with the claims of irrigation. This is not a mere idle fear. We have an actual instance of such a conflict provided us by the history of the Gokak Canal.

The masonry weir of this canal is situated a short distance above the celebrated Gokak Falls, where the river-bed has a sheer drop of 186 feet. The water thus stored is utilized partly for supplying the Mills which were erected at the Falls in 1885, and partly for the irrigation of a small area of land by means of canal taking off from the reservoir. The bulk of the storage is required for the Mills, and the canal is mainly dependent upon the natural supply in the river, a very fluctuating quantity. Out of the original length of 61 miles only $2\frac{1}{2}$ miles with 11 miles of branches are in operation. The obligations to the Mills are of such a nature that no effective irrigation of the tract from the Gokak Canal is possible. The Irrigation Commission was aware of this difficulty and recommended that a release should be obtained from the undertaking given to the Mill with regard to the supply of water by providing the Mill with engine power for use during the dry season and also paying

the cost of the working. "The expenditure thus involved will not be balanced by the increase in irrigation revenue that will ensue; but the difference would probably be not too high a sum to pay for the sake of the larger area which will be cultivated and protected. We have examined the position with some attention; and although we cannot go into further detail here, we think that there are good grounds for believing that the protective value of any extensions of the Gokak Canal that may be proposed, could be immensely increased at a comparatively moderate net cost to Government, if, by some arrangement of this kind, a release from or modification of the present obligation to the Company, in regard to the dry-weather supply, could be obtained."*

In stead of any release being obtained it has been decided to get over the difficulty by extending the existing Gokak Works. Sanction has been obtained for constructing a dam at Daddi higher up the Ghataprabha and taking off a canal at the same point as the existing canal. When it is remembered that the Gokak Mills are a foreign concern the nature of the issues involved becomes apparent.

(9) The construction of such storage-works in the ghats and of pick-up weirs often means the submergence of villages and frequently the most fertile portions of the valley.

The acquisition of the requisite land is not always an easy or cheap thing and on occasions may give rise to political agitation. I need only passingly refer to the recent history of the construction of Tata Hydro-electric Works in the Andhra Valley and the

* Page 76 Provincial Reports of the Irrigation Commission.

Mulshi Peta Satyagraha Movement which in spite of its peaceful protestations led to violence.

(10) Canal irrigation means heavy working expenses. A reference to the statistics in the appendix shows that they may vary from 20 p.c. to 100 p.c. or in a few cases to a 1000 p.c. on the gross revenue from the work. The working expense per acre also are from Rs. 1-8-0 to 4, 6, 8 Rs. or even more. By any standard such expenses are bound to be high for a great deal of repair and supervision-work which would have been done by the villagers if the channel were private is done by official agency and as such has to be paid for. The accounts etc. of Government works have to be necessarily elaborate and uniform and this involves extra cost.

In the actual distribution of water the cultivators are exposed to a great deal of inconvenience, delay, and even harassment and the sum-total of this 'cost' is often far greater than can be guessed from official reports.

(11) Not the least difficulty connected with canal-irrigation is the apportionment of the water-charge. This differs according as the work is protective or productive. In the Deccan we have the system of 'Agreement Rates.' As the Taxation Enquiry Committee point out, such rates arise normally under two opposite sets of conditions. In the one case there is a very large demand for water by enterprising cultivators who wish to cultivate valuable crops like sugarcane. As much as Rs. 45 to 50 per acre is charged and the rates are revised every six years. The opposite case is that in which the rainfall is normally sufficient to raise a crop, though one or two waterings may improve it. In this case the

advantage in securing terms for regular supply is not only on the part of the cultivator, but also on that of the Government, which as a consequence of the guaranteed payment secures a measure of insurance on the works and so is enabled to reduce expenditure on distribution.

'Occasional' rates—always higher than agreed rates—are charged when water is taken when required and after permission is obtained.*

In the Deccan different rates are charged on different canal-systems according as there is (a) irrigation in blocks, (b) perennial irrigation, (c) irrigation for early eight months, (d) monsoon four months, (e) rabi four months, (f) hot weather, (g) single watering. For lift irrigation half the ordinary rates are charged. Double the ordinary rates are charged as penal rates for taking water without permission.

The latest experiment in fixing water-charge is the 'perennial block system' which has made some progress on the Nira Left Bank Canal and is being tried in other tracts also. It is a six-year agreement, water being guaranteed for sugarcane (which is to occupy $\frac{1}{3}$ of the area) and for other crops (occupying the remaining $\frac{2}{3}$). The cultivator is attracted by the guarantee for the valuable crop and the Department by stable demand and fixed revenue.

It is sad to read in the Report that the work of distribution of water could not be left to the cultivators themselves. Local committees for the purpose were formed but the people seem to be unwilling to combine together and undertake the responsibilities and duties of management and control.†

* Page 106

† Page XXXV. Irrigation Report (1923-24)

This—the loss of communal spirit and resulting helpless dependence upon the Irrigation Department, upon the ‘underlings’ of the Department particularly—is the worst feature of such gigantic works. The cultivator is demoralized.

(12) In those places— as in Sind, and the Punjab where cultivation means canal-irrigation, the dependence of the peasantry is likely to be exploited for political purposes. The cultivators and the land owners have to be in the good books of the powers that be, lest they lose the very bread they eat. They are like so many hostages from the community in the hands of Government.

(59) *Wells*—Not that I want to belittle the value of the noble works we have in the Deccan. I am only pressing for attention being paid to other methods of irrigation that are more feasible and more advantageous to the people. Let not irrigation mean canal-construction as apparently Government think. Even the Irrigation Commission pointed out that whereas the *net* cost per acre cannot be *less* than Rs. 150 for irrigation by canal, people can build wells for about Rs. 100 per acre. “Even, therefore, if the State supplied the *whole capital* required for wells, the financial loss, provided the wells are efficient, would be considerably less than that which would be entailed by the provision of canal irrigation. For this reason it is perhaps even of greater importance in the Deccan than in North India, to avoid taking canals into places which can be equally well served by wells. Here also the State is justified in giving far greater stimulus to well-irrigation, and in making financial sacrifices for the purpose.”*

* Page 52. Irrigation Report.

Government no doubt makes *takavi* advances and lately expert assistance in 'water finding' and boring is given by the Agricultural Department. 'Major Pogson' has been employed for the purpose and though I do not venture to say anything about his being a success, he would be a great benefactor of the Deccan peasantry who could evolve some *scientific* method for the location of water.

It must be remembered that we have not in the Deccan, as we have in the United Provinces, an underground sea. Subsoil water that is flowing in *fissures* in the hard Deccan trap is the source that is to be tapped. If you strike it, well and good; if you miss it even by a few feet, you may bore to the antipodes and yet reach no water. Hence the importance of 'locating' water. Well-construction is therefore not possible in *all* places, neither is the well unfailing. The water diminishes with the progress of the hot season and if it is not replenished by timely rain, the well goes dry. Well-construction is again costly and often the well is deep and the lifting-charge for water may be great. Admitting all these drawbacks, I yet maintain that a great deal can be done (and must be done) for well-construction. The Deccan peasantry appreciates well-irrigation. As we have already seen fragmentation and indebtedness come in the way of sinking more wells, and repairing and utilizing the existing ones. But, provided the cultivator has the necessary capital or can command it, nothing is so good as well-irrigation. He is independent; he is able to apply his own labour and that of his family to the field for the larger part of the year; he is able to watch the growing valuable crop; he is able to make the best use of all farm-yard and other manure.

Irrigation demands careful manuring in the Deccan as in other parts. The cultivator, finally, is able to provide employment to labour in the village. In fact successful farming is impossible without irrigation in one form or another and well-irrigation is peculiarly suitable to conditions in the Deccan. There is no waste of water in taking it over useless soil. A well is sunk just where it is wanted, and it cannot be far away from the village.

(60) *Patasthal Irrigation*.—Yet another indigenous form of irrigation which does not attract the attention it deserves is *Patasthal* irrigation. In a hilly and broken country like the Deccan, there are innumerable *nallas*, streamlets, and rivulets which carry a great volume of water in the rainy-season, but are dry for the rest of the year. By putting a weir or *bandhara* across the stream the water is impounded and then conducted through channels or *pats* on to the fields. The weirs may be solid and permanent structures or *kachha* works to be built every year. In former times such works were very common and their remains are to be seen even now. They are of considerable importance in the Nasik and Khandesh Districts. The Irrigation Commission was aware of the utility of of these works. "These channels cannot command the country at any great distance from the banks of the stream, but they nevertheless irrigate considerable areas, and are often held by several villages. The works are managed by the people with considerable skill, every drop of water being utilized by means of successive *bandharas*, and the channels are, when necessary, worked by rotation."*

The causes of the decay of this most useful form

* Page 64, Irrigation Commission Report

of irrigation were four in number: Disruption of the communal life of the village, and the resulting inability to co-operate towards a common purpose; growing fragmentation of land; growing indebtedness; above all, the policy of Government in levying a charge upon this irrigation, known as *Patasthal* charge as a charge is levied upon well-irrigation known as *Motasthal*. On all such *Pat*-irrigated lands a consolidated land and water charge was levied, and it was collected year in and year out, irrespective of the water being used or not. The charge was so high that rather than take water from the *Pats*, the cultivators allowed the works to lie derelict. The theory of levying the charge is obvious: just as the State is the proprietor of all land so it is the proprietor of all water—either flowing on the surface or subsoil water. Every 'water-advantage,' therefore, came to be taxed. The method adopted in determining the assessment was most elaborate. The fixed assessment varied according to the volume of water, and distance of the field from the source of the water. Maximum rates were fixed according to the quality of the soil and volume of water and then they were adjusted according to a *jantri* (or table). Even the Settlement Manual is forced to call the *jantri* 'a cryptic document' and characterizes the whole method as "undesirably obscure." Government maintained that "*Patasthal* tax was a tax on the income of the landholder in his capacity as landlord, or a tax on rental value, and the fact that Government did not construct or maintain the *Pat* no more barred their taxation than private origin bars income-tax on trading profits." *

* Page 17. Supplement to the Bombay Survey and Settlement Manual.

All this is true. But there is a well-known canon of taxation that the goose that lays the golden egg should not be taxed into sterility or death. Government realized this and in 1907 the *Patasthal* assessment was discontinued in the more precarious tracts of the Deccan. In others there are still two rates A and B, the former being charged when the water is flowing all the year and the latter when it flows for a short period. Then the rate is to be charged 'after inspection.' The A rate is fixed and the B rate is occasional. The present tendency is to convert the A rate into the B rate wherever possible. But it seems to me that a far more liberal policy must be adopted by Government in this matter. In view of such works being constructed and managed privately, they should not be taxed *at all* or *very moderately*. Government should *actively* help the construction of such works. The whole country should be examined with a view to reviving the old *Pats* and constructing new ones. Every running stream should be harnessed. The benefit of thus intercepting water in its furious and destructive career to the river will not be confined to irrigation only. A great deal of erosion that is at present taking place will be stopped and the fertility of the soil maintained. Above all, the peasantry will be taught practical lessons in co-operative-management and the value of this *moral* education cannot be over-estimated.

It has been laid down in the Settlement Manual that the principle of Government with regard to such works is "that there should be the maximum of encouragement, and the minimum of penalty for any such utilization of natural resources." This principle has not been applied in practice. But I regard the

encouragement of the construction such works as far more important than canal irrigation or well-irrigation. I should not remain satisfied until the whole of the Deccan is studded with works of this kind, to the diffusion of agricultural prosperity, and the contentment of an independent and sturdy peasantry. It is not unusual to have wells along the channel or *Pat* which pick up any extra water which flows through the *pat*. Such wells are extremely useful. They are able to give water to the fields just when the *pat* fails or is about to fail. I cannot imagine a more admirable combination than that of *Patasthal* and *Motasthal* for purposes of irrigation in those tracts where natural conditions permit the construction of such works. They combine all the advantages of canal irrigation without its disadvantages. Being on small scale the peasantry can manage them easily. Even if a work of this kind 'fails' the resulting loss will be small.

(61) *Tanks*:—As in the case of *Pats*, a number of old tanks are lying in disuse. Government have constructed a few big tanks and maintain them in repair. But the responsibility of repairing the smaller tanks was thrown upon the villagers, and they neglected their work. In the repair of old and construction of new ones Government should follow the same liberal policy. Let a part of the money spent upon canals be diverted to these small, unpretentious, but not less useful, works. Because a tank goes dry in autumn, it does not mean that it is useless. It has probably saved the surrounding fields at a critical moment, and it dries up like a flower when its function is over.

(62) *Embankments*—We naturally go from the

subject of *Pat Bandharas* to that of field-embankments. In a country like the Deccan where rain-water is so precious, every drop of it that falls on the fields must be conserved. The fields must be properly levelled and embankments put upon their sides. An operation that is not properly attended to is that of ploughing them in the hot season. If the soil is turned up and pulverized and exposed to the fertilizing rays of the sun it will absorb the occasional shower that falls like a soft sponge. But few cultivators have either the capital or inclination to look to these things. They scratch the fields when the rains set, drill or broadcast what seed they buy or borrow, and of course reap what they have sown. When one goes into the open country and sees the fields exposed to the fury of the running waters, with an elevation in one place and depression in another, the water cutting deep gullies wherever it can and carrying off what is most valuable in the soil, one wonders whether people look upon agriculture as 'work' or 'play'. If they look upon agriculture so lightly, there is something fundamentally wrong with them or their condition. The latter is probably the case. Their burden of debt must be reduced; their lands must be consolidated; agriculture must be made less of a gamble in rain than it has come to be in a large part of the Deccan.

(63) *Dry-farming* :—Seeing that a large part of the Deccan must for ever be beyond the pale of any irrigation, the possibilities of Dry-farming must be fully explored. We are told that in other parts of the world where rainfall is equally precarious dry-farming is practised with success. Thus Mr. Keatinge who visited the Middle West of the United States of America tells us that there the holdings are of 160

acres, and the average rainfall is between 15 to 20 inches. Land is ploughed deep immediately after harvest: frequent ploughing is resorted to whenever evaporation is expected; half the land is kept fallow every year: deep sowing is effected in the fall and a deep-rooting crop like wheat is selected for the purpose.

Mr. Keatinge's conclusion is that our problem is more difficult than that of the Middle West of America. Even a tithe of 160 acres would be a large holding in the Deccan; the *mal* land is mostly infertile; rainfall far more precarious: the implements are primitive, the heat is intense. We must, therefore, work out our own problem of dry-farming.*

The experiments of the Agricultural Department in this direction, in the study of moisture-retaining capacity of soils, green-manures etc. are of very great value, and should be encouraged.

(64) *Afforestation*:—Every kind of irrigation in the last analysis depends upon rainfall. Is rainfall in the Deccan declining? Statistics show that that is the case. It has very much declined within living memory. This is a grave situation. All talk of irrigation is wasted breath if rainfall is to decline progressively. If the deficiency in rain is found to be connected with causes beyond the control of man, *e.g.* with a change in the *direction* of the monsoon then all is over with our Deccan. We would be a desiccated desert and share the fate of Assyria and Babylonia. God forbid that this is in store for us.

But it may be that the diminishing rainfall is, partly at any rate, due to the disappearance of the

*G. F. Keatinge— Report of a tour in America, Hawaii Formosa &c. 1914.

forests. Extension of cultivation has denuded the hillsides and the plains of trees. The increasing demand for fuel is also responsible, and until lately the M. S. M. Railway used wood for its engines. Continued deforestation is attended with the gravest consequences. Not only does the rainfall diminish in amount, but less of it is retained in the soil, and its scouring action upon the landscape is aggravated. This has been realized in the Punjab. The destructive action of the 'choh' there is like that of a mountain stream in our country. The Punjab Government have acquired such hills, and planted them with trees and grass with a view to mitigating the damaging action of the 'chohs.'

The responsibility in this direction lies entirely with Government. As we have seen all land that is not culturable is under the Forest Department. Government realize it. They say "the ultimate result of the conservation and *reboisement* operations must be an increase of fuel supply already very short which will render available for manure the cattle-droppings now used for fuel. In places the growth of trees on the sloping sides of hills must check the damage done by the abnormally heavy falls of rain."*

But though the danger and its effects cannot be better stated little is being done. The relation between deforestation and loss of manure by the burning of cattle droppings must be stressed. Wherever possible quick-growing plantations of trees must be raised for fuel. Also the reclothing with trees of the naked hill-sides must proceed on a far more systematic scale than is at present attempted. The Forest

* Statistical Atlas, Page 8.

Department must not look to the revenue to be obtained by exploiting as quickly as possible what takes years and centuries to build, but to the larger bearings of Forest Wealth upon national economy.

Such are some of the main requirements of Irrigation: Extension of well and *Patasthal* irrigation; systematic embankments of fields; abating the scouring action of rains by afforestation etc.

CHAPTER V

CONSOLIDATION AND LIQUIDATION

(A) CONSOLIDATION OF HOLDINGS

(65) *Introductory* :—It has been frequently stated in the preceding pages that one of the main obstacles in the permanent improvement of land is that it has been 'sub-divided and fragmented.' This evil is to be found in most parts of India and demands immediate attention. In order that we may be the better able to tackle the problem, reference to the experience of other countries would be valuable.

(66) *Experience of England* :—The division of land into small narrow strips was to be found in England also. The obvious disadvantages of the open field system were realized in England as early as the 14th century, and ever since then the face of the land of England is being changed. Some of the enterprising land-owners of that time and some from the wealthy merchant class that was then coming into prominence began to 'enclose' or "fence off" their land, with a view to its better utilization.

As Mr. W. H. R. Curtler points out we should distinguish four kinds of enclosures in the 15th century: (1) enclosing the common arable fields for grazing, generally in large tracts. (2) Enclosing the same into smaller fields, generally of arable. (3) Enclosing the common pasture, for grazing or tillage. (4) Enclosing the common meadows or mowing grounds.

The chief motive for enclosure was, of course, the raising of sheep, as a profitable trade in wool had developed. Though the enclosures deprived the peasants of their common rights of pasture etc. and drove away some from land, they were a sure sign of agricultural progress. They put a stop to the exhaustive and wasteful common-field system of cultivation; they gave rest to the land that was being continually cropped without manuring; they made the scientific breeding of sheep and cattle and horses possible. In spite of opposition on the part of Parliament and the lament of philosophers like Sir Thomas More, enclosures progressed throughout the 16th and 17th centuries. Though the price of wool was no longer the incentive, another was furnished by the growing demand for corn and meat. As Curtler points out, the history of English agriculture in the 18th century is remarkable for several features of great importance. It first saw the application of capital in large quantities to farming. It also strengthened the tendency to consolidate small holdings into large farms. Owing to mechanical inventions and the consequent growth of the factory system, the great manufacturing towns arose, whence came a great demand for food, and to supply this demand farms, instead of being small self-sufficing holdings just growing enough for the farmer and his family and servants, grew larger, and became *manufacturies* of corn and meat".*

Instead of Parliament opposing enclosures, it now passed private Acts to facilitate them, and between 1760-1797 as many as 1532 Acts were passed, enclosing 2,804,197 acres.† As the procuring of such

*Page 162, Curtler.

† Curtler, Page 163

Parliamentary Acts was expensive many were effected by private negotiation. Special Parliamentary Acts were dispensed with after 1844.

It is important to understand the effects of enclosures upon the agricultural population of England. The smaller peasants, being deprived of their rights of pasture, could no longer afford to keep sheep or cows, and soon had to give up agriculture altogether, and either emigrate, go to the towns, or turn into landless labourers. Indeed the rise of an absolutely landless class of labourers was the most deplorable result in England. The small peasant was the more readily driven from land as he at the same time lost what income he and his family got by domestic industries of weaving etc. We must also trace to the enclosures the decay of the English yeomanry—once the pride of England. There arose only three classes connected with land: the landowner possessing vast estates; his tenant-farmers; and the landless labourers working on the farms.

It will be seen from the foregoing that the enclosing (and consolidating) movement was (a) due to the conversion of arable land into pastures and (b) intensified by the desire for 'capitalistic farming' since the 18th century; that (c) it was the work of the big landowners at the expense of the small proprietors; (d) that, though originally opposed by Parliament, it was later on facilitated by it when the landed aristocracy was supreme in Parliament; (e) that on the whole it laid the foundation of agricultural progress of England.

(67) *Contrast with Conditions in India.*—Now what do we find in India? Agriculture is still in 'the open field' system. It is still dominated by

conditions in which each tract and each village in it tries to satisfy its own agricultural needs. As Dr. Leake points out "The small holding and system of mixed cropping are obviously the economic solution best adapted to the conditions, the drawbacks of which would not become apparent until the increasing population begins to place a strain on the productive capacity of the soil. So long as the possibility of extension of cultivable area remains, an increase in number of families as generation succeeds generation is not necessarily accompanied by a reduction in the size of the family holding, and it is only when this extension has reached its limit that either a reduction must take place in the size of the holding, or a certain number of families must suffer alienation from land".*

The evils of sub-division were held in abeyance so long as the tradition of the joint-family was strong. Indeed, the joint-family had the advantage of securing the co-operation of the labour of all its members—male and female.

But when every son of a father began to insist upon a partition and separate management of his own share of the family-estate, the evils of sub-division and fragmentation became acute.

It has been well pointed out by Mr. Keatinge that the problem of sub-division in India 'presents two distinct features. The first is that the holdings tend to become very small. The second is that individual holdings, whether large or small, tend to become broken up into a number of separate blocks, often situated at a considerable distance from each other. These two tendencies differ both in their origin and in

their results, and it is necessary to distinguish between them. The former should be designated as 'sub-division' of holdings and the latter as 'fragmentation' of holdings. The latter evil does not arise directly from the Hindu Law of inheritance, but has its origin in a desire to provide an automatic method of securing a mathematically accurate partition of a holding amongst the heirs."

(68) *Extent of Sub-division and Fragmentation.*—Village-studies made by Drs. Mann and Slater throw interesting light on the alarming extent to which these evils have been carried in different parts of India. The results revealed by a careful statistical enquiry made by Mr. Calvert in the Punjab—which province we resemble most in indebtedness and small peasant-proprietorship—are instructive. He points out :

(a) About 17·9 per cent of the owners of cultivated land in the province possess *less* than one acre of such land; but the area thus owned is only one per cent of the whole.

(b) About 40·4 p. c. own from one to less than five acres; the land involved is about 11 p. c. of the whole.

(c) About 26·2 p. c. possess from five to less than 15 acres, and own about 26·6 p. c. of the land.

(d) About 11·8 p. c. own from fifteen to less than 50 acres, and account for 35·6 p. c. of the land.

(e) About 3·7 p. c. possess fifty and more acres and own, at a rather rough estimate, 25·7 p. c. of the land.

"Thus while the majority of the Punjab peasants own very small parcels of land, the greater portion of the cultivated land in the Province is held in holdings of over 15 acres."*

*Page 3 The Size and Distribution of Agricultural Holdings in the Punjab, 1925.

In the absence of such a detailed enquiry it is impossible to say what the state of things is in the Deccan. Figures have been given in the Appendix to show the size of holdings in the seven Districts of the Deccan. The average size of the holding appears to be 17·8 acres. But this average is meaningless for we do not know what is the average size of the holdings held by the *majority* of cultivators. The observation of Mr. Calvert that the holdings become *smaller* in areas of assured rainfall seems to be confirmed by conditions in the Deccan. For in all the hilly Talukas of the Sahyadri, the holdings are *much* smaller (average about 5 acres) than they are in the plains (average about 17 acres). This is indeed to be expected.

A better insight into the progressive evil of fragmentation and its real meaning is obtained by the study of a typical village, such as that made by Dr. Mann of *Pimpla Soudagar*. The increase in the number of holdings and diminution in the size of each were as follows :

Year	Number of landholders.	Average size of holding.
1771-72	19	40 acres.
1791-92	35	21 „
1811-12	48	15½ „
1829-30	52	14 „
1840-41	54	14 „
1914-15 (including 40 <i>Inam</i> holdings)	156	7 „

Excluding *Inam* land

Of these 156 holdings only 20 are held as joint property of several members of the family. Only 29 holders have more than 10 acres per head, and 127 less than 10 acres each. Nor are the plots of each holder to be found in one place. The 156 holders have between them 718 separate plots. Their different sizes are as follows.

Size of plots	No. of Plots of each size
Over 10 acres—	8
9—10 "	0
8—9 "	2
7—8 "	8
6—7 "	1
5—6 "	8
4—5 "	20
3—4 "	17
2—3 "	67
1—2 "	164
below 1 "	428

Land, thus fragmented, ceases to support the holders of small plots and they then leave the village after selling or subletting their plots. Thus in this village out of 156 holders 109 actually cultivated the land. Thus the area *cultivated* per holder tends to be greater than the area actually *held*. But as the area thus acquired is in small scattered patches, there still remains the evil of fragmentation of *cultivation*. As Dr. Mann puts it "while the area cultivated per man is greater than the amount held per man, the number of fragments per cultivator is greater than the number of fragments per holder." *

We must thus distinguish between fragmentation of holdings (which has reference to rights of property)

* Page 53, *Land and Labour in a Deccan Village—No. 1.*

and fragmentation of cultivation (which has reference to agricultural operations). The former becomes an evil because it leads to the latter.

(69) *Resulting Evils.*—Frequent references have been made, in the preceding pages, in connection with the growth of tenancy and rise in rentals, to the evils of extreme sub-division and fragmentation. We may summarise other evils as follows: (1) A great deal of waste of time is involved in cultivating small scattered patches; such patches cannot be properly cultivated and watched, and many (being too small) go out of cultivation altogether. (2) No permanent improvements in the form of embankments, fencing, wells, etc. are possible and even the existing improvements soon fall into disrepair. (3) The holders are too poor to adopt improved methods of cultivation in the form of implements, manures etc. (4) The entanglements of small plots give rise to feuds and litigation, and engender disharmony in the village. (5) The cultivator is not able to go and live upon his farm even if he is anxious to do so, because his land is in ten different places. (6) Again outsiders with capital cannot easily get land (in one plot) in such a village and all progress in agriculture is thus stopped.

(70) *Suggested Remedies.*—In considering the remedies for the mitigation of these undoubted evils, we should make clear to ourselves what exactly we want. (1) Do we want the cultivator to cultivate (and not necessarily *own*) one or two large plots in the *same* place, instead of many plots in many places (apart from the question to *whom* the plots belong). We may call this *Consolidation of Cultivation*. Or, (2) do we want to *bring together* the scattered fragments which a holder *owns* in many

places, apart from the question of the *total* area of such fragments. We may call this *Consolidation of Fragments*. Or, (3) finally, do we want to so arrange the holdings as to make each an *economic* holding? We may call this *Consolidation of Holdings*.

Again in bringing about each of these results shall we resort to (a) mutual negotiation and exchange, or (b) Co-operation or (c) legislation and compulsory expropriation?

I am not a believer in revolutionary methods, though it is amusing to note that writers, who are otherwise most conservative, have suggested revolutionary methods of dealing with the land-problem in India. One such writer is Professor H. Stanly Jevons M. A. of the Allahabad University who would bring about a veritable social revolution—and that too in a province which is so thickly populated, so conservative, so permeated with the rights and privileges of ownership and tenancy, and finally, so entirely agricultural as the United Provinces. He would, with the help of Government agency, (with due safeguards, of course) altogether obliterate the existing field-boundaries in a village, restrip the holdings so that they become nicely rectangular and regulary arranged, enlarge the holdings at the same time, lay out good roads and small tracks in the village; he would not forget to give to each village a school, and a few bicycles to enable the villagers to go about and thus 'improve their standard of living.' The redistribution and enlargement of holdings would of course deprive a large number of people of their small plots of land. Professor Jevons would send away such landless people as colonists to extensive cultivable lands that still exist in Native States like Bikaner or Gwalior,

or in the Central Provinces. Even when the reorganized village is thus purged of its superfluous population, owners would still either divide their lands or sublet them. Under the new regimen Professor Jevons would simply prohibit both the evils by legislation.

It is clear that the scheme of reorganization proposed by Professor Jevons is utopian. It is certainly *ideal* in theory, but *idle* as a practical proposition. I realize as much as any body else the grave evils of fragmentation, but I would proceed with very great caution to remedy them. My reasons are clear. (1) The demand for consolidation is not coming from the people, for we are told (what is true) that when a holder has a *large* holding, he cuts it up and sublets portions thereof. (2) Again, the people are so entirely dependent upon land that in the *absence* of industries or schemes of colonization that are within sight, any wholesale disturbance of the property rights of a conservative tenantry or peasantry is bound to cause grave social discontent. (3) Finally, the extent of intensive cultivation for which land is to be consolidated, is, in the Deccan at any rate, limited by the factor of irrigation. There is no such thing as a standard 'economic holding' (as will be shown presently) and any redistribution of land to reach such a hypothetical standard is bound to fail.

(71) *Consolidation of Cultivation*:—I would begin with what is at once feasible namely *consolidation of cultivation*. I would deal with land according as it was wet or dry. In the case of 'dry' land (where little capital expenditure is incurred on its improvement) no plot of land should fall below a *minimum* size—say 3 acres. Plots below this size should be

consolidated into convenient blocks of 3 to 4 acres. An anna-wari valuation of the *property-rights* of the holders of small strips (now consolidated) should be made, and the *whole* blocks cultivated *in rotation*, each holder taking his turn or turns according to the value of his share. Small holders should be encouraged to take a part of the produce in lieu of the right of cultivation. The discharge of a certain function in rotation is quite common in the Deccan, thanks to the wide prevalence of the *Watan* system. Cultivation of blocks of 3 to 4 acres in one place is more efficient than that of strips of a few *gunthas*. There will be initial difficulties of course, but when the cultivators get used to the idea, and when particularly they experience the advantage of the arrangement, they will willingly cooperate. An important advantage of the scheme is that many a cultivator who is at present tied to the village by a strip of his ancestral land, which he can neither 'hold' or 'let go', will now get an opportunity of *leaving* the village (with his right still kept in tact). If he is able to improve his fortune in the town, he will commute his right into a share of the produce (in cash or kind).

Where land is far too much broken up, the holders should be encouraged to cultivate it (as a *whole* block) co-operatively, the produce being shared on some equitable principle. The Deccan peasantry is very skilful in the apportionment of a joint produce.

(72) *Consolidation of Fragments* :—It will not be long before plots will be exchanged for each other—and this would be the next step in the process. Dr. Slater calls attention to an interesting transition that is taking place in one of the South Indian Villages. A few proprietors in the village of Mallur voluntarily

exchanged their scattered holdings with a view to consolidation, and then built huts upon their reorganized fields. "Mallur has 20 such huts and in five cases the family owning the hut lives in it, having moved out of the village. This looks like the beginning of a transition somewhat parallel to 'enclosures' in England in one of its most important features."*

A village where this much response has been secured for consolidation of cultivation, now becomes ripe for the *consolidation of fragments on co-operative principles*. The Punjab experiments in this line are described by Mr. C. F. Strickland, I.C.S. in his valuable '*Studies in European Co-operation*' Vol. II. Page 149 where also interesting information about what has been accomplished in Norway and Sweden has been given. Mr. Strickland has very properly distinguished between the creation of 'economic holdings' and 'consolidation of fragments.' The Cooperative principle is applicable to the latter only. For details as to the formation of such societies and their procedure reference must be made to larger works.

The holder of such a consolidated unit being now not only its cultivator but *proprietor*, he will proceed to make improvements in the land and thus real intensive farming will become possible.

What part should Government play in consummating this great reform? Would it do if they passed the necessary permissive legislation, and placed at the disposal of villages the expert agency of surveyors, valuers, possibly free of cost? Would it be proper for them to claim a substantial share of the increased

* Page 20, *Some South Indian Villages*.

produce of land which is sure to follow consolidation? In abstract theory they would perhaps be justified. But I would suggest that Government, as an inducement to the villagers to embark upon the reform, should declare that they would exempt every village that set about this consolidation from at least *one* revision of its settlement when it might next fall due. This would give it breathing time for 60 years which is sufficiently long to bring out any capacity the villagers have for improvement.

I should be amply satisfied if in the course of these *sixty* years a substantial number of villages in India responded to the Co-operative principle of consolidation of fragments. During this interval public opinion will have been sufficiently educated, and industries would have been started on a sufficient scale, to justify resort to the third kind of consolidation—*viz.*, of holdings into *economic units*.

(73) *Consolidation of Holdings*:—A great deal has already incidentally been said regarding 'uneconomic' holdings and how they give rise to feverish competition among their tenants and consequent enhancement of rentals. It was indeed in Ireland that the importance of an 'economic' holding was first realized in connection with the efforts made by Government for the improvement of Irish peasantry. Lands were purchased from the landlords and made over to the Irish peasants. It was soon found, however, that the measure was not attended with success in every case. Much depended upon the extent of land that was constituted into a holding. It may be too small to support the peasant and his family in which case the condition of the peasant became worse. Or it may prove to be too large to be efficiently cultivated by

the peasant, with the same deplorable result. A peasant would prosper when he has just sufficient land that he can manage : neither more nor less. As the late Rt. Hon. W. F. Bailey explains, until this discrimination between 'economic' and 'uneconomic' holdings was made, the Land Purchase Acts of Ireland did not bear their full fruit. He defined an 'economic' holding "as one of sufficient productive capacity to support a family at a *reasonable standard of comfort without help from outside sources.*" The size of the holding is determined by its fertility and situation. When extra help from any source becomes necessary to support the peasant, the holding becomes uneconomic. In a country where there is a large number of such economic holdings on which a poor peasantry struggles for existence, we get what is called 'congestion'. As Bailey explains the word 'congestion' has acquired a special meaning in Ireland, as applied to *quasi-agricultural* population living on holdings insufficient to support a family. The essence of congestion lies not in locality but in the condition of the people—"owing to various historical reasons, an excessive population, having regard to the means of subsistence, is to be found on the Western Sea Board of Ireland from Cork to Donegal which is regarded as the true centre of congestion—It was for such areas that "Congested District Boards" were created in Ireland as explained on a previous page.

Supposing we applied this definition of an "uneconomic" holding and of "congestion" to conditions in India, what shall we find? Nothing less than this: that the best part of the country is 'congested' in the strict sense of the definition. Indeed a large part of the world is 'congested'.

We must have, therefore, in *each* District of India a "Congested District Board." I am prepared to call it a "Development Board" if any want a less harsh title. Whatever the name, I do not know how, in the absence of such an agency, an all-round programme of reconstruction is to be undertaken.

To the extent to which irrigation—by canals, wells, or *Pats*,—is made available, intensive cultivation becomes possible and a small holding becomes 'economic'. Care must, of course, be taken not to allow the population to outstrip agricultural progress. Such intensive cultivation will also draw off a part of the rural population as labourers.

But in those wide regions of the Deccan which depend entirely upon rain, a holding of even 20 acres may not be 'economic' in the sense that the peasantry in those regions will be always poor and indebted. No dependable, let alone intensive, cultivation is possible in such regions. And as we have already seen that the area available for cultivation is too small for those who at present depend upon it, the necessity of developing *subsidiary* occupations becomes evident. As has been pointed out by Mr. Calvert, in those European countries where the holdings are small, the position of the cultivator has been immensely strengthened by the development of animal husbandry. But in the Deccan, as in the rest of India, religious scruples come in the way. Natural facilities for growing grass, fodder etc. also are limited with us. But the latter difficulty is not insurmountable. Better grass can be grown on thousands of waste acres as the experiments of the Agricultural Department show. Depending as we do for an indispensable part of our diet *e.g.* milk, butter, ghee, upon animals, far greater

attention must be paid to animal industry even though meat be tabooed. Other occupations are indicated by poultry-keeping, (for which, we are told, dry climate of the Deccan is exceptionally well-adapted), bee-keeping, weaving of various fibrous plants and grasses etc. Mr. Calvert well says that "the Punjab smallholder, in trying to make a living out of his few acres without the aid of animal husbandry or domestic industries, is doing a task which no-where in the world seems to have been accomplished with any profit".* What is true of the Punjab peasant is equally true of the Deccan cultivator. Even in the most industrialized countries of the world e.g. in England, the importance of such subsidiary occupations is admitted, as the remarks of Sir A. D. Hall quoted on a previous page show. Their importance becomes ten times emphasized in an agricultural country like ours, if a determined effort is to be made to improve the standard of living of our struggling peasantry.

The size of an economic holding depends not only upon its fertility, and the possibility of subsidiary occupations but also upon situation. Proximity to towns diminishes the size. The rise of towns, therefore, is necessary, and this means localized industries. Such towns help agriculture in two ways: they drain part of the rural population, improving the condition of those who remain behind; and they form excellent markets for the agricultural produce of the surrounding country, and thus encourage intensive farming.

The subject of consolidation of holdings upon principles of economic adequacy is thus most complex.

*Page 78.

It raises the most vital problems of social contentment and economic development. They will be faced with better success if the ground is well prepared by such measures as the consolidation of cultivation and of fragments, and as the regeneration of our industries by Boards of some kind.

(B) LIQUIDATION OF DEBTS

(74) *Evil of Indebtedness.*—When fragments have been consolidated by negotiation and Co-operation one cause of the present low productivity of land will have been removed. But the strength of a chain depends upon its weakest link. We must, therefore inquire into other causes of the inefficiency of Indian agriculture and one is to be found in the indebtedness of the cultivator. It is nothing less than his fragmentation. He is not able to order his economic life as he would; he is not able to retain for himself the fruit of his labour, which he has to share in various diminishing proportions with his money-lender.

No evil has perhaps attracted greater attention of Government than that of indebtedness. Grave agrarian discontent, leading to riots in the Deccan, for the first time showed that this evil was eating into the very vitals of our peasantry and Government have adopted many measures for its mitigation. It has formed the subject of many official reports—amongst which may be mentioned those of the Deccan Riots Commission, and an important one by Sir Edward MacLagan in 1912. Conditions in the Punjab have been carefully examined by Mr. Darling, I.C.S. and Mr. Calvert, C.I.E., I.C.S.

(75) *Causes and Effects:*—Some of the causes of indebtedness and its effects have been already men-

tioned. We may classify the causes as special and universal and enumerate them briefly as follows.

Universal Causes:—Agricultural indebtedness is not a special Indian disease. It is as old as cultivation, and as universal. The problem of supplying capital to *industries* was solved much earlier and more satisfactorily than that of supplying capital to *agriculture*. The chief cause of backwardness in applying credit to agricultural operations is to be found in the unsatisfactory nature of the security which the cultivator is able to offer for a loan. He has no 'commercial' paper and the only property he can offer as security is his land. An ordinary bank has no use of such small plots of land. Again the loans required by the cultivator are usually small in amount and the object for which the loan is required is not always clear. It may be for unproductive purposes when there is small chance of its repayment; or it may be for productive purposes. Even in the latter case, however, it is not always certain that the operation of the cultivator will be successful. An ordinary Bank thus cannot do lending business in a village unless it is prepared to maintain an extensive system of minute enquiries into the credit of the borrower, object of the loan etc. The cost of such a system would be prohibitive.

Thus the lending business in a village comes to be confined to the money-lender. He has thorough local knowledge, as well as use for the land that is pledged to him. He is also much more accommodating to his clients than a Bank could afford to be, though the rate of interest he charges is excessive. Considering the cost of enquiry, the risk involved, and many 'bad' debts that he is faced with, the net

rate of interest may not be excessive. In the absence of any other arrangement, the old system continued even under British rule. But its worst features were brought out by a set of causes that came into operation with the progress of that Rule. As Mr. Darling* points out in the pre-British period the money-lender laboured under two restraints which the British rule either removed or weakened. The restraints were (1) the existence of a vigorous village community which as it tolerated the money-lender as a necessary evil, put check upon his rapacity., (2) The second check was the apathy of the State towards recovery. In the absence of legal and efficient processes for the recovery of principal and interest, the money-lender would moderate his demand rather than antagonize the debtor into a persistent defaulter by an unconscionable claim. There was a spirit of accommodation between the two as the one could not do without the other. This spirit was destroyed by the setting up of regular Civil Courts for the recovery of debt.

This brings us to other *special causes* that have intensified the evil under the British regime. The aggravation of the evil by such factors as recurrence of famines, the rigid demands of the State, and the continual sub-division and fragmentation of land need not be once again explained. Rise in land-values and the facility of land-transfer caused a great accession to the credit of the cultivator and therefore to his debts. He was too improvident to resist the temptation of adding to his debts, and too illiterate to understand how the wily money-lender cheated him in the keeping of accounts.

* Page 203

The amounts borrowed were small—often a few rupees,—but the rate of interest being high 20 to 30 or even 50 p. c.—and compound, the small amounts had an uncanny tendency to grow into large ones which the borrower had no chance of repayment. He thus lost his land, but the money-lender allowed him to till it as his mortgagor-tenant.

The evil of the displacement of an independent peasantry by a class of land-grabbing money-lenders was well described years ago by Mr. Justice West (quoted by MacLagan): "The Rajput or Maratha yeomen are disappearing or sinking into indigence and despair and are replaced, as the Roman freeholders were, by a class of mere cultivators living from hand to mouth, without strong local attachments, or the sturdiness which independence gives. Above these comes the new race of capitalists: men possessed by no ennobling ideas of public duty, cowards as a rule by caste and profession, citizens in no sense beyond that of benefiting society by selfish accumulations. A country with such a class of landlords must soon afford a caricature that should rather startle the advocates of economic and selfish adjustment as the sole or chief basis of polity."

(76) *Past Measures of Government Examined*.—This is a gruesome picture. What have Government done to save the peasantry? Their treatment has been symptomatic rather than radical. Believing that famines were a contributory cause, Government used to make large *takavi* advances during times of distress. Persuading themselves that the illiterate borrower needed protection from the astute money-lender Government gave large powers to the Courts to 'go behind' the written agreements. Thinking that

expansion of credit was the cause of mischief, Government restricted the power of alienation of land, as in the Punjab. Realizing that their revenue-policy was too rigid, they laid down a liberal policy of suspensions and remissions. Finally, finding that none of the preceding measures went to the root of the matter, they have embarked upon the application of the principle of Co-operative credit.

It is not difficult to show that each of these remedies—useful in its own way, and efficacious *so far as it goes* has narrow limits. To take them *seriatim*: A single famine means loss of crores of rupees worth of crops and cattle, and also unemployment to large numbers. Even if takavi advances were made upon an unprecedentedly liberal scale, they would not touch the fringe of the problem. Any improvement in legal procedure and judicial machinery can at most secure convenience, and some amount of publicity, but 40 years' experience of the Deccan Agriculturist's Relief Act shows that indebtedness has *increased* rather than decreased. A restriction of the right of alienation is an invasion of property-rights, though it may be well-intentioned. It was strenuously opposed by public opinion as well as experienced officials of high authority. It has, no doubt, at the cost of a *temporary* diminution of the peasant's credit, checked the transfer of land to non-agriculturists. But the place of the professional money-lender has been taken by a new class of "agriculturist money-lenders." The old creditors have been supplanted by a set of new ones, but indebtedness has remained and increased. Again, as Mr. Darling has well pointed out, the Alienation Act has impeded agricultural progress in the Punjab in two ways. It has

taught the peasant to look for his protection *from outside* and thus weakened him. It has also precluded the urban classes from acquiring land. The assistance of the town is indispensable to the country and the Act keeps the two apart. It thus deprives agriculture of an element of progress. In Western countries the progress of agriculture owes as much to a new landed aristocracy created by commercial, industrial or professional wealth as to the old agricultural aristocracy. In India the old class of Zamindars are little better than money-lenders and rent-receivers; they *would* not improve agriculture. The rapidly increasing class of an urban aristocracy, being shut off from land, *can* not improve it, But as Mr. Darling rightly says: in the last thirty years a new *intelligentsia* has sprung up in the towns, who, if they could be persuaded to study rural problems, might do something for their solution."* In fact we must judge of this Act by the *Social* criterion of Sir J. A. R. Marriott.

Proceeding next to the revenue-policy of Government, it must be admitted that public opinion as well as sympathetic official experience have made it the target of criticism. Indeed there are many who have attributed indebtedness *entirely* to the meticulously grasping policy of Government both as to assessment, revision, and collection of land revenue. I will not go into this subject once again. I have already said that land-revenue tends to become a *universal* levy upon the rural population and it should be as small as possible. A liberal policy of suspensions and remissions would, no doubt, remove what is, next to famine, probably the most frequent *immediate* cause of contracting a loan.

* Page 190

Cooperative credit is no doubt a radical cure. But it cannot be availed of by those who are in most need of it. It may extend a helping hand to those who are just managing to keep their heads above water (not more than 30 p. c. of the peasantry) but it cannot do anything for those who have, after a painful struggle, gone to the bottom (about 40 p. c. of the peasantry, at least).

Indeed it seems to me that no permanent improvement is possible until the existing burden of debt is taken off the shoulders of the peasantry. At the same time care must be taken to see that there are no *fresh* occasions or opportunities to incur *additional* loans. The two sets of measures must be adopted simultaneously and so adjusted that one does not jeopardize the results attained by the other.

(77) *Other Suggested Remedies Examined.*—Various measures were suggested in the past to wipe off the existing debts of the peasantry. One measure, based on the assumption that land-revenue was *the* cause of indebtedness, aimed at purchasing complete exemption from such payment by paying twice the land-revenue for some thirty-five years, after which time the tenancy would be converted into a 'Free-hold.' This was the proposal made by Sir James Caird in the Eighties of the last century. It fell through, as it did not obtain the support of Government either in India or in England.

A proposal of an altogether different kind was made years ago by a Bombay Civilian, Mr. Hart-Davis. According to him the mischief lay in the Deccan cultivator being at once indebted and unwilling to give up part of his large holding for securing the rest. Mr. Davis proposed that the embarrassed cultivator

should first declare himself an insolvent, then surrender his holding, get his debts ascertained and settled by the special agency to be created, and finally give up a portion of his holding in satisfaction of his debts. "Ten acres free of debts are better than 100 acres mortgaged up to or beyond their value." * The only hope of the agriculturists lies, according to Mr. Davis, in sacrificing a part to save the remainder. It will be observed that this proposal corresponds closely with the proposal of Mr. Inglis for the extension of Irrigation. If under the scheme of Mr. Hart-Davis, the cultivator would retain, in lieu of a large but encumbered holding, a small but free holding, under the scheme of Mr. Inglis, he would retain, in lieu of a large but precarious holding, a small but irrigated holding.

But I cannot accept the proposal of Mr. Davis. It is the very opposite of what was done for the enfranchisement of the Irish tenantry. It is also impracticable, for the throwing of so much land on the market, would *reduce* its value, and to that extent inflict greater sacrifice on the cultivators. An enfranchisement of the cultivators at the price of their partial or complete expropriation would offend against the *Social criterion* of Sir J. A. R. Marriott.

An attempt to liquidate the debts at the cost *not* of the cultivator but of the money-lender is illustrated by what enthusiastic and sympathetic officers can do in a single district. The achievements of Mr. Fuller of the Central Provinces are a case in point. In a single district debts aggregating Rs. 5,62,000 were struck off. "Moreover three leading bankers and Malguzars of the district came forward and volun-

* Page 13.

tarily remitted large amounts due to them. The total remissions amounted to 10 lacs of Rupees." "For four districts during 1899-1903, debts due from over 30,000 persons and amounting to one and quarter crore came under settlement, the total amount remitted being over Rs. 82 lacs."*

Yet another remedy suggested for the purpose consists in the establishment of a large Agricultural Bank—on the model of the Agricultural Bank of Egypt—enjoying important privileges from Government, in the shape of finance, guarantee of interest, use of State-agency for the recovery of advances and interests etc. Curiously enough, those who contributed to the initiation and success of the Egyptian Bank, Sir Evelyn Baring (afterwards Lord Cromer) and Sir Elwyn Palmer got their first experience of agricultural finance in India, which they subsequently utilized to solve the problems of Egypt. A great authority like the Hon. Sir D. E. Wachha is a firm believer in this remedy. He calculates the total agricultural debt of the country at something like 375 crores, possibly much higher. No Co-operative Credit Societies can hope to get this amount. "The indebtedness of the agriculturist is so colossal while the resources by way of capital of the Societies are so extremely limited and hedged in by restrictions and limitations that there never can be any emancipation of the ryot from the slough of indebtedness. Agricultural Banks are their only salvation".†

Before pronouncing any judgment upon this scheme of an Agricultural Bank, we must first of all ascertain where the capital and the directorate come

* MacLagan's Report, Page 22. † Page 23.

from. If an Agricultural Bank were to be started in India with 'external' capital and foreign directorate, it would be the most disastrous thing for the Indian peasantry, though, *physically*, agriculture may improve. The Egyptian model is, therefore, quite unsuitable. The Agricultural Bank of Egypt is European in origin and constitution. Also its directors and branch managers are non-Egyptians. Again the managers of the six branches in provincial towns, are also Europeans. I should not allow European capitalists and businessmen to dominate property in land. We have had long experience of the domination of 'external' capital in the financing of our industries and the export and import trade, and our dependence will be completed when the whole of our agricultural land comes under its operation and control. Indeed any proposal to invite foreign capital for the improvement of our agricultural condition should be stoutly resisted. Such proposals have been frequently made in the past but the reply which the Punjab Government made to them in 1908 is final and conclusive. "Such a proposal is open to economic, administrative, and political objections. In the first place it was represented that the facilities for debt would be encouraged. Secondly, the bank would have to work with an English agency, and that the interest allowed under the conditions was too high in view of the fact that the bank would gain the assistance of Government officers. It was further urged that it was politically objectionable to place the welfare of the people in the hands of a powerful bank which had its headquarters in London and was able to influence the Secretary of State. It was urged that the arrangement would be unpopular with the money-lenders on the ground that

it would interfere with their business, with the agriculturists on the ground that it would entail constant process for the recovery of arrears, and with the educated classes on the ground that it would be represented as an exploitation of the Indian agriculturist for the benefit of an English Company.*

Even if the capital and the directorate were *Indian*, and if the new Bank was to depend upon Government to the extent to which it does in Egypt, it would not be a very desirable model.

(78) *Remedies that I Approve.*—Here, as in the analogous problem of ‘fragmentation of holdings’ I would adopt measures that *strengthen* rather than *weaken* the peasant. In the first place a considerable part of the debt—at any rate the dishonest accretions made to it by bad accounting etc.—can be ‘settled’ by compromise in the manner done by Mr. Fuller. A systematic effort of the kind should be made by Government. The grant of a few Titles in recognition of the sacrifice and public spirit shown by the money-lenders would be the cheapest way of initiating the experiment. A regular agency (like a Land Commission) should be instituted, (the Chairman of such a Commission should be a High Court Judge), the claims *judicially* inquired into, and settled at once in *cash*. It will be possible for Government to raise the necessary funds by the issue of bonds etc.

While this work is being done, *Cooperative Land Mortgage Banks* should be started. Very valuable information as to the constitution, functions, etc. of such Banks in some of the countries of Europe and as to their feasibility in India is contained in the first chapter of the 2nd volume of “*Studies in European*

* Page 25, MacLagan Report.

Cooperation" by Mr. C. F. Strickland, I.C.S. (1925) I generally agree with his suggestions. Our peasantry has to be carefully taught the use of credit, and the Cooperative principle is the only principle that teaches moderation in the use of credit, particularly mortgage credit. Typical constitutions of such mortgage banks in the Punjab, Madras etc. have been given there. But such banks are still in an experimental stage. They must be multiplied and organized. There are already existing Cooperative *Credit Societies* in large numbers in most provinces of India. They furnish, as Mr. Strickland points out, "a strong and precious foundation of cooperators on whom a system of mortgage credit can be built up. It is unreasonable and wasteful to start again from the beginning with mortgage credit, as though the same person would not normally, or at least frequently, avail himself of both types of cooperative assistance. Consequently I prefer to connect the Mortgage Bank closely with the primary societies of credit, and arrive at the mutual knowledge and supervision of members through the Village Credit Society."*

The only point I would like to emphasize is that Government must undertake this experiment in a spirit of large-hearted liberality. It has already started the Cooperative Credit movement; it must now start the Land Mortgage Banks movement. It must guarantee interest on the debentures issued by such banks, and it must enable the banks to manage their affairs with such efficiency and honesty, that the public will be induced to turn over their savings to such Banks. I need not go into the administrative details of the relations of the new banks to the

* Page 80.

Cooperative Department, and of both with the Provincial Government.

(79) *Conclusion*:—If the activities of the Land Commission (for purposes of liquidation of debts) could be coordinated with those of Land Mortgage Banks, the *existing* burden of debt will be diminished in a reasonable amount of time. At the same time the efforts to consolidate cultivation and fragments, the extension of irrigation, industrial development, a liberal policy of remissions and suspensions (as indicated), *takavi* advances in cases of actual distress, and above all, the silent extension of the Cooperative Movement among the peasantry, will lessen the occasions to contract *fresh* loans.

Our real prosperity will not begin until there is consolidation and liquidation—consolidation of land, and liquidation of loans. The latter is even more important than the former. As a Sanskrit poet said “If you wish, O King! to milk this cow in the form land, then nourish first the cultivators thereof, even as you would a calf.”*

* राजन्दुधुक्षसि चेत्क्षितिधेनुमेताम् ।
तेनाद्य वत्समिव लोकममुं पुषाण ॥

CHAPTER VI

A FEW SUGGESTIONS AND RECOMMENDATIONS

(80) *Retrospect*:—I have now concluded the examination of the bases of agricultural progress. A cultivator, nearly free from debts, possessing a reasonably large holding, and tolerably assured of water-supply while the crops are maturing, must blame himself if he is not able to show good results. It used to be said that a bad workman quarrels with his tools; but nowadays it is realized that the best means of making a workman efficient is to equip him with good tools. What is true of a workman is true of a cultivator also.

(81) *Fodder & Cattle*:—In addition to the material equipment of land, water, and capital, a cultivator must have access to the results of science. In India these are supplied him by the Agricultural Department. It is unnecessary to go at any length into the work of this most useful Department. I shall briefly indicate what appear to me to be the pressing needs of the moment. First is improvement and conservation of *fodder-supply*. We have already seen how cultivation has extended at the cost of pasture; how the plough-cattle as well as milch cattle are absolutely inadequate for the purpose of draught or milk supply; how famines take a heavy toll of cattle; how, finally, the cattle must be for years to come the *only* means a peasant can have to plough his small plots. Fodder supplies must be improved and stored. In those parts of the Deccan where natural facilities exist *e.g.* in Khandesh, in the valleys of

the Krishna and Godaveri, excellent breeds of cattle must be raised and maintained. I attach the greatest importance to this question of cattle-improvement, as it is upon cattle that the main burden of intensive cultivation must fall; the cattle also will prove a valuable source of *additional* income to the cultivator; above all they will supply milk, butter and ghee in adequate quantities to the towns and the country side.

(82) *Better Implements*:—With improved cattle intensive cultivation becomes possible. Better implements can be introduced. Regarding implements, the unsuitability of *foreign* implements must be emphasized. It is true that the experiment on the agricultural farm at Saidapet in the Madras Presidency where a whole consignment of "steam ploughs, some harrows and cultivators, seed drills and horse-hoes, thrashing machines and winnowers, chaff-cutters and water-lifts"* was ordered out from England to improve agriculture, will not be repeated in all its nakedness. But there is a real danger of foreign industrial interests bringing pressure to bear for the spread of their implements in India. Implements should be devised in India and *manufactured* in India. Indeed improvement of agriculture should afford excellent opportunities for the establishment of *thousands* of industrial concerns *in India* for the supply of ploughs, pumps, crushers, &c.

Unfortunately, however, there are great obstacles in the way of the expansion of such industrial works. We have an excellent factory of the kind at Kirloskar-

wadi in the Satara District. But I am told that the policy of steel protection has enormously increased the price of the requisite raw material, and the railway-rates also are unfair. I should invite the Royal Commission to go into this question, and do their best to see that *every* artificial hindrance in the development of those industries that are vitally connected with the improvement of agriculture, are forthwith removed.

(83) *Field Embankments, Tals, &c.*:—With improved cattle, and improved *Indian*-manufactured plough, the cultivator must be given not merely a *large* holding, but a *levelled* and *embanked* holding. I would recommend for every Taluka an expert agency to help the cultivators in this species of agricultural engineering. It is satisfactory to note that in the Bombay Presidency two Land Development Officers have been appointed to prepare and execute schemes of land-improvement *e.g.* small irrigation works, embankments, building of *tals* &c. I want such officers for every taluka.

(84) *Seed and Crop Selection*:—The next question is the selection of the crop and the seed. Only improved irrigation will bring any thing like system in the raising of crops. Too much at present depends upon the vagaries of the season. But the possibilities of 'mixed cropping' should be fully explored on scientific lines.

Selection of the seed is a problem of fundamental importance. As Sir James Mackenna happily put it, 'the seed is the rock on which the house of agriculture must be built.'* Though the demands of the export trade are important, I would pay atten-

* Page 28

tion to needs of the vast population of country. There need be no conflict, especially as to food crops, between the requirements of the local taste and the export trade. A number of staple products of Indian agriculture are required mostly for export purposes. Their improvement will bring increased profits to the agents, merchants, and cultivators. But it should not be forgotten that an *exclusive* dependence upon foreign markets is a sign of weakness rather than a matter for congratulation. And again, if at all agricultural products *have* to be exported, they should be exported in as *finished* a form as conditions of foreign demand and local production will permit.

I entirely appreciate the efforts of the Agricultural Department in the selection and evolution of better seeds. Such selected seed has to be taken to the fields of the cultivator. Greater cooperation between the Agricultural, Cooperative and Revenue Departments should be secured. I regard the *Cooperative* supply of *pure* seed as the first and most important step in the emancipation of the cultivator. At present he borrows or buys poor seed, sows, and reaps poor harvest. The evil is cumulative. If the cultivator gets good seeds, his servile dependence upon the money-lender will be struck at a vital point.

I need not refer to all the crops and the way in which they are being improved. So long as the needs for food, clothing etc. of the Indian masses are primarily and steadily kept in mind every improvement is a gain. We have already seen how nearly seven million acres of land are under improved seed of one kind or another representing an *annual additional* gain of at least seven crores of rupees. If we take the average cropped area as 27 million acres, *improvement*

of seed alone should give an annual additional income of 27 crores of Rupees.

(85) *Manures*:—But improved seeds require more careful tillage, and better manures. We are said to be deficient in natural supplies of manures. This points to the necessity of conserving what sources we have. It would thus seem to be unwise to allow the export of bones or of Nitrates. As Sir Gangaram points out,* “the exported bones represent an annual removal of roughly 25000 tons of phosphoric acid, while the exports of various forms of grain amounting to 5 to 6 million tons also represent 25,000 tons of phosphoric acid. But while the bones bring about £500,000, the grain-crops are worth £40 millions, the remainder of the grain being materials which are in abundance in all soils, or obtainable from the atmosphere.”

In this connection I should refer to the necessity of field-embankments etc. to prevent erosion of the soil and the loss of the fertile elements contained therein.

Again the possibility of fixing ‘atmospheric Nitrogen’ by hydro-electric works in the Ghats gives a natural advantage to the Deccan which should be fully utilized.

Soils in the Deccan are said to react wonderfully to *organic* manures. But the peasantry as well as the whole population destroys a valuable source of manure by burning cattle droppings. Mr. Arnold Lupton holds strong views on this subject. The mere fact that cow-dung is universally used as fuel in India “is sufficient to condemn the Government of India. It is the most horribly ruinous, unprofitable, uneconomical and

wicked thing it is possible to do, and yet the Government never stirs a finger to prevent this from being done."* He would suggest—and I agree with his view—that cheaper wood and coal should be supplied to the villagers to enable them to conserve the farm yard manure. Plantations of trees will have to be raised, the poorer mines of coal will have to be worked, and railway rates reduced (on fuel) to achieve this object. But it is worth while doing all this.

I would suggest the prevention of cow-dung cakes being used for cremation purposes. This wide-spread practice is not enjoined by Hindu religion. In every considerable village or town there should be *Government* depots of wood. In this case there is no danger of people taking away more fuel than is necessary.

There are further the possibilities of green manuring (an unexplored but promising subject), the use of sewage effluent, drainage water etc. This is a scientific problem.

In many parts of India sheep are used as a source of manure. They are a source of income to the shepherds. But I am not sure if, on the whole, they are not a curse. Any vegetation is impossible under their ravages. In a treeless tract like the Deccan this nuisance cannot be lightly passed over. I am of opinion that new legislation, if necessary, should be passed to regulate the keeping of sheep, goats etc.

Any tendency on the part of the cultivators to live on their farms necessarily leads to the better utilization of manure. Consolidation of holdings, and well-sinking are important from this point of view, and every facility should be given to encourage such an exodus from the village to the farm.

* Page 51—*Happy India*

The forest leaves are a source of manure. I understand that the policy of the Forest Department is not as liberal as it should be. This is an important grievance into which the Royal Commission might well look with a view to its removal.

(86) *Insects and Pests*.—As the plant is being manured, it is exposed to all manner of insects and pests, and the depredations of wild animals. A long list has been given in the *Statistical Atlas* of the common enemies of plants, and a Committee appointed by the Bombay Government to enquire into the damage caused by wild animals estimated that damage at an *annual* amount of at least *seventy* lacs. The question here, as in a large part of our agricultural field, is to put to practical *utility* what is already known. Though a packet of copper sulphate will save a whole crop of *jowar*, the cultivator must get the packet and he must steep the seed in its solution. In Western countries these things have to be simply shown to the people and they take to them. With us more is necessary. And an important thing that we want is some kind of association or organization to see that the thousand and one things upon the timely doing of which success in agriculture—as, indeed, in *everything* else,—depends *are* done. The researches of the entomologist and the mycologist are of little value if they cannot be made to save the crops in the fields. I appreciate what is being done in the laboratory; but what interests me most is *how* to save the crop in the field. Far greater efforts must be made to keep the cultivator abreast with the *practical* utilization of the results of scientific research.

(87) *Co-operative Marketing etc.*.—But the crucial

moment comes when the crop is harvested by the cultivator. Shall he retain it for himself? Or shall a money-lender, or a commission-agent snatch it away even from the threshing-floor? What can be more cruel? The crop which he sowed, watered, manured, watched and at last gathered he has to give up, just as an Indian parent has to give up his daughter to another when she attains a certain age. Now why this haste? Can they not *both* wait, till the harvest fetches a better price, and the daughter *selects* a better bridegroom?

Speaking of the crop only, we must remember that the cultivator has little capital of his own. He has probably borrowed to get seed, manure etc. and he must convert the crop into cash without delay. He has to pay interest to the creditor, rent to the land-owner, and revenue to the State. It is when these *outside* claims are satisfied that he can call what remains (if indeed any *is* left) his own. The value of Co-operative Association is clear. He should *buy* everything he wants—seed, implements, manures etc., through a Co-operative Society; he should *sell* his agricultural or other products through it. Such Co-operative Societies have been started in a few villages of our Presidency, as in other provinces. But they are a drop in the ocean. I am a firm believer in the gospel of Co-operation. Co-operation has worked wonders in Ireland, Denmark, Germany. The late Sir Horace Plunkett showed how it altogether broadens and brightens the outlook on life of the rural population. There are some who belittle the value of Co-operation. They are discrediting the whole Co-operative Movement in India. Mistakes have been made in the past; there may be too much of Government spoon-feeding; improvement is necessary; but the principle of Co-

operation is sound. I see no other *single* principle which will do for our masses what Co-operation can do. But we must take to Co-operation not as a money-making proposition, but as a labour of love, of social service.

Co-operative marketing is as important as the Co-operative supply of improved seed. They are the Alpha and the Omega of agricultural prosperity. From what I have already said in the first chapter it is clear that the cultivator is mulcted of a large part of his produce by others.

How important the subject of *distribution* as distinct from that of *production* of agricultural products can be is shown by the fact that in England a Departmental Committee was appointed in 1922 by the Minister of Agriculture and Fisheries to enquire into the organization of trade in milk-products, fruit and vegetables, meat, poultry and eggs, cereals, flour and bread. The Chairman of this Committee was the Marquess of Linlithgow, who is also the Chairman of the present Royal Commission on Agriculture. There is no necessity, therefore, to dilate upon this aspect of the question which will be adequately considered by the Commission.

(88) *Subsidiary Industries*.—Even with Co-operation and the results of the Agricultural Department, a large part of the peasantry in the Deccan can never hope to attain a decent standard of living unless they also have some 'subsidiary' industries. The holdings are very small. Even if the fragments be consolidated a majority of the cultivators cannot have more than 3 to 4 acres. Thus the holdings are 'uneconomic' and some extra source of income is essential. We have also agricultural operations narrowly confined to a part of the year. What shall the peasant do when he

is not busy on the field or in connection with it? At present he does nothing. Probably he does not *want* to do anything. But we must *teach* him to do something useful. Shall he take to the *Chrakha*? I do not know. It would seem to me that subsidiary occupations in India must depend upon considerations like climate, natural facilities, caste, local demand. No single occupation would do for all. With us caste is an important consideration. Animal husbandry, poultry, cane and bamboo weaving, toy-making, bee-keeping, collection of certain forest products (where they are available) will be found useful. The Industries Department and the Forest Department must solve this problem. A great deal of spade-work has been done, but it has not borne any fruit. Reports and Bulletins are slumbering in their pigeon-holes, and people are starving in their poor howels. This must be changed.

(89) *Reorganization of Departments.*—I have, in many places, made suggestions for what Government should do, and the agency for doing it. An important problem before the Royal Commission would be the devising of the most suitable machinery for carrying out its recommendations. At present there are many Departments in the field: Revenue, Irrigation, Forests, Public Works, Agriculture, Cooperation, Industries, Survey and Settlement, Land Records etc. Each of these has something to do with agriculture. The present Commission may perhaps add one more to the series. I do not pretend to any first-hand knowledge about these Departments. I would only say what the new arrangement should be, leaving it to others to point out difficulties. I would have for the whole Presidency one "Development Department"

The word 'Development' has acquired a bad odour in our province, but that is nothing. Every district should have one superior officer. In districts where forests are important he will be forest-expert; where fishing is important, he will be expert in that line and so on. This Department will contain a number of such experts to be placed in suitable districts. It seems possible to me to hand over a great deal of *routine* work to the Collector and his staff. The new work of reconstruction and development should be carried out through officers to be obtained from the existing Departments. By additions here and retrenchments there such a body of subordinate officials can be put together without any considerable extra burden upon the taxpayer.

But though I would not dilate upon the details of such reorganization, I would emphasize two points before I conclude. The first is that the majority of incumbents in the new Department must be Indians. I value very much what European experts have done for us. But their experience is lost to us just when it begins to be useful. In the slow work of reorganizing the life of a whole people we want as much experience as we have. The Indian officials, after their retirement, will be still with us to guide and direct. A few experts from the West are always welcome, but the majority should be Indians.

And secondly all subordinates in this new Department must have a thorough grounding in Agricultural or rural Economics. The importance of this subject has not been hitherto realized by us. The B. Ag. Course might require readjustment. The B. Ags. have a great responsibility cast upon them. The country looks up to them to take up this great work of

agricultural improvement. The whole subject of agricultural education is important, but I do not propose to draw out the present chapter at any greater length.

(90) *Concluding Remarks* :—It is not the object of this book to make detailed and exhaustive recommendations as to Departmental reorganization either in the Central Government or the Provincial Governments, or into technical lines of advance. More competent persons will look to that. Let me express the hope that the Report of the Royal Commission, in being a 'monument' to the thoroughness of their labour will not be an 'epitaph' to the Indian agriculturist. Let us not forget what H. E. the Viceroy said with as much truth as felicity that the Indian agriculturist is the foundation upon which the whole economic prosperity of India rests and upon which her social and political progress must in the main be built.

APPENDIX

STATISTICAL NOTES

A great deal of information has already been given in the text itself. Other facts and figures bearing upon the subject are given below for reference.

(1) *Population* of the Bombay Presidency has changed as follows :

*Year	Millions	It will be seen that we reached our high watermark in 1891, since when the natural increase has been counter-balanced by extensive famines towards the end of the last century, plague, and the influenza of 1918-1919.
1871	23	
1881	23·4	
1891	27·6	
1901	25·5	
1911	27·1	
1921	26·3	

* Bombay Census Report, Page 7.

The population of the Deccan has actually *declined* as the table shows.*

	Population in 1911	Population in 1921
Khandesh W.	5,80,680	6,41,828
" East	10,34,214	10,75,122
Nasik	9,03,644	8,28,624
Poona	10,64,806	10,02,423
Ahmadnager	9,43,991	7,30,481
Sholapur	7,68,017	7,41,630
Satara	10,80,798	10,25,695
Deccan	63,76,150	60,45,803

* Bombay Census Report, Page 30.

Thus only Khandesh (East, and West) is steadily *increasing*; Poona, Nasik, Sholapur are *stationary*; Satara and Nagar are actually *declining*. The details show the ravages of famine, and plague.

In *Nasik*, there is an *increase* of 17% in the Nasik Taluka; a *decline* of less than 10% in Sakri, Satana, Surgana, Malegaon, Nandgaon, and Igatpuri; of *more* than 10% in Kalwan, Peint, Dindori, Niphad, Chandor, and Yevla.

In *Nagar* an *increase* of 10% in Kopergaon Taluka (Irrigation); a *decline* of less than 20% in Akola, Sinnar, Nagar, Rahuri and Parner; of *more* than 20% in Sangamner, Newasa, Sheogaon, Pathardi, Karjat, Shrigonda, Jamkhed, and Dhond.

Poona—An *increase* of 10% in Haveli (Poona); a *decline* of more than 10% in Junnar, Ghoda, Khed, Sirur, Saswad and Indapur; of less than 10% in Poud and Baramati (Irrigation).

Satara—An *increase* of 14% in Malcolmpet (Mahabaleshwar); a *decline* of less than 10% in Wai, Medha, Satara, Karad, Patan, Shirala, Islampur, and Tasgaon; of *more* than 10% in Khandala, Dahiwadi, Vaduj, and Vita.

Sholapur—An *increase* of 24% in Sholapur (Cotton-Mills) but a *decline* of more than 10% in Karmala, Madha, Pandharpur, Malsiras.

Plague carried off 2,58,000 souls in the period 1911-1921 and Influenza 4,47,057 in the *six months* of Sept. 1918 to Feb. 1919.

The Deccan is also unenviably distinguished from other Divisions of the Presidency in having a *higher* birth-rate and death-rate per thousand: a sign of degeneration.

(2) *Towns and Villages*:—The figures given above show *rural depopulation*. Nor are the towns increasing as they should be.

We may arrange the towns as follows.

A town has a population of more than 5000—the bracket after the town shows the cause of increase.

	Increasing	Stationary	Decreasing
<i>Khandesh (W)</i>	Dhulia (Cotton) Nandurbar (Ry. Jn.) Sindkheda	Taloda Shahada	Sirpur
<i>Khandesh (E)</i>	Bhusaval (Ry.) Jalgaon (Cotton) Amalner (Cotton) Chalisgaon Cotton & Ry.) Jamner Pachora (Ry.) Asoda Kasoda Shendurni	Chopda Dharangaon Varangaon Erandol Parola Yaval Savda	Nasirabad

	Increasing	Stationary	Decreasing
<i>Nasik</i>	Nasik(Religion) Deolali (Cant.) Igatpuri (Ry.) Manmad (Ry.) Nandgaon		Yevla Sinnar
<i>Poona</i>	Poona (Capital and Cant) Baramati (Irrigation) Talegaon	Lonavla (Hill St.) Khed	Indapur Junnar Sirur Jejuri Saswad
<i>Nagar</i>		Nagar(Cant.) Kharda	Pathardi Puntamba Shrigonda Vambori
<i>Sholapur</i>	Sholapur (Cotton) Kurduwadi (Ry.)	Mohol Sangola	Pandharpur Karmala Karkamb Vairag
<i>Satara</i>	Malcolmpet (Hill St.) Panchgani (Hill)	Satara Karad Wai	Ashta Islampur Rahimatpur Tasgaon Vita

	Increasing	Stationary	Decreasing
<i>S. M. C. States</i>	Sangli (Ry.) Akalkot	Miraj Jath Aundh Bhor Maindargi Budhgaon	Malgaon Mangal- vedha Phaltan Modnimb

A table like this is sufficient justification for the first two chapters of my book. The influence of Bombay, Poona, and Sholapur on the rural population of the Deccan would be a most fascinating subject for study.

The Subdivision and Size of Holdings is given in the following Table.

STATEMENT OF HOLDINGS IN 1921-1922

District	Under and upto 5 acres	Over 5 and upto 25 acres	25 to 100 acres	100 to 500 acres	Over 500 acres	Number of Holdings	Total area	Average size of holding
W. Khandesh.	7,138	33,409	16,095	1,532	70	58,244	1,501,210	25.8
E. Khandesh.	38,386	63,107	18,041	1,948	42	121,524	1,947,024	16.0
Nasik ...	40,957	61,000	21,215	2,008	70	125,250	2,238,795	17.8
Ahmadnagar..	39,697	75,038	29,087	2,533	120	146,475	2,754,550	19.0
Poona ...	76,960	68,410	18,227	1,298	26	164,921	2,360,585	14.5
Sholapur ...	20,162	51,298	25,828	2,740	87	100,115	2,356,586	23.5
Satara ...	1,35,454	71,670	12,387	846	20	220,377	1,689,705	7.9
Total ...	358,754	423,932	140,880	12,905	435	936,906	14,848,455	17.8

The figures for irrigation from various sources are given below:—

AREA IRRIGATED IN 1922-23 (by Protective Irrigation Works)

ACCORDING TO SOURCE OF IRRIGATION

	Government Canals Acres.	Private Canals Acres.	Tanks (Private) Acres.	Wells Acres.	Other Sources Acres.	Total Acres.
West Khandesh ...	10,088	1,747	—	18,325	208	30,368
East Khandesh ...	3,490	—	—	23,036	483	27,009
Nasik ...	22,073	19,042	30	38,868	422	80,435
Ahmadnagar ...	65,593	959	—	60,380	—	126,932
Poona ...	49,121	1,795	4,245	76,487	6,760	138,408
Sholapur ...	10,475	14	—	86,354	3	96,846
Satara ...	10,976	27,716	448	57,464	8,169	104,773
	171,816	50,273	4,723	360,914	16,045	604,761
Govt. Productive Works ...	57,000					
Minor Works ...	219,000					
	447,816					

The results of Government Irrigation Works are shown below :—

Results of Operation of Government Irrigation Works up to and in 1923—24.

Name of District.	Area irrigable. Acres.	Area Irrigated in 1923-24. Acres.	Total Expenditure upto the end of 1924. Rs.	Working expenses		Net Return in 1923-24 on Capital Expenditure.
				Per cent. of Gross Revenue.	Rupees per Acre.	
<i>West Khandesh.</i>						
1 Shahada Channel.	2,400	2,423	68,479	43·12	2·17	10·13
2 Lower Panjrah, R. W. ...	12,627	2,865	4,68,621	18·74	1·62	4·29
<i>East Khandesh.</i>						
3 Hartala Tank ...	415	25	73,382	145·14	37·04	(a)
4 Mhaswa Tank ...	1,700	156	1,38,956	86·74	11·74	0·20
5 Jamda Canals (Girna river)...	5,000	801	10,44,137	195·01	11·31	(a)
<i>Nasik.</i>						
6 Kadwa River W....	18,022	5,821	10,35,483	37·43	3·48	3·80
7 Girna Left B. C. ...	8,500	7,745	31,69,411	68·74	4·60	1·89
8 Parsal Tank ...	1,000	1,085	2,14,995	26·08	1·33	1·89
<i>Ahmadnagar District.</i>						
9 Godawari Canals..	49,331	51,807	1,02,53,935	41·82	5·09	3·58
10 Lakh Canal ...	11,280	1,048	3,71,891	109·24	3·63	(a)
11 Pravara Canals (Right Bank) ...	16,960	12,616	1,34,97,607	56·76	5·61	0·40
12 Pravara (Left Bk).	28,760	26,713	3,47,550	34·51	3·83	55·86
13 Bhatodi Tank ...	12,124	1,094	3,79,707	0·94	9·95	0·10

<i>Poona District</i>						
14 Nira Canal and Shetphal Tank...	1,17,480	77,340	66,41,793	32.29	3.17	7.73
15 Mutha C and Matoba T. ...	20,050	18,118	65,39,953	35.80	7.62	3.79
16 Karurdi Tank ...	150	34	45,490	160.01	30.12	(a)
17 Shirsuphal Tank.	1,800	1,537	2,24,568	30.10	20.90	3.33
18 Bhatalwadi Tank.	2,000	820	2,27,422	109.44	4.16	(a)
<i>Sholapur District.</i>						
19 Ekruk Tank ...	16,941	3,043	13,40,386	16.15	6.68	8.11
20 Koregaon Tank ...	1,050	476	39,189	57.43	3.50	3.15
21 Ashti Tank ...	11,780	3,355	8,41,708	26.96	2.21	2.39
22 Pathri Tank ...	2,500	1,240	6,42,846	51.69	4.75	0.86
23 Mhaswad Tank ...	24,300	11,253	20,96,016	21.04	1.58	3.16
<i>Satara District.</i>						
24 Krishna Canal ...	12,320	9,401	9,45,477	38.04	2.95	4.79
25 Rewari Canal ...	1,920	259	59,811	112.80	10.92	(a)
26 Upper Man R. W.	2,080	555	4,39,286	100.23	5.47	(a)
27 Yerla River W. ...	5,480	5,892	7,78,727	65.36	3.26	1.31
28 Chikhli C. ...	1,478	328	57,442	71.27	3.20	0.74
29 Maini Tank ...	4,625	1,791	4,91,613	47.56	2.72	1.09
30 Maswad Tank ...	500	—	—	—	—	—
Total ...	3,94,573	2,46,641	5,24,75,881	63.46	7.4	3.17

(a) There was a loss on the works.

The average net return has been calculated by excluding the exceptional receipts on the Pravara Left Bank Canal.

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(1) It is an excellent piece of work.....Mr. Sapre is a master of his intricate subject and of the English language.....He writes with a clarity and conciseness that are worthy of high praise.

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(2) It is a careful and well-balanced account....I consider that the standard of accuracy achieved is in every way satisfactory...

DR. A. BERRIDALE KEITH,

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(3) Mr. Sapre has unfolded the story of constitutional evolution.....on the whole sympathetically.

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(4) Highly useful, and likely to be of great utility as a work of reference.

DR. RUSHBROOK WILLIAMS,

M.A., PH. D.

(5) The whole book bears unmistakable evidence of indefatigable energy and sound judgment.

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(6) A most scholarly work, distinguished by sobriety of thought and much knowledge of an intricate subject,

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