

# Indian Economic Association.

PROCEEDINGS

OF THE

FIFTH ANNUAL CONFERENCE

HELD AT

PATNA.

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*March 14th, 15th, 16th and 17th, 1922.*

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# INDIAN ECONOMIC ASSOCIATION.

## CONSTITUTION.

1. The objects of the Indian Economic Association shall be
  - (a) the holding of annual Conferences ;
  - (b) the publication of the proceedings of the annual Conferences ;
  - (c) the publication of a journal and its free issue to members ;
  - (d) such other action to promote Economic Science and the dissemination of economic information as may be deemed advisable.
2. The membership of the Association shall be open to teachers and students of Economics and to other persons interested in Economics in general or in special economic problems, if duly elected.
3. The government of the Association shall be vested in a Committee of not more than twelve and not less than six members elected at the annual Conference, exclusive of *ex-officio* members.
4. (a) The officers shall be a President, an Honorary Secretary, an Honorary Treasurer, and a local Honorary Secretary.
  - (b) The posts of Honorary Secretary and Honorary Treasurer may be held by the same person.
  - (c) The local Honorary Secretary shall be elected for one year at the annual Conference from members resident in the locality selected for the ensuing Conference, for which a local Committee shall be formed.
  - (d) The officers shall be *ex-officio* members of the Committee.
  - (e) The tenure of office of the Honorary Secretary and Honorary Treasurer shall be for one year or until their successors be elected.
5. The agenda of the annual Conferences shall be drawn up by the Honorary Secretary.
6. In addition to papers from members, the Honorary Secretary may arrange for papers from associates and non-members, if thereby valuable contributions can be obtained from experts on particular questions.
7. The annual contribution from members shall be Rs. 12 (reduced to Rs. 8 per annum for two years beginning with 1st October 1921, as an experimental measure). This shall entitle members to attend

Conferences, and to receive copies of such papers read at the annual Conferences as may be published, and any other publications of the Association, unless expressly excepted.

8. The annual contribution for associates shall be Rs. 6; and this shall entitle associates to attend Conferences and to receive such reports of the proceedings as are published by the Association, but not to vote on the affairs of the Association.

Members of the general public may be admitted as visitors to the Conferences by ticket, at the discretion of the Local Committee, at a charge to be fixed by the General Committee.

9. Candidates for membership shall be proposed and seconded by members, and accepted by the Committee by a two-thirds majority.

10. Application to become associates shall be submitted to the Committee by the local Honorary Secretary.

11. A member on paying a contribution of Rs. 200 shall become a life member, exempt from all further contribution.

12. It shall be the duty of the Committee to arrange for such cordial co-operation as may be found practicable, with local Economic Associations and with All-India Associations having cognate aims.

13. It shall be the duty of the Committee to arrange for the publication of the proceedings, either through existing journals or independently.

14. Notice of proposed amendments to existing rules and of proposed new rules shall be forwarded in writing, not later than 31st October preceding the meeting to which they are to be submitted and not less than two months before the meeting, to the Honorary Secretary, by whom they shall be circulated to members not later than 25th November and not less than one month before the date of the meeting.

15. A two-thirds majority of the members present and voting at the Annual Meeting shall be required to alter the constitution of the Association.

16. The annual accounts shall be closed at the end of September and shall be submitted, after audit, to the Annual Meeting by the Honorary Treasurer.

17. One or more Honorary Auditors shall be appointed by the Committee.

PROCEEDINGS  
OF THE  
**Fifth Annual Conference of the  
Indian Economic Association**

HELD AT  
PATNA

*On 14th—17th March, 1922.*

*Tuesday, 14th March (MORNING SESSION).*

Mr. V. H. Jackson, M. A., Vice-Chancellor of Patna University, at whose invitation on behalf of the University the Association met at Patna, welcomed the members and addressed the Conference.

Professor H. Stanley Jevons delivered the Presidential Address. He said:—

One of the principal objects of this Association is to promote the study of economic science in India. In undertaking this task we have shouldered no light burden; and with the object of making some contribution towards our joint effort in this direction, I propose to address you some observations on the present position of economic science, with a special reference to its encouragement in India. I must begin by glancing briefly at the state of the science in other countries; and shall end when I have touched on the problem of promoting the growth of economic literature in the vernaculars of India.

The great world war has shaken modern civilization to its depths; and of all the human sciences, economics has been affected probably the most. I am not alluding to the dislocation of University work, and the suspension of the publication of the new books which resulted; but rather to the vast mass of new facts and figures which have been placed at the disposal of economic investigators. These facts relate to unusual conditions, and to changes of such rapid

development or catastrophic suddenness that they are akin to those of moving instantly from one static condition to another static condition, which it helps us to assume in our treatment of theory. Moreover, we had a hitherto unexampled extension of Government control over industries. In many countries all economic activities were subject to Government direction or at least to limitation. We have seen at work a nation-wide economic organization, often a nation-wide monopoly, of what had been a competitive industry. If the results appeared in many cases disappointing, we have to remember that a huge organization suddenly improvised cannot but be defective. Our business is to study the organization, the results which were achieved, and the direct and secondary economic effects.

This investigation of the economic activities of the war and their results has already commenced, and borne some early fruit in the countries of Western Europe. In France and Germany as well as in England several books devoted to the War and after-war economic conditions have already appeared, in addition to a great mass of papers read before learned societies and articles in standard journals. In America, too, the great reactions of the War upon currency and prices and finance generally have stimulated far more extensive and exact statistical enquiries than were ever before undertaken.

In England some noteworthy books have been issued since the War. Marshall's "Industry and Trade", published in 1919, was largely written before the War, and its publication was doubtless delayed thereby; but Pigou's "Economics of Welfare" has many chapters relating to the control of industries, the regulation of prices and rationing of supplies, in which the author's masterly analysis clears up for us some theoretical aspects of these exceptional measures. It is pleasing to find that in elementary books like "Money" by D. H. Robertson and "Supply and Demand" by H. D. Henderson the experiences of the last few years are made good use of; and the same is true, of course, of numerous books dealing with finance, currency and the foreign exchanges. The effects of the War have indeed greatly stimulated interest in economic science, and in the last two years there has been a quite unusual output of books on our subject, their general level of achievement showing, at any rate in England, a marked advance over similar works of the pre-war period.

In India also there has been an unusual output of books on economics, or of an economic character, in recent years. Taking a

view of them as a whole, however, it is impossible to say that any of them, even all of them combined, have made any appreciable contribution to the progress of the general science of economics. They are nearly all concerned more closely either with the second object of our Association—the dissemination of economic information—or with the economic effects of the War, or with politico-economic subjects and branches of public finance. Many of the books are frankly of a descriptive character, being rural surveys and minute investigations of village conditions and family budgets. Several books also have been written on that subject of fertile interest—the Indian currency and exchange.

It is far from my intention to decry the writings of economists in India because they are not devoted to the advancement of economic theory. The intellectual movement of the last few years has been towards gaining a more precise knowledge of the present-day economic conditions of India; and without doubt this is a highly important branch of study. I sometimes think that in the particular branch of minute studies of rural economic conditions India has become more prolific than any other country. This is a healthy sign; for it shows we are becoming conscious of the need of improving the environment of the agricultural communities. At the same time I would venture to suggest that there is some danger in confining ourselves to minute enquiries into the conditions in individual villages; and that a very fruitful field of investigation which should now be pursued would be the conduct of rural surveys of areas embracing a large number of adjacent villages, or possibly whole districts, or even divisions. The wider the area covered, naturally the less the amount of local detail which can be collected. Instead of endeavouring to investigate all aspects of rural life at once, there would be advantage in confining attention to one or two sets of facts, such as the relation of the standard of living to the percentage of commercial crops in the whole area, or variations in the size and scattering of holdings, or the rise of rents and extent of subletting. In all such investigations the comparative method is likely to yield important results; but the enquiries must be extended over areas sufficiently wide for comparisons to be made between presumed causes and effects in localities where different conditions prevail.

Looking again at the recent economic literature of India, one cannot fail to be impressed with the general spirit which underlies it. There are at least three approaches to the study of economics. The

investigator may be imbued solely with a thirst for knowledge for its own sake—he may be a devotee of pure science, absolutely unbiassed in his motive or his point of view. Whilst numerous workers in the natural sciences thus approach their studies, this spirit is rare amongst economists in all countries, and almost non-existent in India. Secondly, there is the approach of the business man, with whom, for this purpose, I may couple those politicians and Government officials who concern themselves with finance. Economics for them is the science of the individual business, and of the nation's business, and they must study it with a view to the better conduct of their part in business. The third approach is that of the social reformer, using the word in its broadest sense. I am glad to say that there is a wide and ever-growing movement towards the improvement of the condition of the people in this country, and it is beginning to result in practical efforts towards amelioration of the conditions of life of the masses.

Young men, imbued with an enthusiasm for fame, have been taking to the study of economics in increasing numbers during recent years. They feel rightly that a knowledge of economics will be helpful towards solving the very difficult problems that are constantly facing the social reformer; they realize that the widespread poverty of the Indian people is at the bottom of many social evils; and that the poverty is itself the result of economic causes.

This last approach to the subject of economics is to me the most important and the most promising. I understand it well because my own attraction to the subject arose precisely in that manner, through a keen interest in social reform. Secondly, as I have said, it is a source of great satisfaction to me that so many young Indians having an enthusiasm for social reform are undertaking the study of economics. I feel, however, that a word of warning will not be out of place. There is a fatal disposition evident in other countries besides India to imagine that economics is a subject in which it is only necessary to read a few text-books and perhaps half a dozen larger works, besides listening to a few lectures, in order to become qualified as an economist. There cannot indeed be a more fatal mistake. No real student of economics, by which I mean one not preparing for an examination, but hoping thoroughly to master the subject, can afford to neglect the experience which he may gain by close, personal enquiries and observations into economic facts of his own locality and of any industries which may especially attract his notice. Neither can he omit to



read many articles in the standard journals upon economics and statistics, and to be closely acquainted with the big literature of official publications. If he has some facility in mathematics and devotes his whole time for three years to some study of the subject, he will begin to feel a new confidence in his knowledge: to know what he knows and what he does not know, and to realize how little he knew at the end of his first year. You will, I am sure, understand that I do not make these remarks with a view to discouraging anybody from the study of economics. I merely wish all would-be students to realize that it is undoubtedly a very difficult subject, and certainly cannot be mastered with less effort or in shorter time than any of the other great branches of knowledge.

This word of warning is necessary, I think, because there is undoubtedly some evidence in some of the economic literature published in India of the writer's zeal for reform having overrun his comprehension of economic theory. Such writers are impatient of the long and laborious study needed to obtain a real grasp of economic science. They put pen to paper, guided only by the particular assortment of economic truths which they happen to have picked up. Having grasped a few principles of theory, they assume them to be of general application in all conditions; or even worse, they select with an unconscious bias those facts and theories which support their pre-conceived ideas.

In all countries many economic writings are of this character. In Europe we find them extensively amongst devotees of the labour and socialist movements. In those countries, however, the tendencies of such literature are counterbalanced by a large number of writings of a thoroughly sound and scientific character. That is where we fall short in India; and it is quite essential for the future progress of the science in this country that all who profess it, and especially the ardent social reformers, should realize how weak we still are in the application of economic theory to Indian conditions. This fact is the more deplorable, considering how popular our subject is in the Universities and colleges of this country.

There is a growing movement, and one which I welcome most heartily, for the development of the literature in the principal vernacular languages of India. This is a movement which is bound to have most important effects in securing the solid and permanent advancement of the people of India; indeed, I would almost venture to suggest that full self-government cannot be established in a permanently

stable form until a great volume of literature in the vernaculars has been produced. As in all countries, the books published in the vernaculars will at first be, for the most part, translations. There is a crying need for rendering into the principal vernaculars books of leading writers in the natural sciences, in history and politics, in philosophy, and last, but not least, in economics. The activities of the Hyderabad University are well-known, and there are many translations in Bengali and Gujarati; but very little has yet been done in the translation of economic books into any of the vernaculars. Perhaps, the difficulty partly is that at the present time a reading public for technical works in the vernaculars hardly exists, and publishers are therefore shy. But I think an even greater difficulty is that which the translator has to face in the total absence in the vernacular of the technical terms which are so widely and necessarily used in all the sciences.

This Association was not slow to realize that the promotion of economic literature in the vernaculars was desirable; and that the first pre-requisite for the success of such a movement was to settle a standard economic terminology in each language. At the last Annual Conference committees were appointed to devise suitable technical terms in Hindi, Urdu, Marathi and Gujarati; and we are to hear reports of these committees during the course of this Conference. No doubt, they will be in the nature of interim reports, for the work is difficult and extensive; but the committees must persevere until each can publish a standard glossary of the technical terms of economics in each language.

The importance of a precise terminology, with the progress of knowledge, has been so clearly appreciated that almost every science has succeeded in evolving a terminology and nomenclature which obtains general acceptance throughout the civilized world. Economics in all countries is, unfortunately, amongst important sciences the most backward in this respect. The committees rendering the technical terms into the vernaculars will find most hopeless confusion prevailing in the terminology of the science. True, a few well-known words such as *Utility* and *Diminishing Returns* are in universal use; but unfortunately different authors have applied widely different meanings to these very words. Almost every author seems to arrogate to himself the right to use any terms with any new or different shade of meaning that he may choose to attach to it. This practice cannot be too severely condemned. According to the well-established practice of all

scientific writers, no author has the right to use an already accepted term with a new meaning in any way different from that ascribed to it by the great majority of writers. In other sciences, if a man has a new idea to convey, he must invent a new and suitable technical term specially to denote that idea. It is only by following this rule that misunderstandings and confusion of thought can be avoided. Economics can never be a homogeneous and consistent body of thought until this rule has become well-established in practice. If every author introduces a new term for a new idea, whilst faithfully using accepted terms for adopted ideas, those new terms would survive which denote important ideas in a suitable manner. Thus, in the course of many years, there will evolve a consistent and accepted terminology utilized by all writers on the science.

At present, I am sorry to say, I see no signs of the consummation of this ideal. There is even some evidence of a retrograde tendency. On the one hand, authors are still continuing to annex the ordinary commercial terms used by business men, and to give them technical meanings to convey ideas in economic theory. This is a practice which has already caused the science of economics infinite harm in all English-speaking countries; and it ought surely to cease. It is impossible that we should go on for ever having to qualify our use of certain words by adding "in the business man's sense" or "in the economic sense." An equally deplorable tendency, as it seems to me, is that of endeavouring to introduce new terms to replace some already well-established and used with a generally accepted and definite meaning. Whatever the disadvantages of the latter in their first adoption, they having come into universal use, nothing but confusion can result from trying to replace them by new terms. Writers in all countries are offending in this manner. Pareto, for example, has proposed to substitute the word *Ophelimity* for *Utility*; and Pigou has adopted the word *Desiredness* as a substitute for the term *Utility*. The objection to the word *Utility* is that, like almost every other technical term in economics, it has a colloquial meaning different from the technical meaning in economics; but as a term in universal use with a technical meaning, it has a history of 120 years. It cannot be displaced by any such cumbrous word as *Ophelimity*; and *Desiredness* is equally cumbrous and, moreover, is unsuitable for adoption into other languages, while *Utility* can be so adopted.

Let us see now what are the essential features of a good terminology in any science and in any language. First and foremost, the term should be free from ambiguity. Economics is a badly organized science, for many of its terms bear several meanings; and the right meaning can be learnt only by the general tenor of the context, unless the author defines his term each time he uses it. A classic example is the word "value" which, as my father pointed out, is commonly used in five different senses—as synonymous with *price*, *total utility*, *marginal utility*, *magnitude* (as in mathematics) and as the *product of quantity times price*. The last is the business man's use of the word "value," and it denotes a clear and definite idea. Economists would do well to use the term in this sense only.

Secondly, a technical term should, so far as possible, indicate or at least suggest the idea which it denotes; and this is usually accomplished by including in it one or more roots in the same language or a classical language which convey the elementary ideas associated in the new idea for which the term is wanted. Thus we have no good term to signify the act of putting together of the factors of production for commencement of production, and I might suggest the word *incollocation*, from *locus*, Latin for "place," *con* meaning "with" (each other), and *in* to signify that the factors become merged into one another. The usual phrase "fixation of capital" does not convey all these ideas.

The third desirable feature of a technical term is that it should be easily pronounceable, and not too long. Words difficult to pronounce cannot be conveniently used in lecturing; and terms involving many words are a great tax upon the powers of comprehension when often repeated. I need mention but one example: terms introduced by Professor Pigou—the *value of the marginal social net product*, and the *value of the marginal trade net product*. When both these terms are repeated several times in the (same sentence, the average economist may be excused for having to read the passage two or three times before understanding it.

Another very important principle to be observed in selecting technical terms is the advantage of their being international and usable by people speaking different languages. This has been accomplished in the natural sciences largely by the use of Latin and Greek words and roots. Latin words can apparently be assimilated into almost every language in the world; and it will therefore be a great advantage to use Latin words, or French and English derivatives

therefrom, for our technical terms in preference to pure English or German. For the same reason, if the invention of new equivalents for economic terms in the Indian vernaculars is absolutely necessary, Sanskrit roots should be preferred to Persian or Arabic.

The problem of economic terminology in the Indian vernaculars is a very difficult one, and I have given it a good deal of thought. I do not think my conclusions are invalidated by my imperfect knowledge of even one of those vernaculars, because these principles are of perfectly general application in the use of technical terms in all languages. The four most important principles, as it seems to me, are: (1) technical terms having a well-defined meaning in economics such as *marginal utility* should be merely transliterated, that is to say, adopted with only such slight modification as is necessary to make the words easily pronounceable. I noticed in a Japanese translation of an English economic treatise that the technical terms, even such as *Capital*, were retained and printed in English. The printing in English is, of course, undesirable in translations into Indian languages, but the main outlines of the words can be retained. (2) Vernacular words in common use for ideas and instruments of business must not be adopted and given a different meaning. Their precise present meaning amongst Indian business men should be ascertained and recorded. (3) Sometimes a term can be coined by running together two ordinary words, for example, *rupia-paisa* might serve for money. When it is impossible to adopt any other word, a Sanskrit word may be adopted either as it stands—or merely its root with some modernized termination. In the adoption of a Sanskrit word care must obviously be taken to see that it has not already been used by writers in some other branch of knowledge with a new and different modern signification. I would like also to venture a word of warning to enthusiasts for the use of Sanskrit words. Is it quite fair to the Sanskrit language, to the scholars and lovers of a great classical language, to take words unaltered from that language and give them a new and modified meaning? This should be done only with caution, I feel, the better practice being to use a Sanskrit root in some form of combination. Indian economists must not be shy of introducing wholly new words into the vernacular languages. A technical term always needs definition and explanation to the student or reader, simply because the idea itself is new. In the end I am sure the introduction of the new or foreign terms in use for all new ideas will promote the healthy growth of economic science in India. The way is open to us now by careful work to repair for

the use of Indians in the future some of the worst mistakes of the terminology of economics in English, which have done and still do retard the progress of the science.

I trust I have not wearied you with this rather lengthy expression of my views on exact terminology. My excuse must be the extreme importance I attach to it, and my strong desire to contribute something, however little, towards the growth of a great body of economists in India in touch with the leading schools of economists in Western countries, but teaching and writing for the people of India in their own language.

*Wednesday, 15th March (Morning Session).*

Professor R. M. Joshi, Sydenham College of Commerce, Bombay, read a paper on "Imperial Preference". He said:—

For over half a century after the close of the Napoleonic War, England had a virtual monopoly of the supply of manufactured articles to the whole world. It was towards the eighties of the last century that competitors began to appear in the field. By that time European countries like Germany, France, Austria and the American nations of Canada and the United States had succeeded in modernizing their industrial organization with the help of the plant and machinery supplied by England herself; and the first use they made of their new equipment was to cut England off as far as possible from their home markets, invoking the aid of high protectionist tariffs for that purpose. In another couple of decades they entered upon competition with England in foreign markets. Japan, too, now came upon the scene. It was this competition that led some of the English statesmen to think whether it was possible to devise measures for lessening this foreign competition in some of their markets. The extensive British Empire was in itself a wide market with large potentialities of expansion. Could not Britain secure a privileged position for herself in the markets of her own Empire? Hitherto, in the parts of the Empire administered by herself she had pursued the policy of the "open door", and in the self-governing colonies her goods had been placed on the same footing as those from foreign countries. Could some preference be secured for British goods in the markets of the British Empire? That was the question which agitated the minds of men like Joseph Chamberlain at the beginning of the present century. The time for a move in that direction was then opportune. The Diamond Jubilee of Queen Victoria, celebrated

in 1897, created a fervour for the mother-country all through the Empire and especially in the self-governing colonies. That fervour was given a material expression by the colonies when they voluntarily came to the help of the mother-country during the Boer War. So at the Colonial Conference held in 1902, after the accession of King Edward VII to the British throne, the subject of Imperial Preference was first broached. Hitherto, the self-governing colonies had adopted the policy of protecting their national industries as much against England as against foreign countries. Canada had declared as early as 1859 that fiscal autonomy was a vital part of self-government, and she had to be allowed to act upon that principle; and other self-governing colonies had quietly followed Canada's example. At the conference of 1902, resolutions embodying the principle of preferential treatment for the United Kingdom were passed, though it was stated that free trade with that country was not yet felt possible. In August 1903, the Secretary of State for India drew the attention of the Government of India to these resolutions. Lord Curzon's Government promptly replied, in October of the same year, to the effect that India should not be pledged in advance to accord such preferential treatment, and that under such a scheme India had very little to gain but a great deal to lose or risk. I shall not dwell at this stage on the reasons adduced in their despatch by the Government of India in support of their opinion, for I shall have to do it in some detail a little later. I shall only say here that everybody interested in this question ought to read that despatch carefully, for the arguments therein advanced are as pertinent to-day as they then were. In October 1903, Chamberlain launched his Tariff Reform campaign at Glasgow; and that controversy went on till 1906, when the general election resulted in a victory for the free-traders. In July 1906, however, the sixth Congress of the Chambers of Commerce of the Empire passed a resolution urging "the granting of preferential treatment in their respective markets on a reciprocal basis, each to the other; believing that thereby the bonds of union will be strengthened, and the British Empire largely freed from dependence on foreign countries for food and other supplies". In the Colonial Conference of 1907, the resolutions of 1902 regarding preference were once again passed; and the colonial prime ministers bound themselves to do what they could, on their return home, to carry out the resolutions. Neither Britain nor India, however, undertook similar responsibility. In 1913 the subject of preferential tariffs was discussed in the Indian Legislative Council, when the Finance Member pointed

out the financial loss that would occur if the principle were adopted by India. As a result of the European War, Great Britain has turned protectionist and has recently established preferential rates for the whole Empire on nearly all articles on which import duties are levied by her. The tariff policy of the Government of India is now being reconsidered. In appointing a Fiscal Commission to examine it, the Government have expressed a hope that "in the event of some scheme of Imperial Preference being found consistent with India's interests, India will not stand aloof from such a scheme, so that India's solicitude for the solidarity of the Empire may be established". One may doubt the wisdom of trying to strengthen the solidarity of the Empire by means of preferential tariffs, when the price to be paid for the creation of this extra good-will within the Empire is the creation of an extra ill-feeling towards it among foreign countries, including the Allies and Associates of the Empire during the late war. Further, if the end in view be the economic self-sufficiency of the Empire as a measure of defence in the event of another great war, that self-sufficiency, if at all attained during peacetime, may burst as a mere bubble when such a war does break out, considering the distances which separate the various units of the Empire. But I do not propose in this paper to enter into a discussion of these Imperial aspects of the question. I shall only try to find out how Indian interests are likely to be affected by the adoption of the principle of Imperial Preference.

In the first place, let us consider whether on economic grounds we need be particularly anxious for the adoption of the principle of Imperial Preference, i.e., whether we need give special treatment to our imports from the other parts of the Empire in order that we may thereby be able to find better markets for our exports. Now our exports chiefly consist of raw materials and food-stuffs. These are required by the importing countries for their manufactures, so it is to their interest to allow them to come in on the easiest terms possible. Whether the importing countries lie inside the Empire or outside of it, their attitude towards our raw materials and food-stuffs must remain favourable to us, especially if the quality of some of our exports, e. g., cotton and hides, is improved. Our six chief exports, in order of their importance in the pre-war year 1913-14 are as follows:—

1. Jute, raw and manufactured
2. Cotton, raw and manufactured.



3. Grain, pulse and flour.
4. Hides and skins, raw and tanned.
5. Tea.
6. Oil-seeds.

(1) *Jute, raw*, is imported free by all our customers, and we have a virtual monopoly of that important fibre. There are no impediments in our way in the importing countries that we would like to see removed or modified.

Manufactured jute, in the form of gunny-bags and gunny-cloth, is required by various countries for packing wheat, cotton, wool, etc. The United States and Australia do discriminate in their tariffs between raw and manufactured jute, putting an import duty on the latter while admitting the former free. But that duty has not really been very effective in reducing our exports of gunny-bags and gunny-cloth to those countries; and in any case our markets for those commodities are so extensive that we do not need to vex the United States in order to woo Australia in the matter, as Imperial Preference would oblige us to do.

(2) *Cotton, raw*. Our markets for this lie almost wholly outside the Empire. We can develop a market for it within the Empire, if we improve the quality of our product. But in that case we shall not need the additional assistance of Imperial Preference. We can very well do without it.

Cotton manufactures form a small item in our exports. What we need in order to develop our exports is not Imperial Preference, but a rebate of the excise duty when our cotton goods are exported.

(3) *Grain, pulse and flour*. There are no impediments put by the importing countries on our exports of grain and pulse. There may be minor restrictions put by some countries on imports of flour; but the exports of flour hold a very insignificant position in our export trade, and we do not need to adopt Imperial Preference in order to develop them.

(4) *Hides and skins, raw*, are admitted free by all importing countries.

Tanned hides mainly go to the United Kingdom, and there they are admitted duty-free; so we do not need to ask for preference.

Skins mainly go to the United States. They do discriminate between raw skins and dressed skins, admitting raw skins free and putting an import duty on dressed skins. But, as things are, we

do not find ourselves overstocked with dressed skins, which we are unable to sell abroad unless we cultivate markets for them within the Empire by means of Imperial Preference.

(5) *Tea.* China has practically disappeared as a competitor of India in the world tea-market, and India has achieved that result without asking for any special treatment at the hands of the importing countries. The only competitor worth considering that is now left is Ceylon, which is within the Empire. So Imperial Preference will not help us in this case.

(6) *Oil seeds.* Our oil-seeds are everywhere admitted duty-free, so we do not need to ask for special treatment with regard to them.

This very brief review of the position of the main articles of our export trade is enough to show that we do not need to ask for preference at the hands of the other parts of the Empire in order to develop our export trade. And, as a matter of fact, what we are anxious about, in the present economic position of our country, is not how we shall be able to sell more of our raw materials abroad, but how we shall be able to turn more of our raw materials into finished products ourselves.

Now let us pass on to consider how Imperial Preference will affect us, economically. It has already been shown that we do not need to ask for preference. But is it possible that preference can be shown to us, to a material extent, by Great Britain or the Dominions because they want us to give preference to their goods? Great Britain can do so only if, in the first place, she imposes an import duty on all raw materials and food-stuffs, and then lowers that duty on our raw materials and food-stuffs exported to her. Great Britain is hardly likely to do that. She has lately lowered the duties on Indian tea, coffee and tobacco. She has only lost some of her revenue thereby, but has conferred no material benefit on India. Nor have Canada and New Zealand brought India under great obligations by allowing our tea or candles to come in at lower rates. Neither is it possible for these countries to do much more. So the conclusion is that Imperial Preference cannot bring any material advantage to India. But is it likely to cause any economic loss to India? Let us see.

In the pre-war year 1913-14, 70 per cent. of India's total imports were from the British Empire, 64 per cent. being from Great Britain alone. Imports from foreign countries were only 30 per cent. of the total. This means that, even without preferential duties, Great

Britain had a good grip on our market. So the effect of our adoption of Imperial Preference can only be to enable Great Britain to get a still firmer grip on our market through the lessening of what little foreign competition there may be at present. The benefit of this to Great Britain is clear enough, but does it not mean that we help in the matter of raising prices against ourselves? Our chief imports in order of importance are :—

1. Cotton manufactures.
2. Sugar.
3. Iron and steel.
4. Railway plant and rolling stock.
5. Machinery.
6. Woollen manufactures.
7. Chemicals, drugs, etc.
8. Mineral oil.
9. Hardware.
10. Paper.
11. Motor-cars and accessories.

In most of these articles Great Britain, though holding a predominant position in our market, has to put up with a certain amount of competition from the United States and Japan; and Germany is a potential competitor. The competition of all of these is likely to increase in coming years. Now it is undoubtedly in our interest to manufacture these articles ourselves, as these countries do. But in so far as we have got to meet some of our requirements by imports, it is surely in our interest to buy in the cheapest market. Any policy that prevents us doing so causes economic loss to us.

In 1913-14, of the total exports from India, 62 per cent. went to foreign countries, and only 38 per cent. to the countries within the British Empire (24 per cent. being to Great Britain herself). So our best customers lie outside the Empire. If, by adopting Imperial Preference, we buy less from them, they may buy less from us, though the nature of the commodities they buy from us is such that they cannot retaliate in this manner without causing further injury to themselves.

So far, by Imperial Preference we have understood only preferential import duties. That is what that term means in Great Britain or in the Dominions. But for the last two years or more the Government of India have adopted a novel method of showing preference, *viz.*, by levying an export duty of 15 per cent. on raw hides

and skins, but charging only 5 per cent. if the hides or skins are to be exported to any part of the Empire. This export duty is alleged to be in the interest of the Indian tanning industry; and the preference, I suppose, is to show India's solicitude for the solidarity of the Empire. The net result of this novel scheme is to give the Indian tanners a preference of 5 per cent over the British tanners, and to give the latter a preference of 10 per cent over the foreign tanners. The economic loss to India of this kind of Imperial Preference hardly needs to be pointed out at length. An export duty, as a general rule, means a depression in the price of the article to be exported; and preference, of the kind mentioned, means a greater solicitude for the Empire than for India herself.

What has been said so far clearly shows, I believe, that India has very little to gain, economically speaking, by the adoption of the principle of Imperial Preference, but that she has a great deal to lose and a certain amount to risk. That is what the Government of India themselves said in 1903, though now they appear to have changed their views, judging from the remarks made by their spokesman in the Legislative Assembly on 1st March 1921, with reference to the appointment of the Fiscal Commission which is now sitting. I have already quoted those remarks in the earlier part of this paper.

It may be said, however, that the question of Imperial Preference is not merely an economic issue; that it is as much a political as an economic issue; and that it behoves India to do what the self-governing Dominions have done in the interest of the unity of the Empire. I do not desire to go too much into politics here; but the issue cannot be burked, if the subject is at all to be properly discussed. What I must point out is this. Firstly, India need not be in a hurry to fall into line with the Dominions in this matter, because she is not yet a self-governing Dominion, though Dominion status of a sort has now been allowed her in certain international transactions. Secondly, if India is to fall into line at once with the Dominions in the matter of preference, let her adopt that principle on the lines followed by the Dominions themselves. What are those lines? An examination of the fiscal policy pursued by Canada, Australia and New Zealand shows that the general principles underlying that policy are as follows:—

- (1) They levy high import duties on all foreign manufactured goods, the duties varying between 20 and 40 per cent. That is, they guard their own interests even as against those of Great Britain.

- (2) After safeguarding their own interests, they give British goods preference over foreign goods, the preferential rate being generally two-thirds of the full duty.
- (3) The preference given is to Great Britain, not to the Empire as a whole. The other parts of the Empire are left to arrange terms with the particular Dominion
- (4) Preference is confined to differentiation in the rates of import duties only. Export duties are to be found only in New Zealand, on some special kind of timber of which they have a monopoly. But no preference is given in that case. (It may be noted that all the three Dominions, like India, mainly export raw materials and food stuffs, and import manufactured articles.)

The case of South Africa is different. There, even food stuffs have largely to be imported. The tariff is low, between 10 and 15 per cent. The preference given to Great Britain is a rebate of 3 per cent. or so. It does not automatically apply to the other parts of the Empire.

It is not pertinent to this paper to discuss whether it is in India's interest to raise her rates of import duties to the level obtaining in Canada, Australia and New Zealand, or to leave them at their present level, which approximates to the South African. If we decide to adopt the first alternative, I believe it would be politically expedient to give Great Britain a preference of not more than 25 per cent. of the rates of import duties for foreign countries, *e. g.*, if the general rate be raised to 30 per cent. *ad valorem*, let the rate for Great Britain be not less than  $22\frac{1}{2}$  per cent. With regard to the other parts of the Empire, I should recommend nothing more than a policy of reciprocity. If we decide to leave our tariff at its present low level, it would not be practicable to give preference to Great Britain by reducing the general rate of 11 per cent. to 8 per cent (say) in her case. I should not recommend the adoption of Imperial Preference at all in that case. It is only if we decide to change our existing tariff policy, so as to increase the restrictions on imports in general, that it would be expedient for us to consider the question of Imperial Preference favourably, even though it would mean an appreciable economic loss to us.

*Discussion on Prof. Joshi's paper.*

Prof. H. S. Jevons, in introducing the discussion, pointed out the possibility of conflict between interests that were Indian and interests that were Imperial. Imperial Preference might lead to a deterioration of the Indian revenues, or damage to India's foreign

trade. It was, he considered, difficult to carry out in connection with any policy of protection, because many of the articles imported into India were manufactured in countries other than Great Britain. Another serious economic objection in his view was that it might lead to trade becoming more round-about and less direct than at present. The trade-routes would become artificial, and would necessitate on the part of England a strong navy. Without such a navy her position in time of war might be very much worse than at present. His greatest objection to the policy, however, was that he did not believe that an economic bond of this nature was necessary for the unity of the Empire. That unity, he submitted, rested largely on sentiment, and from the economic standpoint it seemed to him better to let each constituent part of the Empire go forward in its own way.

**Mr. Deole** put it forward as his opinion that Imperial Preference could not be separated from the question of Protection. Imperial Preference only became a practical question for India, if Protection were first adopted. Even then the question would hardly arise, unless India were granted full Dominion status. The Dominions had not sacrificed their own interests to the interests of England, and he feared that Imperial Preference at the present time would involve the sacrifice of the interests of India. As soon as India was granted full Dominion status, she should be prepared to grant Imperial Preference as far as lay within her power; but until that time the issue was, in his opinion, not a live one.

**Dr. Hyder** said that he would prefer to see the industrial system of India built up without Protection. Opinion in England was against all manner of duties, and India at the present time had little to gain from Imperial Preference. He reminded the audience that the Empire had once before been disrupted by attempting to introduce these economic ties. In his view, the Empire should be cemented by cultural ties; ties of blood and kinship did not exist so far as India was concerned, but he felt that the end would not be secured by protective duties.

**A member from Dacca** said that it was essential to balance the gain against the loss, if Imperial Preference were adopted. The economic loss might be more than counterbalanced by the political gain. So far as the economic aspect was concerned, Imperial Preference would prevent India from buying in the cheapest, and selling in the dearest market, and would certainly involve an economic loss.

**Mr. S. P. Bhargha** said he felt it was necessary to be more precise in the meaning attached to Imperial Preference. Did the reader of the paper advise discriminating protection, or a high tariff all round ?

**Prof. W. H. Myles** pointed out that previous speakers had, in his opinion, attempted to draw too hard and fast a line between the economic and the other aspects of the problem, *e. g.*, the political. As a matter of practical politics, they could not be so separated. He doubted the wisdom of attempting to achieve Imperial unity by schemes of preference, unless at the same time greater political unity were secured through some new Imperial Chamber. Without the latter, the former might, as Dr. Hyder had suggested, have a disruptive rather than a binding tendency. In this connection he pointed out the advanced position taken up by Adam Smith, who in his famous chapter on "Colonies" not only put forward the idea of an Imperial Constitution, but actually conceived the possibility of the centre of power moving across the Atlantic. Though that teaching was now nearly a century and a half old, he submitted that along those lines lay the hope of the future; and he felt that when one considered the influence Adam Smith's teaching had had upon trade, education, finance, etc., it was not yet too late to hope that in colonial policy his teaching might still bring forth a Cobden.

**Prof. C. J. Hamilton** pointed out that the separation of political and economic issues was, in his opinion, the result of confusion and compromise. Since the war, nothing had become more common in international conferences and elsewhere than to divide the nations of the world into different categories, *e. g.*, enemy, neutral, imperial, etc., and to discriminate between them. In his opinion, Imperial Preference arose from the same mode of thinking. It was nothing more than an insidious method for securing the results of protection. Those in England who supported it would, if true to themselves, come out as full-blown protectionists. Previous speakers had generally assumed that Imperial Preference would be a source of loss. He submitted that it might be a source of gain or of loss, according as it had one of two results. In so far as the different parts of the Empire were at the present time largely protectionist even as against one another, any form of Imperial Preference that led to these protective duties being decreased or abolished would tend to bring about an increase in the volume of trade and an important economic gain. On the other hand, any form of preference that maintained these

tariff walls, and then put on a kind of super-tax as against the products of countries outside the Empire, would in his opinion be both worthless and a cause of economic loss. This was, in practice, the kind of preference offered by Canada. The first idea there was to secure protection for native manufacturers, and after this had been done certain small advantages, so negligible as to be hardly worth considering, were offered to the products of Great Britain. Such a policy, he considered, was to be rejected if put forward for application to the whole Empire; he would only accept Imperial Preference in so far as it would bring about greater freedom of exchange.

**Prof. Johnson** took up the point raised by the last speaker on the subject of the Canadian preference granted to Great Britain in 1897. He pointed out that the chief motive underlying the change was not a purely economic one, but the motive behind the change was to increase the autonomy of Canada. The Liberals, when they came into power, had posed as opponents of the policy of protection; and this was one of the measures in the direction of free trade that they thought was not calculated to do much harm. Further, by an almost Machiavellian move, they made use of this method of granting preference to Great Britain in the full assurance that Germany would interfere as she actually did, and Canada's power of concluding reciprocity treaties with other countries would be increased as a result of the whole matter being brought out into the day-light.

**Prof. Joshi** replied. He fully admitted that Imperial Preference postulated a policy of protection. As regards the criticism of Prof. Hamilton, that a policy of protection first, and then a kind of super-tax against the products of countries outside the Empire, would be worthless, he did not agree. He was of opinion that if British goods found entry to the Indian market on paying 25 per cent., and those of other countries only on paying 30 per cent., that preference of 5 per cent. would put Great Britain in a most favourable position as compared with other countries. He was not in favour of the political aspects of the question being mixed up with the economic. What had surprised him most in the criticism, he said, was that no one had pointed out that the conclusion of the paper was favourable to Imperial Preference, though the argument throughout was against it. The advocate of Imperial Preference was the Protectionist; he, the writer of the paper, was a Free-Trader.



*Wednesday, 15th March (Afternoon Session).*

Professor Clark A. Warburton, Ewing Christian College, Allahabad, read a paper entitled "Comments on the Equation of Exchange". On the motion of Professor Myles, the discussion of the paper was postponed until the next day in order to give members an opportunity of looking through the paper more carefully.

[Professor Warburton's paper is printed, along with the discussion, in the Proceedings for the morning session of the 17th March.]

Professor T. K. Shahani, Samaldas College, Bhavnagar, read a paper on "Indian Finance". He said :—

One of the greatest contributions of the late Mr. Gokhale to the service of this country was his most fascinating way of handling the annual Indian budget, on which only a sort of rambling general discussion was permissible according to the Indian constitution of those days; and though the principles on which he based his criticism of the financial measures of the Government of India were not always very sound; he no doubt added much to the public zest to get into the mystery in which the whole field of Indian public finance was then enveloped. Since Mr. Gokhale's *début* before the Welby Commission, this subject has been engaging the attention of an increasingly growing number of students and publicists; and every financial move of Government is now coming in for either well-reasoned criticism or intelligent applause, as the case may be. *Pari passu* with this growing sense of appreciation has grown the change in the material aspects of the country. Indian finance is no more "a gamble in rain", as Sir Guy Fleetwood Wilson once remarked, or for the matter of that, "a gamble in railways", as more recently Sir William Meyer said in the course of one of his War budgets. We are admittedly in the midst of conditions fairly allowing of a broad base for revenues, if wisely administered, capable of facing storms and stresses occasioned by wars, diplomatic necessities, and famines, and enabling Government to undertake some part of the developmental and socialistic functions of a modern state. A careful perusal of the Financial Statements from the time of Wilson in 1859 down to that of the Hon. Mr. Hailey will leave no doubt that the absence of elasticity in Indian revenues so plaintively put forth by Fawcett is an affair of the remote past. Under almost all the heads of revenue there has been a growing increase, as is naturally the case with every progressive country. Income-tax which figured for the first time just about forty years ago has shown distinct improvement, indicating the transition that the country

is undergoing from a purely agricultural to a semi-industrial condition. Owing to our long heritage in agriculture we hold a valuable asset in our raw materials, which generally gives us a favourable balance of trade, and consequently a claim on a fair share of the world's production of precious metals which may, at no distant date, come to be at least partly replaced by our holding securities in other countries, particularly in England and British Colonies.

The rosy look of Indian finance is, however, marred by a few ugly spots that have of late figured so palpably as to invite a scrutiny and a cure, if possible. Currency and exchange, though of vital importance to the commerce, industry and credit of a country, need not, ordinarily, have a direct bearing on its public finance. But Indian finance is, unfortunately, so intimately mixed up with the currency problem that not a few of our financial woes and some of our blessings are traceable alike to our currency and our exchange policy. Government receives its revenue from the country in silver, but has contracted obligations to the outside world, payable in gold, to the extent of nearly 25 millions every year, known as the Home Charges. Sir David Barbour's strong representation that India was not "a bottomless pit" out of which rupees could be dug indefinitely to meet these charges in terms of appreciated sovereigns resulted in means being devised for stabilising exchange which, barring a small spell of adverse trade balance in 1907-8, worked all right for nearly twenty years (1896-1915)—a period of absolute smooth sailing and "currency" surpluses with which Mr. Gokhale made us familiar. The war completely changed the outlook. With silver rising in value, the rupee also rose in terms of the gold pound till quite a phenomenal position for the rupee, equal to something in the neighbourhood of 3 shillings, was reached. The Currency Committee of 1919, taking these conditions as having come to stay for the future, recommended a 2 shillings rupee; and the Indian Finance Member budgeted for the Home Charges as well as all Indian capital expenditure to be spent in England on the new basis.

Lord Meston had budgeted (1919-20) for a big harvest from exchange operations; and on 1st March, 1920, his successor in office, Mr. Hailey, announced that the gross gains from exchange for the closing year would amount to 22½ crores of rupees. Deducting from this 4½ crores, as loss on rupee coinage, and another 6½ crores on gold purchases, arising from the premium over sterling parity at which the Secretary of State's purchases had been made, the estimated net

exchange gains for the year 1919-20 stood at  $11\frac{3}{4}$  crores of rupees. The situation then suddenly took a different turn. The rupee got lower by leaps and bounds, till it sank down to a trifle less than its former statutory position of 1 s. 4 d. In the interval, the process of selling Reverse Councils had already seriously taxed the capacity of the Secretary of State to meet these sterling demands; and now for the Home Charges, as well as for capital expenditure on railways which is mainly incurred in England, the Indian Finance Member had to provide more rupees than were required according to the fresh statutory basis of 2 s. per rupee. Thus a heavy deficit of nearly ten crores had to be met by increased taxation. This story of the fluctuations in exchange, the inevitable result of an artificial linking of silver with gold, points to only one conclusion. We must get rid of this baneful influence over Indian Finance, once for all. Unless the country has a gold currency in terms of which all calculations (of internal revenue as well as external obligations, like the Home Charges) are made, our public finance will always remain in a state of harassing uncertainty. Other things remaining the same, this year's budget estimates are likely to show a deficit because the calculations have been uniformly made on the basis of 1 s. 8 d., whereas the average exchange rate has been throughout the year just 1 s. 4 d. Currency is already one of the most vexing problems all over the world: we in India make it doubly vexing by trying to tie one metal with another. This is an artificial arrangement, which hits us hard both ways. For when windfalls in the shape of currency surpluses come, the spirit of expenditure possesses the soul of the administrator, and it is the military that generally pricks up its ears, (*vide* Lord Curzon's regime); when there is a deficit, increased taxation is the only resource for filling up the gap, and the tax having once been imposed has generally the ugly habit of sticking on. One other observation in this connection is worth hazarding. By spending on behalf of the Home Government we put ourselves in possession during the War of funds in England, which might have been gradually utilised in buying up part of the Indian debt held in England. If by this arrangement these foreign loans had been transferred to Indian fundholders, the burden of the Home Charges would have been considerably minimised; and the case for Governmental handling of exchange would have lost much force. This opportunity, which the War gave us and of which the United States took full advantage, was unfortunately not sufficiently encouraged by Government.

“ While the policy followed did not exclude Indian investments abroad, it left the matter to individual initiative, and did nothing to favour or encourage such investments”. (Mr. Dalal in the Minority Report of the last Currency Committee.)

Our Paper Currency reserves form another theme that ought to give anxiety to the custodian of Indian Finance. The question of handling these reserves is closely allied to that of the very issue of Paper Currency. That this alarmingly increasing issue of Paper Currency was a legacy of the Great War, nobody denies. This is how most of the belligerents tided over their difficulties. The Government of India, becoming a big buyer of commodities in India on behalf of the Home Government, met payments in India by the issue of notes ; and this keener demand for commodities and the greater issue of currency operating on the limited supply of commodities resulted in phenomenally high prices, which again reacted on the Government itself by adding to its expenditure all round. This was, no doubt, a great evil ; but it might be said that here our Government sinned in very good company, for there is hardly a Power in the world, coming within the war zone, that escaped this influence. As Paper Currency must have some backing, and as the supply of the precious metals became more and more limited, we sought the necessary security for our Paper Currency mainly in two directions : (1) our investments in Home Treasury Bills ; (2) Government of India Treasury Bills. The former, being sterling holdings, resulted in a serious capital loss to us on the adoption of a rate of 2s. to the rupee. Mr. Hailey showed in the budget statement of 1919-20 that the deficiency in our Paper Currency Reserve might ultimately amount to nearly 40 crores. In his budget statement of 1st March, 1921, he again says in para. 34: “ In order to meet the Reverse Councils sold by us, which since the 1st April of last year have amounted to £31 million, the Secretary of State had to withdraw and realise a large amount of the sterling securities held in the Paper Currency Reserve. These were, of course, originally valued on a 1 s. 4 d. basis, and the net result has been a loss of some 17 crores in the course of the current year ; added to which, a further loss of 2½ crores resulted from our selling Reverse Councils at rates above 2 s. These and other losses which have resulted from our remittance transactions are at present held in suspense ; but, as I have already mentioned, will sooner or later, except in so far as they may be reduced by a demand for Councils above 2s. (never likely), have to be met from revenue.” The investment in question had

been recommended as a peculiar measure pertaining to War Finance, and as a provision for buying railway material in England after the War (*vide* Sir William Meyer's budget statement of 1st March, 1918, para. 34); but this backing for the Paper Currency eventually proved precarious, if not altogether treacherous.

Regarding the other backing, *viz.*, Government of India Treasury Bills, Mr. Hailey has repeatedly expressed his dissatisfaction in fairly strong terms. The Paper Currency Reserve has only one function, and that is, that when Government are pressed hard from all directions to cash currency notes in gold or silver, they should be in an easy position to sell those securities which represent a particular ratio of the Paper Currency issued. Because of their easy and not unprofitable sale, such securities are called gilt-edged, and are generally understood to be as good as gold. The issue of Treasury Bills is justifiable, when Government have to tide over a temporary financial difficulty, *e. g.*, an unforeseen deficit. They are themselves a form of floating debt that the Government contracts; and they eventually depend for their liquidation on the year's revenue. Paper Currency is also a sort of loan (some writers on Finance would call it a forced loan); and when satisfaction for it is demanded by the holder of the loan, Government have nothing better to offer him than some other scrip of their own. This process is aptly described in the financial world as "pig on pork", or more humourously as the drawing of Mr. Micawber on Mrs. Micawber (in Dickens' *David Copperfield*). The Indian Chancellor of Exchequer is, by no means, enamoured of it. Repeatedly he has acknowledged that this unsound condition must be remedied. But how? In his last budget statement he said it was something to see the Paper Currency brought down to 164 crores from something like 137 crores, as it was in March, 1920. The latest we read about it is, that it is once again over 179 crores; and no attempt has yet been made to take leave of this Micawber method of meeting claims. No less than 40 crores of rupees of floating debt have to be disposed of, in addition to the War Bonds, for which again, says the Finance Member, no provision has been made in the direction of a sinking fund, although they are expressly terminable loans. As the bonds mature, or financial stringency arises, Government rushes to the money-market for a rupee loan in India and a sterling loan in England, both to be contracted under more and more exacting conditions. Thus Government, in the matter of debt liquidation, have been moving in a sort of vicious circle, just trying to ward off the immediate difficulty like a reckless

spendthrift who, to meet one set of creditors, throws himself into the clutches of another and, perhaps, a worse set. The only sound method to adopt in order to get out of debt is to keep annual income above annual expenditure. Sir William Meyer won volumes of applause, both in the Legislative Assembly and outside, by the skilful manœuvre of framing his war budgets with the minimum of new taxes and the maximum of loan operations. That is a cheap and undesirable popularity, where statesmanship takes no thought of the morrow. Individuals generally live in the present. The prosperity or otherwise of future generations does not weigh very much with them. But the interests of the country as a whole are entrusted to statesmen, who ought to recognise what huge burdens posterity will have to bear if a courageous policy of taxation is not adopted in the very beginning when a war breaks out, and to see that the proportion between war loans and war taxation is always such that the future is not irretrievably mortgaged. Gladstone financed the Crimean war mainly out of taxation. People considered it an heroic attempt, befitting his great personality. But the whole history of war-finance since the days of William Pitt the Younger teaches only one lesson; and it is, that wherever there has been a departure from that Gladstonian policy of financing war largely by taxation, statesmen have come to grief, and the country has been saddled with burdens under which it continues to groan for generations. Even in the last war no less a man than Mr. Lloyd George missed his opportunity, when experience has always demonstrated that it is of the first importance to impose adequate taxes as early as possible. The temper of the people is such that considerable sacrifices would at that time be borne without complaint. Moreover, there is a clear economic explanation confirming the view adopted in this paper. The state has its functions enormously enlarged during the war-period; therefore, it must acquire great spending-power. Its need is commodities and services. Current production, therefore, must be largely directed to what it wants. This can only be effected if the demands of individuals are curtailed. If they remain in possession of purchasing-power to the same extent as in normal times, and choose to exercise it, the demand for commodities will obviously outrun the supply. The general level of prices will rise; and there will be a great clamour for an increase in wages all round. A proper adjustment of purchasing-power is therefore necessary. A part of the purchasing-power of citizens must be transferred to the state. This can be done either by

loans or by taxation. Both methods are adopted, in practice. A fixed ratio between the two is, of course, out of the question, as the Chancellor will certainly be guided by practical considerations. The greatest objection against excessive borrowing is that the commodities and services of war-time being unproductively consumed, the loans remain outstanding, leaving nothing behind to represent them. Purchasing-power is not contracted, and a condition of inflation arises which is associated with high prices. Excessive borrowing, in fact, results in an indirect and objectionable form of taxation. Consequently, there was all the more reason in India to restrict borrowing. The possibilities of overt taxation ought to have been fully explored as a check on these evils. A budget which simply marks time (as was the case with all Sir William Meyer's budgets) is evidently quite inadequate. Taxation could have been more easily borne during the war than it can be after the return to peace. Borrowing is apt to make the debt charge so heavy that it is necessary to maintain the same scale of taxation after as during the war; and apart from the immediate effect of loans in raising prices, the Government is borrowing in depreciated currency and assuming the obligation of paying the interest in good money, if and when the standard is restored. Of course, taxation is unpopular, and India is not rich; but if the obligations connected with a great war have been accepted, they ought to be met courageously and out of a full cup of sacrifice, not by surreptitiously shifting the burden on to future generations. An adequate provision for the liquidation of these war loans, accompanied by the discharge of an inconveniently large floating debt, will test the courage and talents of any Finance Member; but it looks as if Mr. Hailey will be up to it, though the present legislature hardly seems to understand the position.

An outstanding feature of the last budget statement was the provision of 62½ crores of rupees for military expenditure. As long as we were in the midst of a great war, the country could conveniently be made to think that the military must encroach on a considerable part of the annual resources available for the public exchequer. But a demand for 58½ crores as the normal annual military expenditure took away the breath of Honourable members. In spite of innumerable assurances, given both by the Finance Member and the Military Secretary (Sir Godfrey Pell), that the utmost economy consistent with efficiency was being practised, and that the barest minimum in the way of supply was being asked for, it was difficult for

the country to be really convinced that public security demanded so heavy a sacrifice. This battle for a reduction in the military expenditure is an old, old story, in which perhaps no non-official ever played so important a part as the late Mr. Gokhale; but Government have always found it easy to shut the mouths of their critics by urging the argument that, being alone responsible for peace and security, they alone know what they must spend. Guizot, in his *History of Civilization*, says somewhere that when James I asked his Parliament for a grant of money to enable him to fight on the continent on behalf of the Palatinate, Parliament offered him only a few thousand pounds, thinking that should be quite enough; but when the King urged that nothing short of one hundred thousand pounds would do, the poor members of the Parliament in dismay protested they knew nothing of such things as war, diplomacy, etc. The position of members in the Indian legislature is no better regarding this question of military expenditure. We can only say that it is most alarming, and welcome any ray of hope that relief is in sight. In this connection, the report of the Military Requirements Committee will be awaited almost breathlessly; but presumably as long as we have positive conditions that require full, up-to-date preparedness for war, escape from this heavy military expenditure seems to be hopeless. It is all right for a flock of sheep to pass resolutions in favour of vegetarianism; but the wolf has to be consulted in the matter. That neither Afghanistan, nor the restless tribes on the frontier, are part of the League of Nations, or for the matter of that are likely to be influenced by the decisions arrived at in the Washington Conference, was very neatly urged by the Commander-in-Chief in the last debate on this military expenditure. We are further assured that all this vast outlay is required purely on account of India's needs: that it is a myth that Imperial interests are served thereby; and that consequently the Indian tax-payer has no business to look for relief in the direction of the British Exchequer. No amount of quoting sound principles of finance will be of any avail to us in this matter. It is only when a large number of highly educated Indians obtains insight into the actual working of the military administration that, through them, public opinion will be formed regarding the proper scale of our military requirements. Till then, this expenditure will always remain a sore point. One thing, however, must be stated quite frankly. This annual supply of about 60 crores, which is intended to give security to the whole of India, is borne by British India only. One third of



India (known as the Indian States) escapes it nearly altogether. One might reasonably ask why. Prof. Jevons in last year's Conference at Allahabad tried to make out a case for inland Indian States claiming a share of the Indian customs revenue; possibly, they may prefer a claim to a share in the Post Office revenue or currency and exchange profits. By all means. But they cannot have it both ways. They cannot eat their cake, and have it. At the earliest opportunity their claims against British India ought to be adjusted with their liabilities to British India. It is for the legislature to bring this point forcibly to the notice of the Finance Member, when he next places the military budget before them.

Looking to the whole revenue system of British India (central as well as provincial), as envisaged by the Meston Committee and slightly amended by the Government of India afterwards, one must confess to a sense of the disappointment and vexation that the arrangement is causing. The first serious drawback to the scheme is the arrangement for Provincial contributions to the Central Exchequer; and already the protests of Bengal have materialized in substantial relief. From all provinces the cry still comes. Bombay is restless, and Madras keeps continually fretting. Complete separation of revenues is the first requirement; and then a sufficiently liberal provision must be made for the provinces, on which must primarily fall the developmental and socialistic functions of the modern state. Provincial revenue, again, must be sufficiently elastic; and an increase in their revenues with the increase in the income of the enterprising commercialists and industrialists of Bombay and Bengal can be secured to them only through the income-tax. For the Central Government the two essentials are elasticity and certainty. The mainstay here will be the customs revenue, supplemented by the whole of the excise, the whole of the railway profits, Postal and Telegraph revenue, Commercial Stamp Duties, and Inheritance Taxes. There is one distinct principle running through this allocation. The Central Government must have its revenues obtained from the industries or pursuits with which it is intimately connected. The regulation of trade for which uniformity is essential, is peculiarly within its province; and this also is true of communications. Under this head come Railways, Posts and Telegraphs, and Shipping, which India must develop in the interests of its national existence. Lastly, come manufactures yielding a revenue to the state, which in the language of finance is called excise. Since elasticity as well as certainty is essential for the revenue system of a sovereign state, it is certain that a system of revenue that rests

chiefly on commerce will not readily enough respond to the fluctuating demands of Government. A great crisis, as, for example, the advent of a war, is sure to embarrass commerce and curtail the customs revenue; and any attempt to increase that revenue by raising duties will, under such circumstances, be sure to intensify the crisis. In such circumstances elasticity can be secured only if customs are supplemented by taxes on products manufactured in the country itself. The revenue machinery pertaining to excise should in ordinary times operate lightly; but emergency uses may easily be made of it. This is the justification, and the only justification, for maintaining internal duties on home products as a source of central revenue in time of peace. With us, in India, the machinery already exists; but whereas salt, cotton manufactures and opium have been allocated to the Central Government, by the award of the Meston Committee, the rest (which at present means only intoxicants) have been left with the provinces. In this respect, a revision is necessary. The whole of internal industry likely to come within the purview of taxation should be transferred to the Central Government; and the net of dutiable commodities may be made wide enough to include salt, intoxicants, tea, coffee, tobacco, cottons and sugar, when conditions allow. The propriety of granting the Central Government an exclusive title to excise duties is further supported by a consideration of the confusion that would follow, should the provinces undertake to tax any process of manufacture. With the development of communications, there no longer exists a local or restricted market. Hence uniformity of excise laws is essential. In the absence of this uniformity it is greatly to be feared that a time will come when an industry in one province will claim a sort of protection against its rivals in sister provinces; this would be fatal to national unity. The fact that the excise revenue has so far been partly appropriated by the provinces, or that part of the excise administration has been provincial, need be no bar to this proposed re-adjustment. On the same principle of uniformity here advocated, the stamp duty on commercial papers should be allotted to the Central Exchequer. In face of the military budget, there is great fear that the voracious appetite of the Central Exchequer will not be appeased with these three main heads of revenue. Therefore, another fairly elastic source of income may be tacked on to its revenue system, *viz.* Succession or Inheritance Duties. The principle underlying this award to the Central Exchequer is that succession duties must go to that Government which affords the necessary protection

to the business activities which rendered the accumulation of the property possible (Adams, page 504). As fortunes in modern times are not made in one town or even one province, but have generally something of a cosmopolitan character attached to them, it is in the fitness of things that the Central Government should participate in taxing them by a graduated system of Inheritance taxes. Finally, will come royalties on profitable undertakings like mining, fisheries, etc., which the Central Government may in all propriety appropriate to itself. Such revenues also may legitimately be subjected to the principle of progressive taxation.

The Act of 1919 has given us complete separation of the spheres of the central and local Governments. Therefore, financially too, they must be made independent of one another and self-supporting. Now the controlling consideration in the assignment of sources of revenue ought to be found in the public functions which each Government performs. The Central Government, representing the sovereignty of the people (so far as the present constitutional arrangements allow), having exclusive jurisdiction over international matters, and being entrusted with the power of declaring war and of concluding peace, must have both a certain as well as an elastic revenue. In the sketch contained in the preceding paragraph an attempt has been made to provide that. The Provincial Government, under the present arrangements, comes in for a large share of the developmental and socialistic functions of the modern state. Forests, the land revenue, judicial stamps and income-tax are the legitimate sources of its revenue, the last head promising some expansion. Without the inclusion of this last item, some Provincial Governments at least will be severely handicapped. Presumably, these Provincial Governments will have to meet a steadily increasing expenditure. With the progress and prosperity of the Province, the Finance Member should find his field for public revenue enlarged; but if the income-tax is a Central preserve, he will not only have no interest in forwarding the progress and prosperity of his own province, but will be envious of a growth of wealth which leaves him all the more destitute by contrast with the Central Government. The arrangement about the income-tax proposed at present is a very sore point with the Provincial Governments; and it is difficult to see how any harmonious, progressive work in the Provinces is possible in the absence of the entire restoration of this head of revenue to them. The earlier such a readjustment is brought about, the better for all concerned.

It is time that the principle underlying the present land revenue system came in for a thorough revision. Agricultural land is no more a peculiar domain of the state than building land, than any industry in the country, or, for the matter of that, any other source of private income. All these equally come within the purview of the state. Historically, every state has singled out agricultural land for taxation, because it carries a definite income and status with it. In a rude agricultural state of society, very naturally, land will bear the greatest part of the public burdens. India, too, for a long time could boast of only the land revenue, aided by one or two minor imposts like the salt duty, or the opium duty, as its main source of public revenue. The British Government came into possession of the legacy left it by the last rulers; and the social and economical condition of the country warranted the deriving of the main revenue from land alone. If at the time the British East India Company became the rulers in Bengal, Indian industries had been given some fostering care instead of what was actually their fate, a very different arrangement in public finance would have been possible long ago. Reality and personality would have very probably gone hand in hand; and no British statesman in India would have been obliged to uphold the absurd theories of state landlordism, which alone explain the Government reserving the land revenue system as an executive measure not to be brought before the legislature for discussion like any other taxation bill. Government, indeed, has all along maintained the premiss that land in India is a peculiar state domain. We have now travelled far from that primitive position; and along with the measure of financial reform which hands over to the provinces the entire proceeds from land revenue comes in the right of the legislature to vote the land revenue like any other tax bill. This is as it ought to be. There is, therefore, nothing in the land revenue to distinguish it from any other source of income belonging to the state. Like the income-tax it is not direct, but derivative income; and is thus to be distinguished from forest revenue, inasmuch as forests are actually worked by the state. Nowhere is it acknowledged that the holders of the land are not owners, but mere occupants.

Having first cleared up the point that the land revenue stands on the same basis for public finance as any other head coming under derivative income, it is one of the objects of this paper to press for relief to be given to earners of income from agricultural land which does not exceed the bare minimum required for subsistence. The present income-tax law exempts incomes below Rs. 2,000 a year,

which is considered the subsistence level. Similarly, there should be an exemption limit in the case of agricultural incomes. Equity demands it. Humanity compels it. The loss thus sustained may, to some extent, be made up by the application of the principle of progressive taxation to agricultural income. The land-holder on the margin of existence, like the professional man exempted from the influence of income-tax, should be left to contribute his fair quota to the Exchequer through the indirect taxes which he pays on articles of consumption and his Local Board or Municipal rates. That is all that he should reasonably be asked to bear. Tax the taxable. Exemption of income and property below a certain amount is justified on social considerations. "Without admitting man's right to live in the modern state without contributing to its support, a modified application of this principle may be defended on purely fiscal grounds. The surest source of public wealth is a lively hope and a healthy expectation on the part of the great body of citizens, and in so far as exemption of low incomes and small salaries from taxation induces to the conditions from which this hope springs, such exemptions will tend to the expansion of a nation's wealth. If this be true, the exemption of small incomes from direct taxation must ultimately result in the development of a source of wealth from which the State may expect to derive an increased revenue." (Adams, page 329.) "It is not conceivable that the needs of a Government can ever become so pressing as to warrant the levy of a tax that will depress the wealth of the nation, or impair the ability of citizens to secure an income".

The last word on Indian Finance, everywhere, is economy. That economy in expenditure is a big item on the revenue side is a maxim repeated *ad nauseam*, but rarely practised. We had a proof of this when the popular Ministers in the Provincial Governments and Presidents of Legislative Councils already enjoying fat pensions refused to let their salaries be interfered with. A splendid opportunity was thereby missed. After this, it is useless to blame Imperial services or any other set of office-holders if they press for high salaries. There are no signs that the spirit of expenditure is likely to be exorcised in the near future; let the country pray for a Gladstone who may bring in a new era in the finance of this country.

*Discussion on Prof. Shahani's paper.*

Prof. Jevons, introducing the discussion, referred to the very serious abuse that had arisen through financing so largely

by Treasury Bills. It was true that the quantity of bills outstanding had been reduced last summer by funding a portion of the floating debt out of the permanent loan. Since then, however, it had been mounting by  $1\frac{1}{2}$  to 2 crores per week; and the Finance Member's only resource might be to fund some more of this floating debt. Then, as regards inflation, there had not been the automatic contraction of the currency provided for in the Act of 1920. The contraction was strictly carried out from the 1st. of April to December of last year; but then the Government got into trouble with the money-market. They put Treasury Bills upon the market—3 month, 6 month and 9 month bills; but they were always in the difficult position that only a certain number of these bills might be taken up at the price at which they were offered. In December, when the market refused to take more than a limited quantity, Government issued more notes against its own Treasury Bills. The result was that the contraction of the note issue which had previously taken place was all wiped out in the course of about four weeks by the issue of notes backed by Treasury Bills. Last month, a start was made to withdraw these notes, but whether that contraction would be carried far enough to accord with the provisions of the Act of 1920 by the end of the present financial year, was more than doubtful. The Indian money-market was not in a position to stand the heavy drains made upon it by Government without causing a great drain upon trade. It was therefore essential for the Government, in the interests of trade, to increase taxation or cut down expenditure.

Though Professor Shahani made out a case for the Native States bearing their share of military expenditure, this could only be done by some scheme of distribution of the customs' revenue, as outlined by him (Professor Jevons) last year. We had, since then, seen the customs' duties becoming higher, and the burden on consumers in Native States greater. Though he had not gone into the question at length, he believed that, so far as military expenditure was concerned, there was great scope for economy. He believed that the Indian army at present was greatly over officered; many officers had been taken on or recalled during the war, and it had not yet been found possible to have them all retired. As regards senior officers, and the supply organisation, he believed there was great scope for economy.

So far as revenue was concerned, he agreed that excise and stamps on commercial papers should come under the Central Government,

A scandal that should be removed was that of mining royalties, which in Bengal particularly had brought in enormous incomes. Yet these incomes were, by a decision of 1860, considered as land revenue, and hence were exempt from taxation. He would favour giving the Income Tax to the Provinces, either in whole or in part. In that way the local Governments would feel that what they put out in the way of development would bring in some reward in the form of increased income. Besides, the cost of government went up with the progress of the Province. On the question of land revenue, he wished to disassociate himself entirely both from the theory and the conclusions set forth by Professor Shahani. He would not accept the statement that "land revenue stands on the same basis for public finance as any other head coming under derivative income", nor the conclusion, where a plea was made for "an exemption limit" in the case of agricultural incomes. Land revenue, he submitted, was a tax on the economic rent of land, on the surplus; and it made therefore not the slightest difference how the land was owned. To grant an exemption limit would, he considered, be to put a premium upon smaller holdings, give greater latitude for the laws of population to act, and lead to holdings becoming smaller and smaller.

**Prof. Bhateja** observed that he was not in agreement generally with Professor Shahani because he had laid too much stress on new sources of revenue, and too little on the necessity for economy. Professor Shahani's anxiety seemed to be to put more money into the hands of the Central Government, and he even went so far as to suggest bringing in the Native States. This might simply lead to greater extravagance on the part of the Central Government. Besides, when many of the Native States kept up their own military establishments, it seemed hardly feasible to saddle them with a share of the general military expenditure as well. The suggestion that Income Tax should be given over to the Provinces was, he considered, open to great objections. Much of the income of business was derived from places wide apart; and it was not possible to collect Income Tax upon this locally. A much better arrangement would be that the Central Government should contribute something to the local Governments.

**Prof. Joshi** submitted that no division of the present heads of revenue would solve the problem of Central vs. Local Governments. If the Income Tax were allotted to the Provinces, some,

e. g., Bombay and Bengal, would benefit much more than others, e. g., Madras and the United Provinces. He differed absolutely from Prof. Jevons in his attitude towards Land Revenue. Prof. Jevons had said that Land Revenue should be regarded not as a tax, but as a rent charged by the state. His own standpoint was rather that wherever there was income, there the Income Tax should apply. Land Revenue had been resorted to by the British Government because it had antiquity in its favour. The time had now come, and the argument would get stronger and stronger in the future, for income not to be specially differentiated because it came from land. As regarded military expenditure, he was certain that considerable retrenchment was possible. He quoted figures showing that the number of British troops in India before the war was 69,000 compared with 79,000 now, and the number of Indian troops had also risen from 130,000 to 153,000. He understood that the cost of maintaining a British soldier was Rs. 1,917 per year, and an Indian soldier Rs. 411 per year. Great economy could be effected, even though the present size of the Army were retained, if British soldiers could be replaced by Indian. This, however, was a question for the high military authorities, because it depended on the trust that could be put in the Indian soldier. As regarded officers, he quoted from a speech made recently by Lord Chelmsford, and showed that the cadre of British officers in August, 1914, was 4,698, and of these 2,600 were sent away on the outbreak of war on business quite unconnected with the Indian Army. We were told that the army existed for a double purpose, to defend the frontiers and to preserve internal security. It was only by interpreting the frontiers in the widest sense, as extending from Egypt in the East to China in the North and West, that it could be said that the Indian army was mainly for the defence of the frontiers.

**Prof. Warburton** considered that one of the great merits of Prof. Shahani's paper was that it had put in proper perspective the two alternatives of financing a war, viz., taxation and voluntary loans. During the last war he felt that economists had not stood to their principles. They had relied far too much on voluntary loans; and he maintained that the war-burden was borne by the present generation, whether the war was financed by loans or by taxes. The distribution of revenue between the central and local Governments in India showed certain resemblances to the distribution between the Federal Government and the State Governments in the United States. By



the Constitution the Federal Government had the right to raise taxation only by indirect means, though it had recently acquired the right to levy an Income Tax, and during the war a tax on excess profits. The State Governments, on the other hand, might levy taxes in any way they liked. This had, in practice, led to certain overlapping; for example, in the State of New York there were now two taxes on Income—one imposed by the Federal Government, and the other by the Government of the State. As regarded Land Revenue, he agreed entirely with Professors Shahani and Joshi, and differed fundamentally from Prof. Jevons. The differential advantage which led to a surplus existed not only in the case of land, but appeared in various forms. Land might be inherited, and so might capital; and how could it be said that there was any more excuse for taxing the one than the other? On the subject of the inflation of the currency, he was of opinion that currency notes were being substituted for silver rupees. Even taking silver and currency notes together, it appeared from figures he submitted that there had been a net inflation of 13 per cent. by the third quarter of 1921, as compared with the beginning of 1919.

(At this point the discussion was postponed until the next day.)

*Thursday, 16th March (Morning Session).*

*Conclusion of the discussion on Prof. Shahani's paper.*

**Mr. B. L. V. Bhimpure** wished to dissociate himself from the remarks of certain previous speakers, who had said that the cost of security was borne only by British India. The cost of security in the Native States was borne by the States themselves, and further they had often come forward to assist in the defence of the frontier. Far from making them pay a share of the military expenditure of India, he would favour most strongly their getting a share of the Indian customs duties.

**Mr. Bhatnagar** dealt with the exemption of a certain minimum in the case of agricultural incomes. In India, he said, it was essential to take account of the laws of Inheritance and Bequest, and also the system of tenure. Forces were at present strong enough in the direction of the sub-division of holdings, and the reduction of income to the bare level of subsistence, without stimulating this artificially.

**Mr. Deole** in a lengthy speech expressed his disapproval of certain parts of Prof. Shahani's paper. He thought that the portions dealing with the "up-to-date preparedness for war" and the

“frontier tribes not being part of the League of Nations” should be withdrawn. On the subject of the exemption of a certain minimum in the case of agricultural incomes, he agreed with Professors Shahani and Joshi, and differed from Prof. Jevons. He considered that Prof. Shahani made too much of taxation as a method of financing war. Even Mr. Gladstone could not meet the whole of his war expenditure by taxation, and Mr. Lloyd George was right in adopting both. With regard to his (Prof. Shahani’s) criticism of Sir Malcolm Hailey for fixing 1s. 8d. as the rate of exchange for last year’s budget, he wished to point out that the rate prevailing in December 1920, when the Budget was being framed, was round about 1s. 8d.

Another member advocated the purchase of the Indian debt held in England, a succession and inheritance tax exempting small successions, a national militia involving compulsory service for a few years, a tax on dowries to vary according to the size of the dowry, and a curtailment of expenditure upon the Police and the C. I. D.

Prof. Shahani replied briefly. He disagreed entirely with Prof. Jevons, who would not allow exemption from taxation in the case of small agricultural incomes. Further, he did not consider that the Native States of India undertook a sufficient share of the general financial burden of the country.

Mr. Narayanaswami (University of Madras) read a paper on the “Economics of a South Indian Village”. He said :—

IMPORTANCE OF THE STUDY OF RURAL ECONOMICS IN INDIA.—The study of rural economics is of supreme importance in a country like India, where about 72 per cent. of the population are engaged in agricultural pursuits. Its aim is to improve the material well-being of the ryots who toil on the land, not only by studying the conditions of their livelihood, but also by comparing their actual conditions with their position in the past. Its object is to answer the queries as to how far the condition of the rural population is improving, and as to how far changing economic conditions affect their material life. It is by means of an intensive enquiry into selected centres of investigation that accurate results, worthy of study, can be arrived at. In fine, the study of rural economics aims at comprehending the economic conditions and problems of village communities, with a view to probe into the possibilities of their future material advancement.

**FUNDAMENTAL CONDITIONS OF STUDY.**—Such an intensive study on the part of a worker necessarily involves the fulfilment of certain conditions which go to make the study perfect and complete. He who is intent to study must, by means of close and familiar acquaintance, enter into the spirit of the rural population. To fulfil this condition, one must have stayed with them for a tolerably good time, so that people have neither hesitation nor fear in giving reliable information concerning their material condition. To a stranger, the fear on the part of the ryots is inexplicable. The truth is that they are possessed of an ever-present dread of enhanced taxation on the basis of the figures that they have given out. Hence one must convince them first that the study has been stimulated by a desire to estimate their well-being and to compare their past and present conditions of material prosperity.

Two other conditions require to be fulfilled in the investigation of such rural problems. The locality taken for study must be sufficiently far from urban centres to prevent their influence being paramount in its life. It must also be sufficiently small in size to enable the worker to have a clear idea of the village as a whole.

**VALUE OF THE STUDY.**—It has been said that the naked presentation of bitter truths has been followed by the healthy cure necessary for the ailment in question. This, in brief, represents the value of the study. In the past, the study of the galling economic conditions under which the ryots struggle has stimulated the introduction of necessary measures of reform, both by Government and private bodies. As an instance, the agricultural indebtedness of the rural population may be mentioned.

It was only when the various Government Commissions, starting with the Deccan Ryots Commission of 1871, began to study the problem of the indebtedness of ryots that the Government and people realised it in all its seriousness. The problem has since been studied in greater detail; and the conclusion all have come to is that the ryots are miserably involved in debts, which provide an uncongenial atmosphere for the free play of their qualities. The various Commissions proposed to remedy the evils arising out of the phenomenon by ascertaining its causes. After careful investigation they enumerated the causes as poverty, improvidence, inheritance laws and increase of population, and proposed suitable remedies, which included special protection of indebted ryots from

the decrees of Civil Courts, arising out of suits launched by merciless money-lenders; restrictions on the alienation of land; the establishment of Co-operative Credit Societies; and elasticity in land revenue collection. They took care to apply different remedies suitable to each affected area.

The above remarks bear testimony to the truth that the bare presentation of the truth brings in its train the necessary remedies to combat the evil.

The main part of the enquiry may now be started. The village that is proposed for investigation is known as Alankulam in the Tinnevely District of the Madras Presidency. This is the southernmost British District in India, being surrounded by the neighbouring Native State of Travancore.

Alankulam represents one type of village-farming, wherein the intensive cultivation of dry lands is taken up in right earnest. It represents the type of villages in the north-western part of the district, where intensive cultivation is carried on of dry lands, which sometimes yields heavier crops and a more profitable out-turn than that of wet lands of ordinary fertility. The village also presents features of that type of land-cultivation wherein, owing to the absence of natural sources of irrigation and the consequent resort to artificial methods, no distinction is actually made between wet and dry lands. Thus paddy, which is a regularly irrigated crop, is grown here both on dry and wet lands, provided the areas are adequately irrigated from a well. The use of the land is not strictly according to the official classification. In fine, the village deserves study because it represents the intensive cultivation of dry lands in South India.

TOPOGRAPHY.—The village is about 18 miles by road from Tinnevely, the district head-quarters. The village is held under the ryotwari tenure, which means that the ryot pays the land revenue direct to Government, without the aid of an intermediary like the farmer or zamindar.

Re-settlement took place in the year 1908-09. The total area of the village is 3037 a. 2 cents. The areas under each description of land and their assessment are as given below:—

Rate of assessment per acre of wet land ranges from	Extent of occupied wet land.		Total assessment for wet land.		
	a.	c.	Rs.	A.	P.
6-1-0 to 4-0-0	106	48	579	14	0

Rate of assessment per acre of dry land ranges from	Extent of occupied dry land.		Total assessment for dry land.		
	a.	c.	Rs.	A.	P.
0.13-0 to 0.6-0	2,455	5	1,081	1	0

THE PEOPLE.—It is now worth while to consider the character of the people, their material conditions, their sources of income, and in general their manner of life. This leads us on, in the end, to their principal occupations and trade.

The total population of the village is about 3,200. This can be classified under the various castes as follows :—

Name of caste.	Number of houses.	Population in each caste.	Total Population.
1. Shanars.	630	2,200	
2. Pallars and Parayars.	34	84	
3. Chukkiliyars	56	242	
Total ...	720	2,526	2,523
4. Other castes Vellalas, Marayars, Visvakarmas, etc.	80	674	

This table shows that the major portion of the population consists of what are known as the Untouchables. The bulk of these are Shanars; and hence attention will mostly be devoted to this caste.

HOUSING —The village occupies an area of 28.8 acres. It is peopled by several castes, the chief of which are the Shanars.

The different castes occupy more or less separate parts of the village. Thus the Shanar houses are to the west of the Vellala quarters. But there is no sharp separation, inasmuch as the communities have lived together too long to act upon supposed religious scruples. There are 630 Shanar houses, with a population of 2,200. One-third of their dwellings are tiled. They are arranged in streets in which the houses face each other. The tiled houses are almost all one-storeyed and fairly spacious. The rest of the houses are thatched.

That there is a congestion of houses no one can deny. This may be inferred from the fact that 800 houses occupy a space of about 30 acres. Hence the pressure for building sites is great; and the Shanars, forming the bulk of the population, feel this most acutely.

The Government have endeavoured to relieve this pressure for building sites. To the west of the village, they purchased patta lands to the extent of 14 a. for Rs. 225, and distributed the area among the needy at nominal prices.

Thus the population consists almost entirely of Shanars, who forsaking the climbing of palmyras have applied themselves to intensive as well as extensive cultivation. The village is teeming with crops. The profitable agriculture of the place is a standing monument of the indefatigable industry of the Shanars.

This leads us on to the occupation of the land in the village. The areas under wet and dry lands are respectively 106 a. 48 cents and 2,455 a. 5 cents, the total area being 3,037 a. 2 cents. The cultivable land has been divided into 785 survey fields.

It is interesting to see how the land is cultivated. The system of land-holding in the village is remarkable in that ownership cultivation prevails over the whole area of cultivable land. In other villages of the Taluk, the leasing of land to tenants is the rule and cultivation by the landlord the exception. But here the landowners themselves cultivate the land, with a personal interest in the area owned by them; and hence they are able to raise heavier crops.

The main fact which explains this phenomenon is that the village contains no absentee landlords, as in other localities. The owners of land are all resident in the village. Being resident, the labour of the whole family is applied to agricultural pursuits. Only in seasons of great stress do they go in for hired labour.

The Pallars and Parayars and the landless Shanars furnish the village with the additional labour required for the successful agriculture of the place.

Next to land-holding, irrigation engages our attention. As has already been said, the village does not possess any natural sources of irrigation. It depends mainly on wells, sunk by agriculturists in the most economical manner possible. There are three rain-fed tanks in the village, which afford irrigation only for three months in the year. Hence the ryots have made a virtue of necessity, and have taken to the sinking of wells. Thus irrigation by wells has become a speciality. Cultivation with the aid of wells has become a remunerative venture. If water exists under the ground, a Shanar will find it and quickly convert a patch of dreary soil into a luxuriant garden. Additional wells are being sunk

year by year, and thus the problem connected with irrigation is solved. The following statement shows the acreage constituting independent ayacuts irrigated by wells :—

Number of wells.	1st crop area.		Assessment.	2nd crop.		3rd crop.	
	a.	c.	Rs. a. p.	a.	c.	a.	c.
287	427	73	335 1 0	405	16	74	97

The successful irrigation of the place is standing testimony to the resourcefulness of the ryots.

**THE HOLDINGS OF THE PEOPLE.**—In no matter is the study of the village more interesting than in that of the holdings of the people. It is now admitted by all that the most common features of Indian agriculture, retarding its progress, are the excessive sub-division and fragmentation of holdings. Hence, to arrive at a correct understanding of the material condition of the people, it is absolutely essential to examine whether these phenomena exist in the locality.

From the increase in the number of pattas in recent years, it may be surmised that in the past the landholders were comparatively few in number, and the holdings larger in size. Now this has been reversed, with the result that the number of landowners has increased and the holdings have become small. Thus it is evident that the character of the holdings has altogether changed. As counterpoise against this phenomenon, the increasing industry and resourcefulness of the ryots have to be taken into account. Actual figures with regard to the effect of the latter were not available.

It is worth while now to examine, with the help of illustrative tables, whether the phenomena of excessive sub-division and fragmentation exist in the village.

The official list of pattas and survey numbers in the village amount to 706 and 785, respectively. The average acreage per patta affords a clue to the average size of individual holdings.

Total number of pattas.	Total area of cultivable land.		Average area per patta.	
	a.	c.	a.	c.
706	2561	53	3	75

Total survey nos.	Total area of cultivable land.		Average area per survey number.	
	a.	c.	a.	c.
785	2561	53	3	26

REMARKS.—The average acreage per patta does not in reality correspond to actual facts, inasmuch as persons who are actual owners of land do not apply for a separate patta till after the lapse of some time. Thus if a man owning 3 acres dies, leaving three sons, these three figure as joint pattadars for some time until they apply for separate pattas. For the purpose of the official enumeration of pattas, these three figure as a single patta.

Hence in reality, the average area per actual patta is much less than 3.75 a.

To ascertain the average area that a cultivator farms in Alan-kulam, the following method has been adopted. Some 20 survey numbers, both from dry and wet lands, are selected at random; and details pertaining to them, such as their extent, the number of sub-divisions they contain as well as their area, the number of cultivating landlords and lessees that farm the survey numbers in question are ascertained. Then the total area of the survey numbers is divided by the number of cultivators, and this gives us the average area farmed by each cultivator. This person may be either an owner of land, or merely a lessee, or both.

But there is one factor that affects the accuracy of the result aimed at by means of this method. Some of the cultivators may own lands in other parts of the village, and hence the total extent of land possessed by them cannot be accurately estimated.



The above method has been used in the preparation of the following tables:—

(The number within brackets indicates the number of subdivisions.)

(a) WET.

Survey number.	Area.		Assessment.			Number of cultivating landlords.	Number of lessees.
	a.	c.	Rs.	a.	p.		
140 (5)	1	46	9	2	0	4	
141 (8)	2	63	16	7	0	8	
142 (7)	2	06	12	14	0	7	
143 (8)	1	84	11	8	0	8	
144 (2)	0	85	5	5	0	4	
145 (8)	1	19	7	7	0	6	Nil.
146	0	40	2	8	0	1	
147 (4)	0	59	3	4	0	4	
148 (3)	1	18	7	6	0	3	
149 (7)	1	25	7	13	0	7	
<b>Total 10</b>	<b>13</b>	<b>45</b>				<b>52</b>	

Sub-div. 53

(b) DRY.

Survey number.	Area.		Assessment.			Number of cultivating landlords.	Number of lessees.
	a.	c.	Rs.	A.	P.		
48 (10)	10	13	8	5	0	12	
49 (10)	2	90	2	5	0	4	
50 (8)	4	51	3	11	0	7	
51 (3)	4	88	4	0	0	4	
60 (9)	3	53	2	13	0	8	Nil.
61 (4)	1	64	1	6	0	2	
62 (5)	4	37	3	9	0	6	
63 (3)	2	77	2	4	0	3	
64 (4)	4	23	3	7	0	6	
66 (5)	8	83	7	3	0	6	
<b>Total 10</b>	<b>47</b>	<b>79</b>				<b>58</b>	

Sub-div 61.

Thus, on the whole, 110 agriculturists cultivate an area of 61 acres 24 cents. This figure represents, more or less, the average holding of a cultivator. Details of S. No. 141 (rice land) bear witness to the great number of its sub-divisions and their fragmentation.

Sub-division number.	Pattadar.	Area.	
		a.	c.
1.	A	0	83
2.	B	0	30
3.	B	0	19
4.	C	0	20
5.	B	0	18
6 (a).	D	0	33
6 (b).	E	0	34
7.	A	0	23
		<hr/>	
		2	63

These figures show that the sub-divisions of the survey number are not only small but also fragmented.

The following are typical cases, showing fragmentation of particular holdings of agriculturists.

Holder.	Area of holding.		Assessment.			Number of separate plots.
	a.	c.	Rs.	A.	P.	
A	2	26	14	2	0	3
B	1	91	12	1	0	2
C	1	97	12	5	0	1
D	2	54	15	14	0	6
E	1	92	12	0	0	4

The number of separate plots in the holdings points to the prevalence of fragmentation in the agricultural holdings of the village. The tables also point to the fact that almost all the land in the village is under ownership cultivation, which enables them to have a personal living interest in the lands owned by them.

The phenomena of excessive sub-division and fragmentation are recognised to be very great evils, arresting the progress of agriculture in this country. They tend towards the formation of uneconomic holdings, which barely support those who rely on them. They prevent any enterprising outsider from taking upon himself the profitable exploitation of the holdings in question. The prospect of forming an

united holding, involving as this does the consent of so many land-holders, is unwelcome. They involve much economic waste in labour, cattle, time and material resources.

These remarks hold good in general. But happily in the locality taken up for study, owing to other causes, their effects are not felt at all. The extensive and intensive methods of cultivation of the local ryots prevent them from being victims of these phenomena. They bring all available land under cultivation, and once it begins to produce crops, its fertility is augmented by the application of manure and constant labour. The various crops raised in the village, with their yearly out-turn and expenses of cultivation are illustrations to the point.

The following statement shows the area cultivated under some of the principal crops :—

Rice.		Chillies.		Ragi.		Brinjals.		Gingelly.	
one-crop area.	double-crop area.	a.	c.	a.	c.	a.	c.	a.	c.
205	50	173	7	192	52	25	17	67	1

The following are the expenses of cultivation, gross out-turn, and net profit in each season in the case of some of the principal crops. It must be borne in mind that most of the labour required for the cultivation of crops is supplied by the farming family itself.

Name of crop.	Expenses of cultivation per acre.			Money value of gross out-turn.			Net profit per acre per crop.		
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
(1) Paddy ...	56	0	0	160	0	0	104	0	0
(2) Chillies...	113	0	0	250	0	0	137	0	0
(3) Onions ...	168	0	0	300	0	0	132	0	0

These figures are amplified in the following tables :—

(a) EXPENSES OF CULTIVATION OF RICE.

72 cents of wet land

Item of expenditure.	Actual cost.			Remarks.
	Rs.	A.	P.	
1. Cattle manure 10 cart-loads.	15	0	0	Bought from others.
2. Green manure 1 cart-load.	7	0	0	Do.
3. Sheep manure ...	6	0	0	Do.

Item of expenditure.	Actual cost.		Remarks.
	Rs.	A. P.	
4. Ploughing expenses.	2	0 0	He has a pair of bullocks and a pair of ploughs. The family labour is utilised in ploughing. Hence the low cost. If all these were paid, it would cost Rs. 8.
5. Labour for planting, sowing, weeding and harvesting.	4	0 0	In addition to the family labour.
6. Seed.	Supplied by himself		If purchased, would cost Rs. 9
7. Kist	...	4 8 0	
Total	...	<u>38 8 0</u>	

The yield is  $7\frac{1}{2}$  kottas per year at Rs. 14 per kotta.

(1 kotta equals 112 Madras measnres.)

EXPENSES OF CULTIVATION PER ACRE OF CHILLIES.

Item of expenditure.	Actual cost.		Remarks.
	Rs.	A. P.	
1. Cattle manure 25 cart-loads.	40	0 0	Purchased.
2. Sheep manure	...	7 0 0	
3. Ploughing	...	8 0 0	Generally the farmer possesses his own pair of bullocks, and pays only the number of hands that drive them.
4. Labour for weeding, etc.	5	0 0	In addition to family labour.
5. Plucking of chillion from plants.	2	0 0	
6. Kist	...	0 13 0	
7. Expenses for drawing out water from wells.	50	0 0	Some ryots own a pair of bullocks, which are used to work the kamalai.
Total	...	<u>112 13 0</u>	

INCOME.—The yield will amount to 5 pothis at Rs. 50 per pothi.

## EXPENSES OF CULTIVATION PER ACRE OF ONIONS.

Item of expenditure.	Actual cost.			Remarks.
	Rs.	A.	P.	
1. Seed	50	0	0	The expenses here given indicate the actual cost, if all the items are bought from others, or if outside labour alone is depended upon. Generally, the cultivator supplies the manure himself and buys only a part. He also supplies part of the labour required.
2. Cattle manure cart-loads.	25	40	0 0	
3. Sheep manure	...	7	0 0	
4. Other manure	...	15	0 0	
5. Watering expenses		40	0 0	
6. Kist	...	0	13 0	
7. Labour	...	15	0 0	
Total	...	167	13 0	

YIELD.—The yield is 50 pothis at Rs. 6 per potbi.

CONCLUSION.—These figures point to the profitable nature of agricultural operations in the locality. The resourcefulness of the ryots and their indefatigable industry always stand them in good stead. The locality, as we have seen, does not possess natural sources of irrigation; and hence one is apt to find nothing but dreary patches of uncultivated dry land. But the ryots have made a virtue of necessity. They have supplied their natural wants by means of the sinking of numerous wells which adequately irrigate their lands. They do not go in for hired labour. They are tied down neither by ancestral nor by agricultural indebtedness. The landless people engage themselves as road coolies or agricultural labourers in seasons of great activity. Some of them own carts which they let for hire, the locality being a good market for the goods of neighbouring villages. Those who own the land toil on it unceasingly; and thus the prosperous condition of the village is a standing testimony to the resourceful and energetic habits of the local ryots

Mr. J. Guleri ( Agricultural College, Lyallpur, ) read a paper on the "Consolidation of Agricultural Holdings in the Punjab". He said (in part) :—

The object of this paper is to describe the efforts that are being made to consolidate holdings in the Punjab on co-operative lines, and to give some account of the success with which they have been attended. Incidentally, I have mentioned some of the difficulties that are being experienced in the actual work of consolidation, with suggestions as to how they could be overcome.

### INTRODUCTORY.

On this question of the consolidation of agricultural holdings we have mainly to look to the Presidency of Bombay for any real guidance or inspiration; for leaving aside the very valuable contribution to the subject by Professor Jevons, which, I believe, is a very authoritative exposition of the economic aspect of the question, there is little to be found elsewhere that is constructive or critical.

In Bombay Mr. Keatinge and Dr. Mann have made intensive studies of the sub-division and fragmentation of holdings and have done much to educate public opinion as to their bearing on Indian agriculture.

It was in Bombay that the subject was for the first time pressed on the attention of the Government; but the motion of the Hon'ble Mr. Godbole before the Bombay Legislative Council in 1916, even as subsequently amended by Mr. Paranjpye, for a Committee of Enquiry, did not, unfortunately, commend itself to the Council because it was considered to be premature and inexpedient. In Western India again, the enlightened Government of His Highness the Maharaja Gaekwar had the subject thoroughly investigated by a committee, with a view to taking legislative action; and we have a fairly comprehensive report on the subject.

In 1917 Mr. Keatinge drafted a bill "to enable land-owners in the Bombay Presidency to prevent the excessive sub-division of agricultural holdings"; but even a purely permissive measure like this did not meet with any better luck than the earlier efforts, and since then the idea of an appeal to the Legislature for remedial action seems to have been dropped. But the subject was again taken up in Bombay, and this time at a meeting of the Board of Agriculture held at Poona in December 1917.\*

\* Vide proceedings of the Board of Agriculture, Poona, December 1917, pp. 12, 22, 26, 111.

After a full discussion on the subject:—

“Whether anything can be done to remedy the disability of Agriculture over a large part of India, arising from the fact that the size and distribution of the land-holdings are such as to render them essentially uneconomic units,”

the following resolution was recorded; which has, I think, indicated the right lines on which a solution of the problem could be sought in India:—

“That this meeting of the Board of Agriculture recognizes that in many parts of India the extreme and increasing sub-division of the land and scattered character of the holdings together form a very serious impediment to agricultural progress and to the adoption of agricultural improvements, and wishes to suggest that the attention of local Governments be called to the matter. It recommends that the question be closely investigated and experiments made in each provincial area, in consultation with the Registrar of Co-operative Societies, with a view to the adoption of such measures as seem best adapted to meet the special local circumstances, and to the introduction of such legislation as may be necessary.”

In the Punjab, outside the north-west dry area, which includes the new colonies, holdings are over a considerable part of the Province excessively sub-divided and scattered, so that their cultivation has become inconvenient and uneconomic. The causes that have led to this, and the evil effects, social and economic, that inevitably follow do not require to be discussed, as they have been set forth by writers who have pursued this inquiry in other parts of India. But it is certainly remarkable that the same causes should have been operative here, with practically the same consequences; and this points to the essential unity of economic forces under different conditions.

#### EARLY ATTEMPTS AT CONSOLIDATION.

The evil has not been allowed to grow unchecked. In the good old days the periodical redistribution of lands was commonly resorted to, when things became serious; and, even after the decay of the communal idea, the principle of voluntary exchange was much in requisition, and has indeed done much to improve individual cases,

The extension of the area under cultivation, more especially by the colonization of large areas of waste land, has afforded considerable relief to several congested tracts; and it is estimated that the three million acres of waste land now commanded by the canals have absorbed about 5 to 6 per cent. of the population of the Punjab.

Besides this, revenue officers are required under Land Administration rules to prevent the dispersion of fields, particularly in partition cases, and in general to see that fields do not get inconveniently fragmented for Revenue purposes. To some extent, therefore, the consolidation of fields and realignment of crooked field boundaries is generally carried on by the Land Record agency. But these Killa Bandi and Ohak Bandi operations are chiefly confined to newly-irrigated tracts; and though they serve to demonstrate the economic superiority of compact blocks of land over scattered and irregular patches, they leave the problem almost untouched. Voluntary exchange of isolated fields with a view to consolidation has all along been going on, alternating perhaps with periods of agricultural prosperity and depression; and some idea as to the extent of these transactions will be given by the figures in Appendix A. During the 10 years ending with 1918-19, the average annual number of transactions for the exchange of ownership has been over 18,500 and the total area transferred over 4,500 acres, about 40 lakhs in value. The revenue authorities view the practice with great sympathy, and desire "to encourage exchange for this purpose, in the interest of efficient and economic agriculture." In practice, there are many difficulties, such as "the intricacy of the land records and the prevalence of unrecorded private partitions"; but steps could no doubt be taken to get over them.\*

#### CO-OPERATIVE CONSOLIDATION.

But these voluntary exchanges and good intentions cannot take the place of a general and well-organised movement to effect the consolidation of holdings, and it was left to Mr. Culvert, the energetic Registrar of Co-operative Societies in the Punjab, to initiate such a movement. Attention has already been drawn to the important Resolution of the Board of Agriculture at Poona, 1917, suggesting "close investigation and experimentation"; and great credit is due to Mr. Culvert for giving a practical shape to the idea. He drew up a scheme for the consolidation of holdings by means of Co-operative Societies; and the model by-laws framed for the purpose were kept

\* *Vide* Land Revenue Administration Reports, 1917 p. 10; 1919, p. 19.



as simple as possible. The essential features of the scheme are its simplicity and voluntary and temporary character. Here I would draw special attention to two main points of the scheme,

First, the society to secure a more beneficial rearrangement of holdings could be formed by landowners and occupancy tenants of a village—only when each member of the society binds himself by a written statement (*a*) to agree to the principle of consolidation; (*b*) to abide by the decision of two-thirds of the entire membership; (*c*) to transfer possession of lands under any plan of re-partition so approved; and (*d*) finally to refer all disputes to arbitration.

Secondly, permanent change of ownership is not compulsory. The entire re-partition work is in the nature of an experiment for four years only, at the end of which period it could be rejected, renewed, or made permanent, but not without the consent of the persons concerned. Thus transfers of possession are limited to the rights of occupancy only. Unanimity is necessary to convert them into ownership at the end of the four years—though provision has been made for permanent transfer of lands from the very start, by mutual agreement.

The plan is, thus, quite simple; and the landowner has absolutely no fear of being “out-witted.” He could see that this was, in fact, the same principle of voluntary exchange applied on an extended scale, and offered in the attractive garb of a society, by a set of public servants with whom he was already familiar and who had already won his confidence.

The seed fell upon favourable ground; and in spite of difficulties inherent in the nature of new things and old men, the progress made “exceeded expectations.” But it was only when a special staff of two inspectors and ten sub-inspectors for the purpose was sanctioned and secured (this was as late as May 1921) that the work started in right earnest, and the scale of operations was enlarged. But, as a principle, the rapidly growing new societies were only registered when the re-partitions carried out by the agency of the local Patwari (unless he was hostile and made to keep out of the way) and the co-operative sub-inspector had been approved by the revenue officer, and mutations confirmed. The progress made during the last two years is shown in the statement contained in Appendix B. By the end of the Report year, 31st July 1921, work had been completely finished in 45 societies, with 1653 members; 8,125 acres of land had been consolidated, and fields reduced from 10,906 to 2,071, the average

size of a field being thus raised from three-quarters of an acre to about 4 acres. By the 15th September three more societies had finished their work; and the total number of societies registered by the end of September 1921 was 69. By the end of the year 1921, the number of registered societies is expected to be about 150.

This initial success of the movement is quite remarkable. The mere reduction in the number of fields, and the consequent consolidation of holdings, is no mean accomplishment, when it is realized that in the co-operative societies, where work has been carried out, the size of fields has been raised from an average of three-quarters of an acre to more than 4 acres.

If we take districts, the results are no less striking. In Gurdaspur District, where 3,490 acres have been consolidated in 18 villages, the average size of the field has been raised from less than  $\frac{1}{4}$  acre to 3 acres.

In the eastern circle, where work has mostly been confined to Hoshiarpur and Jullundur, the average size has risen from less than  $\frac{1}{4}$  to about  $4\frac{1}{2}$  acres. But these averages give no indication of the great change brought about in individual cases. This can only be appreciated fully on the spot, when the owner comes to tell with evident pride how his little estate stretches in this direction, and in that. I may give here a few instances.

In Niamatpur, in Tehsil Shakargarh of the Gurdaspur District, the number of fields which before re-partition was 117, with an average size of slightly more than  $\frac{2}{3}$  acre, has now been reduced to 9, thus raising the average to more than 9 acres. The largest holding is 43 acres, the smallest  $1\frac{1}{2}$  acres; but others are 5 acres, 4 acres, and so on.

In Butarnangal, in Tehsil Batala of the same district, consolidation has been carried out only in one patti (Sivia). Fields have been reduced from 232 to only 4; the average size has increased from  $\frac{1}{2}$  acre to 31 acres. It must be noted, however, that the holdings consolidated belong to four joint families, who will distribute the fields among the individual members.

In Ghazipur in the Jullundur District, where the area offered for consolidation is relatively large and where the dispersion of fields was serious, holdings have become quite compact, and the size of the fields raised from  $\frac{2}{3}$  acre to more than 3 acres.

Other interesting cases are Manoharpur (Gurdaspur District) and Dhaliwal (Jullundur District), where the members struck me as

remarkably intelligent, and prepared to accept new ideas in a critical spirit. The obvious and certainly the most hopeful feature of the movement is the readiness of owners to realise the advantages of the scheme. Economic benefits, of no doubtful value, have already occurred in certain places, while others are expected to follow, as conditions become more favourable. Such instances were brought to light in the course of my inquiries; and I hope a mention of some of them will be interesting.

Besides the mere reduction in the number and dispersion of fields, the saving of the waste in field "boundaries" and "hedges," wherever they are found, adds something to the cultivated area. At Dhaliwal, and again at Ghazikot, it was pointed out that the subdivision and the dispersion of fields led to the neglect of outlying and inconvenient patches, which are sometimes encroached upon by the neighbours, and are only discovered when the re-partition takes place. At Sailakhurd people realise that their society has been instrumental in lessening petty feuds and jealousies, which too often lead to futile land-demarcation cases and frivolous boundary disputes (Banna Shikani). If arbitration of disputes can thus be made to strike root, unnecessary litigation will in course of time be considerably diminished. Other solid advantages gained are the possibility of abolishing the watchmen of crops (the Rāktā)—not always above reproach, and certainly not very cheap—and, at Bhabra, they have actually done away with him. As a proof of the economic superiority of the compact holding, rents have substantially increased for the consolidated fields, as reported at Ghazikot, Bhabra and Butarnagal—in some cases becoming double.

As regards agricultural improvements, instances of an awakening are not wanting. Everywhere there is a desire to sink masonry (pucca) wells in the consolidated areas, and at places excellent wells are under construction. Some of these wells are a delight; the one belonging to the headman at Manoharpur cost more than Rs. 1,600. There is a strong demand for Taccavi loans for this purpose; and the prevailing drought of last year was a further inducement. The Co-operative Societies Report speaks of Meston ploughs being purchased by a consolidation society; but the drought has perhaps prevented other noble desires being carried into practice. Economy of irrigation, whether by wells or canals, is realised; and practical appreciation of this fact is shown by the extension of the area under irrigated crops. There is a decided stimulus to increased

cultivation. At Sailakhurd the old Banjar (waste land) has been brought under the plough; and at Dhaliwal people claim to have increased the yield of crops. At the former place, people are beginning to level their lands and to adopt other devices to retain moisture. But more important still, is the economy about manures; and this is a question which is daily assuming importance in the Punjab.

Of course, in so short a time, one cannot possibly speak of any effect on the standard of living or rather on the standard of life, that sure index of material welfare; but it is permissible to point out hopeful indications. There is sure to be a change in the mentality of the cultivator; and if one were to speculate upon the merely possible, the psychological effect would be tremendous. An owner at Manoharpur, whose fields had been consolidated, spoke of his having for the first time realised that he was a proprietor; and certainly the view of his lands stretching in all directions from where we stood was an inspiring sight. At Sailakhurd the miserable-looking owners confessed that they had passed the hand-to-mouth stage, and were looking forward to a competence.

#### LIMITATIONS AND DIFFICULTIES.

The above perhaps would appear to present the case in too roseate a light, but it is undeniable that the potentialities are enormous if once the movement becomes catching. At present, like all reforms, it is working under great limitations and difficulties; and this makes the initial success all the more significant.

(1) STAFF.—In the first place, the special staff sanctioned for the purpose is all too inadequate to cope with the work of the consolidation of fields now started, perhaps a little too soon, in several districts of the Punjab. As it is, a considerable part of the preliminary work, "the preaching and persuasion," which is the most difficult part, falls to the ordinary staff of the Co-operative Department. The service, as a whole, might gain from this broadening outlook of its functions; yet the older co-operative activities—credit, supply, purchase and sale, and many others—for which the scope is almost unlimited are likely to suffer by this diversion. Another drawback is the difficulty of securing suitable workers with local knowledge and local connections—requirements which cannot be too strongly emphasised.

(2) WORK DONE.—Viewed in proper perspective, the work undertaken is almost like a drop in the ocean. In the three districts

in which the work has made some progress (viz., Gurdaspur, Jullundur and Hoshiarpur), the total number of villages is 5,857 and the total number of fields 6,863,212. The area actually consolidated in these districts by 15th September 1921 (by 48 societies, with 1,690 members) was 6,008 acres—the total number of fields being reduced from 11,233 to 2,110. In a sense, the work undertaken has hardly touched the fringe of the problem. In villages where societies have been started, all owners and occupancy tenants have not joined; the areas offered for consolidation have been but a fraction of the village area; the experiment has been confined, with notable exceptions, to the poorer lands, where perhaps sub-division and dispersion were not at their worst; and in some cases, the holdings of entire joint families have been consolidated only to be divided by them among the individual members—a process which tends to neutralise the effect of the reduction in the number of fields.

(3) EXPERIMENT.—The fact is to be noted, though it is not meant to question the wisdom of the step, that the experiment is only being tried in places where the co-operative spirit, at least the co-operative idea, has already been developed to some extent.

(4) SCHEME.—Even the scheme, as it stands, cannot be said to have been put to a complete test, as the critical points have either been avoided or have not yet arisen. Lands of similar quality have usually been exchanged. In a few places, no doubt, people have exchanged irrigated for unirrigated land; but this has not been common. The four years' duration of the experiment, as provided by the rules, has not yet been tested as transfers have, in almost all places, been made on a permanent basis from the start. The rule about the two-thirds majority for any plan of re-partition has never been brought into requisition, as all partitions have fortunately been carried out unanimously. Up to the present, formal compulsion and arbitration have not been resorted to; but this has been due to good will and good sense prevailing in the places selected; but these qualities are by no means abundant. Perhaps the initial success of the scheme, in some measure, is due to the drought of the last two years, as it is easier to make people listen and co-operate in periods of depression than in fairly prosperous years.

The object of suggesting these limitations is not to minimise the value of the work done, but simply to emphasise the caution needed in interpreting the results of an economic experiment like this. But difficulties of a more serious character have yet to be stated.

(1) CONSERVATISM.—The very first obstacle that makes propaganda work so difficult and discouraging in any new movement is the “inertia,” the placid contentment of the people that dislikes to be disturbed even from admittedly unsatisfactory conditions.

(2) SENTIMENT.—Another difficulty, which is the root of much that is good and much that is bad in rural society, is the sentiment, the attachment to his own ancestral lands, that makes an owner overvalue his fields and undervalue those offered in exchange. This makes adjustments difficult; and people have been known to grow pathetic at the idea of parting with land. An owner at Dhaliwal, who had once given his consent, withdrew it at the last moment, when his boy put it to him with childish simplicity, “Will not the field call us back, Papa, when we part?”

(3) UNANIMITY.—But the real crux of the matter, when once the idea has appealed to the people, is the difficulty of securing complete agreement as to any proposed plan of re-partition. As indicated above, anything like compulsion by the two-thirds majority has, fortunately, been avoided; but we must not make too generous an allowance for harmony and common-sense. The spirit to compromise, to sacrifice a smaller point to gain a larger end, is rare. Petty feuds, jealousies and suspicions are, unfortunately, all too common in many villages. Then there are people who out of sheer cussedness take pleasure in standing in the way and upsetting nicely-calculated schemes. Old men are generally suspicious, and scent danger where there is none. Too often, they feel that to agree to the proposals of the younger set is no compliment to their importance or wisdom. Others, and specially the small owners, may refuse consent simply because they find themselves, for the first time, indispensable. A few might do so, as a matter of tactics; while others, with nothing to gain, might adopt a dog-in-the-manger temper, in order to create impediments to frustrate the scheme. The rich owner may not like “the democratic spirit” of a co-operative society—particularly where he is afraid of the re-partition disclosing old encroachments. Occupancy tenants have more than a miser’s suspicion when their lands, with their hard-won rights, are in question. Then mortgagees, absentees, widows and minors all present problems in securing unanimous consent.

(4) RE-PARTITION.—Attention has already been drawn to some of the defects of the present re-partitions; but it must be pointed out that the work requires great tact and patience. The proceedings are

naturally protracted in "the game of trying to please everybody," and those who are specially interested have sometimes to bear extra inconvenience or expense. At Manoharpur, I was informed that some members had to spend more than Rs. 100 in drink and other entertainments, while deliberations were going on. The task is complicated by the variety of soils and the existence of wells, trees, and other improvements made by the owner. In Dhaliwal, to give only one instance, an owner exchanged 2 acres (16 kanals) of well-irrigated land for about 3 acres (25 kanals) of dry land; but such transfers are not common. As a rule, people are unwilling to part with their lands, adjoining the Abādi (village site), or where they have got wells, because of their irrigation or tillage superiority, but especially because, for want of sufficient capital, they cannot afford to look far ahead.

(5) LOCAL HOSTILITY.—Last, but not the least in importance, is the veiled and sometimes the active hostility of the local Patwari, and at times that of some benighted higher revenue officers. Even the delay in the attestation of mutations has had the effect of damping enthusiasm at several places.

#### SUGGESTIONS.

These are some of the difficulties experienced in the actual work of consolidation; and it will be seen that some of them are natural, as they are bound to attend attempts of such a far-reaching character, and one can only suggest the obvious need of adopting due precautions to ensure the success of the movement. Its present limitations should be borne in mind when extending it to new areas. In a delicate and protracted task of this nature where every one is to be humoured, the greatest sympathy, patience and tact are needed. There should be no haste and no mistake. Sound societies are the most effective advertisement, and with the zeal of new converts become the apostles of the new faith. Ghazikot and Sailakhard are examples. Any semblance of pressure, or partiality to particular interests, has to be carefully avoided.

The movement has been started on the right lines, but much could be done to accelerate its development.

(1) The sympathy and assistance of the Patwaris can be secured by "rewards"; and the example of the Gurdaspur Co-operative Union in offering a good sum for the purpose has much to commend it. The revenue authorities have now been moved to accord sanction to such rewards. Local officers have been directed to allow

free access to revenue records for this work, and on suitable compensation to lend the services of experienced Patwaris for the work of re-partition.

In particular, it is suggested that the mutations should be confirmed promptly and the fees should be remitted entirely, the Patwaris being compensated in some other way, such as from the local rates. (In Austria, when consolidation was undertaken, all transfers were exempt from stamp and registration duties.)

(3) Some sort of assurance that the increased economic value of the holding, due to consolidation, will not be assessed at the next settlement, will go a long way to encourage the idea.

(4) Nothing will so foster the development of the movement as provision for easy and cheap capital. Preference should be given to owners who have consolidated their holdings for Taccavi loans, and the rate of interest lowered. But what will be most appreciated will be a relaxation in the methods of recovery and in the vexatious procedure of granting them. Such loans should be extended to all kinds of improvements. It would, perhaps, be better to start special Land Improvement Agricultural Banks, financed by the state in such areas, or the interest rates of Co-operative Banks for such loans might be substantially reduced.

(5) The high prices of bricks at some places are discouraging the construction of wells. Co-operative Brick-Burning Societies could easily be started for the purpose.

(6) Mr. Calvert does not advocate any compulsory legislation at present. The view is sound; but he is careful to add that "the experience of other countries suggests that, without some such power, the work will not proceed very far." We have to distinguish between legislation that compels people to consolidate against their wishes, and legislation that merely provides facilities and removes difficulties. Legislative protection of the interests of occupancy tenants, mortgagees, minors and their guardians, and absentees, will be needed. Tenants, claiming compensation for disturbance, have to be satisfied.

(7) But in addition to all this, some modification of the Alienation of Land Act will be desirable. The virtues ascribed to this beneficent measure may all be admitted, yet its provisions for inter-group transfers are a clog on a permanent rearrangement and a perfect realignment of holdings. Nothing is to be gained by making a "fetish" of a thing. The same would apply to the law of pre-emption.



Statutory heirs need not be penalised, but an *option* should be given to the owner of an adjacent holding, unless it is large enough already, to effect an exchange, if possible, or to pre-empt at a fair valuation. At Sailakurd, the Consolidation Society had to give some sort of assurance to its members for compensation, out of the village common (Shamilat Deh), against the acquisition of land by Government for public purposes. It may be possible to provide for this, though there are difficulties of a fundamental character.

## APPENDIX A.

Statement showing the area and value of partition and exchange of land in the Punjab.

Year.	PARTITION.							EXCHANGE.				
	No. of partition cases decided.	Total Area			Cultivated Area.			No. of exchange cases decided.	Area exchanged.			
		Area in acres	Rate	Value	Area in acres.	Rate.	Value.		Area in acres.	Rate.	Value.	
1918-19	6,267	491,963	122 0 0	60,019,456	323,417	184 0 0	59,513,248	14,351	34,431	122 0 0	1,101,792	
1917-18	6,953	517,382	147 0 0	91,055,154	276,563	253 0 0	69,698,916	15,739	31,633	147 0 0	4,650,051	
1916-17	8,665	618,387	97 0 0	69,983,539	302,455	166 0 0	50,207,530	19,868	43,076	97 0 0	4,178,536	
1915-16	9,726	612,114	97 0 0	69,375,058	352,760	166 0 0	58,558,160	18,486	53,637	97 0 0	5,192,619	
1914-15	8,285	633,408	97 0 0	66,290,576	386,275	166 0 0	41,180,050	19,376	48,960	97 0 0	4,749,120	
1913-14	11,038	799,523	97 0 0	77,533,731	428,488	166 0 0	71,569,008	21,713	42,754	97 0 0	4,147,138	
1912-13	9,636	697,194	97 0 0	67,927,818	233,131	166 0 0	55,299,746	20,175	38,663	97 0 0	3,721,311	
1911-12	9,587	744,700	97 0 0	75,165,300	311,801	166 0 0	52,136,966	20,378	44,191	97 0 0	4,286,527	
1910-11	7,009	586,161	64 0 0	37,514,304	277,939	114 0 0	31,685,046	17,385	64,733	64 0 0	4,142,912	
1909-10	8,426	534,195	64 0 0	34,188,480	373,302	114 0 0	42,516,428	18,109	52,231	64 0 0	3,347,864	
TOTAL...	85,652	6,185,027		6,29,073,416	3,269,181		5,32,425,098	1,85,560	4,54,181		39,510,900	

## APPENDIX B.

Statement showing the progress realised by some of the most successful Co-operative Consolidation of Holdings Societies, Punjab, up to the end of the year 1920-21.

District.	Name.	No. of members.	Area offered for consolidation.	NO. OF FIELDS		AVERAGE AREA OF A FIELD		REMARKS.
				before consolidation.	after consolidation.	before consolidation.	after consolidation.	
Gurdaspur	Ghazikot ...	10	Kanals.* 7965	1139	240	Kanals.* 6.2	Kanals.* 33.2	Largest area offered for consolidation. New wells to be sunk. Rents doubled for consolidated fields.
"	Niamatpur ...	10	660	117	9	5.9	73.9	Remarkable reduction of fields, producing compact and regular blocks of land. Now fields range between 1½ and 38 acres.
"	Manoharpur ...	11	1034	165	7	6	148	Ditto. An excellent well constructed.
"	Butarnangal ...	17	997	232	4	4.2	249.2	Phenomenal reduction of fields and increase in size.
Jullundur	Ghazipur ...	92	2586.18	825	102	8	25	A successful society, actively engaged in preaching and persuasion.
"	Alamgir ...	87	2423	583	59	4	41	With the largest membership, one of the most fragmented villages in Jullundur in the past; one-third of the entire village consolidated, the rest being taken up now.
"	Dhaliwal Patti Mano	181	2041.6	679	102	3	20	
Hoshiarpur	Semi ...	45	2221.9	703	38	3	60	One of the very first societies; members quite proud of their achievement, and grateful to the Co-operative Department. By 15th September 1921 the area consolidated had risen to 1029.10 kanals, and the average area of a field to 35 kanals.
"	Sailakhard ...	73	301.15	116	24	3	13	
"	Safdarpur Patti Gujran.	12	657.14	38	5	17	132	

\*Note.— 8 kanals=1 acre.

Mr. B. G. Bhatnagar, Reader in Economics, University of Allahabad, read a paper on "The Distribution of Crops in India". He said:—

### I. INTRODUCTION.

During the session 1918-19, when I was Research Scholar at the University of Allahabad, I had to make use of some of the agricultural statistics of British India to learn the principle of correlation. It was then that Professor H. Stanley Jevons asked me to interpret a set of graphs, which I had drawn while correlating the prices and the area of wheat in India. This led me to certain interesting conclusions, and I made up my mind to carry on the study further. Within the purview of this paper, therefore, I wish to present the results of my statistical studies for the consideration of fellow-students. To begin with, an attempt has been made to give an idea of the actual place-distribution of crops in India, with an exposition of the general principles that determine it. Then the tendency towards specialization of localities in the production of particular crops, as a result of the development of the means of communication and canal irrigation, is noted, and an attempt has been made to study the extent and the basis of this specialization.

### II. THEORETICAL BACKGROUND.

Distribution of crops in India may be studied from two stand-points, (i) Distribution by place, also called geographic or territorial distribution, and (ii) Distribution by time. This two-fold classification is a peculiarity of India and all those tropical countries, such as Australia, which have an uneven climate and a well-defined season of rainfall. In countries like England and France, where the climate is not very variable as it is in India during different parts of the year, and where the rainfall in point of time is evenly distributed, we have no such division of crops as Summer or Winter crops, or as Kharif and Rabi in India. All those crops which suit the soils of that country are grown more or less simultaneously, and if possible we have a repetition of the same, giving a system of double cropping.

#### (A) DISTRIBUTION BY PLACE OR GEOGRAPHIC DISTRIBUTION.

Geographic distribution of crops is determined by the character of the soil, that is, its chemical composition and physical constitution, the amount of rainfall, and other climatic conditions such as heat and cold of the place during the growing season, deposition of dew and

dampness in the air. The state of development of the means of communication exercises a very great influence on the character of place-distribution.

### (1) GEOGRAPHIC DISTRIBUTION ON THE BASIS OF NECESSITY.

Although geographic distribution is predominately determined by the conditions mentioned above, yet in the earlier stages of civilization, where means of communication are crude and slow, such as the creaking bullock-cart or the staggering pony of the early 19th-century India, geographic distribution is very much modified by necessity. Every locality, being practically isolated, has to be self-sufficient. In such a state of economic development we find that broad differences of soils, climate and rainfall create only a sort of regional specialization in the varieties of food crops, fibres, oil, seeds, and sugar. One locality may have rice as its predominant food crop; in another it may be wheat; but in every one we will come across fibres, oil-seeds, and sugar of one kind or another. It is impossible for us to come across a locality given up exclusively to the production of a particular grain and another to a particular oil-seed. Such a phenomenon is only possible in a country where the means of communication have been fully developed, and where things can be carried from one part of the country to another easily and quickly. The differences in the output of various crops per unit of land of the same quality may suggest an idea to the mind of the people that the growing of a certain crop would give them by far the largest quantity; but as they must have others also, they continue to grow them. This was the state of affairs in India up to the end of the 19th century; and this is, owing to the force of custom, the predominant characteristic even to-day, although some change towards specialization is noticeable.

### (2) GEOGRAPHIC DISTRIBUTION ON COMMERCIAL BASIS.

We have noted that the absence of cheap and quick means of communication compels people to grow crops, the output of which is less per unit of land of the same quality than that of others; but it may also happen, and does happen, in countries where the means of communication are fully developed, that the natural geographic distribution of crops is modified by commercial considerations. People do not grow those crops the yield of which per unit of land is greater than that of others, but those which are more profitable, that is,

bring in larger net profits. To explain myself, natural conditions in a certain locality may be such that the yield of wheat is 8 maunds per unit of land, while that of rice is only 7 maunds per unit of the same land; but if the price of wheat be Rs. 5 per maund and that of rice Rs. 7 per maund, and the expenses of cultivation of wheat be Rs. 3 per unit, while that of rice are Rs. 2-12 per unit, then a prudent cultivator will give up the production of wheat, and will specialize in that of rice, as rice will bring him more money, and that in its turn a far greater quantity of wheat than could be grown on the field. Distribution, therefore, on a commercial basis is not merely a question of natural conditions, but very much that of comparative prices of different crops in the market, and the comparative expenses of cultivation of different crops in the locality which commands that market.

### III. THE STATISTICAL VERIFICATION.

Having discussed the theoretical aspect of distribution, we may now pass on to read its verification in the actual distribution of crops in India. Study of the agricultural statistics of British India gives us a very clear idea that the distribution of crops was, and is to a very large degree even now, on the basis of necessity. Every locality used to produce its own food, materials for clothing, oils and sugar. But the broad differences of soil and climatic conditions exerted their influence even here; and we find different varieties of food, oils, and clothing materials, cultivated in different parts of the country. Table A, which is printed below, supports this to a remarkable degree. Although some crops which we find in the triennium ending with the year 1892-93 against certain provinces have appreciably decreased in the triennium ending 1915-16 owing to the development of the means of communication, yet almost all kinds of agricultural products are being produced in all the provinces. In this connection we may specially note the decrease of wheat from 107 thousand acres to 1399; of sugar-cane from 1100 to 528; of cotton from 209 to 152 in Bengal; of wheat from 2359 to 1935; of linseed from 282 to 151 in Bombay and Sind; of ragi from 558 to 220, of linseed from 615 to 325 in the U. P.; of jowar from 2497 to 1351 in the Punjab; and of sugar-cane from 41 to 20 in the C. P.

TABLE A.

Showing the area (3 years' average) under different crops in the undermentioned provinces (1) at the beginning of the period of enquiry (1890-1 to 1892-3) and (2) at the end (1913-14 to 1915-16).

Acres (000's omitted).

Name of crop.		PROVINCE.					
		Bengal, Bihar and Orissa.	Madras.	Bombay and Sind.	U. P.	Punjab and N. W. F.	C. P. and Berar.
1. Rice*	(1)	37,091	6,296	2,342	7,563	725	4,397
	(2)	36,536	10,833	2,996	6,395	779	4,940
2. Wheat	(1)	1,607	...	2,359	4,787	7,490	4,721
	(2)	1,399	...	1,955	6,982	10,099	3,415
3. Barley	(1)	1,033	...	...	2,029	1,466	...
	(2)	1,314	...	...	4,567	1,404	...
4. Maize	(1)	2,083	61	144	1,463	1,301	50
	(2)	1,762	137	160	2,242	1,499	152
5. Jowar	(1)	167	4,645	8,107	545	3,497	3,171
	(2)	121	5,371	7,493	2,215	1,351	4,036
6. Bajra	(1)	..	2,753	5,563	1,988	1,967	...
	(2)	...	3,454	6,445	2,526	2,960	...
7. Ragi	(1)	797	1,619	653	58	...	...
	(2)	940	2,537	650	220	...	...
8. Gram	(1)	1,355	128	77	3,659	3,049	1,071
	(2)	1,430	146	589	5,620	4,005	1,139
9. Linseed	(1)	692	...	282	615	...	1,941
	(2)	558	...	151	325	...	1,228
10. Sesamum	(1)	521	671	401	169	210	612
	(2)	460	828	351	355	176	857
11. Rape or mustard	(1)	2,161	...	...	93	951	30
	(2)	2,022	...	...	164	1,082	50

\*Burma (1) 6,070; (2) 10,430. Assam (1) 1,291; (2) 4,718.

Name of crop.		PROVINCE.					
		Bengal, Bihar and Orissa.	Madras.	Bombay and Sind.	U. P.	Punjab and N. W. F.	C. P. and Berar.
12. Sugar-cane	(1)	1,110	56	76	1,298	355	41
	(2)	52	16	57	1,336	418	20
13. Cotton	(1)	255	1,156	2,859	1,206	646	2,924
	(2)	152	2,79	4,437	1,399	1,711	4,640
14. Jute	(1)	2,170	...	...	...	...	...
	(2)	3,155	...	...	...	...	...
b Indigo	(1)	658	316	...	27	76	...
	(2)	61	65	...	22	64	...
16. Tea**	(1)	108	...	...	...	...	...
	(2)	158	...	...	...	...	...

\*\*Assam (1) 248; (2) 369.



Then again, as the development of the means of communication has continued more and more, the specialization of certain provinces in the production of certain crops has also proceeded. The degree of specialization is not very marked up to this time. However, for the sake of convenience, we may here take special notice of certain prominent changes in the percentage share of certain crops in the total area of some provinces. This is shown in the following table:—

TABLE B.

*Showing for the undermentioned provinces the percentage share of certain crops in the total cultivated area for each triennial period from 1891-3 to 1912-14.*

	1891-3	1894-6	1897-9	1900-02	1903-05	1906-08	1909-11	1912-14
<i>Bombay and Sind—</i>								
Wheat	9	8	7	6	7	6	6	7
Cotton	10	11	9	11	14	14	16	15
Jowar	29	28	31	18	29	23	24	25
<i>United Provinces—</i>								
Wheat	14	17	19	19	21	17	20	20
Linseed	2	1	1	1	2	5	1	9
<i>Punjab and N. W. F.—</i>								
Wheat	34	31	38	30	34	37	38	37
Cotton	3	6	5	4	4	5	5	6
Jowar	11	10	8	6	5	6	4	5
Sugar-cane	2	2	2	1	1	1	2	1
<i>C. P. and Berar—</i>								
Wheat	21	15	11	11	14	13	14	14
Cotton	13	13	13	16	19	19	18	19
Linseed	9	6	3	3	4	2	5	5

The chief real reasons to explain this limited degree of specialization are (i) the prevailing ignorance of the agricultural classes, (ii) the force of habit or custom, and (iii) the want of sufficient momentum in the tendency towards specialization, as it has not had sufficient time to develop itself. To these may be added a fourth which, however, is more apparent than real, namely, the neutralising effect of one part of a province upon another. The distribution of the area of India into provinces is not on the basis of climatic unities, hence we generally find the zone of an individual crop divided into two and sometimes three contiguous provinces, with the result that an increase in one province is often made less prominent than it would have been if crop zones and provincial boundaries had coincided.

However, as we go through the agricultural statistics of British India, we notice a clear tendency towards specialisation of certain parts in certain crops for which they are pre-eminently fitted. To illustrate this, I am not going to take up every crop, as in that case the paper will become very long. Table C at once tells us that the percentage share of the Punjab in the total wheat area of India is by far the largest, and that it has shown a progressive increase since the year 1900. This progressive increase is accounted for by (i) the extension of irrigation, which has been very great in recent years, (ii) the colonization of once arid parts, and (iii) the extension of the N. W. Railway towards Sind and Karachi. The advent of this railway connected Northern India with the Western Punjab and Sind. This has facilitated the exportation of wheat to foreign countries, and has induced a tendency towards specialisation in wheat production in the Punjab and the western districts of the U. P. The tendency towards specialization is supported not only by the progressive increase of area under wheat in the Punjab and the U. P., but also by a tendency towards continued decline in the area under wheat in other provinces. Table O brings this out very clearly.

TABLE C.

Showing (1) the total area in acres (000's omitted) under WHEAT in British India as a whole; (2) the percentage increase or decrease in the total wheat area; (3) the percentage share of the total wheat area assignable to the undermentioned provinces for each triennial period from 1891-3 to 1912-14.

	(1) Total area	(2) Percentage increase (+) or decrease (-)	(3) Percentage share of total area assignable to				
			Bombay and Sind.	United Provinces.	Punjab and N. W. P.	C. P. and Berar.	Bengal, Bihar and Orissa.
1891-3	21,294	-	11	23	35	22	8
1894-6	19,159	-10	11	29	35	17	7
1897-9	18,759	-12	9	33	36	13	8
1900-02	19,442	-9	8	34	37	13	7
1903-05	23,975	+9	8	32	38	15	6
1906-08	21,587	+2	8	27	44	14	6
1909-11	21,064	+13	7	30	42	14	6
1912-14	23,999	+13	8	29	42	14	6

In the year 1893 we find the C. P. and Berar having a far greater proportion of the total area under wheat in India than after the serious fall of area in 1896. As a matter of fact, the C. P. and Berar have suffered a permanent decrease in the area under wheat. Now what provinces have contributed to make amends for the consequent diminution in the total area under wheat? Evidently, the Punjab and the U. P. As in the Punjab, so in the U. P., we find a constantly increasing area under wheat after 1900.

Then again, when we look at Table D, we find that the cotton area in the C. P. and Berar, and in Pomroy, has been constantly increasing since the year 1900.

TABLE D.

Showing (1) the total area in acres (000's omitted) under Cotton in British India as a whole; (2) the percentage increase or decrease in the total cotton area; (3) the percentage share of the total cotton area assignable to the undermentioned provinces for each triennial period from 1891-3 to 1912-14.

	(1) Total area.	(2) Percentage increase (+) or decrease(-)	(3) Percentage share of total area assignable to				
			Bombay and Sind.	United Provinces.	Punjab and N. W. P.	C. P. and Berar.	Madras.
1891-3	9,414	-	30	13	7	31	15
1894-6	9,592	+ 2	28	11	11	29	16
1897-9	8,823	- 7	27	11	9	33	16
1900-02	10,338	+ 9	27	11	10	35	14
1903-05	12,671	+33	30	9	6	36	15
1906-08	13,516	+43	29	10	9	33	15
1909-11	14,063	+50	31	8	7	31	17
1912-14	15,068	+60	29	9	11	31	16

As a matter of fact, the area under cotton shows everywhere a tendency towards increase; but progress in the C. P. and Berar, and in Bombay, has been by far the greatest. We can say, therefore, that what these provinces have lost in wheat they have gained in cotton; and what the total wheat area in India has lost in these provinces has been regained by the increase under wheat in the Punjab and the U. P.

From what we have seen above, it should be abundantly clear that even before the development of the means of communication there was a broad line of specialisation of particular areas on the basis of soil and climatic conditions, but all the same each locality produced all the food, materials for clothing, oils and sugar

it needed; and (ii) that this feature of self-sufficient economy is slowly disappearing, and specialization on different lines is slowly taking place.

Having discovered that specialization is going on in India, although at a slow rate, we may try to find out the basis on which it is proceeding. A comparative study of the average yield of different crops in different localities (*vide* Agricultural Statistics of British India for 1918-1919, page 279) and the extension of the area under these crops in those localities reveals that, in some cases, the cultivation of certain crops is extending far more in provinces where the average yield per acre is comparatively small than in provinces where it is comparatively large. Take the case of wheat, for example. The outturn per acre in the Punjab, to which is assignable 42 per cent. of the total area under wheat in British India, is 791 lbs., as compared with 1,050 lbs. in the United Provinces, to which is assignable only 29 per cent. of the total area. In the case of cotton, the United Provinces, whose share of the total area under cotton is only 9 per cent., have an outturn of 170 lbs., as compared with 102 lbs. in Bombay (with 29 per cent.) and 86 lbs. in the Central Provinces (with 31 per cent.). Again, take the case of sugar. In Bombay, with only 3 per cent. of the total area under this crop, the outturn is 6,950 lbs. per acre, whereas in the United Provinces (with 53 per cent.) the outturn is only 2,600 lbs.

Off-hand, one would expect a locality to specialize in the production of that crop from which its average yield is the greatest; but this is contradicted in many cases, as I have shown above, by the actual facts. How are we to account for this? As I have remarked, cultivation of a particular crop in a particular locality is not a mere question of greatest average yield, but of relative yield and relative expenses of production, and then of the relative prices in the market, and the resulting yield per unit of money of different crops. Distribution on these lines is called commercial; and there would be no harm if it were even called economic.

That re-distribution is going on along commercial lines is supported by the study of Table E, which gives us the percentage share of different crops in the total cultivated area of British India.

**TABLE E.**

*Showing the percentage of the total cultivated area of British India under different crops for each triennial period from 1891-3 to 1912-14*

Name of crop.	1891-3	1894-6	1897-9	1900-02	1903-05	1906-08	1909-11	1912-14
1. Rice ...	34	36	38	35	35	35	35	35
2. Wheat ...	11	10	10	10	11	10	11	11
3. Barley ...	2	3	4	3	4	4	4	3
4. Maize ...	2	3	3	3	3	3	3	3
5. Jowar ...	11	11	12	11	10	10.5	9	9.5
6. Bajra ...	6	5	6	7	6	7	7	7
7. Ragi ...	2	3	3	3	2.5	3	3	3
8. Gram ...	5	6	5	5	5	5	6	5.4
9. Linseed ...	2	1.5	1	1	1	1.9	1.3	1.2
10. Sesamum ...	1	1.7	1.7	2	2	2	2	2
11. Rape or mustard...	...	...	1	1.7	1.6	1.8	1.9	1.7
12. Sugar-cane ...	1.4	1.5	1.5	1.3	1.2	1.2	1.1	1.2
13. Cotton ...	5	5	5	5	6	6	6.4	6.7
14. Jute ...	1	1	1	1	1.4	1.6	1.3	1.5
15. Indigo ...	.7	.9	.6	.4	.2	.2	.1	.08
16. Tea ...	.2	.2	.3	.2	.2	.2	.2	.3
Total cultivated area (British India) acres (000's omitted).	153,666	157,678	191,045	200,683	207,893	214,316	220,653	223,680
Percentage increase (+) or decrease (-)	-	-3	-1	+4	+7	+10	+14	+16

From this we notice that whereas the share of other crops in the total cultivated area of British India has remained almost the same from year to year, the share of such commercial crops as cotton, jute, mustard, sesamum and tea has increased, and that of sugar-cane, since sugar can be had cheaply from other countries, has decreased.

The relation in which the curves of prices of wheat and cotton stand to the curves of area under these crops sown in the same year is also significant. A year of high prices generally follows a year of decreased area; thus we have a peak in the prices curve of wheat in the year 1897, following a deep valley in the area curve in 1896; and we have the same order of things in the years 1908 and 1907. This order is quite natural in India, because, if the rains fail in the summer months of 1922, the area under wheat which is a winter crop would decrease; and as the produce of the winter season would come to the market in the first half of the year 1923, the price would rise abnormally in that year. This special relationship of price and area might lead us to think that in India prices have no influence on the determination of the area to be given to a particular crop; and that it is rather the area sown and harvested, and the resulting yield, that determine the price. This statement is further supported by the degree of correlation existing between the figures for the area sown and harvested and the figures for prices. On testing the correlation of (i) the yield of wheat in the U. P. over a series of 25 years, 1891—1916, with the prices in the following years over the same period, (ii) the area harvested in a particular year with the prices in the following years, and (iii) the area sown in a particular year with the prices in the previous year, I find the strongest correlation in the case of the area harvested and the resulting prices. The respective co-efficients of correlation are: (i)  $-.07$ ; probable error  $.13$ ; (ii)  $-.45$ ; probable error  $(.105)$ ; and (iii)  $-.23$ ; probable error  $.13$ . However, there is other evidence at our disposal to show that although prices are very much influenced by the area sown in the previous year, and by the area harvested in that year and the resulting yield, yet over a long period the prices in the previous years seem to exercise a very great influence on the relative importance of different crops in the allotment of area to each individual crop. The curves of all the crops, when read in conjunction with their prices over a long period, give a vivid impression to this effect. The tendency of wheat prices to rise is noticeable since the year 1900, and so has been the tendency of area under wheat to increase in the Punjab, the U. P. and Central India. The same is true of other commercial crops, such

as jute and cotton. This is further supported by the fact that the percentage share under non-commercial crops like barley, gram, jowar and bajra, in the total cultivated area of British India has remained almost unchanged. Table E brings this out very clearly. We may, therefore, reasonably conclude that although over short periods of two or three years the yield of a particular crop and the area harvested determine its immediate price, yet the secular tendency is for the relative prices to determine the relative importance in the allotment of areas to individual crops. The crop that commands the highest price in and outside the country tends to secure to itself the largest area in the long run—a conclusion which supports, in a very remarkable way, the teachings of economic theory.

*Discussion on Mr. Bhatnagar's paper.*

Mr. Bhateja said that he considered Mr. Bhatnagar had gone wrong in taking up much too wide an area. Bombay might be divided into a great number of soil areas; Sind, even, was included. The result was that an increase in one part might be balanced by a decrease in another, and he felt from his reading of the paper that there was really no adequate basis for comparison.

Prof. Myles said that the presentation of statistics in the printed copy, which had been circulated to members, was defective; so much so that in some places the figures to him were quite unintelligible. He hoped that this would be attended to when the paper was being re-printed.

Mr. Bhatnagar made a short reply.

*Thursday, 16th March (Afternoon Session).*

Lt. Colonel W. C. Ross, I. M. S., delivered an address on the "Relation between Agricultural Improvement and Public Health."

Put in a nut-shell, the substance of his paper amounted to this, that "improvement in public health must be preceded by, and was largely dependent upon, agricultural improvement." The economist usually regarded agricultural improvement simply from the economic standpoint; he wished to regard it from the point of view of public health.

He took up a number of the more common diseases which are rampant in India. In the treatment of malaria what they wanted was a policy which would pay its own way. Such a policy was in his view not impossible; for they could combine agricultural improvements



with improvements in sanitation, as had been done in Italy and Spain. Through the adoption of a proper policy, they could at one and the same time bring more land into cultivation and improve the health of the people. The prevention of plague depended upon the permanent separation of rats from the people. This was, at bottom, an economic question; for such separation was impossible while the people lived as they did at present. Any policy for the prevention of this disease must be co-ordinated with a policy of economic improvement; and that in India meant agricultural improvement. Hookworm was a disease which had been found to be prevalent to an alarming extent in India; and it was a disease which could only be met through an improvement in the economic position of the people.

One fact which they had to bear in mind was that, in the tropics, epidemic and parasitic diseases were extremely prevalent, and preventive measures against these diseases were most expensive. Preventive measures circled round the improvement of water supplies and general sanitation. To effect these improvements, they must have money, and the sad fact of the case was that Government with the best will in the world had not got the money. Grants for experimental purposes were almost all which it was in the power of Government to grant, and success in dealing with tropical diseases depended upon the measures being universal in their application. In the last resort, therefore, the problem came to be one of obtaining a sufficiency of funds to deal with the problem. Such funds must come from the wealth of the country; and in a country which was so predominantly agricultural, that in his opinion reduced itself to an improvement in agriculture. They must make more grow, and then there was some hope of an available fund, part of which could be utilised for improving the conditions of living of the people. Alongside of this, the desire of the people for better conditions would be increased; but the first fundamental step towards increasing the prosperity and improving the health of the people was to tackle agriculture.

Of the condition of agriculture in India, there could be no two opinions. Agriculture was very backward, and the outturn was very small as compared with other countries. The opinion of the speaker was that there was no necessity for that state of affairs in India; on the other hand, the country was possessed of great potential wealth. Its land and climate were both good for agricultural purposes. He considered that the low outturn was largely due to the

fact that the inhabitants used little or no manure, and secondly to the fact that there was great inertia among the people. Unless you dug, manured and irrigated, you could not get the best crops. The speaker said he would not trouble putting figures before the audience, but there was no doubt that the crops of India were no more than one-half or one-quarter of what they might be, if manure were judiciously used.

Dr. Bagchi and the speaker had collected statistics showing the analysis of the water of the Ganges and the Sone at different seasons of the year. Their results had been much more far-reaching than they had anticipated. The reaction of the water during the cold weather was alkaline; but beginning about April, and stopping about October, the reaction was acid. That acidity was caused by the precipitation of free nitric acid with the rain, and it was found that this precipitation of nitric acid was associated with thunderstorms more than with the rains of the monsoons. As the acidity became greater, the content of calcium nitrate also became greater. The results in three separate years showed almost identical results. In a single hailstorm as much as one-eighth of a ton of nitric acid might fall to the square mile.

Herein lay the explanation of why the land in the plains of India, though it got little or no manure, still retained its fertility. Statistics showing the precipitation of nitric acid in England showed a figure only about one-eighth to one-tenth of what we had found here. But for this source of nitrogen, India would long ago have become a barren wilderness, had the existing methods of cultivation been followed. Yet largely because of this bounty of nature in supplying such quantities of nitrogen, no effort was made to get more. Without more they could not take up intensive cultivation, and so provide the funds needed for improvement of public health. They might try propaganda for public health purposes; but it was the speaker's firm conviction that, sooner or later, they would be driven back to this cardinal point that "improvement in public health must be preceded by agricultural improvement."

Prof. Jevons, in opening the discussion, said that we had here a subject of great interest to all economists, *viz.*, that you could not raise the general condition of the people until their labour had been made more productive.

Prof. Hamilton said he would like to ask Colonel Ross whether he had any figures as to the rainfall and the nitrogen precipitated

in Japan. There was a great difference between Indian and Japanese agricultural conditions, and the difference lay largely in the great use of manure in Japan. The Japanese field was generally small, and in one corner of it stood the manure tub. The manure seemed to be squirted on to every root of grass or paddy, and he would much like to know whether the Japanese had to contend with a natural shortage of nitrogen.

Colonel Ross had raised a most important economic question, but he was doubtful of the speaker's solution. It was true that in India to-day two blades of grass grew where one had grown 200 years ago; there was no doubt whatsoever that the gross produce had greatly increased. But, side by side with that, there had been a great increase in population, and though the gross produce had increased, the produce per head had not increased. The great problem to his mind was how the desired increase in the produce could be achieved without a corresponding increase in population; how the increase of produce could be brought about in such a way as to yield an increased standard of comfort. This really was a question of education, but to say this did not take us far. We might provide increased facilities for education, and stimulate general improvements, without breaking the vicious circle. Some economists would be inclined to follow Dr. Gilbert Slater, and accept his doctrine that the crying evil in India was that of under-taxation. Admitting this, the only method for increasing the production of the people was to tax them in order that what was raised in this way might be spent on productive improvements. We could have no improvements without incurring expense. If this expense was to be met by the method of taxation, then we might have to face the proposition that in order to eradicate famine, you might have in the first place to create famine, as in Ireland in the middle of the 19th century. Increased taxation would, for the time being, emphasise poverty; but if India was to obtain a higher standard of life, it must be by increasing the checks on the growth of population. This might seem a hard doctrine; but we were not sentimentalists, and we must either face it or acquiesce in present conditions.

Prof. Jevons said that he agreed with Prof. Hamilton. Nothing effective would be done to get India out of the vicious circle unless we undertook propaganda, and made the cultivators realise new ideals. They must be taught that there was a higher standard of life obtainable by hard work and greater co-operation among themselves.

Consolidation of holdings, better roads, co operation would all help towards this result. But, as things were at present, the gain would go to the Zamindar. Legislative protection must be given, if the effort in this direction came from the side of the cultivators. Perhaps, the only way out of it was the way that was taken in England. There the interest that the landlords began to take in agriculture broke the vicious circle. They learned a great deal from the Dutch, when the fen lands were being drained. The Dutch were at that time much in advance of the English in agriculture; and the influence thus brought to bear gradually spread to change of tenure and to improvement in agriculture, generally, during the first half of the nineteenth century. Looking at the state of affairs in India, it seemed to him that they must also have a push from outside. Was it to come from the Zamindars? The cultivators would not do anything, if left to themselves. He would advocate such a reform of the Tenancy Acts as would give the landlords the power to undertake improvements. Even with this, however, he was doubtful whether there was much hope, as the landlord class in India was not likely to take the lead.

Perhaps, more hope lay along the lines that had been followed in the Southern States of America during the last 15 years. In these States there was a large negro and a poor white population, and 85 per cent. of the population were dependent on agriculture for a living. The population had for years gone on increasing, and in many ways conditions were similar to those in India at the present time. The Education Board of the Rockefeller Foundation took up the problem; and their first idea was to extend education throughout the backward tracts. They soon realised, however, that not much could be done in this way because the funds were not available. They decided that the best way to utilise such funds as they had was to concentrate on the education of adults, and stimulate them to greater work. They established hundreds of demonstration stations all over the States, and almost every village was touched. From these as their head-quarters, they went to any man, and said: "May we cultivate one-third of your fields? You may take the results." The money for the experiment was provided partly by the Education Board, and partly by the United States Government. The results achieved were extraordinary, so much so that after a few years they were able to take the steps originally contemplated in the way of education. It was along this line that there seemed the greatest hope in this country. The initiative must be really non-official, with Government offering assistance in the background. If cultivators would not face the expenditure of improved

implements, for example, such an agency might provide them at one-third or two-thirds of their cost, or might even lend them.

**Dr. Hyder** said that attention had been drawn to two of the most important factors in our economic life, the fiend of poverty, and the fiend of disease. So far as the treatment was concerned, however, he had to express disagreement with all the three previous speakers. He thought that Colonel Ross might have considered more closely how these two fiends reacted one upon the other, disease upon poverty, and poverty upon disease. He (Colonel Ross) had suggested that agricultural improvement must come first; but, in his (Dr. Hyder's) opinion, they ought to attack both fiends together. The one reacted so much upon the other that it was no use tackling the one, and leaving the other alone. In India, for example, the manure that ought to go into the fields was largely used as fuel. He considered that the introduction of an improved type of fire-place in which, say, coal could be used would lead to more dung being made available for manure, and so the productive capacity of the soil would be greatly increased. Then, as regards the disease of hookworm, he was under the impression that this could be largely avoided if the people would wear shoes. In his view there seemed no sense in tackling one of the problems and leaving the other alone. They ought to make progress along both lines. He considered it a great pity that, in the seats of learning in India, Public Health was not included in the curriculum. The existing Universities were, he considered, not doing any real good to the people, but were merely parasitic growths. On the subject of deep ploughing, the possibility of that operation bringing the moisture up to the surface had to be considered; and if the deeper ploughing led to more rapid evaporation, then two blades of grass might not grow where one had grown before.

**Prof. Guleri** thought that it might be a good plan to select a few areas, and concentrate all their efforts upon these. Every effort must be made to eliminate waste. The good conditions in the Canal Colonies in the Punjab would have been still better, had earnest attempts been made to see that wasteful methods were eliminated. They must distribute land so as to have it cultivated by the most efficient people, and he considered that the system of distribution adopted in the colonies was a mistake.

**Mr. Deole** said he could not agree with the conclusions reached by Colonel Ross. That speaker's solution had been that agriculture must be improved. The real solution, he felt, lay more along the

lines suggested by Prof. Hamilton. But he would not accept Prof. Hamilton's suggestion that the only way to improve the lot of the agriculturist was first to make him worse off. He agreed with Colonel Ross that the economic position of the people must be improved. He did not see how this was to be done, and at the same time pay its own way.

Mr. Nankeolyar said that, with reference to the district of Eastern Bengal which he knew best, the theory outlined by Colonel Ross was particularly applicable. The drainage conditions were deplorable; and, both in the interest of agriculture and public health, the drainage system would have to be improved. The present poverty in that district he would set down as largely due to ignorance, laziness and over-population. Ignorance in respect of water supplies had most serious effects. Water for drinking purposes was obtained from tanks, and privies were often erected in the vicinity of these tanks. The result was that the water in these tanks was polluted; and a cholera epidemic almost invariably followed the rainy season. The laziness might be partly the result of the wonderful bounty of nature. There was plenty of water; and the land got annual accretions of silt. In these conditions the peasant worked hardly three months in the year. Sugar-cane on these lands was the most valuable crop; yet it involved much labour, and as a consequence some other crop was often substituted which involved less labour. During the war there was a great demand for jute, and great profits could have been made; but the cultivators began a system of hiring labour for work that they used to do themselves, and as a consequence the cost of production rose. Though the price of jute had gone down, this wasteful system still prevailed. Further, even if the people were more energetic, and great improvements were introduced, it seemed to him that the increase in the produce would scarcely more than meet the increase in population. So dense was the population in some parts of Eastern Bengal, *e.g.*, Faridpur, that these districts ranked among the most thickly populated districts in the world. Something more was needed there to effect improvement, and to raise the standard, than a mere change to intensive cultivation.

Prof. Shahani said that he considered it most unfortunate that Prof. Hamilton should have said that, at the present time, India was lightly taxed. (Prof. Hamilton observed that he had never made any such statement.) Prof. Shahani then asked whose duty it was to find the money needed for the development of agriculture. Was

it the duty of the state, or the duty of private individuals? If it was the duty of the state, then the state must find the money. If the state declared itself bankrupt, then the only way to find the necessary funds seemed to be to cut down expenditure in other directions. Prof. Shahani then declared that the landlord class would have to be very different from what it was at present, if the needed improvements were to come from them. In his opinion, the whole scheme of tenure of land as it existed at present should be abolished.

**Prof. Joshi** said that if Colonel Ross desired for the people a healthier and higher standard of life, then one of the preliminary steps must be to make them thoroughly dissatisfied with the conditions under which they lived. At present, they were content to live surrounded by mud, flies, mosquitoes and nuisances of all sorts. Their eyes must be opened to the dreadful conditions under which they were living. This having been done, the nation must then make the best use of its resources; and there were very few persons who would agree that in India at the present moment the best use was being made of the national resources. For the improvement of the people we must spend the money we had got in a better way; and the whole question came back to one of finance. If the money could not be got in other ways, it might be necessary to borrow. He saw no reason why we should not also borrow for construction as well as for destruction. He considered that a loan raised for the purpose of education and spent wisely during the next twenty years would in the days to come repay itself many times over.

**Colonel Ross** replied. He said that what Prof. Joshi had said was not in the least new to him; in fact, if Prof. Joshi would look through his last Report, he would find the ideas he had expressed put down in almost identical words. He considered education a primary necessity, if for nothing else than to make people realise that they were not in a good state now. The three things he considered essentially necessary to effect the social and economic uplift of the people were firstly economic improvement, secondly education, and thirdly legislation. The last would be required to carry out the improvements, and to deal with recalcitrants.

As regards the vicious circle outlined by Prof. Hamilton, he as a practical man was inclined to set it down as a thing of academic interest only; and he refused to accept Prof. Hamilton's conclusions on the subject of the increase of population wiping out all the effects

of the improvement in production. That simple application of the Malthusian theory had not been found to be true in England during the last century. In the same way, if the problem were attacked here in a practical manner, the increase of wealth in the hands of the people would make them want more and all the good effect would not necessarily be cancelled by an increase in their numbers. Once "light the spark of desire in their hearts," said the speaker, and you need have no fear of the vicious circle.

Prof. Hamilton had referred to Japan, and the intensive cultivation carried on there. The reason for that intensive cultivation, as far as he knew, was the over-population which existed there. Prof. Hamilton would not let this reason pass. In further explanation, Colonel Ross said that in his opinion conditions of extreme poverty in India were not so common, except in times of famine, as they were sometimes supposed to be. The population in the last census was only a little greater than it had been twenty years previously, and there had been during that time a great improvement in the condition of the people. They now had luxuries of many kinds (*e. g.*, cigarettes and bicycles) which were quite unknown twenty years ago. It had to be admitted, however, that the influenza epidemic which carried off from seven to ten millions of the people was partly responsible for the small increase in population.

In connection with the remarks made by Prof. Jevons from the Rockefeller Report, he would like to point out the effect which the eradication of the disease of hookworm had had in bringing about the improvements mentioned. It was found, at the beginning of the experiment, that the majority of the people were lazy and good-for-nothing. Investigation showed that about 70 per cent. of them were infected with hookworm, which rendered them incapable of hard labour. The tackling of this disease had much to do with the improvement which took place. Here in India this disease was rampant. In Bihar the percentage affected by it stood somewhere between 60 and 80; in Bengal it stood at about 65; and in some parts of the United Provinces it stood as high as 80. In India more people had got it than not; and the numbers affected by it ran into hundreds of millions. The majority of these people suffered without knowing what was wrong. It was only the advanced cases who admitted they were ill. Yet, even in its earlier stages, it was a great cause of low vitality and laziness. If hookworm and malaria could be effectively dealt with, it would



pave the way for great economic improvement. Prof. Jevons had, in a way, given them a wrong impression in what he said about the reconstruction of the Southern States of America. The key to that reconstruction was the death of the hookworm. The hookworm normally attacked people through the skin coming from excreta scattered all over the country. It showed itself, to begin with, in wounds and ulcers on the legs which were caused by the entrance of the parasite in large numbers.

Mr. Deole had expressed grave doubts at any such scheme as Colonel Ross had outlined paying its own way. He (the speaker) assured them that this was possible; and in this respect they had much to learn from Italy and Spain. The system of improving the land there was much the same as was being adopted in some parts of Eastern Bengal, where the land was either drained or flooded so as to get good results from cultivation. The difficulty which generally arose was that a good deal of capital was required. He was surprised to note that, in a meeting of economists, little reference had been made to the creation of capital through agricultural banks. Many seemed to put too much reliance on Government; but a scheme, to do any real good must reach the village, and this could only be done through banks of the right type with many small branches. It was in this respect that the agricultural bank could render most valuable service.

Prof Jevons brought the discussion to a close by thanking Colonel Ross for the address which he had given, which was of unusual interest to all who were interested either in Public Health or in Economics. He had been particularly interested in the facts which had been put forward, showing the fixation of the free nitrogen of the atmosphere during thunderstorms. During the war Germany had succeeded in utilising this with very considerable success on a commercial scale.

A note on "The Improvement of Official Statistics" was submitted by Mr. C. A. Townsend, I. C. S., Director of Agriculture, Punjab. In Mr. Townsend's absence, this was read by Professor Hamilton; and was as follows:—

The writer of the paper has been intimately connected for the last few years with the preparation of crop forecasts in the Punjab, of which the wheat forecast is the most important; and, as these forecasts supply the material for some of the most important official statistics of India, he notes, briefly, the principal difficulty which has confronted him in their preparation.

This difficulty is the *estimate of outturn* per sown acre. The actual area sown is ascertained within, he thinks, 99 per cent. of accuracy from the records of village accountants, who are supposed, at any rate, to visit every field at harvest time, and record what crop is sown in it and the condition of that crop. As the area of every field is recorded in the village accountant's records, it is not difficult from this to ascertain the actual area sown with any crop.

The estimate of the outturn of grain per sown acre is a very different and much more difficult proposition, however. Crop experiments, and estimates by experienced men, are the only guides we have. Neither is very satisfactory. Crop experiments cannot be made in any thing like a sufficient number in the short time available; nor, indeed, is the staff requisite for this work, which requires considerable judgment and intelligence, available. Further, experience has shown that estimates of outturn by even the most experienced men are often very wide of the mark in actual practice. As an illustration of this, take the following extract from my predecessor's report, Part I, on the working of the Punjab Department of Agriculture for the year ending June 30, 1920. "The subject of crop forecasts was discussed at the last Board of Agriculture at Pusa; and I then stated that I doubted whether experts could, in general, estimate the outturn of fields with an accuracy of 10 per cent or less. Mr. Roberts, Professor of Agriculture, took up the challenge; and, although my statement was meant to apply to estimates of fields of Zamindars, a test of accuracy of estimation was made at the Lyallpur Agricultural Station on 15th April, 1920, when the wheat crop there was dead ripe, and the yields of 32 different fields were estimated independently by Mr. Roberts, Mr. Fankner, and myself. The fields were subsequently reaped, and the grain weighed; and the following errors of estimation were found:—

Observer.	Mean error in estimate of yield.	Number of fields estimated in which the error was less than 10 per cent.
W. R.	38 per cent.	3
O. T. F.	28 per cent.	1
S. M. J.	27 per cent.	8

Conditions favoured accurate estimates, as the past yields of the various plots were known, as were also the manurial and other treatment and the number of waterings. The outturns in

most fields were estimated at too low a figure. These tests confirm those made last year at Gurdaspur under much severer conditions, where even larger errors were made."

If any members of the Conference can suggest any step which would help to a solution of this difficulty, the writer would be very grateful.

There is one other point to which I desire to draw your attention. If the Government of India wish to improve the statistics of India as a whole, they should take steps to improve the figures of crops, etc., returned, to them by Indian States.

Prof Hamilton, in opening the discussion, said that he had talked this matter over with the Financial Secretary of his own Province; and the latter's estimate was that statistics in Bihar were more defective even than was suggested in the paper by Mr. Townsend. Prof. Hamilton emphasised the importance of the problem. He felt that what was badly needed in India was an estimate of taxable capacity such as had been prepared for most European countries. Such an estimate in the case of India would depend largely on the estimated crop yield, and hence the importance of greater accuracy in their figures dealing with this.

Mr. Ghosh, of the Department of Statistics, Government of India, being called upon, said that this whole matter was at present under the consideration of Government; and the result would be known soon. They were carefully considering the statistics of export and consumption. He regretted that, in these circumstances, he was not in a position to offer any remarks. He was himself in communication with the Director of Agriculture in the Punjab, and such remarks as he had to make he would address to him directly.

Mr. Bhatnagar said that, to show the deplorable state of some of our official statistics, he might quote some provincial figures published by the Director of Statistics, in which no change had been made during the last twenty-five years. The only possible way out of the difficulty seemed to him to be for some competent person to go to different villages, and try to strike a standard rate in different districts. The patwari often took not the slightest trouble in trying to find out the correct figures.

Mr. Mukharji asked how the figures could approach accuracy, when one considered the method of their collection. The officers responsible took little or no care to get reliable figures, but pushed

the work on to their subordinates; and this process went on until the person responsible for official statistics came to be the village chaukidar. He often reported on subjects without taking any trouble whatsoever, and as a result, his figures were both imaginary and wrong.

Prof. Myles said he considered the discussion was getting rather off the lines. If an official labouring under the difficulties of getting accurate figures consulted us as a scientific society, it was ungracious, to say the least of it, to tell him that his figures were so much rubbish.

Prof. Jevons said that it looked as if the meeting was not able to arrive at anything now. It had to be granted that it was extraordinarily difficult to collect figures in respect of many of the subjects on which statistics were collected. It would really be a great step in advance, if an estimate of the accuracy of the figures could be given for figures of different sorts. The degree of accuracy might vary from one province to another; and it was only those who were concerned with the collection of the figures who could give any estimate of their accuracy. Much improvement might be effected if the Director of Statistics circulated some elementary manual on statistics to those responsible for the collection of figures, showing why they were being collected.

*Friday, 17th March (Morning Session).*

The following is the text of the paper entitled "Comments on the Equation of Exchange", read by Professor Clark A. Warburton at the afternoon session of the 16th March:—

While from a theoretical point of view it is not difficult to reconcile the "commodity theory" of money with the "quantity theory," (1) Hugo Bilgram's recent attack on the "quantity theory" (2) shows that the controversy between the two points of view still exists.

In recent years the quantity theory has been generally expressed in the equation of exchange—the most familiar form being that of Professor Irving Fisher,  $MV + M'V' = PT$ . Even Mr. Bilgram does not question the mathematical correctness of this equation; it is in its application that disagreement occurs. In this matter of causal relations quantity-theorists have often made assumptions which are

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(1) By regarding the value of gold (or silver) as following the ordinary laws of exchange, with due regard for composite demand (for use in the arts and as a medium of exchange) and for the principle of substitution (bank deposits for gold).

(2) Journal of Political Economy, November, 1921.

unwarranted. Thus Professor Fisher has undoubtedly laid too much stress on P as the effect and the other elements as cause. (1) As far as the equation itself is concerned, there is no evidence whatever regarding causality; it simply shows, for instance, when prices are rising, whether that rise is accompanied by an expansion of the circulation, a more rapid turnover of the media of exchange, or a decreased volume of trade. It would be of considerable practical value to know which of the other elements is accompanying price changes—especially when one or more of these elements can be controlled or modified. But the causal relations are to be deduced only from a study of time relations, or of something entirely outside the equation. Mr. Bilgram attempts to show that the causal relations are sometimes the reverse of those stated by Professor Fisher. There is also considerable evidence to show that under certain circumstances changing prices are paralleled by a changing turnover of the media of exchange, or of the velocity of bank deposits. The latter part of this paper will deal with recent investigations along this line.

While the rest of the criticisms made in the article referred to above are trivial or plainly untenable, there are two other criticisms of the equation of exchange (2) which merit attention. The first of these regards the definition of money—brought into prominence when one asks whether coins which are hoarded are or are not money. In an extreme form the argument is that money is money only when it is being used in a transaction. The difficulty disappears, however, in theory at least, when we make the test of money the same as that of other tools and conveniences—that which is commonly used for a particular purpose and generally acceptable for that use warrants the name. It is the ready-for-use of the goods, rather than the use of it in a particular case, which gives it its name. (3) In analysis of actual facts one has to decide whether or not, on this principle, time deposits are part of the media of exchange.

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(1) "The Purchasing Power of Money," Ch. VIII.

(2) Suggested to the writer by Professor H. J. Davenport, of Cornell University.

(3) The idea that money is money only when it is being used in a transaction violates our whole notion of naming things. A hammer is a hammer only when one is driving in a nail. An auto is an auto only when it is going along the road. The same argument intimates that whenever anything, whatever it be, is used as money, it is really and truly money. So when one uses a stone as a hammer, it is, verily, a hammer. In the case of money, wouldn't the goods be money as well as the gold or paper? Some

Here one's decision as to what is included in  $M$  or  $M'$  has a reciprocal effect on  $V$  or  $V'$ , for if time deposits, as an example, are included, the  $M'$  will be larger, but  $V'$  smaller.

The other criticism of the equation of exchange as commonly expressed is that there should be allowance made for a turnover of goods. That is, the  $T$  in the equation is the volume of trade, not the volume of production. This is of special significance in view of the fact that fairly reliable index numbers of production have recently been constructed in the United States. So far as the writer knows, however, there is no country in which the volume of trade is satisfactorily measured.

With this fifth element in the equation, it becomes

$$M V + M' V' - P G R$$

when  $M$  is the quantity of currency in circulation.

$M'$  is the quantity of bank credit in use.

$V$  is the average turnover of currency in a given period of time (usually given as a year).

$V'$  is the average turnover of deposit credit in the period.

$P$  is the general price level.

$G$  is the quantity of goods produced in the period.

$R$  is the rate of turnover of these goods, or the average number of sales per unit of goods.

The ordinary equation, however,  $M V = P T$  <sup>(1)</sup> is one derived algebraically from the original equation of  $M V - p_1 q_1 + p_2 q_2 + \dots + p_n q_n$ . For the sake of proof, then, as well as for the formation of a working formula for each of the elements in the revised equation, we need to start with the fundamental unquestioned identity.

$$M V - (q_1 p_1 + q_2 p'_2 + \dots + q_1 p_1^m) + (q_2 p_2 + q_2 p'_2 + \dots + q_2 p_2^m) + \dots + (q_n p_n + q_n p'_n + \dots + q_n p_n^m) = q_1 (p_1 + p'_1 + \dots + p_1^m)$$

kinds of hammers may not serve for all purposes, and some kinds of money are not always acceptable. A hammer may lay around for a year without being used. Is it any less a hammer? But gold-plate it, put it up on a shelf where it is not intended to be used, and it becomes only an ornamental hammer. When the carpenter wants one, he'll not use it. For practical purposes it is no longer a hammer. Money (in the broad sense, of course, without distinction of currency and credit) is that which is generally acceptable as a medium of exchange, is the kind of thing that is generally used for that purpose, and is available for use. It is true that it is sometimes difficult to tell just what this includes. If one uses a stone as a hammer once in a year, one would hardly call it a hammer, but if he used it exclusively and constantly for that purpose, it could very properly be classed as one, though of a peculiar style. The analogy is obvious.

(1) For theoretical discussion it is most convenient to disregard the difference between  $M$  and  $M'$  and  $V$  and  $V'$ —using  $M$  and  $V$  for the combination.

$$\begin{aligned}
 & + q_2 (p_2 + p'_2 + \dots p_2^m) + \dots q_n (p_n + p'_n + \dots p_n^m) \\
 & = q_1 m_1 \left[ \frac{p_1 + p'_1 + \dots p_1^m}{m_1} \right] + q_2 m_2 \\
 & \quad \left[ \frac{p_2 + p'_2 + \dots p_2^m}{m_2} \right] + \dots q_n m_n \left[ \frac{p_n + p'_n + \dots p_n^m}{m_n} \right]
 \end{aligned}$$

If we now substitute  $p_1, p_2 \dots p_n$ , or the average price for each good, for the terms in brackets, we have

$$M V = q_1 m_1 p_1 + q_2 m_2 p_2 + \dots q_n m_n p_n$$

$$M V = \sum q m p$$

Then, for comparative purposes, designating the year under investigation by the letters  $q, m$  and  $p$ , and some other year as base by the letters  $q_0, m_0$  and  $p_0$ , we have

$$M V = \frac{\sum q m p}{\sum q m p_0} \frac{\sum q m p_0}{\sum q m_0 p_0} \sum q m_0 p_0$$

Thus far the analysis is analogous to that used by Professor Fisher. (1) We should, however, carry it further, so as to obtain all

(1) "The Purchasing Power of Money", Appendix to Ch. X. Here Professor Fisher (pages 421-2) has the equation of exchange in the form

$$M V + M' V' = \left( \frac{\sum p_1 Q_1}{\sum p_0 Q_1} \right) \sum p_0 Q_1.$$

Of the elements in the equation as thus expressed, the members of the left-hand side of the equation and the

$\sum p_0 Q_1$  (or  $T$ ) are absolute figures or real quantities, while  $\frac{\sum p_1 Q_1}{\sum p_0 Q_1}$  (or  $P$ )

is a kind of average, or index number. Professor Fisher recognizes that it would be desirable to obtain  $T$  also in the form of an index number, for any change in the quantity  $\sum p_0 Q_1$  assumes uniform changes in the  $p$ 's and  $Q$ 's of which it is composed. "We should consider an index number perfect (so far as needed in the equation of exchange) if we could assert of it the same theorem of proportion as above, without the restriction as to the  $Q$ 's changing uniformly, so that we might substitute an average change in the  $Q$ 's in the place of uniform change. No such index is found in the table, and no such index seems possible." But by the method used above in regard to the revised equation of

exchange, that is by changing  $\sum p_0 Q_1$  to  $\frac{\sum p_0 Q_1}{\sum p_0 Q_0}$  and thus making it

quantity relative to the base year, the difficulty is solved. True, this throws the equation out of balance—but by correction of the other  $Q$ 's, the usual formulae for relative numbers of  $M$  and  $V$  are derived. Thus (dropping the subscripts for the year under investigation, and regarding  $M V$  as inclusive of both money and deposits):

$$M V = \frac{\sum p q}{\sum p_0 q} \sum p_0 q$$

five elements in the equation, not two only, as either relative figures or index numbers. The procedure is as follows:—

$$\left(\frac{M}{M_0}\right) \left(\frac{M_0 V}{\Sigma q_0 m_0 p_0}\right) = \left(\frac{\Sigma q m p}{\Sigma q m p_0}\right) \left(\frac{\Sigma q m p_0}{\Sigma q_0 m_0 p_0}\right) \left(\frac{\Sigma q m_0 p_0}{\Sigma q_0 m_0 p_0}\right)$$

$$\text{Since from } MV = \Sigma q m p, V = \frac{\Sigma q m p}{M}$$

$$\left(\frac{M}{M_0}\right) \left(\frac{M_0 \Sigma q m p}{M \Sigma q_0 m_0 p_0}\right) = (\text{same as above})$$

Or

$$\left(\frac{M}{M_0}\right) \left(\frac{\frac{\Sigma q m p}{M}}{\frac{\Sigma q_0 m_0 p_0}{M_0}}\right) = \left(\frac{\Sigma q m p}{\Sigma q m p_0}\right) \left(\frac{\Sigma q m p_0}{\Sigma q m_0 p_0}\right) \left(\frac{\Sigma q m_0 p_0}{\Sigma q_0 m_0 p_0}\right), (1)$$

In the method here outlined, the precise formulæ for such index numbers or relatives are determined. Not only is each of these simple in construction, but each agrees with a common-sense analysis of the element. Money in circulation is an ordinary relative. Velocity is a relative of the actual rate of turnover. On the other side, we have to determine how much of the change in

$$\left(\frac{M}{M_0}\right) \left(\frac{M_0 V}{\Sigma p_0 q_0}\right) = \left(\frac{\Sigma p q}{\Sigma p_0 q}\right) \left(\frac{\Sigma p_0 q}{\Sigma p_0 q_0}\right)$$

$$\text{Then, since from } MV = \Sigma p q, V = \frac{\Sigma p q}{M}$$

$$\left(\frac{M}{M_0}\right) \left(\frac{M_0 \Sigma p q}{M \Sigma p_0 q_0}\right) = \left(\frac{\Sigma p q}{\Sigma p_0 q}\right) \left(\frac{\Sigma p_0 q}{\Sigma p_0 q_0}\right)$$

Recently (in a discussion of the best form of index number at the Eighty-Second Annual Meeting of the American Statistical Association, (reported in the Quarterly Publication of the Association, March, 1921), Professor Fisher

has advocated the formula  $\sqrt{\frac{p_1 q_1 + \dots}{p_0 q_1 + \dots} \times \frac{p_1 q_0 + \dots}{p_0 q_0 + \dots}}$  as the simplest

form of price index number meeting the two tests: (1) that it should work both ways as to the two factors, prices and quantities, and (2) that it should work both ways as to time. To substitute this formula, the right-hand side of

the equation  $\left(\frac{\Sigma p q}{\Sigma p_0 q}\right) \left(\frac{\Sigma p_0 q}{\Sigma p_0 q_0}\right)$  needs to be modified:

$$\begin{aligned} & \left(\frac{\Sigma p q}{\Sigma p_0 q}\right) \left(\frac{\Sigma p q_0}{\Sigma p_0 q_0}\right) \left(\frac{\Sigma p_0 q}{\Sigma p_0 q_0}\right) \\ &= \left(\sqrt{\frac{\Sigma p q \cdot \Sigma p q_0}{\Sigma p_0 q \cdot \Sigma p_0 q_0}}\right) \left(\sqrt{\frac{\Sigma p_0 q \cdot \Sigma p q}{\Sigma p_0 q_0 \cdot \Sigma p q_0}}\right) \end{aligned}$$

(1) These formulæ are open to the objection that, in the price index, the quantities of goods produced and the turnover of goods that are assumed stationary are those of the period under investigation, while, in the



pecuniary transactions (for either side of the equation  $MV$  or  $PGR$  is the total pecuniary volume of trade) is due to changes in the quantities of goods produced, how much to greater or less turnover of goods, and how much to price changes. Let us first suppose that the quantities of goods produced and their turnover remain the same. The change in pecuniary volume of trade under these

conditions ( formula  $\frac{\Sigma q m p}{\Sigma q m p_0}$  ) is the index of price changes. Simi-

larly, a change in the total pecuniary volume of trade, quantities produced and prices charged remaining unchanged, is the index of changes in the rate of turnover of goods. Likewise, suppose the rate of turnover and prices stationary, the change in pecuniary volume of trade then represents the changes in goods produced.

The distinction between currency and deposits is important, not so much because of the direct connection between the quantities of the two which the public uses, as because of the probable different velocity of the two and the fact that, in practice, the velocity of bank deposits is obtainable while that of money is not. The allowance for this is made by changing

$$\left( \frac{M}{M_0} \right) \left( \frac{\frac{\Sigma q m p}{M}}{\frac{\Sigma q_0 m_0 p_0}{M_0}} \right) \text{ to } \left( \frac{M + M'}{M_0 + M'_0} \right) \left( \frac{\frac{\Sigma q m p}{M + M'}}{\frac{\Sigma q_0 m_0 p_0}{M_0 + M'_0}} \right)$$

or to

$$\left( \frac{M + M'}{M_0 + M'_0} \right) \left( \frac{V \left( \frac{M}{M + M'} \right) + V' \left( \frac{M'}{M + M'} \right)}{V_0 \left( \frac{M_0}{M_0 + M'_0} \right) + V'_0 \left( \frac{M'_0}{M_0 + M'_0} \right)} \right) \quad (1)$$

"goods produced" index, the prices and turnover of goods assumed are those of the base year. Thus they do not "work both ways as to time." To obviate this, formulæ analogous to those recently recommended by Professor Fisher may be obtained by writing the right-hand side of the equation as follows:—

$$\sqrt{\frac{\Sigma q m p}{\Sigma q m p_0} \cdot \frac{\Sigma q_0 m_0 p}{\Sigma q_0 m_0 p_0}} \quad \sqrt{\frac{\Sigma q m p_0}{\Sigma q m_0 p_0} \cdot \frac{\Sigma q_0 m_0 p}{\Sigma q_0 m_0 p_0}}$$

$$\sqrt{\frac{\Sigma q m_0 p_0}{\Sigma q_0 m_0 p_0} \cdot \frac{\Sigma q m p}{\Sigma q_0 m p}}$$

In practice, however, these formulæ become rather complicated. Professor Persons, in tests of Professor Fisher's "ideal" index number (published in the Harvard Review of Economic Statistics in 1921) concludes that the difference in most investigations is negligible. It is probable that the simpler formulæ are as accurate as any statistics that may be gathered, and are sufficient for practical use. As noted in the following pages, even these can only be partially used with statistics available at the present time.

(1) The derivation from  $MV + M'V' = \Sigma q m p$ , or rather

$$MV + M'V' = \left( \frac{\Sigma q m p}{\Sigma q m p_0} \right) \left( \frac{\Sigma q m p_0}{\Sigma q m_0 p_0} \right) \Sigma q m_0 p_0 \text{ is as}$$

Such are the formulæ for index numbers of the elements in the equation of exchange. It is quite obvious that index numbers or relatives constructed on the same base and in a similar manner are identical functions of the five elements in the equation, and that the equation must hold for index numbers as well as for actual quantities. Thus we may rewrite the equation  $MV + M'V' = PT$ , or  $MV + M'V' = PGR$ , and mean by each of those terms a relative number or an index number. The equation is of greater value to use in this form than in the form of quantities, for we can often obtain index numbers where the total values are lacking. Not only this; such an analysis gives a partial check on the accuracy of index numbers constructed from various sources and in various ways. There may be compensating errors, or there may be errors in time relations, as has been pointed out, if the simple formulæ are used. Nevertheless, index numbers that

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follows:—

$$\frac{(MV + M'V')(M + M')}{M + M'} = \text{Same as above.}$$

$$(M + M') \left[ V \frac{M}{M + M'} + V' \frac{M'}{M + M'} \right] = \text{as above.}$$

$$\left( \frac{M + M'}{M_0 + M'_0} \right) \left( \frac{(M_0 + M'_0) \left( V \frac{M}{M + M'} + V' \frac{M'}{M + M'} \right)}{\Sigma q_0 m_0 p_0} \right) =$$

$$\left( \frac{\Sigma q m p}{\Sigma q m p_0} \right) \left( \frac{\Sigma q m p_0}{\Sigma q m_0 p_0} \right) \left( \frac{\Sigma q m_0 p_0}{\Sigma q_0 m_0 p_0} \right)$$

But since  $\Sigma q_0 m_0 p_0 = M_0 V_0 + M'_0 V'_0$ , by substitution we have

$$\left( \frac{M + M'}{M_0 + M'_0} \right) \frac{(M_0 + M'_0) V \left( \frac{M}{M + M'} + V' \frac{M'}{M + M'} \right)}{M_0 V_0 + M'_0 V'_0} = \text{As above.}$$

$$\left( \frac{M + M'}{M_0 + M'_0} \right) \left( \frac{V \frac{M}{M + M'} + V_0 \frac{M'}{M + M'}}{V_0 \frac{M_0}{M_0 + M'_0} + V'_0 \frac{M'_0}{M_0 + M'_0}} \right) = \text{As above.}$$

or, if one wishes the two velocities combined instead of separated and weighed,

$$\left( \frac{M + M'}{M_0 + M'_0} \right) \left( \frac{\frac{\Sigma q m p}{M + M'}}{\frac{\Sigma q_0 m_0 p_0}{M_0 + M'_0}} \right) = \left( \frac{\Sigma q m p}{\Sigma q m p_0} \right) \left( \frac{\Sigma q m p_0}{\Sigma q m_0 p_0} \right) \left( \frac{\Sigma q m_0 p_0}{\Sigma q_0 m_0 p_0} \right)$$

correspond closely and whose products conform to the equality of the equation are more probably true to the facts than those that do not. Another advantage that is gained by using index numbers (on the same base) of all the elements is that they may be charted so as to show graphically what compensating changes have occurred—as, for instance, what other element has accompanied a rise or fall in prices.

Of the seven elements ( $M$ ,  $M'$ ,  $V$ ,  $V'$ ,  $P$ ,  $G$ ,  $R$ ) in the revised form of the equation here presented, there are three ( $M$ ,  $M'$  and  $P$ ) for which index numbers or relatives have been available for the last few years in most countries. It is true that most price indices are faulty for use in the equation of exchange, because of the omission of all transactions in stocks and bonds, in real estate and wages. For accuracy, too, the price index should be made up of the average prices for which each particular good is sold, that is, the average of manufacturer's or producer's price, the wholesale price (or prices, if there is more than one middleman) and the final price to the consumer. Such an average is hardly practicable; it seems that the wholesale prices, which are used in the majority of price index numbers, will most nearly represent the average.

There are two more of the elements ( $V'$  and  $G$ ) which have recently been the subject of investigations in the United States. The problem of constructing an index number of the volume of production was attacked almost simultaneously by four economists.<sup>(1)</sup> Of the index numbers prepared by these men, only one, prepared in the Statistics Department of the Federal Reserve Bank, is based on the month as the time unit. The others are yearly indices. A period of a year, or at least a half-year, is undoubtedly necessary if one is attempting to check the accuracy of index numbers by noting the margin of error between the product  $MV$  and the product  $PT$  or  $PGR$ . But to find out which element leads in changing conditions, it is necessary to have monthly or quarterly data. In the monthly index of production just mentioned, allowance is made for seasonal fluctuations—an allowance essential for the purpose intended in the construction of the index, but one that should not be made for use in the equation of exchange. Some of the items in this index are more indicative of volume of trade than of volume of production. If this were

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(1) See the American Economic Review for March, 1921,

thorough-going, it might make it available as an index of volume of trade, corresponding to the more common form of the equation,  $M\bar{V} + M'V' = PT$ —which is, after all, more valuable than the revised form for certain purposes.

Monthly computations of the velocity, or rate of turnover, of bank deposits have been recently prepared by the Statistics Department of the Federal Reserve Bank of New York. (1) The data upon which they were constructed are not available for years previous to 1919, so that the computations began with January of that year.

In regard to the other two elements of the equation,  $V$  and  $G$ , nowhere have there ever been reliable estimates brought forth. Professor Fisher, it is true, made an estimate some years ago of  $V$  for the United States, but the possibilities of error were extremely large. (2) In countries like the United States and England, where cheque transactions form so large a part of the total trade (3), there is probably little error in using  $V'$  for the combined  $V$  and  $V'$ , not only because such a large percentage of the total trade is included therein, but also because it is reasonable to assume that changes in the velocity of currency will occur simultaneously with changes in the velocity of bank deposits. A way to investigate  $G$  is not easily found. To apply the formula  $\frac{\sum q m p_0}{\sum q m_0 p_0}$  would require a mass of unobtainable statistics. The degree of correlation between the volume of trade and the volume of production, were comparable indices of both available, might be used. Of the influences which make the volume of trade diverge from the volume of production, most important is the accumulation of stocks, partly seasonal but in manufacturing enterprises cyclical to an important degree. Then

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(1) At the present time the writer is unaware of the extent to which these have been published. His knowledge of the work is due to the fact that he was engaged thereon for several weeks during the summer of 1921.

(2) It was based on no more data than his estimate of  $V'$ , the inaccuracy of which is shown by comparison with the recent computations mentioned above. Professor Fisher estimated  $V'$  as 54 in 1909 and as 95.6 (turnover per year) in 1918 (American Economic Review for June, 1919), while the accurate figure for 1919 ranged from 18 to 48 for different cities throughout the United States, and about 75 for New York City. It does not seem as if the average for the whole country could be greater than 40 or 50. A comparison of the "debits to individual account" at clearing-house banks with the average net demand deposits for Federal Reserve Member Banks gives a velocity for the entire United States for 1919 of 43. But since the former group of banks is larger than the latter, this also is doubtless somewhat too large.

(3) Estimated as 80 p. c. to 90 p. c. of the total trade in the United States.

there are likely to be more middlemen, or perhaps more "middle" transactions during a period of rising prices than of falling prices.

These considerations show that even in the United States many data are lacking to determine inductively the causal relations existing among these elements. Another line of possible attack of the problem is to take bank clearings as an index of pecuniary volume of trade, that is, either  $M'V'$  or  $P T$ . Obtaining relatives, divide by relatives of  $M'$ , the quotient representing  $V$ . Dividing by a price index number, the result is an index of  $T$ , volume of trade. But any errors in  $M'$  or  $P$  are duplicated in the other elements. Needless to say, little light is thrown on causal relations, though the complementary relations may exhibit themselves. In Canada a uniform system of clearings has been in operation since 1900, and the velocity of currency and credit obtained by comparison with the volume of currency and credit in circulation is probably fairly accurate. (1)

Presented below, therefore, is a chart of the relatives of "notes in circulation plus demand deposits," of a composite velocity of currency and credit, and of wholesale prices. (2)

(See Chart on next page.)

These results show that a large increase in circulation need not be correlated with a rise in prices, though this is what has occurred since 1914. Previous to that date, it was the velocity of the currency

(1) In the United States a change of clearing methods occurred with the introduction of the Federal Reserve System, which lessens the "already doubtful" accuracy of this method, so that it hardly seems worth while to use it. In Canada both bank-notes and cheques are cleared through the clearing-houses.  $M'$  is much more important than  $M$ , not only because demand deposits are about double notes in circulation, but also because notes pass through more transactions than cheques without passing through a clearing-house.

(2) The figures upon which this chart is based are as follows, the bank clearings being taken from "The Monetary Times" and notes in circulation and demand deposits from the Canada Year Book. Prices are from the Canadian Department of Labor.

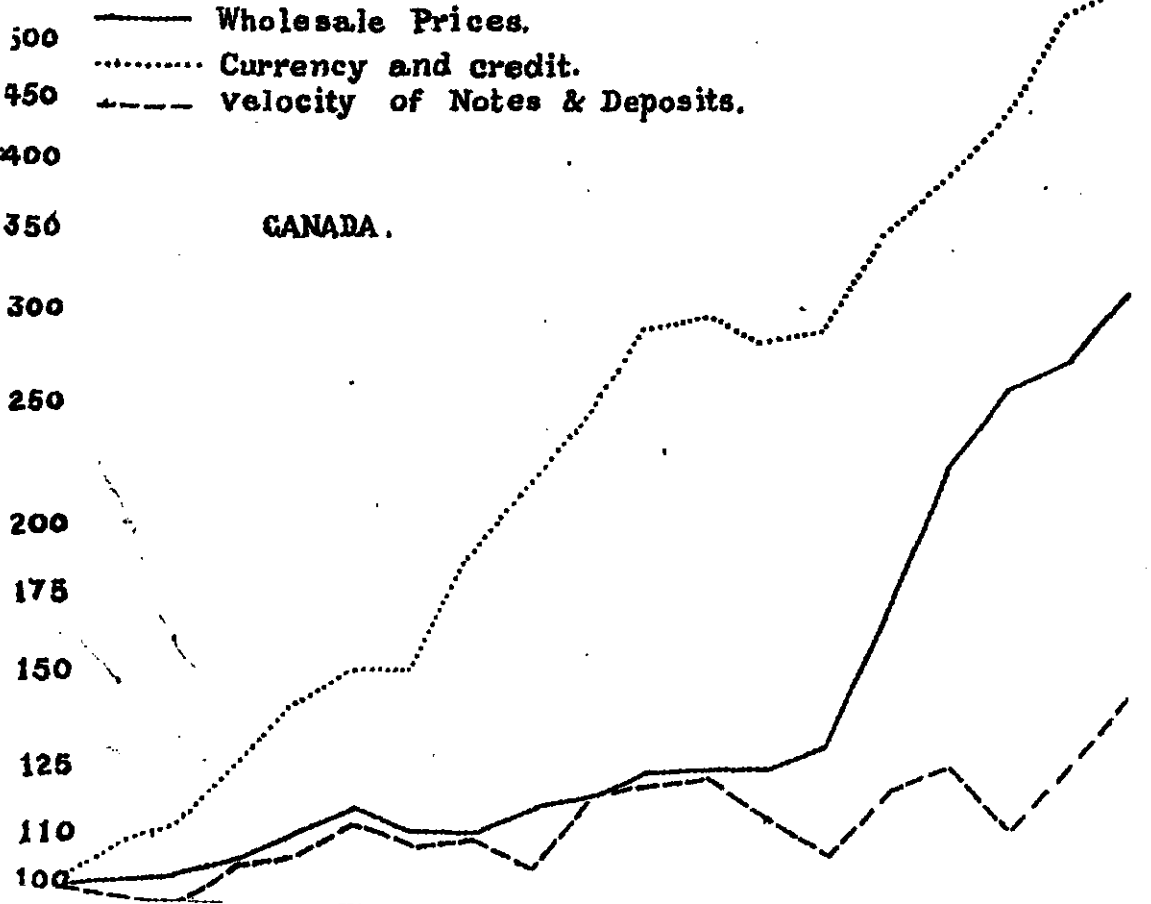
Clearings (in millions of dollars).		Circulation.	Clearings.		Circulation.	Clearings.		Circulation.
1902	2640	159.8	1909	5204	299.3	1916	10509	555.3
1903	2691	172.6	1910	6154	342.3	1917	12564	629.0
1904	3738	179.6	1911	7391	394.7	1918	13776	785.9
1905	3335	202.1	1912	9155	459.5	1919	16701	840.5
1906	4015	235.7	1913	9275	472.4	1920	20282	888.3
1907	4324	242.0	1914	8087	460.6			
1908	4142	241.1	1915	7805	463.5			

1902, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20.

500 ——— Wholesale Prices.  
450 ..... Currency and credit.  
400 - - - - - velocity of Notes & Deposits.

350  
300  
250  
200  
175  
150  
125  
110  
100

CANADA.



which was more closely correlated with price changes. The expansion of the currency was an accompaniment of an expanding volume of trade.

In the next chart are presented the courses in the United States of the three variables, wholesale prices, currency and credit, and the velocity of bank deposits, monthly, from January, 1919, to June, 1921. (1)

(See Chart on page 103.)

While this does not give sufficient information for scientific determination of causal relations, yet it does not look as if declining volume of currency were responsible for the decline in prices since May, 1920. Throughout 1919 prices, volume of media of exchange,

(1) Wholesale prices are the index numbers of the Bureau of Labor Statistics, shifted to the year 1919 as base. Currency and credit are relatives of the combined figures of "average net demand deposits" and Federal Reserve note circulation (the latter at the close of the month). While these are by no means the total deposit credit and monetary circulation, they form the larger part of the media of exchange, and the relatives would be practically unchanged by the addition of the other deposits and currency. The velocity of bank deposits is a series of relatives of the "debits to individual account at clearing-house banks" divided by the "average net demand deposits of Federal Reserve member banks." While these two groups of banks are not identical, and while there were a few additions to both groups during the two and one-half years, it is believed that the relatives obtained therefrom fairly represent the trend during that time. The method used for computing velocity in the Statistics Department of the Federal Reserve Bank of New York differed from this, the figures given herewith being independent computations. The following table gives the necessary data and the relatives according to which the chart is drawn:

	Debits to Individual Account at Clearing House Banks.	Average Net Demand Deposits F. R. Member Banks.	Federal Reserve Note Circulation.	Relative Notes plus Deposits.	Relative Rate of Turnover of Deposits.	Price Index, Bureau of Labour—1919 base.
( In millions of dollars. )						
1919.						
January	34792	10048	2451	95	7	96
February	28086	9908	2472	94	85	93
March	32044	10115	2522	96	88	95
April	32642	10135	2550	96	90	96
May	37896	10489	2519	98	101	98
June	38194	10393	2499	98	102	99
July	40918	10605	2504	99	108	103
August	37236	10800	2590	101	94	107
September	39243	10984	2655	103	100	104
October	44526	11140	2753	105	112	105
November	48483	11880	2862	107	107	108

and the velocity of bank deposits all tended upward—the trend of all three being about equal. Currency continued to expand till March, 1920, but not at such a pace as to account for the rise in prices at the same time or during the following two months. Neither had there been an advance earlier which can be held responsible for the upward trend, nor a decline which caused the fall in prices after May. The fact that during 1920 the velocity declined shows that less than customary use was made of the existing currency. From this examination of the facts one is tempted to say that it was the refusal of holders of purchasing power in the spring of 1920 to use that purchasing power that caused the price decline in the summer. The volume of currency remained almost unchanged through the summer and fall of 1920, beginning to decline in November, six months later than the beginning of the price decline. This is what would be expected if one regards the volume of currency as following, rather than preceding, price changes. If this is the sequence, one must note that the currency failed to follow the price advance in 1920—the reason being that reserves were becoming low. We may say, then, with some assurance, that the currency or credit possible according to law and banking customs forms a limit above which prices cannot rise with normal trade and with business methods affecting velocity unchanged. Below that limit prices are affected by other causes, and the quantity of media of exchange tends to follow changes in the price level. It is like the air pressure in a tube, with a piston representing the price level. As the piston is pushed in the air pressure becomes of greater and greater force—

December	...	45493	11214	3058	108	113	112
Average for year.		37879	10595	2608	100	100	100
1920.							
January	...	45184	11582	2851	109	109	117
February	...	35706	11476	3020	110	98	118
March	...	43364	11598	3049	111	105	119
April	...	41598	11545	3075	111	101	125
May	...	41875	11503	3107	111	101	128
June	...	39779	11497	3117	111	97	127
July	...	39910	11465	3120	110	97	124
August	...	36334	11305	3204	110	90	118
September	...	37469	11294	3280	110	92	114
October	...	41189	11265	3361	111	102	106
November	...	38899	11025	3326	109	99	98
December	...	48020	10823	3345	107	111	89
1921.							
January	...	38296	10814	3091	105	99	83
February	...	29915	10583	3052	103	85	79
March	...	34071	10404	2931	101	91	76
April	...	32115	10201	2830	99	88	73
May	...	32412	10194	2735	98	89	71
June	...	38243	10182	2634	97	91	70





until a point is reached beyond which the piston cannot move. But it can move freely and widely when at a distance from the limit, the air pressure having then little influence. Such was the position of prices and the media of exchange in the United States during 1921. Certainly the cause of the tremendous fall in prices must be sought elsewhere than in varying volume of the media of exchange.

*Discussion of Prof. Warburton's paper.*

Prof. Myles said he desired to thank Prof. Warburton for what was the boldest, and perhaps the most original, paper submitted to the Conference. He said he had moved the postponement of the discussion so that members might have time to go fully into the paper; but even now he, for one, attempted the criticism with considerable trepidation. The paper was essentially difficult; and it seemed to him that the logical connection between the different parts was not always clear. Again, he said that he could find no clear line of thought running throughout the paper. It seemed to him to divide itself into two portions, one of which was a theoretical exposition and expansion of the Quantity Theory as propounded by Irving Fisher, and the second an application of the Quantity Theory to the recent fall of prices in the United States. Only, what struck the speaker was that the argument and the formula so elaborately stated in the first part of the paper seemed to be cast aside, for the most part, when the time came for its application. In this respect Prof. Warburton, if he sinned, sinned in company with some of the best writers of the Mathematical School. He (Prof. Myles) was charmed, for example, with Marshall's treatment of monopolies in the "Principles"; but when the same writer came to the practical treatment of monopolies in his "Industry and Trade," the mathematical treatment so elaborately worked out in the "Principles" was hardly ever referred to. He asked Prof. Warburton whether in certain passages of his paper he had not pushed the Mathematics so far as to make them practically useless for application in practice. This conclusion, he thought, was substantiated by what followed in the paper. He felt that he was right in saying that the conclusion drawn by Prof. Warburton at the end of his paper could have been equally well deduced, had he taken the old classical statement of the Quantity Theory. Much of the criticism of the old statement of the Quantity Theory had arisen from the fact that the hypothetical conditions under which it was true, had not always been expressly stated, and there had

thus been a tendency to look upon the quantity of money in circulation as the only factor, and omit other important items. The speaker was doubtful whether Professor Warburton, after his elaborate analysis of the various elements that have to be considered as well as the quantity of money, had not at the end fallen into this old error himself. His last sentence was suggestive of it: "Certainly, the cause of the tremendous fall in prices must be sought elsewhere than in varying volume of the media of exchange." Even the student brought up on the old classical treatment of the theory would expect this to be the case.

The last paragraph of the paper seemed to the speaker the most important of all; and he thought that it might be better worded before it was finally printed. It was difficult to get at the writer's conclusion; but if he was right, the conclusion made was that the price level in the United States fell first, and then the volume of currency was adjusted to the new level, e. g., the maximum price level occurred in May, 1920, and there was little contraction of currency till November. Now this seemed an extraordinary conclusion to be drawn by one who had restated Prof. Irving Fisher's formula so as to admit of the rate of turnover. Making allowance for the turnover, the maximum  $M V$  was to be found in the last quarter of 1919, and the maximum price level was not reached until the second quarter of 1920. This would seem to indicate that, when allowance was made for the rate of turnover as well as for the quantity of money in circulation, prices had followed with about a five or six months' lag. He wanted to put this before Prof. Warburton as a possibility; and he felt that it was more in accord with the teachings of economic theory. Certainly, both in England and in the United States, when prices were rising, it was the expansion of the currency that came first, and the general level of prices followed later; but, on the other hand, Tooke had shown in his treatment of prices during the Napoleonic period that the currency had expanded to meet the rise in prices. Though not agreeing with the conclusion, he desired again to thank Prof. Warburton for a most stimulating paper.

Dr. Hyder, speaking next, said that everything about money had been said by the English economists; and it might be partly a result of his training, but he did not like the treatment of Prof. Fisher. He objected to the definition of money with which Prof. Warburton set out. "Readiness for use" seemed to him a poor

criterion. Money hoarded could not affect the price level; it had exactly the same effect as though it did not exist at all. Another point, which neither Prof. Irving Fisher nor Prof. Warburton had made clear, was how if there had been an initial increase in the quantity of money, the price level would be affected. The lack of this explanation had given rise to controversy in America. If the old English explanation had been given, much of that controversy might have been saved. The money came in the first place to the banks, and the bankers with larger reserves became more light hearted, and were prepared to grant loans more readily. With the loans thus contracted, people went and made purchases, and a rise in the price-level followed. The first thing which produced this sequence of events was the increase in the quantity of money in the hands of the banks. Dr. Hyder said that, particularly in the writings of Americans, grave doubts had been cast upon the Quantity Theory; but if any doubted it, they had only to cast their eyes on the currencies of Europe at the present time.

Prof. Jevons said that this subject was not so remote from Indian conditions as some might be inclined to think. On the other hand, they should be studying it closely at the present time. In some ways it was more important that this investigation should be made in India than elsewhere, because of the Gold Exchange system which existed here. In England and America the currencies were for the most part automatically adjusted, while under the Indian system regulation of the currency was necessary.

Prof. Warburton's definition of money had been questioned. The definition of money in India was of the nature of a puzzle. It was true that a Census of Rupees was taken by the Controller of Currency in May each year; yet we could not estimate the actual volume of the currency except at the end of a series of years, because when a change took place in the volume of trade, you had an outwelling of currency from hoards, as for example in 1920. Every few years, at the end of a period of brisk trade, we got a great change. What then were we to include under money? Were we to include the rupees which agriculturists and merchants had stored away as capital? In practice, what we found was that hoards of different kinds had different effects upon the circulation. The hoard of the agriculturist who saved for his old age, and died without letting it be known where his hoard was, had disappeared altogether. The hoard of the merchant had more influence on price-determination, but not so much as the money he

was using in business. Indeed, it seemed to him doubtful whether it was possible to find a formula that would be applicable to all countries at all times.

Prof. Jevons said that he had not been able to follow the purpose Prof. Warburton had in view when he developed Prof. Irving Fisher's formula. Would he please explain?

He said that he was quite convinced that the formula did not nor was it intended to express causal relations. It was simply a mathematical identity. We must, therefore, take actual figures before we elaborated this formula, which might simply be leading us into the wilderness of mathematical hypothesis. In this connection, he thought it was good that Prof. Warburton had taken the monthly figures; this he considered absolutely essential if any causal relation was to be made out.

One important influence upon prices which had not yet been mentioned was the psychological. Prices might depend not upon the credit actually available, but upon the belief that credit was to be got. In this way prices might outrun the level which could be supported by the money and credit available.

Prof. Hamilton said that he agreed with Prof. Jevons as to the importance of working out the relationship between the quantity of money and the general level of prices in India. At the same time, he feared it would be rather fruitless work because of the difficulty of finding out how much of the currency was functioning as money. So far as India was concerned, with the outbreak of war the import of gold came to an end. When gold could no longer come into the country, the people took to hoarding in the form of silver, and a large part of the silver in circulation took the place of the gold that had been previously hoarded. It was his opinion that a good deal of this silver had since been disgorged. Still, this difficulty of ascertaining what was the actual circulation, as opposed to the nominal, made the problem of correlating prices with the quantity of money in circulation in India extremely difficult.

As regards the mathematical equation, Prof. Fisher had meant it merely to express a relation; there was no causal relationship implied. He regarded it as proved that a rise in prices might be initiated by monetary or non-monetary causes. If it was due to non-monetary causes, however, the effective accompaniment must be an increase in some form of the money that was used. When Prof. Jevons suggested

that a rise in prices might be initiated by psychological causes, he could not share that opinion if it was suggested that the belief that credit was to be had could have more than a momentary effect. Unless some authority gave the necessary purchasing power, the mere belief would have only a momentary effect. The belief might give the initial impetus; but unless this was accompanied by the creation of currency, the operative cause would not function.

Professor Warburton replied at some length. As regarded the criticism that had been levelled at the mathematical part of his paper, he said that he agreed that the results deduced might have been equally well deduced by using Prof. Fisher's formula. His only hope was that the formula he had developed might help in the collection of statistics. As regarded Prof. Fisher's equation, it might be divided into two parts—the money and its velocity on the one side, and the price and the quantity sold on the other. The important thing was the relation between the four elements. If one changed, some other element must also change. If we found that prices had changed, then the problem was to find what other element or elements had also changed. The equation, however, gave no evidence of causality. Professor Fisher did not intend to show causality; but he did often try to show that change of price was necessarily an effect, and in this respect the speaker thought Prof. Fisher's treatment open to criticism. The great practical difficulty was that of measuring the changes in the four elements. Prof. Fisher had only elaborated prices; and in this paper the writer had attempted to do the same for each of the other elements. The methods adopted were those used in the business world. By means of the formula, we could make use of prices when we wanted to get at the volume of trade. With his formula, however, the operation became more complicated, because we had to take the quantity produced and the rate of the turnover. As regarded the various elements in the equation, some of them had never been satisfactorily measured. It was only in the United States that any serious attempt had been made to measure the velocity of circulation. It was, however, quite unfair to say of the mathematical method that it was useless, if it went too far to be applied at the present time. A formula such as the one worked out might assist greatly in the collection of statistics. With reference to the conclusion drawn by Professor Myles, that in his figures it was the  $MV$  which moved first, he found it difficult to disagree. What he was particularly concerned with, however, was which part of  $MV$  moved first; and he thought that he had made it clear in the

paper that it was  $V$ , the velocity, that went down first. Following this, the combined  $MV$  went down. It did not vitiate the conclusion in the least that  $M$  did not go down till later. It was the slower turnover of bank deposits which came first. It had been said that Prof. Fisher did not account for the rise in prices following an expansion of the currency, and Dr. Hyder had gone to considerable trouble to make this clear. All that the speaker would say about this was that if Prof. Fisher did not formally develop it, it was because everyone was supposed to know the process. As regarded the psychological influence, it should be remembered that demand must be an effective demand. This, in the United States, did not need to be a demand backed by actual media of exchange. There the quantity of banking deposits was most elastic and important. The business man bought, and then went to the bank to borrow on his goods. As regarded his definition of money, which had been criticised, he would say that money, even though it was hoarded, should still be classed as money. More correctly it was money, the velocity of circulation of which was zero. Before we could get anywhere with the equation of exchange, we must have a clear definition of money; and the one he had put forward was the one he considered most satisfactory.

Mr. Kumaraswami (University of Madras) read a paper on the "Cost of Living in Madras City". He said:—

A rise in the prices of the necessaries of life causes much hardship to the working classes, as it is not generally accompanied by a corresponding rise in their money wages. This lack of proper adjustment between prices and wages results in industrial disputes. A proper diagnosis of the malady is necessary before one can suggest any remedy for it. The unprecedented rise in prices during the last decade certainly requires a remedy. Here diagnosis means the correct measurement of the variations in prices.

These variations are measured and illustrated by being expressed in index numbers. According to this method, a certain period is taken as the base, the other periods are compared with it, and the percentage variations from the basic period are added to or subtracted from the number which denotes the base.

In this report, I have taken the period 1910-12 as the base. I have prepared index numbers for the 19 items which appear in the Bombay Labour Gazette Cost of Living index. Though I have constructed index numbers for 100 commodities, I have chosen

these 19 items to facilitate comparison between the provinces. I have adopted the Bombay system of weighting, as it does not differ very much from the one I prepared for Madras, after a careful examination of the actual sales of the various stores in the city and of an appreciable number of family budgets collected by me.

The period 1910-12 has been chosen as the base for the following reasons:—

(1) It was not possible for me to get authentic information about the prices ruling in the years prior to 1910.

(2) This period alone represents a normal level of prices after the year 1904. There was a sudden rise in prices after the year 1904, which reached its highest point in that decade in the year 1908. After that, there was an appreciable fall till the year 1910, when prices were 25 per cent. above the level of 1904. After 1911 prices went up once more. In the first two years (1911 and 1912) the rise was gradual. In the next two years (1913 and 1914) the rise was steep. The average for these three years, 1910-12, as expressed in index numbers, taking 1873 as the base year, is 159.66 (Index Numbers of Indian Prices, 1861-1918). The average for the five years ending with 1910 is 162.8; and the average for the six years 1905 to 1910 is 158.16. The average for the four years 1910 to 1913 is 165.25 (the pre-war years). The average for the five years 1910-1914 is 169.6. From these figures it is evident that the period 1910-12 represents a normal period normal, that is to say, in comparison with the period before and after. As a base should always represent a period which may be taken as normal and a period which is not remote, this period, 1910-12 has been chosen by me.

(3) There was a revision of salaries and wages in the years 1909-1911, and the next revision came only in the years 1918-20. So the period after the first revision has been chosen as the base.

The prices that I have considered are actual retail prices. I have given the yearly averages in the table. I went through the books of the chief stores in this city, which keep an accurate record of such transactions; and I have worked out daily, monthly, half-yearly and annual averages, and so the figures given in the appended tables represent averages of actual transactions.

I am indebted to Messrs. Beardsell and other cotton mills for the prices of clothing materials.



I have taken into consideration the fluctuations in the rent of about 200 houses in the different quarters of the city of Madras; and I am of opinion that those houses represent typical working-class tenements.

An examination of the tables will show that the rise in prices was gradual till 1915, rather steeper in the years 1915-1918, and sudden and soaring in the year 1919. Prices reached their highest point in 1920, when they were 108 per cent. above the level of 1910-12. After that there has been a slight fall; and in 1921 prices stood at the 1919 level.

I have appended three tables to this paper, the first showing the annual average prices, the second the percentage of variations and the unweighted index numbers, and the third the weighted index numbers.

I may conclude this brief paper by saying that the tables will speak for themselves.

*Friday 17th March (Afternoon Session).*

This was devoted to the annual business meeting.

# INDIAN ECONOMIC ASSOCIATION.

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Honorary Local Secretary and Editor of the Proceedings.

Professor W. H. Myles, M.A., University of the Punjab.

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# INDIAN ECONOMIC ASSOCIATION.

## CONSTITUTION.

1. The objects of the Indian Economic Association shall be
  - (a) the holding of annual Conferences ;
  - (b) the publication of the proceedings of the annual Conferences ;
  - (c) the publication of a journal and its free issue to members ;
  - (d) such other action to promote Economic Science and the dissemination of economic information as may be deemed advisable.
2. The membership of the Association shall be open to teachers and students of Economics and to other persons interested in Economics in general or in special economic problems, if duly elected.
3. The government of the Association shall be vested in a Committee of not more than twelve and not less than six members elected at the annual Conference, exclusive of *ex-officio* members.
4. (a) The officers shall be a President, an Honorary Secretary, an Honorary Treasurer, and a local Honorary Secretary.
  - (b) The posts of Honorary Secretary and Honorary Treasurer may be held by the same person.
  - (c) The local Honorary Secretary shall be elected for one year at the annual Conference from members resident in the locality selected for the ensuing Conference, for which a local Committee shall be formed.
  - (d) The officers shall be *ex-officio* members of the Committee.
  - (e) The tenure of office of the Honorary Secretary and Honorary Treasurer shall be for one year or until their successors be elected.
5. The agenda of the annual Conferences shall be drawn up by the Honorary Secretary.
6. In addition to papers from members the Honorary Secretary may arrange for papers from associates and non-members, if thereby valuable contributions can be obtained from experts on particular questions.
7. The annual contribution from members shall be Rs. 12 (reduced to Rs. 8 per annum for two years beginning with 1st October 1921, as an experimental measure). This shall entitle members to attend Conferences and to receive copies of such papers read at the annual Conferences as may be published, and any other publications of the Association unless expressly excepted.

8. The annual contribution for associates shall be Rs. 6 and this shall entitle associates to attend Conferences and to receive such reports of the proceedings as are published by the Association, but not to vote on the affairs of the Association.

Members of the general public may be admitted as visitors to the Conferences by ticket at the discretion of the Local Committee, at a charge to be fixed by the General Committee.

9. Candidates for membership shall be proposed and seconded by members and accepted by the Committee by a two-thirds majority.

10. Applications to become associates shall be submitted to the Committee by the local Honorary Secretary.

11. A member on paying a contribution of Rs. 200 shall become a life member, exempt from all further contribution.

12. It shall be the duty of the Committee to arrange for such cordial co-operation as may be found practicable, with local Economic Associations and with All-India Associations having cognate aims.

13. It shall be the duty of the Committee to arrange for the publication of the proceedings, either through existing journals or independently.

14. Notice of proposed amendments to existing rules and of proposed new rules shall be forwarded in writing, not later than 31st October preceding the meeting to which they are to be submitted and not less than two months before the meeting, to the Honorary Secretary, by whom they shall be circulated to members not later than 25th November and not less than one month before the date of the meeting.

15. A two-thirds majority of the members present and voting at the Annual Meeting shall be required to alter the constitution of the Association.

16. The annual accounts shall be closed at the end of September and shall be submitted, after audit, to the Annual Meeting by the Honorary Treasurer.

17. One or more Honorary Auditors shall be appointed by the Committee.

# INDIAN ECONOMIC ASSOCIATION.

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## SIXTH ANNUAL CONFERENCE

HELD IN

LAHORE

January 16th, 17th, 18th and 19th, 1923.

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FIRST DAY—Tuesday, 16th January, 1923.

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### OPENING ADDRESS

BY

HIS EXCELLENCY.

SIR EDWARD MAOLAGAN, K. C. S. I., K. C. I. E.,  
GOVERNOR OF THE PUNJAB.

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The first Meeting of the Conference was held in the Town Hall, Lahore, at which most of the Members of the Reception Committee and a large number of the general public were present.

HIS EXCELLENCY SIR EDWARD MACLAGAN, K.C.S.I., K.C.I.E., President of the Reception Committee, took the Chair at 11-0 a.m., and said:—

MR. COYAJEE AND GENTLEMEN,

I am very glad to find that after trying other centres in India you have selected Lahore as the site for your sixth Annual Conference, and it is a distinction for us that this Conference should be presided over by so eminent an economist as Mr. Coyajee. We have a number of gentlemen here who study Economics, and the subject is, as you know, one of growing interest among students at our Colleges. The Deputy President of our Legislative Council, Mr. Manohar Lal, is a former Minto Professor of Economics in the Calcutta University, and though busy with Council and professional work, he finds time for studies in Economic Science. Our University has recently entertained its own

Professor of Economics (Mr. Myles) and with his help a combined class of students for M.A. Economics, taken from all the Arts Colleges in Lahore, has been established, the teachers of different Colleges combining their teaching for this class. You will therefore find not a few kindred souls among us and we hope for much real benefit from your stay.

We are the more appreciative of your visit as we have ourselves in recent years tried to encourage the study of our own economic questions by the erection of a Standing Board of Economic Enquiry. The Board was started in August, 1919, and has taken up a number of subjects for investigation. It receives a small grant from Government and it has at present—if I may dare to use the expression—a steel frame-work of Government officers, but it is in its essence an academic and non-political body and a large and increasing amount of the work done by it is done by non-officials. I hope that when it has found its feet it will evolve into a purely scientific body assisted by the Government and assisting the Government but not in any way under Government control. It has from the beginning been divided into two sections which deal with rural and urban subjects respectively. It has put together some material on household budgets and on the economic condition of certain defined groups of villages. And it has taken up enquiries into such varied subjects as the size and fragmentation of holdings, the economic condition of factory hands, and the supply of milk and ghee, all of which subjects are of much importance to us in this Province. It has commenced the organization of a bureau of statistics and it has furnished Government with opinions on Trade Union Legislation. I hope that members of our Board, many of whom are present here to-day, may receive fresh inspiration for their efforts from the proceedings of your Conference.

I am glad to see that several of our Punjab Government and University officers have arranged to read papers before you,—Mr. Abel is to speak on our Factory Legislation and Administration, Mr. Myles on Industrial Development and Training, Mr. Calvert on the Consolidation of Holdings, Mr. Strickland on Co-operative Farms, Mr. Darling on Rural Debt and Mr. Jacob on the Periodicity of Food Prices. Three of these officers are members of our Co-operative staff, and I am particularly struck by the valuable literary work which the Co-operative officers in our Province have been able to do not only in their own line of co-operation proper but also in general economics. Messrs. Darling and Strickland have published valuable accounts drawn from first-hand experience of the conditions of co-operation in various parts of Europe and Mr. Calvert has produced an admirable series of studies in Punjab Rural Economics under the title of “The Wealth and Welfare of the Punjab.” This last is a work which investigates the practical results of the application of economic theories to our rural problems and it is, I venture to think, a book which every one interested in the economic progress of India should read and assimilate.

I know that to some of you the practical results of your investigation are matters of subsidiary interest but to us who have to deal with administrative questions the practical results are what we look to.



Few administrators and politicians have time to be economists, but if they are wise they obtain, when they are young, a general view of economic principles, and as each problem arises they learn as best they can the recent developments of economic theory on the question at issue. The main lines on which we look at this time for development in this Province are—to put it briefly—Education and Agriculture, and on both these lines your studies have a marked bearing. In Western Canada we are told that more than half the farmers are graduates and though we are here still a long way off these conditions, we are trying to foster both Education and Agriculture and the application of the one to the other. If I may refer to history I would exemplify the importance of these lines of development from the experience of Scotland. During the seventeenth century Scotland was subjected to a turmoil of political and religious controversy and when the Union took place at the beginning of the eighteenth century, the only feeling through the country was one of intense hatred towards England and despair for the future. But the Scotch soon learnt the value of peace and for years they devoted themselves to the development of a thorough system of education and a scientific application of rural economy.

There was little enough theory at the back of this at first, but before the eighteenth century was over the Scotch had not only provided for their country the best education and the best agriculture in Europe but by the publication of "The Wealth of Nations" had made the first substantial step towards the systematic study of Political Economy. By the end of the century the Scotch had emerged from the condition of a second rate appenage of England to a position in which they led the van of progress and controlled the destinies of the United Kingdom: a result which was due almost entirely to their having followed—consciously or unconsciously—the dictates of economic principles.

I hope you will not think me presumptuous to have brought this old example forward but it shows I think the advantage of the practice which you all stand for—that of clear thinking applied to the complicated realities of economic life. You strive to make us think accurately. You will not allow the poet to say:—

*Every moment dies a man,  
Every moment one is born,*

but like Babbage, the mathematician, you point out the inconsistency of the statement with the increase of the population and you insist on our substituting

*Every moment dies a man,  
And one and one sixteenth is born.*

All this is to the good and I anticipate the greatest benefit from Conferences like this which encourage men to bring together facts untinged by prejudice or passion and to extract lessons from them in the cold light of accurate thought. I wish you all success, gentlemen, in your meetings at Lehigh.

# PRESIDENTIAL ADDRESS

ON

## FISCAL POLICY

BY

J. C. COYAJEE, Esq., M.A., PRESIDENCY COLLEGE, CALOUTTA

YOUR EXCELLENCY, LADIES AND GENTLEMEN,

On behalf of the Indian Economic Association I have to express my deep thanks to Your Excellency for your words of cordial welcome. I have also to express our obligation to the Local Secretary and the Reception Committee for their admirable arrangements. The philosopher Plato observed that things will go well with the world when either kings were philosophers or philosophers were kings. In a similar way the economists of India must augur well for the economic future of India when they see an economist in the Governor of this province—an economist whose dicta on co-operation they have studied long with great advantage.

The great fiscal controversy which occupied the political as well as the academical circles of the western world for over a century and which for over half a century has loomed large in the field of Indian Economics has recently assumed an acute and practical turn in our own country. A great deal of preliminary work has been done in the matter by the Indian Fiscal Commission, and the Government of India and the Indian Legislature will soon pass judgment upon the subject. But before such a judgment is pronounced the controversy must come before the economists of India as before a jury of experts whose privilege it should be to pronounce a well-considered verdict and to give a lead to the nation. I am deeply obliged to you for giving me this opportunity of introducing the subject. But the aspects of the fiscal problem are many, and in the space of a few minutes I can only indicate rather than deal exhaustively with some of the aspects. I shall begin by appraising the value of some arguments for protection, and then will examine the nature of discriminating protection. I would end by noticing the problems of foreign capital and the excise duties.

As regards the arguments for protection the place of honour was to be given to the infant industry argument of which the force was increasing automatically with the increase in complexity and scale of business, the rise of joint combinations and the growth of export policies and devices. A co-ordinate place was to be given to the argument for the diversification of industries but not much importance was to be attached to the revenue argument, because protectionist tariffs did not yield big revenues except in countries where the body of consumers was very rich. The case of Japan had been cited to the contrary but with no good reason because relatively to the other sources of revenue the yield of

customs revenue as well as its elasticity were low. Again, in India in the last 16 years customs revenue had multiplied faster than most other sources of revenue, while in the case of Japan the customs revenue increased much less fast than other sources of revenue.

Coming to discuss the nature of discriminating protection, I would point out that its advocates estimated correctly the limitations of the potentialities of protection. High economic authorities had pointed out that protection must work within the limits of comparative economic advantages or of what is called comparative costs. Any attempt to push protection beyond these reasonable limits would reduce our exports as a consequence of reducing the proper scope of international exchange of commodities. Indiscriminate protection abdicated the function of protection which was to guide national production into comparatively more productive lines. In a word the whole scheme of discriminating protection followed the law of comparative costs—it selected industries to protect on the lines of comparative costs; it fixed tariff rates in the light of relative costs of production, and finally when the industries had developed their comparative advantage in the proper and contemplated measure protection was abolished.

There is a case for pausing before the adoption of the rather crude methods of restriction that have been proposed. When, and if, there are signs that a plethora of foreign capital is being attracted towards India, it will be time for us to think of imposing conditions on it and it will comply with them in its own interest. But as it is, our demand for foreign capital for our industrial capital is enormous and the stream of foreign capital towards us is becoming smaller with political and other troubles. The competition of foreign capital would lighten the burden of protection on our consumer, would shorten the period of infancy of our industry and would give us the much coveted industrial organisation and environment.

Artificial remedies of nationalizing or keeping out foreign capital have never been successful. A reference to the investigations of authors like Grunzel on the subject shows that restrictions on foreign capital do not meet with the approval of even protectionist economists. There are cases of course, where legislation might be conceivably necessary to prevent exploitation by foreign capital or enterprise. There is the case where foreign enterprise has formed itself into a monopoly, is exploiting the consumer and is closing the opportunities of competition to local producers by means of unfair devices. But so long as foreign enterprise maintains competitive conditions and the proper plane of competition there can be no question of exploitation by foreign capital. The fear of such exploitation is only the reminiscence of bygone conditions when Indian capital was inert and Indian enterprise was non-existent. At such period no doubt it was easy for foreign enterprise and capital to assume monopolistic powers and exploit the country. But such conditions have passed away and we must not sacrifice our present national advantage for the sake of recollections of the past. There was also a time when foreign capital assisted by political favours might have thought of exploiting a country, but with the growth of

political autonomy there can be no reasonable suspicion of any such state of affairs.

Finally we must remember that the Indian is the natural heir of all foreign enterprise and capital. The foreigner when retiring must needs sell his securities and they are thus transferred automatically into Indian hands. Thus in many jute mills of Calcutta more than 50 per cent. of the shares are by now in Indian hands in spite of the proverbial Scotch clannishness and with anything like reasonable enterprise we should have acquired the predominant interest in the direction of the industry.

The majority of the Commission has most justly condemned the historical origin of the cotton excise. It was imposed by a powerful rival on a struggling infant competitor. There was no excuse in free trade theory for the duty in those days, since it is no necessary part of that theory that every modest revenue duty should be necessarily countervailed by an excise. Moreover, the infant industry argument is entirely compatible with free trade theory and the incidental protection afforded by a 5 per cent. import duty was the least that an infant industry could expect as support.

But we must not mix up an old historical situation with the greatly altered situation of the present and we must consider the present excise duty on its merits. The majority had entire justice to the domestic producer by advocating for him such protection as the Tariff Board might recommend. The question of excise duty according to them arose only when an additional import duty was put on for revenue purposes. And even then the excise duty was not to be equal to this additional import duty but was to be smaller in amount. It is difficult to see how the excise duty levied under such a scheme could injure the development of any local industry. This majority scheme is in fact much more favourable to the domestic industry than the Japanese scheme. Under that scheme protection is granted to industry and then if further import duties are levied on an article for revenue purposes an *equivalent* excise is imposed upon domestic production. Let us take an example to illustrate the scheme of the majority. Suppose an industry requires and obtains a protection of 15 per cent. Suppose further that for revenue purposes an additional amount has to be obtained by the taxation of the article. The choice might conceivably lie between an extra import duty of say 15 per cent. on the one hand and an import duty of 10 per cent. accompanied by an excise duty of say 5 per cent. Strong considerations present themselves in favour of this latter course. *Ex hypothesi* the protection required was only 15 per cent. and a 30 per cent. duty would give over protection to the industry with its manifold evils and temptations which are well-recognized by economists. Moreover the 30 per cent. duty would raise the price of the foreign import to the domestic consumer unnecessarily high. It will also raise the prices of competing domestic products and substitutes. Consequently the domestic consumer is harmed while the producer obtains an unnecessary amount of bounty. Such over-protection is not very beneficial to domestic production as a whole and leads to stagnation since it

removes all motive for improvement and for avoiding antiquated and backward methods of production. Again the minority is wrong in asserting that financial authorities would limit the employment of excise duties to the case of deleterious drugs and drink as Pierson would have argued. Each excise duty is to be judged on its own merits. Again the majority did not consider it any part of its duty to tie the hands of the Assembly as regards the use of industrial taxation. If the Indian legislature abolishes an excise duty it must first consider from what classes the lost revenue can be recouped and it will further consider the comparative tax-bearing capacity of these latter classes, especially after some of them have been adversely affected by the action of protection.

It might be asked "what was the value of a protectionist system which was discriminating and hedged round by qualifications"? To that the answer is that all fiscal policy must work under proper qualifications and on the right lines. Professor Marshall had drawn attention to the "cumbersome qualifications" of the free trade position. And it has to be remembered that as a policy free trade is simplicity itself compared to any legitimate scheme of protectionist policy for any given country. An efficient system of protection is a detailed and delicate affair and not a matter of easy shibboleths or of facile dogmatism.

**At this stage of the Proceedings the Conference adjourned from the Town Hall to the University Library.**

## DISCRIMINATING PROTECTION.

BY T. K. DURAISWAMI AIYER, ESQ., MADRAS.

(In the absence of the author, this paper was read by Professor Myles, Hon. Local Secretary).

It is now some time since the Report was published and considerable comment has already been made in India and England. Fiscal policy is a subject that has been receiving considerable attention since the termination of the recent war and tariff walls have been and are being raised in various countries like Spain and U. S. A. with a view to keep out imports. Even in England where there is a tradition of free trade measures had to be adopted like the Safeguarding of Industries Act which free traders will be hard put to it to justify.

The discorded condition of the Continental exchanges added to the feverish desire of most countries to secure foreign markets and the determination to keep their home markets from foreign competition explain the rage for tariffs. The view that the course of trade should be left to its own devices and that the interference of Governments will only lead to the worsening of the situation has not for some years received whole-hearted support even in England and now the resources of English statesmanship are directed to the problem of devising measures for the development on a large scale of Inter-Imperial trade. In India for long years there has been a strong public opinion in favour of the policy of protection. The foremost English economists of the present day like Marshall and Pigou accept that the position taken up by the English economists of an earlier generation on free trade was unscientific. They admit that backward countries containing rich undeveloped resources and a population not sufficiently trained in mechanical pursuits may with advantage depart from the policy of strict free trade.

The soreness of Indian feeling on the matter is due to the fact that in the adoption of Indian tariff policy sufficient recognition was not given to the material difference in economic conditions between England and India. Without further preface I will pass on to consider the main recommendation of the Report.

The Report is in favour of discriminating protection. Its implications are : (1) that the industry possesses natural advantages, (2) that without protection the industry can develop not at all or not so rapidly as is desirable, (3) that eventually it will be able to face world competition without protection.

Two well defined lines of criticism have been directed against these recommendations. The Press in England and her businessmen and politicians are against the above recommendations, pointing out that discriminating protection is all the same protection and the inevitable result in high prices will affect the consumer whose poverty is proverbial. The dissenting minute that finds fault with the recommendation as a halting and a vague one and as not far reaching enough represents the prevalent Indian view.

In this connection it will be pertinent to remark that thus far in the history of British India Indian opinion has not had decisive weight in the determination of tariff policy. Largely for this reason the implications of protection and free trade have not been thoroughly gone into and an exhaustive examination of all the consequences good and evil has not been undertaken by Indian students and publicists.

Just as the Reform Act of 1919 transferring as it did to Indian hands the determination of policy in some of the spheres of Government brought to the surface differences of opinion which had lain submerged till the hand led to the formation of parties or groups based on such differences, so the probability amounting perhaps to certainty that Indian opinion henceforward will have decisive weight in the moulding of Indian tariff policy may lead to the emergence among Indians of differing points of view.

Let us discuss in the dry light of economics the main recommendation. Those who urge that discriminating protection as the Report has defined it will not lead to the rapid industrialisation of India call for the removal of the safeguards provided for in the Report. They urge that these limitations will retard industrial progress and since protection is called for with a view to inspire confidence in the capitalists such a half-hearted scheme will not realise the intended aim.

English criticism against the recommendation takes the line that prices will rise to the detriment of the consumer and underneath the recommendation English critics detect a conspiracy on the part of the capitalists and the manufacturers against the masses. The middle classes, *i.e.*, the educated section being doctrinaire and out of touch with the realities of industrial and commercial life, is said to be playing into the hands of the capitalists.

While the Report is for discriminating protection those who wrote the dissenting minute should not be called unfettered protectionists because they concede that the consumer suffers in the initial stages. The plea of unfettered protectionists is that from the beginning of protection there is no loss. They talk of new outlets for capital and labour and a home market near by for the agriculturist. The dissenting minute does not take up that line. The point urged in it is that protection hedged in with the conditions laid down in the Report will not bring about the rapid industrialisation that they desire. The dissenters do not give any convincing reasons for the position they take up. They urge that every protectionist country applies protection with discrimination. The history of protection in various countries however gives evidence of indiscriminate protection. The fact is that a policy of protection acts on the nerves of the manufacturers in most lines and also on agriculturists, and industries suited and unsuited call for protection. The inevitable compromises that characterise public life and the conditions that surround the passing of the bills through the legislature result in protection being granted to industries all and sundry. It is because protection is given to industries which are not suited to the country that later on utmost difficulty is felt in the matter of removing

the duties. So much for the dissenting views that in every country there is only discriminating protection. Again they find fault with the absence of faith disclosed in the statement in the Report that "India for many years to come is likely to concentrate on the simpler forms of manufactured goods." The dissenters are not fair in this respect. It is not a fact that those from whom they differ do not want that India should succeed in manufacturing complex machinery. On the other hand they feel that granted the natural resources of the country, and the agricultural bent of the population, and the temperament and traditions of the workers and the middle classes, for many years India cannot afford to compete with countries like England, United States of America, Germany, Belgium, etc., in the turning out of complex products. Those who think in this strain do not deserve condemnation. As a matter of fact even countries like France and Italy whose industrial organisation cannot be considered backward have not succeeded in those lines.

You have after all to reckon with distinct aptitudes and the specific genius of different peoples. The French are supreme in lines that call for delicacy of taste and subtlety of motive. Besides the statement referred to is an expression of opinion which is not unwarranted by the facts of the situation.

If we take stock of our resources and deficiencies it will be plain that for many years India is not likely to produce complex forms of manufactured goods. Coal, iron, hydro-electric power, large capital, labour efficient and mechanically trained, an intelligent class of foremen, capable technicians, inventors of processes and bold captains of industry are necessary for successfully establishing complex manufacturing industries.

Though we have plenty of coal resources the quality of our coal is not very high nor the quantity to be compared with that of England or America. In fact last year India imported foreign coal to the extent of nearly  $1\frac{1}{2}$  million tons.

As for our labour the Report of Ainscough on British Trade with India for 1921-22 says that increased wages for coal miners resulted not in their improving their conditions of life and their efficiency but in increasing idleness. The output of coal per head of the miners fell from 111.1 tons per head in 1919 to 94.4 tons in 1920 and was probably less in 1921. It is such labour that has to be trained in mechanical pursuits and rendered quite efficient. As for iron it is true that we have plenty of high grade iron ore in Bihar and Orissa. In quality and quantity the hematite iron deposits of Bengal compare favourably with the huge American deposits in the Lake Superior region. A number of iron and steel companies are springing up and foreign capital and enterprise is flowing into the business. It is estimated that when all the companies which are being started will be in working order the output will be  $1\frac{1}{2}$  million tons of pig iron and 1 million tons of steel. The figures for the United Kingdom of the production of pig iron and steel for 1920 are 8 million tons and 9 million tons respectively. Our resources in iron are



really large. In iron and steel production the competition India will have to face will however be very intense. Ainscough in his latest report says that combinations and amalgamations among steel producers are the order of the day in all parts of the world. The United States imposed a 100 per cent. duty on imports of English steel and in course of time was able to bring down her price to the British level. Our iron and steel industry will have an era of rapid advance under protection. At the same time for a good many years it will be impossible for us to organise the production of very complex manufactured goods like say motor cars. As for technicians and foremen that is a serious deficiency which will take some time for removal. The purely literary type of education that has prevailed till now is largely responsible for this. Without a large class of engineers and foremen modern industry cannot be carried on with success. There is ample field for recruitment if we are in right earnest about industrial progress and the general good of the country. The Industrial Commission report says: "It is not in manual skill, if they care to acquire it, or in the capacity for understanding technical problems that the castes which have in the past sought knowledge rather than commercial success are deficient". The problem of the unemployed educated class victims to the literary type of education is engaging the anxious attention of the authorities in Bengal at present. In Madras also there are increasing numbers of educated people with the accustomed careers closed to them on account mainly of their increasing numbers and the financial situation. They should not be left to their own devices. Such a policy is dangerous to the state and inimical to economic progress. The ministers of development and education may take up this problem and by laying the foundations of a satisfactory solution add to the economic strength of the country. In view of the additional reason that protection will adversely affect the middle classes more than any other class it is incumbent on the state to devise measures with a view to keep them as useful citizens of the state. The investigation of hydro-electric power schemes is not likely to be pushed forward on account of paucity of funds for some considerable time to come by the ministers of development in the provinces to whose charge such work has been transferred. From the foregoing remarks it will be seen that for a long time to come we will not be in a position to produce complex manufactured goods unless insufferably high protective tariffs are imposed which is out of the question.

There are also difficulties in the way of discriminating protection. Mistakes should not be made in the selection of the industries, and it is not always that you can avoid making mistakes. One of the safeguards is that the industries should be able ultimately to face world competition without protection. How can any Tariff Board, however perfect might be its constitution, foresee the difficulties that will arise as an industry develops and the degree of success that will attend the overcoming of those difficulties? How can the Tariff Board foresee the new processes that will be evolved in the industry in the different countries thus giving a special advantage to one country over another? Instances are not wanting to illustrate my point. Speaking of the domestic price of

steel in the United States of America being brought down to a level as low as the British price, Taussig says " moreover in Germany as in the United States these results came about in unexpected ways and in consequence of technical improvements whose effect had not been foreseen. What the Bessemer process proved to be for the iron trade of the United States, the Thomas Gilchrist (or basic) process proved for that of Germany. The basic process had just been perfected at the time when the protective tariff of 1879 was enacted ; but the leading German iron master then declared that it proved of no advantage to his country's industry."

The condition that the industry selected should be able ultimately to meet world competition is necessary. But one should not disguise from oneself the difficulty of withdrawing protection even when the test is ultimately satisfied. Taussig says in this connection " It happens however that there is always the most violent opposition to the application of this, the sole decisive test. In the same breath we are told that prices have been brought down and a flourishing industry has been brought to maturity, and also that the duties must by no means be touched." Even when the protected manufactures fall to such an extent in price that they figure in the export trade of a country thus showing that there is no further need of protection the manufacturers concerned raise a hue and cry against the abolition of high duties. This attitude is accounted for thus : " The main explanation probably is the general state of trepidation engendered by a long continued policy of protection, the constant proclaiming of the danger of foreign competition, and the parading of the pauper labour argument which always seems to strike a chill of terror into employees as well as employed."

One of the advantages claimed for discriminating protection in the Report is that it will restrict the rise in prices. The rise in prices is the consideration that has been urged forcibly by most British critics against even discriminating protection. They say, and the commissioners are not unmindful of it, that the consumer in India especially the agricultural masses are living in such poverty that they have barely any margin. Under these circumstances any rise in prices that is bound to come as a result of protective duties will adversely affect them. Consequently they say protection is quite unsuited to India. The answer to that is a policy of aggressive free trade has not been incompatible with the wretched condition of the peasantry, and in view of the advantages claimed for protection in the Report the contention of the English critics is not decisive.

It is true that other things remaining the same under protective duties there is a less profitable employment of labour and capital than under free trade. The real income of the country as a whole may therefore be said to diminish. This diminution which will become progressively less as the industry develops profitably exploiting the natural advantages that it possesses is the loss that the country adopting protection has to face. But in India on the other side of the account must be mentioned the development of productive power due to the expansion of the industries. The agricultural industry moreover is over-stocked

and the surplus instead of emigrating to countries like Guiana, etc., may be absorbed in the industries. I am aware of the argument that the remedy for the agricultural depression is the adoption of better methods of cultivation, the constitution of economic holdings, etc., and not the dubious expedient of protection. The relation between agricultural progress and protection will be considered below. Bold and enterprising capitalists will be prepared to come forward with their funds to start industries under protection. The development of industries will be taken up with more zest than the expansion of agriculture. The appetite of the capitalist is whetted by the scope for the expansion of industries while he is not equally prepared to use his capital for agricultural progress since profits in his opinion are not likely to be as great in agriculture.

On all hands the present condition of India depending for the livelihood of 70 per cent. of its population on agriculture is not considered satisfactory. The development of a many-sided and vigorous national character, the mitigation of the effects of famines, the scope for the investment of capital and the growth of general wealth have been urged in the Report as justifying their recommendations. While dealing with prices under protection regard must be paid to the character of the articles against which India will require protection. The Report rightly says that raw materials ought not to be taxed and as an ideal partly manufactured articles being the raw materials for finished industries should not be taxed. So our tariff will have to be designed largely to keep out manufactured goods and these constitute 70 and 80 per cent. of our imports. In this connection the following observations are significant. "A duty on a manufactured product commonly is either so high as to keep out all imports, or so low as to admit all and thusto be in effect merely a revenue duty. True, imports often appear to continue, and a division of the supply between domestic and foreign quotas often appears to be brought about. But the appearance is deceptive ; the two sets of goods on examination prove to differ in quality, or to be for other reasons not in reality competitive." A duty on raw materials is more likely to be competitive. The reason for this difference between the products of manufactures and of extractive industries is that the latter are under the operation of the law of diminishing returns whereas manufactured products are likely to be produced under conditions of uniform cost or increasing returns. So the division of the market between foreign and domestic producers is not so likely in manufactured goods. In the light of these considerations one can see how the duty on manufactured goods to be effective must be fairly high almost prohibitive. The general poverty of the country may be said to militate against heavy duties on goods leading to high prices. It is therefore incumbent on the state to adopt discriminating protection, *i. e.*, to levy duties on selected commodities only and not to precipitate a heavy increase in general prices by adopting protection for various industries. It will be plain from the foregoing remarks that the poverty of the agricultural population is a grim fact that faces us in our schemes of development. Argue how you will there is not much chance for protection without improving the standard of life of the agricultural

classes. It has been too long neglected and industrialists must realise that the best way of creating favourable conditions for manufactures is by rapidly pushing onward agricultural improvement. The problem has to be viewed as a whole. Our going in for protection necessitates the devotion of large funds to the vigorous prosecution of agricultural improvements. The agriculturist will be induced to improve his standard only when education becomes general. I hold this to be important because unless you broaden his outlook you will not succeed in making him improve his standard.

Sober criticism will grant that protective duties alone will not bring about industrial prosperity. As a matter of fact the industrial advance of Germany and the United States has been rendered possible more by other factors than protection. The magnificent natural resources in coal and iron in particular, a highly efficient scheme of technical and commercial education, the mechanical aptitudes of the general population, the genius of inventors and above all the boldness, judgment and enterprise of the captains of industry, explain in the main the progress of those countries. It cannot however be asserted that protection did not exercise any beneficial influence on the industrial development of those countries. In the United States protection for iron and steel was among other causes responsible for the large profits made by iron masters which profits were again invested in business with the result there was very rapid expansion in the industry. It is doubtful if without protection such rapid progress would have been attained.

The Report says that in case an industry does not fulfil the expectation on which protection was granted, the Tariff Board should be charged with the duty of recommending the withdrawal of protection. This is far from an easy affair. It is such industries that are mainly responsible for the view that if once protection is adopted, protection can never be overthrown. Evidently these are the industries in which the application of labour and capital is not comparatively effective. But capitalists would have made their investments and a labour force would have been trained to the work in the industry. As legislatures are constituted it will be an extraordinary thing if legislatures screw up their courage to withdraw protection from such industries.

Thus it will be found that there are risks attending the adoption of discriminating protection also but in the present state of Indian industries the risks must be faced and a scheme should be worked out by the Tariff Board in the best interests of the country.

## REPORT OF THE FISCAL COMMISSION.

BY B. G. BHATNAGAR, ESQ., M.A., F.S.S., LECTURER IN ECONOMICS,  
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It is needless for me to discuss within the purview of this paper the historical development of the fiscal policy of India, as it has been recently given to us in a masterly way by the members of the Fiscal Commission in their Report and by Dr. Pramathanath Banerjee in his book "The Fiscal Policy in India." However, to give us a historical basis we might in the words of Dr. Banerjee say that "The Fiscal History of India" divides itself into three fairly well defined periods. The first was the period of the East India Company's rule, when a protective policy was followed in the country. The protection was however in favour of Great Britain, and against India. The second period began with the transfer of the administration of India from the hands of the Company to those of the Crown (1858) and ended in 1914. These were the days during which the principles of free trade were applied with the greatest rigour. During both these periods England carried out in India her own trade policy. With what results? Well, one has to read the minute of dissent of Pt. Madan Mohan Malvia, to the Report of the Industrial Commission to find an adequate answer to this question. "The third period was ushered in with the sound of the war drum, and may be said to be still continuing. The financial stress caused by the great world upheaval led to some modification of the fiscal system of India, but the aftermath of the war has been responsible for the introduction of still greater changes into it. The customs duties of recent years have, it is true, been imposed for revenue purposes, but their protective tendency has, in a few cases, at least, been none the less marked. In fact, with the recognition on the part of the Joint Select Committee on Political Reforms in India of the right of India to decide her own fiscal policy, this period may be said to mark the transition from an absolute adherence to free trade principles to the adoption of a policy of protection."

It is equally unnecessary for me to enter into a theoretic discussion of the free trade and protective policies. The authors of the Fiscal Commission Report and Dr. Banerjee, have given us a very exhaustive study of the various arguments advanced by eminent writers like Fredrick List, Fredrick Bastiat, John Stuart Mill and many others, for and against these two policies. I cannot be accused of being partial to the one or the other if I say that all economic thinkers of note, whether free-traders like John Stuart Mill or protectionists like Fredrick List, maintain that the fiscal policy of a country should be relative to the circumstances of that country. Before deciding the line of action one must go deep into the condition of labour, the articles of imports and exports, and the nature of demand of the various commodities in and outside the country; unless these have been thoroughly gone into and analysed one cannot decide whether a country should adopt the policy

of protection or that of free trade. It augurs well therefore, for the industrial future of India that modern writers on the fiscal policy of India are trying to impress the relative character of these policies. The line of approach has been laid down for us in a very clear way indeed and I should think in a reasonable way too, both by the authors of the Fiscal Commission, and by Dr. Banerjee. Both of them try to impress upon us that these policies are very much like medicinal drugs on the absolute merits of which it is useless to pronounce any verdict, unless they are discussed with reference to some disease which itself has been thoroughly diagnosed. If the diagnosis of a patient leads us to the conclusion that it needs protection, we should give him protection; otherwise not. Doctors of tariff policy have laid it down for our general guidance that a country which is mainly agricultural should adopt a policy of free trade, so that by coming in contact with the better organisations of the outer world, it may learn things necessary for industrial development in other lines and initiate manufacturing industries on a capitalistic basis. When the stage of initiation is over the country should adopt the policy of protection. But protection should only be extended to those industries, which may have a sure prospect of development, and standing competition from foreign countries, when fully developed. They recommend this help as a temporary expedient only, and that to counteract the disadvantages of a late start. When this stage has been passed the country should revert to the Free-Trade Policy. As a general maxim to guide the fiscal policy of any country one could hardly take exception to the general policy recommended above. Even such a strong supporter of free trade as John Stuart Mill supports it in these words: "The superiority of one country over another in a branch of production often arises only from having begun it sooner. There may be no inherent advantages on one part, or disadvantage on the other, but only a present superiority of required skill or experience. A country which has this skill and experience to acquire may in other respects be better adapted to the production than those which were earlier in the field. Under these circumstances it is desirable to bear the burden of protection until the producers have been educated up to the level of those with whom the processes are traditional. A protecting duty continued for a reasonable time might sometimes be the least inconvenient mode in which the nation can tax itself for the support of such an experiment. But it is essential that the protection should be confined to cases in which there is good ground of assurance that the industry which it fosters will after a time be able to dispense with it."

With this theoretical background we may pass on at once to study the recommendations of the Fiscal Commission. Unfortunately the Commission are not unanimous in their recommendations, but to me the points of difference do not seem to be of any vital significance except in one case. The one point where they differ is really of vital importance and it is that while, the majority recommend the adoption of a policy of protection to be applied with discrimination along the lines indicated in their Report, the minority are of opinion that "there

should be an unqualified pronouncement that the fiscal policy best suited for India is 'Protection.' " If to this main recommendation of the minority one of two other sentences out of their minute of dissent were added we will get some idea of their true position. Thus in paragraph 6 of their minute they say " while we agree that the policy of protection should be applied with discrimination we do not think that any qualifications or limitations should be made a condition precedent to its adoption. We recognise that in the efforts to attain a prominent position in the industrial world India will have to pay a price..... The discrimination with which we agree is intended to minimise such sacrifice as far as possible as consistently with reaching the goal which we are putting before the country. We do not subscribe to the condition that such discrimination should be 'along the lines of the Report.' " The conditions laid down in Chapter VII appear to us to be stringent, and will entail considerable delay in giving effect to the policy which we have unanimously recommended, and will not produce adequate results. We share the concern shown in the Report for the interests of the consumer, and we agree that the policy should be applied in such a manner as to reduce the burden on the consumer to the minimum necessary for the purpose of carrying out the object in view. In the present economic condition of India, limitations in the interests of the consumers are necessary, but we anticipate that if immediate effect is given to the policy we recommend, India will begin to grow economically prosperous within a reasonable period of time. As one reads through the limitations laid down by the majority there seems to be no serious difference in the position taken up by the majority and the minority except that the minority would like to start on an intensive policy of protection at once, while the majority like the minority insist that Government should in order to create confidence in the minds of the capitalists declare protection as their policy, yet actual protection to individual industries should be given after due deliberation. Looking at the very little difference between the apparent position of the two sets of signatories of the Report it seems to me that the chief cause that makes the minority fight shy of the very reasonable limitations (purely from an economic point of view) laid down by the majority is to be found in the lingering fear that these limitations may not like so many other things in the past be used to defeat the object in view. In this connection the following words are significant " we have to make these observations in view of the statement made by our colleagues, *viz.*, that India for many years to come is likely to concentrate on the simpler forms of manufactured goods and these are precisely those in which the United Kingdom has the smallest interest." We earnestly trust that no such limitations will be placed in the path of India's Industrial Development. We have already pointed out that we disagree with our colleagues regarding their proposals to hedge in the policy of protection. We hope this has not been done with the object of keeping India to concentrate her industries on the manufacture of simpler forms of goods." It is on this assumption alone that one can explain the insistence of the minority on having no limitations laid down before hand. Looked at in the light of historical evidence in other depart

ments of politico-economic life in India the fear does not seem to be unjustified. But all the same if protection is to be adopted, and if it is to cause as little inconvenience to the consumer as possible then it should be cold and calculating in its character, as has been recommended by the majority when actually being applied to individual industries. But this does not mean that the whole policy should be rigid and inflexible, and herein comes the importance of the protest so strongly lodged by the minority because they are right when they recommend that the policy should be animated by warmth of feeling for the industrial regeneration of India, and not by the idea of how it is going to affect the interests of the United Kingdom. Such a consideration might have been good practical politics when India was ruled for the sake of the United Kingdom; but during these days when she is said to have got her Fiscal Freedom, and when the declared goal is to train her for Swaraj it seems to be out of place, and an unpractical sentiment on our part. But we have to remember that India is yet not perfectly free, that British interests can yet, if they chose to do so, create lot of mischief in the working of the Indian constitution, and perhaps it was the realisation of things as they are that has led the majority to show so much solicitude for the interests of the United Kingdom, may be just to placate the sentiment of self-interest of the British manufacturer. Be it as it may, as a student of Economics I for one believe that the majority did well in laying down the limitations under which protection should be worked in India, but they seem to have overdone their part and the minority although unjustified in going to the other extreme of having no limitations whatever have also rendered a public service by insisting on the liberal spirit in which the protective policy should be worked. If one has supplied the physical structure, the other has infused the right spirit that ought to animate the whole policy.

So much about the difference of principle, we may now study the outlines of the scheme of protection as given to us by the Commission. They recommend a tariff that "will be a combination of revenue and protective duties. The existing tariff will form the basis of revenue duties and will become progressively modified as the duties on particular commodities are successively determined on protective principles. A duty that has been fixed on protecting principles should not be varied except in accordance with those principles. And the duties imposed on revenue considerations should be open to the Government to vary from time to time on purely revenue considerations. . . . . It is possible indeed that the necessities of revenue may force the Government to put a higher import duty on certain protected goods than is required for purpose of protection. We deal with such a contingency in a later chapter when we recommend that in such cases revenue should be raised by means of an excise duty plus an additional import duty." Referring to this Mr. C. N. Vakil, in the Journal of the Indian Economic Society, Bombay, page 157, in a depreciatory tone remarks: "But we have not yet heard of countries which divide the tariff into two clearly defined parts one part consisting of revenue duties another of protective duties, and this is the ideal put forward by the majority for the Government



of India to follow. With regard to one part of their tariff the Government is asked to think strictly on free trade principles, with regard to another part they will have to think on the principles of discriminating protection on the lines indicated in the Report. The task of watching the details of this complicated and highly unpractical scheme is to be entrusted to an impartial organisation, the Tariff Board." To me there seems to be no difficulty in having such a twofold classification, and if we were to study the fiscal arrangements of different countries we would find such a classification maintained in practice, though it may not be mentioned in the constitution in so many words. Such a classification would be absent from the tariff policy of a country which is indiscriminately protectionist in its policy. If protection is to be discriminate (it may not be discriminate exactly on the lines indicated in the report of the majority), then such a classification as is recommended by the majority is bound to make its appearance in actual practice. The fact that Mr. Vakil finds fault with a recommendation like that, only means that we have still in India a large majority of people who are as it were in love with protection, and to whom any qualifications, however much reasonable in themselves, appear like a red rag to a bull.

Then the Commission pass on to recommend the creation of the Tariff Board, whose business will be to adjudicate cases referred to it for granting protection. They also lay down general principles for the guidance of the Board. Some of these general principles are unexceptionable but there are points where it is not difficult to differ: Thus while they object to "granting tariff protection to new industries" or industries which supply, only a small percentage of the total supply necessary to satisfy the demand of the country, I fail to agree as in an industrially backward country like India, with very good prospects for the development of many industries that do not exist at present such a qualification would have a very hindering effect. It is rather unfortunate that the Commission should have anticipated those details which they themselves have recommended for the Tariff Board to investigate before recommending protection to individual industries. This anticipation becomes doubly unfortunate as they insist on protection being adopted in India on condition that it is worked on lines suggested in their Report. Although they realise that in order to decide the question, whether a particular industry should have protection or not it requires a very minute investigation, yet they have allowed themselves to express their opinions this way or that without sifting all the details. It is when one reads through the lines on which protection should be worked in India, that the real nature of the objection of the minority that "it mixes up policy with procedure" becomes intelligible.

However, leaving these matters of detail apart with the above general observation, we notice with pleasure one important point which has not so far received serious recognition from the students of Indian Economic problems. While discussing the methods of agricultural development in India in his booklet "The Consolidation of Agricultural Holdings in U. P.," Professor Jevons after discussing various measures of reforms remarks that "I wish to record my opinion that it is almost

useless to undertake these measures piecemeal. The forces of degeneration are so strong.....that each measure of reform would be successively defeated. Far better results would be obtained by making a combination of agricultural and educational reforms in one district at a time." It is this principle of an all round effort which the Fiscal Commission have done well to emphasise in those words. "But it is clear that the mere imposition of protective duties, however scientifically contrived will not by itself produce that full industrial development which we desire." In recognition of this fact they recommend a number of supplementary measures, such as ; (1) the extension of primary education, which should include training, (2) the training of apprentices in India, and abroad by making it a condition that whenever Government of India place any large order with a firm one of the condition of the tender should be that the firm undertakes to afford facilities for technical training to Indian apprentices, (3) organisations to make labour more mobile, (4) the modification of the railway rate policy to make it favourable to the industrial development of India, and others of the same kind."

Another important fact that the Commission have done well in emphasising is where they try to impress upon us that protection does not only mean high import duties. It is after all a policy, and the policy may be translated into practice either by high import duties or by protective export duties, or by subsidies and bounties, or by favourable rates of carriage, or yet by right of favourable rates of purchasing and selling and in many more ways. Whether one will be adopted or the other will be decided by the circumstances of each individual case, and the only general principle that could be laid down in the words of the Commission being "that considerations of national economics rather than of economics of individual industries should predominate in all such cases."

Before passing to the consideration of such relatively independent items as the questions of excise duties, and Imperial Preference, I consider it desirable to discuss the use of export duties as an instrument of protection.

Although the Commission admit that a protective export duty benefits the home manufacturer by getting for him his raw material at a lower cost than his rivals abroad, yet they do not wholeheartedly support the idea of using this method of giving protection because "unlike protective import duty an export duty places the whole foreign product at a disadvantage" and this "tends to produce a special feeling or resentment in those countries which use the commodity as raw material," and "because it taxes production instead of consumption." Now both of these considerations are weighty, although personally I am not inclined to attach much weight to the idea of offending other countries, yet one has to admit that if a foreign country buys a very large quantity of a raw material produced in India and if we want to levy an export duty on it, we should do so after thinking as they say twice. Once we should think on the share of that country in the total produce, and secondly on the chances of India's capacity to consume the raw

material if the foreign country diminishes its demand. Here as elsewhere the actual line of action should be decided in terms of national development rather than in terms of goodwill of this or that country be it even such an important country as Great Britain itself.

We can now conveniently take up the question of excise duties, and at once say that while I agree with the general conclusions of the Commission as regards excise duties, I am inclined to say that excise duties should not be levied on things the production of which is receiving protection. The Commission recommend such a policy for revenue purposes only. On this the writer in the *Journal of the Indian Economic Society, Bombay*, already quoted remarks that "whether this is the outcome of a genuine rigid adherence to free trade principles, or of a skilfully concealed sympathy for the interests of Lancashire it is difficult to say. It is evident, however, that the Indian Fiscal Commission was not considering Indian interests and Indian opinion in devising this otherwise ingenious proposal." And there is lot of truth in what he says.

Both the majority and the minority are of opinion that from a purely economic point of view adoption of the policy of Imperial Preference is not tenable in India. But the majority after taking into consideration larger considerations of political solidarity, and growth of Empire spirit recommend that India should offer to Great Britain an unqualified preference, while towards dominions she should adopt "a policy of reciprocity, such as is already adopted by more than one dominion for interdominion trade relations; that is to say preference should be granted only as the result of agreements which might prove to the mutual advantage of both parties." To me the question of Imperial Preference apart from reciprocity is a purely political one, which it is difficult for a cold and calculating student of economics to pronounce any judgment upon and which should be left to the free voice of the Indian political leaders, *i.e.*, the two legislatures.

#### FOREIGN CAPITAL.

While agreeing with the majority that "the development of new industries should proceed as quickly as possible," so as to cause the minimum of sacrifice to the consumer, I fail to agree with them when they seem to think that this cannot be done unless foreign capital is allowed to come in, and this for two reasons. First of all recent loans raised by the Government of India and the response they have received from the public should be able to tell us that there is an appreciable quantity of floating capital seeking investment. Secondly we should remember that there are ways and ways of securing foreign capital for the industrial development of a country. To begin with we may secure it by allowing foreign domiciled companies to invest their capital here. Capital would be invested in India, but its influence on the prosperity of the land under the condition of protection would be worse than what we see now in the case of railway and the jute industry under the free trade policy. The consumers would have paid in higher prices, and the profits would then as now go out of the country. Then there is the

way that people, with capital may come here from foreign countries, invest it in the development of industries and may live here permanently. There could be no objection to an investment of this sort, provided these people had the right sort of political outlook. If after coming to India, sympathy and feelings of these people remain fixed in their distant homes, and express themselves in preference for foreign labour, in diffidence to train Indian labour, and so on, then certainly the country of their adoption is not likely to get real benefit of industrial development brought about by their aid. To me, however, the best way to secure foreign capital is none of these nor is it that which has been suggested by the Commission, but that of national borrowing through the Imperial Bank in foreign countries, and then its lending to prospective industrialists in India through the same agency. Credit of the Government of India is fairly high in money markets of the world and we should be able to secure fairly large amounts of capital necessary for the development of industries in this land. But the Government should not undertake any other responsibility in this matter except that of lending its credit to the Bank, and the Bank should do all other matters of detail. Industrial Banking is the most complicated part of the most complicated business of the world—I mean banking, and no Government with its other multifarious duties should undertake this difficult task.

We have now come to the close of our review of the Report of the Fiscal Commission and leaving sentiment apart, we feel impelled to say that taking all in all the recommendations of the Commission seem to be inspired with a due sense of things practical. It is all very well to feel strongly when we are asked to subordinate our line of policy to the interests of the ruling race, it is equally easy to indulge in strong sentiments but it is very very difficult indeed to secure your point in the face of strong and dominant clashing interests. The majority have no doubt indulged in persuasive and in some places apologetic language but the reason that seems to have led them to use that language may be found in their desire to win over the sympathy of the dominant race, rather than in any desire to subordinate the interests of the Indian people to those of the people of Great Britain. The fact is there that so far it is the British who are dominant in India, and they can, if they feel inclined, defeat any and all measures of reform, be they in our tariff policy or our currency system or in any other department of life, and by taking stock of this patent fact the majority have only given us an evidence of their being alive to the facts as they are. Why think ill of them, why impute motives where there seem to be none ?

FIRST DAY:—TUESDAY, JANUARY 16th 1923, AFTERNOON SESSION

## INDIAN TARIFF REFORM.

The Fiscal Commission.

Need for Protection.

By C. GOPAL MENON, ESQ., F. C. I., A. I. B., MADRAS.

(In the absence of the author, this paper was read by Mr. J. Leitch Wilson.)

An impartial observer of the signs of the times cannot fail to be struck with one idea concerning the findings of the Fiscal Commission, viz., the country's decision in favour of protection. The subject of tariff reform is of national importance at the present moment. It is, moreover, of absorbing interest and the issues, though of a complex nature, are of such paramount importance that they demand long and thoughtful study before any definite conclusions can be arrived at. It is to be deplored that an economic problem affecting the future welfare of our country should have received so little attention on the part of the public. When the Montford Reform Bill was issued, people rushed to express their opinion as to the merits or demerits of the reforms vouchsafed to the Indian public, but that tariff reform which is going to be put into operation before very long should have received so little attention may be due to the fact that high finance is the "*bete noire*" of the public. There is no doubt that the present tariff reform is a subject which requires calm and judicious inquiry, for adjudication by those who have made a study of politico-economic science, substantiated, of course, by practical experience. In any of the western countries such a measure will have caused much political excitement and party strife. It would even be made the subject on which a future election will be conducted. The tariff reform is one of those bloodless revolutions which often take place now and then in the history of every nation and which are often more far-reaching in their effects than many of the longest and most expensive of wars have been.

### THE COMMISSIONERS' FINDINGS.

The Commission was asked "to examine with reference to all the interests concerned the tariff policy of the Government of India, including the question of the desirability of adopting the principle of imperial preference and to make recommendations." The finding arrived at is that "we recommend in the best interests of India the adoption of a policy of protection to be applied with discrimination along the lines indicated in this Report." The Report is signed by all the members subject to a minute of dissent by the five members including the president. The minority's verdict is that "there should be an unqualified pronouncement that the fiscal policy best suited for India is protection."

The sentiment underlying the view expressed by the Minority

Report is no reaction against free trade but is only an evidence of the feeling in the country that she should devote her attention to intense industrialism. This may be ascertainable from the evidence given before the commission by all those who are interested in any industry in the country. They all unanimously expressed their opinion that a certain amount of protection is needed for the development of the industries in which they are interested to meet and to protect them from undue competition from the outside world where similar articles are produced under highly organised conditions. Those who favour this view have a very strong argument in the present rapid growth of such protectionist countries, as America, Germany and the self-governing colonies. In the western countries there are even to-day two schools of thought on the subject.

### ENGLISH POLICY IN THE PAST.

England had been a protectionist country for hundreds of years. The trade of England and indeed nearly of all other countries was conducted under what was known as the "Mercantile System." Under this system, each country took steps to get as much gold and silver as possible and all expedients were resorted to in order to prevent their removal from the country. This fiscal policy, though it was a policy of protection, differed from the policy proposed by modern tariff reformers. It was not intended as much as a protection of the trade of the country, but as a protection of their gold supply. At the present day the gold of any country is not protected in this manner, but by an entirely different method; viz., by the action of the discount rate fixed by the prominent bank in their respective countries. The mercantile system prevailed in the European countries until the beginning of the nineteenth century. In England during this period some 1,300 articles came to be included in the customs list and the duties upon very many of them were almost or entirely prohibitive. The Corn Laws in England were dated from the year 1360 and a case for reform was brought up several times, but it was not until 1836, a few of the radicals banded themselves with the avowed object of securing the repeal of the Corn Laws. In 1838 an association was formed in Manchester at the instance of Richard Cobden, who not only devoted all his time for the work but was also able to bring to his band his friend John Bright of Rochdale whose superb eloquence convinced people of the evils of the system. One of Cobden's predictions for the abolition of Corn Laws was that "if England abolish Corn Laws honestly and adopt free trade in its simplicity there will not be a tariff in Europe that will not be changed in less than five years to follow your example." This prediction was not fulfilled as it did not suit other countries to adopt England's method chiefly due to the difference of circumstances and interested opposition. Such is pure history and it is from the past that the present should take lessons and apply them to practical needs keeping in view ones own capacity. A certain section of economists avow that England gained her supremacy during the days of her protec-

tionist policy, and not since the time she adopted her present so-called free trade policy. It is a difficult problem to answer, because, it is difficult to judge the exact influence of all the contributory clauses to England's present commercial and financial supremacy. There is another argument that England did not give up protection until her industries had reached that state of proficiency when they were independent of protection.

### REACTION AGAINST FREE TRADE.

With all the talk of a "dogmatic" free trade policy of England, do we not observe her favouring occasionally a policy of retaliation in the tariff system and those who advocated this policy undoubtedly have a very strong argument in the rapid growth of the protectionist countries? Did not the late Joseph Chamberlain in 1903 astonish the world by proposing the adoption of preferential trading between the mother country and the colonies as the only means of keeping the mighty Empire together? The question received the serious attention and was discussed vigorously in every circle of the community in England, from the ministers of the Crown to the man in the street. The subject took such a turn as to involve a conflict between Free Trade and Protection. Chamberlain wanted to work up an Imperial Zollverein, after the example of the German Empire and the United States, with free trade within the Empire and a common protective tariff against the outside world. These are all examples of what a country would do when trade is being imperilled from foreign competition and there is nothing strange in India desiring to shape her tariff policy with a view to protect her industries and commerce. This is what the Minority Report of the Fiscal Commission have in view when they pronounced that they want a definite policy of protection and not any half-hearted measure as is conveyed in the Report of the Commissioners as a whole. The motive of the minority is not a reaction against free trade policy but only one of self-preservation to make India a self-contained and self-sustaining country.

### INDIA'S RESOURCES.

It is necessary in a preliminary survey of this nature to define what resources India possesses for the task which she is going to undertake. The area of India is 1,760,000 square miles, with a population of about 300,000,000 of people. There are two clearly defined regions, which possess great varieties of soil and climate. The first is that comprising the plains watered by the great Himalayan rivers, the Indus, Ganges, and Brahmaputra with their tributaries. This huge plain is 1,700 miles across and includes the richest and most populous regions of India. The second great division is the Deccan which is enclosed on all sides by mountains. We have our monsoons; the South-West usually arrives at the end of June and lasts for about four months. It distributes rain over the whole of India, but very unequally, the regions favoured by most constant falls being

Eastern Bengal, Assam, part of Central Provinces and the Malabar Coast. In the remaining provinces the rainfall is uncertain and droughts often occur. India, unlike other countries has enormous potential, but undeveloped wealth, agricultural, mineral and industrial. It has inexhaustible supplies of coal and iron, chrome iron, and manganese ore, copper plumbago, lime, kaolin, gypsum, asbestos, mica soft and hard, wheat, food grains of all description, oil seeds, tobacco, cocoa, sugar, coffee, tea, spices, dye, hemp, flax, fibres of every description. Notwithstanding, she is the dumping ground of other nations. A little fostering protection will help some of these to be converted into manufactured articles, for which there are ample facilities in the country. The few industries which are in existence in India to-day are suffering from foreign competition owing to the dumping of foreign goods at a low price. India's principal industries are those engaged in the manufacture of cotton and jute products, leather, silk, wool, paper, sugar, indigo, tea, coffee and tobacco. Of these the leather, wool and paper industries, the bulk of them, are making no progress and are having only a hand to mouth living. The silk industry is practically losing ground. The only industry which comes into competition with England is the cotton industry and as India is Lancashire's best customer in cotton goods, the progress of the industry is being closely watched. Even here, it is only in grey goods she comes actively into competition with Lancashire. In the cotton industry apart from grey goods there are several other varieties which are needed in India, and I believe even if the excise duty is removed and protection is applied to this industry it will take a long time for Indian mills to come into competition with Lancashire in other varieties than grey goods. Space will not permit me to point out to what extent she could come into competition in cotton goods with Lancashire and how infinitesimally small that competition will be under natural and other conditions even if a small amount of protection is afforded.

### NEED FOR PROTECTION.

The tanning and leather industries should be prosperous under protection as there are large supplies of hides and skins and the necessary tanning materials in the country. Apart from exporting raw hides and skins, no attempt is made to convert these into tanned goods. Sugar, match and soap industries are all bound to succeed under protection. There is, no doubt, lack of enterprise in the method of manufacture. Attempts should be made to avoid wastage in manufacturing and economy exercised in management. Otherwise protection will be at the expense of the poverty-stricken population.

Another aspect of the question is : Have we not heard of the competitions of such protectionist countries as Germany and the United States in the markets of the world ? The alarm was so great in some quarters in Britain as to make them feel as to the state of the future British industry. These alarmists gave out that it is not that the



British industry was declining, but the prosperity of the German and United States industries were developing in much greater proportion than British and this they attributed as due to the protectionist policy of those countries. These were at least the arguments brought forward by the late Mr. Chamberlain and his exponents of the theory of Imperial Federation for the British Empire. The old proposition that "what is true of one must be true of all," is repeated often as it was one hundred years ago. Free trade may be good to England, but may not be good for India and as conditions and circumstances change fiscal measures and tariff reforms have to be modelled to suit the conditions of each country.

### PROTECTION ALONE WILL NOT SUFFICE.

But protection alone cannot advance the industrial and commercial prosperity of a country. We want the technical skill and clever foremen and superintendents of workshops. Our technical educational system must be modified in order that our schools and colleges turn out technological experts who possess the adequate knowledge to conduct experiments in the factories and workshops. These are state-aids which the Government of the country should render for the development of industries. We must also have the enterprise and initiative; apart from big industries to be started, there are several minor industries which, with little enterprise and initiative, we can without much difficulty develop. We are as a nation sadly behind other nations in the matter of enterprise and initiative. In order that a country should become industrially great, we must possess the right sort of education. It is by the encouragement of science, by the technical training and by the diffusion of knowledge that the Government can best aid private enterprise. If people in the country now take advantage of the protection for industries which will be conceded shortly, we can reasonably hope to advance, both industrially and commercially so that we may attain the position which other nations have attained in the matter of industrial development. If, on the other hand, prompt steps are not taken for the realisation of the object in view of the present tariff reform, misery and hardship will result to the people owing to enhanced prices. The object of protection is to encourage home industries by the manipulation of a fiscal system and that will in turn raise home prices. If a temporary rise in prices did not take place, then the industries are not encouraged. This is a necessary evil in the initial stage of a protectionist measure but the people will eventually benefit by the industrial progress of the country. To achieve this object, says Mr. Armitage Smith, "the country will have to rely upon her skill, efficiency, business capacity and energy. She will need to be vigilant, skilful, enterprising and active to meet the desires of her customers at a reasonable price and anticipate their wants."

## INDUSTRIAL DEVELOPMENT AND INDUSTRIAL TRAINING.

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Never has the question of the industrial development of India been more in the public eye than it is at the present time. The purpose of this paper is not to enter on the thorny question as to whether industrial development on Western lines would, or would not, be for the good of India; nor to enter on the still more debateable question as to whether that development, supposing the ideal to be admitted, would be best brought about by means of a policy of protection. It is rather to point out one essential condition of industrial development that does not, in most discussions upon the subject, seem to have received the attention due to it, and to put forward a scheme that in the writer's opinion must be adopted simultaneously with any policy of industrial development.

The economic student on his introduction to the theory of production and the conditions upon which the productivity of a nation depends, meets in the foreground of his study the three great agents of production—land, labour and capital. They are all of primary importance, but it is possible to lay too great stress upon the group. Later economists from Marshall onwards have laid more and more emphasis on "organization" as a distinct agent of production, and unless "capital" be given the widest interpretation so as to cover "immaterial" agents of production as well as the purely "material," this inclusion is essentially necessary. Many of the errors of the extreme individualist school arose from their omission of this very factor, though it is to be noted that Adam Smith, the master of individualism, is not open to the accusation, for he included "the natural and acquired abilities of a people" in the category of the fixed capital of the nation. List restored the human factor of production to its proper place, and it always seems to me that List's claim to fame is equally strong in this direction as in the better known sphere of fiscal policy. Yet Mill, writing with the work of List before him, was not able to shake himself altogether clear of the doctrines in this respect of his predecessors; it can hardly be said that Mill realised the fundamental importance of immaterial capital, or "organization" if you care to call it such, and much of his dread of diminishing return on the one hand, and over-population on the other, is attributable to this very fact.

Now in the University syllabuses of economic study in India Marshall finds a prominent place—too prominent it seems to me—and yet the salient fact of organization to which he attaches such importance does not seem to be fully realised. The omission is perhaps more regrettable in that it is the factor of production which is most lacking in our midst. We are all familiar with those analysis of the possibilities of production in India, which call attention to its boundless acres of land,

sometimes deficient in water, but which modern irrigation may cause to "blossom like the rose"; its abundant labour, which has often been spoken of as cheap, though India's own representative at Geneva declared emphatically that it was dear because of its inefficiency; and its capital, being slowly unearthed from the hoards of earlier days, and taking advantage to an ever-increasing extent of the new facilities for investment. But in these analysis there is too often a tendency to skip over the immaterial agents of production, or to treat them as quite subsidiary. Now any one familiar with industrial life in the West knows that it depends for its very life-blood on its entrepreneurs or captains of industry. It is their organizing ability, their bold and restless enterprise, which waits not for assistance from the powers above, their power of predicting the future and producing to meet it without guarantees, their inventive genius and their constant juggling with the process of production so as to secure the maximum output with the minimum of cost—these, one and all, are fundamental in industrial development, and in India they are noticeable by their absence. The few individual exceptions that arise to the minds of all of us only serve to emphasise the crying need in this respect before India becomes a great industrial country.

Perhaps our educational system is partly responsible for the deficiency, but I personally feel that a change of outlook amongst our educated classes as to the relative value of the different professions must be the preliminary to change. Many of you here are University teachers. What is the aim of the average student who passes through your hands? I may be wrong in speaking thus of other Provinces, but in the Punjab the average student looks forward to Government service, to the Bar, or to Teaching as a profession. Now without disparaging for one moment any one of these learned professions, you must admit that it is a sad feature if they are to draw off the pick of the brains of the country, and industry and commerce have to depend on those with more limited attainments. One thing that those whose ideal is the rapid industrial development of India should clearly realise is this—that if industry is to have a chance, it must be given its fair share of the very best brains in the country. Production in the narrow sense of the term must come to be regarded by our leaders of thought as an essentially honourable profession, as one to which their sons may go with credit, and as one which from the standpoint, both of the country and the individual, may be taken up with advantage.

While India was a country unknown to me except through books, and Japan was similarly unknown as it still is, I was much struck as a University teacher at home by the different outlook of Indian and Japanese students whom we had in about equal numbers. Both were there to get the best that the University could give, but their intention was to apply it differently. The Japanese student as often as not desired to return to his own country and go in for business in some of its many forms; the Indian student, on the other hand, no matter what else he was doing, seemed always to be reading for the Bar, and the sad feature is that on his return he too often takes the path of least resistance and

drifts into that profession which he took up largely as a side-line during his University course. The profession, no doubt, offers great opportunities for active participation in public and political life, and India's debt to her lawyers in many different spheres of activity is indeed a large one ; but my point still remains that the industrial development of India will necessitate a diversion of brains from these aforementioned channels into that of production in the narrower sense of the term.

There are those who would contend that this deficiency, of which I have spoken, and which will be generally admitted, is a product of the literary type of education which has largely predominated and still predominates in most of our higher institutions. I agree, but only up to a point. My contention is that our University education is good as a starting point even for the man who is going into business life. One of the tendencies, noticeable in Germany and in America before the war, and which has been particularly noticeable in England since the war, is in the direction of looking more and more to the Universities to provide men of broad education and with a general grip of affairs for the higher business posts, instead of depending as largely as formerly on the pushing clerk from below. Harrison and Crossfield, the large firm of exporters and importers in London, who have large connections with the East, have stated to me that this is the policy now being definitely followed by the Company, and the routine work of the business they leave very largely to girls. In this respect it seems to me that England is largely following in the foot-steps of the United States. What has often struck me in my travellings in that land has been the much larger number of University graduates that one found in all departments of business than was the case in England.

This change is partly a product of the growing complexity of modern business organization. Bagehot pointed it out most forcibly when he compared the modern organization of peace and of war. The modern commander of an army rides no longer at the head of his forces ; but in some secluded spot far behind, where the din of battle troubles him not, he follows by the telephone the movement of his troops, and directs and controls their operations. So in the business world—the man who is being wanted more and more, is he who can take a grasp of a broad situation, who can analyse clearly the problems involved, and sheltered from the petty details of management can give his whole time to the question of policy and the path to be pursued. It is here that the wide general education of the University is most valuable, and where the process of working up stage by stage may cramp rather than enlarge the outlook of many who pass through it.

The production of a class of industrial leaders in India seems to be one of the preliminaries of industrial development. Our present University system does not give us the product we have in view. Some may say, with reason on their side, that this is not the function of a University. But what is really worse, the University does not seem to instil the spirit that is necessary. Nor is the product got by sending a number of our best men to those old haunts of learning, Oxford and Cambridge. Colleges of Commerce may strike the imagination of some

as the institution most likely to turn out what is required, but as one who has been very closely connected with the Commercial Department of one of the Universities at home, I very much doubt whether the College of Commerce will turn our Indian student into a potential captain of industry. The training it gives is for the most part a good general education with a distinct commercial bias ; it is no doubt very satisfactory as a beginning, but it has to be very much supplemented.

The best training for the business man is still that which is got in the rough and tumble of ordinary everyday business life. No College of Commerce, and no Degree in Commerce can ever be a substitute for that. The College gives but the groundwork on which to build, and the building must be done in the business laboratory of everyday life. I am one who personally thinks that it does not matter a very great deal what course a student goes through before he starts this practical training. A really first-rate degree course in commerce is to be preferred, but a good Arts course on the modern side would seem to me equally satisfactory.

Now this practical training a student may get in our midst, but what he does not seem to get is that modern business spirit of which I spoke earlier in the paper. It, I feel, can only be acquired by placing a few of our very best young men who have done well in their University courses here in direct contact with the business organisation where that spirit is the predominating feature. We have in the past sent large numbers of our best men to the Universities abroad, and they have returned with much of the "culture" of the west. Let us now, if we are entering on the path of industrial development, put our young men in the position, as far as possible, so that they may assimilate and make their own the business methods and the spirit that prevail where industry is more developed than in our midst.

Japan is often held up as an example for India, too much so in my opinion, but in the above respect Japan has a most valuable lesson to teach us. When she was entering on the path of industrial expansion, she realized that it was essential that she should have men who had been given a chance to shake off the old methods that had prevailed for centuries, and who had assimilated something of the modern methods and the spirit that permeate industry to-day. She realized that she must have men who, on the industrial side, could guide the destinies of her country. For these she looked to her Universities, and from them she picked of her very best and sent them abroad to industrial and commercial firms. How did she get them in ? Because there was propaganda behind the movement, and India could, if she liked, do the same. Indeed, it is one of the bright parts of the Fiscal Commission Report that they suggest that firms, with which the Government of India have large connections, should take in apprentices from India for training. Ordinary apprenticeship would not seem to me to meet the case, nor to produce altogether the type of man I have in view. It would be necessary to come to special arrangements with particular firms to take in selected graduates for, say, two or three years, and to promise to let them see in that time as much as possible of how the business is run.

Let me put the question, are we teachers doing all that can be done both for our boys and for the country? A boy has a really good career at the University here, and we suggest that he should go to Oxford or Cambridge. He goes there, and does well. Back he comes and asks us what he should do. The facetious say to him, "Go and make pins," and he cannot! We want more people coming back to India who know how to make pins and other things. We want them coming back also imbued with the spirit that they can make an opening for themselves, and not with a plaintive cry to Government to try a pin factory as an experiment, and if it is a success, hand it over to private enterprise as a going concern.

My programme is therefore that there should be in each Province an agency of some kind through which we can get properly selected candidates placed with large firms, industrial and commercial, in England and elsewhere. I should like to know if anything of this nature exists in any of the Provinces. There is nothing in the Punjab, and from a conversation I had with Dr. Tannar, Principal of the Sydenham College of Commerce, Bombay, some eighteen months ago, I gathered that there was nothing of the nature in Bombay.

Whether that agency should, or should not be, the Local Government raises a debateable question. I personally am all in favour of a strong Local Committee on which you might have officers of Government, but they should be there in their non-official capacity. It must be a strong Committee; you have got to impress firms at home. But the further it is removed from Government, so much the better. If a boy goes abroad through an official agency, there is much more likelihood that when he returns he will rely upon the Government that sent him there to find him a job. That is the last thing we want to encourage. On the other hand, if a young man is sent through a private agency, and it is impressed upon him that he is going to learn, and that his future career largely depends upon himself, he is much more likely to develop greater self-reliance, and to be the asset that we want on his return to India.

It would be one of the duties of that Committee to scrutinise the industrial possibilities of the Province, and to select the type of firms to which it considers that its young men should be sent for training. To begin with, particularly, it ought to exercise the very greatest care in its selection, for the success of the whole experiment will depend upon the impression our boys make with business firms in England or elsewhere. It will be its duty to reconnoitre the ground abroad, and draw up a roster of firms that would be prepared to take in our boys and afford them every facility for learning the business.

In this connection some individual of the Committee, when in England, should have a personal interview with the managers of suitable businesses, diplomatically explain the idea, and I feel certain that we should get what we want.

It would be the duty of the same Committee to receive regular reports on the work of such learners as it has sent, and it would be in its

power to recall at any time any student who was in any way proving unsatisfactory. At times it would have to be strict. I myself, some eighteen months ago, sent one of my M.A. students for two years' practical training in the Bank of Scotland. He worked for six weeks, and then there came an urgent letter asking me to reply by return as to whether he might at the same time read for the Bar. With my general views before you, my answer can be better imagined than described !

Lastly, there is much greater responsibility attached to sending a student on training of this kind, especially with firms of certain types, *e. g.*, banks and insurance offices, than in sending him to a foreign University. The consequences of his going wrong are so much more serious. I consider that it would be one of the functions of the Committee suggested above to take and to hold, to find, if need be, sufficient guarantees for the good conduct of the learner against his return. No individual, especially of the teaching community, can undertake the liability that would be involved in sending a number of students on work of this kind. It would be all right if firms would themselves enact a guarantee, but as a rule they will not. They will simply say that they take the word of one individual or of the Committee as sufficient guarantee.

So far I have spoken as though the individual concerned would himself bear the expense. He will in most cases get no salary during his years of training—indeed he can hardly expect it. But if the experiment were set agoing, to begin with, through those who can themselves defray the cost of training, the day would soon come when Local Governments might have their attention called to what was being done, and asked to provide a limited number of scholarships for the specific purpose outlined.

There is a cry all over India for greater facilities for industrial and commercial education. All parties with experience agree upon the urgent need. Let us turn out mechanics and foremen by all means ; let more attention be given to commercial and purely clerical subjects ; but let us not stop there. Such a programme will not take us far. The political reforms have created a call for leaders in the political world ; industrial expansion will make a much greater call for leaders in the industrial world. You may, in your Commercial Colleges, impart the rudiments of commercial education, but you cannot at the moment instil the spirit which will make India industrially great. I have outlined, what I consider, a feasible programme to fill the great deficiency under which India still labours.

In conclusion, there is one "fly in the ointment". It would appear that the day is not far distant when India will enter on a policy of protection, discriminating or otherwise. Protection does not of itself breed a class of industrial leaders. It does not of itself foster a spirit of individual enterprise and initiative, but rather the converse, *viz.*, that spirit of carrying on as things have been done in the past, and relying on Government not to remove the protective duties, or if things come to the worst, to increase them. Further it makes the carrying out of the programme suggested more difficult because we, with one breath,

say that we are to keep out as far as possible the goods of other countries, and with the next we humbly petition our producers of the past to teach us how to make the things we formerly took from them. We need not be surprised if they are not very keen. Even although the ultimate ideal be protection—whether it is the best policy or not, is altogether beside the point for present purposes—we could not go wrong along the lines I have suggested. It is a policy that would be easy to carry out now ; it would be more difficult under a policy of protection. Perhaps if it were tried on an adequate scale, the need for protection might become less apparent ; if protection were then adopted, the country would be much better prepared for production within its own borders ; and even the most ardent supporters of the policy of protection must admit that it is fraught with grave possibilities for evil that are entirely lacking in the scheme proposed above.



## SOME ECONOMIC ASPECTS OF DEFICIT BUDGETS.

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The operations of public finance deserve a close economic study because of the important directive effects which the character and volume of public revenue and expenditure exercise on the economic activities of the people. The economic effects of taxation have been closely studied by many writers. These do not concern me in this paper, except in so far as a deficit may be considered to be due to undertaxation. The effects of various classes of Government expenditure are not so widely appreciated, which is regrettable because their directive effects are in some ways more important in the aggregate of results. I find it necessary, therefore, to begin by discussing the nature of an economic deficit, and to follow this with some analysis of Government expenditure.\*

In the first place, what is a real deficit ?

We need to be very careful to distinguish between a mere book-keeping deficit, and a real economic deficit. The latter cannot be defined without a careful analysis ; but broadly speaking it may be said to be an excess of expenditure in relation to returns from it, *i.e.*, the public benefit secured, such that the accustomed rate of progress cannot be maintained. The point which I wish particularly to bring out is that a financial deficit must not be allowed to produce an economic deficit.

There is no relation of any fixed or predicable kind between an economic deficit as here conceived and to be explained below, and a financial deficit. An economic deficit may be realised even when the ordinary financial accounts show a revenue surplus ; and it is also possible that there may be no economic deficit even when public expenditure on ordinary recurring heads exceeds ordinary revenue. It will generally be the case, however, that a financial deficit tends to produce an economic deficit ; and the main purpose of this paper is to see how this can be prevented. With this explanation, I proceed to examine the nature of an economic deficit.

### The Capital Fund.

Economists have been familiarized by the writings of J. B. Clark with the idea of the "Capital Fund"—consisting of all the fixed and circulating capital existing in a country. It includes all public works and property, all usable buildings, all durable goods, whether for production or consumption, and all consumable goods. In a normally

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\* This paper was given at the conference mainly from notes, and substantial changes in the subject matter have since been introduced.

progressive country the deterioration of capital goods is more than made good by new savings and investment, and the capital fund is constantly expanding, though more rapidly in some years than others. A great and destructive war, on the other hand, may seriously diminish the capital fund in the belligerent countries, and particularly in the actual areas of hostilities.

Besides the "material" capital comprised in the capital fund there is another and human element in the material civilization of any country, of the greatest importance; I refer to the accumulation of knowledge and ideas, such as the technique of industries, which have become public property and conduce, through inventions, new discoveries and improved organization, to a far more efficient application of labour and utilization of the capital fund.

Improved modes of life—rational housing, townplanning, wise and simple living, better health, culture for enjoyment of leisure—increase directly, the sum total of human enjoyment besides increasing the efficiency of the people as workers. All this accumulation of knowledge, established institutions of government and of industry, all these good habits, life and capacity for enjoyment, I must call, for want of a better term, the fund of "human capital." Education is, of course, the great agent for increasing the fund of "human capital;" and public health services are perhaps equally important.

### Progress the Normal Condition.

Economists are familiar with what is termed the static condition of a people. Over any period of years the capital fund shows neither augmentation nor decrease: the fund of "human capital" is stationary too. Society remains as it was. Only the population would be growing and standard of living falling, until the pressure on the means of subsistence would bring the positive check into operation. This condition was doubtless characteristic of most of Europe until the sixteenth century, and of parts much later; whilst in India and China large tracts have for centuries been in a static condition, broken only by wars or terrible famines. Since the break-up of the feudal system in Europe, and especially since the agricultural revolution and expansion of trade, followed by the industrial revolution, progress has become the normal state. There was in the eighteenth and nineteenth centuries a continuous growth of accumulated capital, accompanied by a growth of technical knowledge and application of inventions. This was followed in the nineteenth century by a vast improvement of public health; the material resources for which only became available through the increasing wealth of the countries—England especially, others in Western Europe following.

The rapid growth of material civilization in America, followed, and now accompanied, by a rapid expansion of the "human capital" is, perhaps the most astonishing phenomenon of progress ever seen, whilst Japan and many non-European countries have recently started and gathered strength in an economic revolution. In the present age

progress is the normal condition; and any country which is not augmenting its funds of material and "human capital" will lag behind in the race and become relatively poor and internationally weak.

If progress is to be regarded as the normal condition, it follows that the public finance of every well-governed country must be so managed as to provide for constant progress in these respects. Finance must be found for all that will make for increased efficiency of the population as producers, for improving health, for better education in work and in culture. The normal budget will provide from revenue for building up the capital fund—particularly that important portion (public works of all kinds) which is in public ownership—and for such expenditure on education and public health as it is possible to afford without unduly burdensome taxation. When such expenditure on public works, and the creation of "human" capital, takes place out of ordinary revenue there is effected a compulsory saving of capital by the people as a whole through the instrumentality of the State; and this should be the normal condition. An economic deficit is the result of a failure of the scheme of public finance to secure such compulsory "saving" and investment at the annual rate to which the country has become accustomed.

#### Nature of an Economic Deficit.

An economic deficit occurs whenever the rate of growth of the capital fund, material and human is less than the normal rate of growth to which the country concerned has become accustomed, and to which it has adjusted its economic life; and the deficit is the difference by which the actual rate of progress falls short of the normal. It is impracticable, of course, to define a normal rate of growth with any precision; but the idea certainly has a firm basis in reality. It is a fact that in every country the population tends to grow, and at a rate depending on numerous factors peculiar to the country. It is also a fact that in every country which has become accustomed to the continued investment of capital in public works and in the expansion of trade and industries, there is a real demand for the continuance of new investments of capital in such manner year by year. Failing such new investment the supply of all kinds of services and goods depending on such investment becomes noticeably insufficient. The truth of this becomes evident when we consider how the cessation of new investment during war-time brought about an acute shortage of railway facilities of all kinds, an increasingly felt want for new roads and bridges in certain parts, and a shortage of cotton cloth and many other commodities largely produced in India.\*

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\*The shortage experienced was, of course, partly due in the case of railways to non-replacement and inability to effect repairs, and in the case of commodities to restriction of the normal overseas imports; but, after making allowance for this, the absence of the normal annual increment of invested capital in the country remains an important cause of the shortage.

Furthermore, if a country has become accustomed to an extension year by year of educational facilities, or the progress of works and agencies for public health, it learns to expect a regular continuance of the extension of such facilities and improvements. Seeing what has been done here and there, people become increasingly conscious of wants for such improvements in their own localities, for by knowledge and experience they have been educated to want them. When a normal rate of progress is maintained there is a normal interval between the public becoming conscious of such a want and its satisfaction. When the rate of progress is much slackened that interval is greatly lengthened and people become impatient, become acutely conscious of the want. That is the psychological expression of an economic deficit.

### **Relation of Normal Budget to Progress.**

In a country having a stable Government a financial equilibrium is more or less maintained in normal times of peace. When the people are politically conscious and have representative institutions controlling finance the needs to be met by expenditure are uppermost in men's minds: they are debated and finally assembled into a budget. Taxation is imposed to raise the revenue needed to meet this expenditure; and the burden is distributed so as to bear as lightly as possible on all, that is to say, more or less in accordance with ability to pay.

When the desire for progress animates the people, they will demand expenditure for the purpose. Of course the public may be, and often are, ignorant as to what kinds of Government activities and expenditure would be most conducive of progress. In this they need educating; but in any case they will gradually learn by experience. As the public demand for progress grows, the normal budget will come to make more and more provision for the growth of the "human" and material capital fund.

### **Economic Classification of Expenditure.**

Before examining the effects of a disturbance of budget equilibrium, I must offer an economic classification of expenditure, the object of which is to indicate the economic effect of every kind of expense which a Government usually incurs. On this basis there seem to be six major classes of expenditure as follows:—

- (1) **Military (including Naval)** expenditure on defence and internal security. This is a direct drain on the national dividend, and thus retards the growth of the material and "human" capital funds. War is always destructive of the capital funds; at least so far as society as a whole (international) is concerned.
- (2) **Expenditure on the civil administration**—maintenance of law and order, administration of justice, and collection of the revenues. These essential services stabilize the fabric of Government; and neither add to, nor detract from either capital fund, if honest and reasonably efficient. A corrupt

or inefficient civil service and judiciary will often reduce, and even destroy the incentive to work and saving, and thus are detrimental to the capital funds. Underpayment of Government officers relatively to the standard of living to which their class has become accustomed may be largely the cause of the corruption; and this result of attempting to balance the budget must be carefully avoided.

- (3) Expenditure on the beneficent services, the chief examples of which are public health and education, increases the fund of human capital, and directly in proportion to the efficiency of the expenditure.
- (4) Expenditure on the indirectly productive services increases the fund of material capital, and indirectly also the fund of human capital by creating leisure for enjoyment and resources for maintaining the beneficent services. Examples of indirectly productive services are the agricultural departments and colleges; technical and trade instruction; maintenance of roads and other public works in good repair.
- (5) Expenditure on permanent works, such as roads, bridges, drainage channels, public buildings, and so forth. This directly increases the fund of material capital.
- (6) Expenditure on the commercial services, such as the post and telegraphs, railways, irrigation canals, and all public utility services for which fees are charged more or less proportioned to service rendered. These are part of the flow of the normal economic life; and in most cases the state undertakes them either on account of their monopolistic character, or because the risk in investment of capital is too great for private enterprise. Capital is invested on commercial lines, *i. e.*, if it shows a return exceeding the rate of interest at which Government can borrow; but the fact that Government lends its credit for raising capital is a factor tending greatly to augment the capital fund.

#### Relative Growth of Different Classes of Expenditure.

Prime importance attaches to the relative rate of growth of expenditure falling in each of these classes. In a normally progressive country all classes of expenditure will tend to grow—not only absolutely, but relatively both to the general price-level and to population. It is obviously undesirable that expenditure in classes (1) and (2), military and civil administration, should grow, except slowly; and they should certainly grow much less rapidly than expenditure on classes (3), (4), and (5). As the revenue and expenditure on each commercial service should balance, if not show a profit, at least over a series of years, I leave the commercial services out of account.

More important than the absolute or relative amount of expenditure on each service is its efficiency; and the marginal efficiency of an

increment of expenditure in expanding the service will depend on the average efficiency of the whole service. Bureaucracies have a tendency to over-organize themselves, and by their size and, by the intricacy of the channels of work and threads of control, to lose much in efficiency and particularly in initiative till they function only in response to clamant demands on their attention. Unless subjected constantly to criticism they lose the ideal of service as an object of existence ; and only a great emergency re-arouses it. It follows that an increment of expenditure directed to re-organising, simplifying and re-enlivening a service will at times be far more efficient than an increment devoted to expansion. In fact an increment of expenditure on re-organization, if the effort be sustained, may enable an elimination of personnel to such an extent as to save far more than the cost of the re-organization, and yet gain in efficiency.

#### Causes of Deficits.

The equilibrium of the budget may be subverted, and a deficit result, from various causes, the most frequent of which may be tabulated as follows :—

##### Increased expenditure caused by—

- (1) A war, or other extraordinary military expenditure.
- (2) A considerable rise of the general price-level necessitating the increase of salaries of Government servants.
- (3) The gradual growth of expenditure on any or all of the public services, due to prior commitments, such as graded pay.
- (4) Debiting to revenue the cost of urgently needed permanent works, each in itself inconsiderable perhaps, but the expenditure being properly of a capital nature.

##### Decreased revenue due to—

- (1) Depression of trade.
- (2) Widespread failure of crops.
- (3) Civil commotion.

The remedy must, of course, be adjusted to the cause, and a careful analysis of the cause or causes of a deficit is indispensable. It may be found that two or three causes are acting together, each partly responsible for the deficit ; or there may be a counteracting increase under some head of revenue, without which the deficit would have been larger. The analysis may conveniently be carried out by the graphic method, plotting a histogram of each head of expenditure and revenue for 10, 15 or 20 years back. If plotted on the logarithmic scale\* any exceptional rate of increase, or cessation of the normal rate of increase, will be immediately apparent, and the causes thereof be ascertained by an inquiry into the detailed figures.

\* For explanation of the logarithmic scale see *Elements of Statistics*, by A. L. Bowley, 2nd ed. 1902, p. 188, or later editions ; and other text-books on Statistics,

Such an analysis of growth of expenditure may be carried out, of course, according to the ordinary budget heads and sub-heads now in use ; and in practice it would be an onerous task to make a new classification of expenditure for the purpose. Yet the analysis cannot be considered complete until it has been carried to the point of separating distinctly from one another all kinds of expenditure which belong to different economic classes, such as the six classes named above (pp. 42 and 43). Only by such a separation is it possible to draw conclusions, as to the economic effects of proposed remedies—whether more revenue must be raised or retrenchment be effected in various services, and if so which, by how much, and by what means.

Such economic analysis of expenditure ought indeed to be the normal accompaniment of budget making, and not be confined to eras of enforced retrenchment. The various heads of expenditure need to be redefined and regrouped according to a classification which has an economic basis ; or at least a second version of the budget should be prepared on the economic basis to accompany the normal budget based on an administrative classification. If this be done Government will have its attention more forcibly directed to the probable economic results of proposed re-adjustments of expenditure ; and the legislature and the public generally will be enabled to judge more easily as to the justification or otherwise of increases of expenditure, or proposed reductions, having in view the future economic welfare of the country. The economic classification would in fact exhibit the extent to which Government was contributing to the material and human capital funds of the country, and promoting material and cultural progress. A true balance-sheet for the country could be prepared each year showing the improvement of its material, vital and cultural assets ; though, of course, to make it strictly true, a valuation of those assets which would be entered at cost, according to the efficiency of the expenditure in producing the intended results would need to be made by statistical and other means.

### **Necessity of avoiding an Economic Deficit.**

The economic analysis of expenditure outlined in the preceding section will go a long way towards discovering whether the country is experiencing an economic deficit or not. As I have pointed out already (p. 39), there is no necessary connection between a financial deficit and an economic deficit, though, of course it is more likely than not that a financial deficit will be followed by an economic deficit as the result of retrenchment initiated on account of the deficit. A financial deficit is, of course, highly inconvenient ; and if not rightly met, it may have seriously prejudicial economic effects. Such effects can be avoided by correct financial measures ; and it remains true, therefore, that an economic deficit, whether arising from retrenchment, or from permitting inefficiency to grow in the beneficent and indirectly productive services, is far more serious than a mere financial deficit.

The correct financial measures for coping with a financial deficit are to carry on by borrowing *from the public* by sale of Treasury Bills, and to fund this floating debt at least once a year by the issue *to the public* of long term loan securities. By this method the financial deficit does nothing worse than add to the unproductive permanent debt of the country.

The worst expedient for meeting a deficit is inflation of the currency by excessive issue of paper or of token coins. Another measure sometimes adopted to finance a deficit is to borrow from a bank or banks, by a fixed loan, or a fluctuating overdraft, or by discounting Treasury Bills with the bank. This method results in inflation of bank credit, and thus of bank deposits subject to cheque; and the effect in raising the general price-level is as bad as inflation of the currency.

On the other hand, when the public buys Treasury Bills there is no inflation of currency or credit, unless the banks freely advance to the public on the security of the Treasury Bills, which they should make a practice of doing as little as possible. The effect of large issues of Treasury Bills on the money-market is dependent on what Government does with the money. If it is immediately banked and paid out from the Government account no stringency is caused; but locking up large funds obtained by loan in Government Treasuries, or in the Imperial Bank, when the uncertainty as to dates and amounts of withdrawal of large sums makes it unsafe for the Bank to lend any considerable part of it, will cause temporary stringency. Government transactions can and should be arranged so as to avoid this result.

The result of funding the floating debt is to transfer the loan securities (*i. e.*, Treasury Bills) from temporary to permanent holders (the bills having become long dated stock or bonds) and thus from trading and financial firms largely to private investors, many perhaps, of small means, and representing all classes of the public. Thus the economic result is that part of the recurring expenditure of a deficit year, which is represented by the deficit, is now represented by loan stock or bonds the annual interest upon which will absorb a small part of the country's revenue in all future years until redeemed. Such debt is unproductive in the sense that it has not been incurred in order to make permanent works which would increase revenue directly or indirectly, nor to increase the "human capital." The interest on unproductive debt is, of course, a burden on the country; but not a serious burden comparatively speaking. A measured judgment would regard the inflation of the currency, or of credit by bank borrowing, as producing economic evils far greater than the creation of floating debt and its subsequent funding into permanent debt.

I would go further and assert that it may be a positive advantage for a country to incur a deficit and the consequent unproductive debt, if that deficit has been incurred by an increase of expenditure on the beneficent services (public health and education) or on the indirectly productive services (such as the agricultural departments).



The fund of "human capital" is thereby increased; and this will increase the efficiency of the people as workers, besides to some extent directly raising their standard of living and capacity for the higher forms of enjoyment. The outlay on education, health and agriculture undoubtedly creates gradually an increased taxable capacity; and probably adds to the country's revenue after a few years far more than the interest on the debt representing the deficit or series of deficits. Expenditure on education and agriculture efficiently applied gives an indirect return at a high annual percentage.

During many years before the war it was not infrequently the case that the German Imperial Government was unable to balance its budget and met the deficit by increase of its permanent debt. At the time I used to be puzzled that this seemingly imprudent finance had apparently no ill-effect on the country which with its rapidly growing industries and mercantile marine exhibited a prosperity and rate of progress unexampled except in America. The civil administration of Germany was efficient at low cost—only its army was a great burden—and the beneficent and indirectly productive expenditure was also efficiently made, so that it doubtless yielded a big annual percentage of indirect revenue. Hence promoting and extending the beneficent and indirectly productive services, even though it led to the necessity of borrowing, was in every way good policy.

The ground is now clear for me to draw the conclusion to which this paper is directed. I have shown that every normally progressive country becomes accustomed not only to the idea of progress, but to some normal rate of actual progress which is approximately maintained from year to year. Only in war-time and when finances become seriously deranged is this rate of progress checked. I am not sure that it is good policy to check this progress even in war-time by curtailing the beneficent and indirectly productive services—certainly not unless the enemy's pressure necessitates a very heavy drain on man-power. I am quite clear, on the other hand, that nothing short of a tremendous war should be allowed to interfere with the country's normal rate of accumulation of "human capital." To retrench expenditure on the beneficent and indirectly productive services merely because there is a prospect or certainty of a financial deficit is deliberately taking an action which will produce an economic deficit. As I have tried to show, an economic deficit is the real thing: something which must adversely affect the country in the near future, and by its cumulative negative effects, also in the distant future. An economic deficit must be avoided, therefore, even at the expense of incurring a financial deficit.

Economies should be begun by an overhauling of the civil and judicial administrations, and by reducing military expenditure by more efficient organisation. Whilst economies are being realised in these directions additional revenues may be raised by taxation, until, after two or three years, perhaps, the budget may be balanced again. In the meantime financial deficits will be incurred, and these must be

funded into permanent loans. This may be done without misgiving, however, if the financial deficit is not large in proportion to the annual expenditure on the beneficent and indirectly productive services : say, not more than one-half of such expenditure. In India, the finances of the Central and Provincial Governments must be considered together for this purpose. In any case it is not the beneficent and indirectly productive services which should be stinted for money. Let them be re-organised so as to secure greater efficiency for the expenditure incurred ; but to reduce this branch of expenditure so as to impair in any degree the service rendered, is bad national economy. In some directions, *e. g.*, in public health and agriculture, additional expenditure would prove after a few years, so greatly remunerative to the country, that it would be sound economy (and therefore, sound finance—for the greater includes the less) deliberately to borrow to finance them, whenever ordinary revenue, after due retrenchment of the least necessary expenditures, is insufficient to provide for these services.

Finally let me safeguard myself by saying that nothing in this paper is to be interpreted as condoning a legislature or administration which fails to balance its financial budget. To go on incurring financial deficits year after year will add seriously and unwarrantably to the unproductive debt of the country ; and strenuous efforts ought to be made by economies in administration and raising additional revenue to avoid this. Whilst deprecating financial deficits, however, I have been concerned to point out that there is the likelihood of creating a worse evil by any kind of retrenchment which will tend to produce an economic deficit. This last must be avoided even at the cost of incurring financial deficits during the period necessary to bring the country's finances once again into equilibrium.

A certain amount of discussion, principally on Fiscal Policy, took place during this Session. It was not reported.

**GARDEN PARTY :—**At 4-15 p.m. the members of the Conference attended a garden party given in their honour in the Town Hall grounds by the members of the Reception Committee.

**SECOND DAY :—WEDNESDAY, JANUARY 17th, MORNING.**

### **EXCURSION TO RAILWAY WORKSHOPS.**

Members of the Association assembled at the University Hall at 9-45 a.m. and proceeded in motor cars, kindly lent by members of the Reception Committee and others, to the Railway Workshops, Moghulpura. They were conducted over the Locomotive Workshops and the Carriage and Wagon Workshops by the Officers in charge. At 12 noon members returned to Lahore.

**SECOND DAY :—WEDNESDAY, JANUARY 17th, 1923, AFTERNOON SESSION.**

### **THE NEW ECONOMICS AND THE EASTERN OUTLOOK.**

**BY PROFESSOR RADHAKAMAL MOOKERJEE, M.A., PH. D.,  
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There is a growing recognition in the west of two important limitations of modern economic science. In the first place, economic principles have not progressed with the recent advances in biology and psychology ; they have remained more or less a blend of hedonistic psychology and utilitarian ethics. An out-of-date associationist psychology is still the assumption of modern economic analysis. The psychology of motivation, of individual and social behaviour is still inadequately recognised in economic theory which concerns itself with the working of one human motive, and is apt to forget those external aspects of human psychology, which represent man's manifold reaction to a concrete environment. The newly developed instinct psychology decidedly exhibits a tendency away from intellectualism and the interpretation of conduct by an enlightened self-interest. Economics, however, still bases its analysis on the explanation of behaviour by rational motives, revealed by the logical introspection of the older psychological school. It has thus reared up a system on a logical method of investigation which is now obsolete and has taken only a fragment of real living man and a distorted shadow of commercial economy.

This limitation in method and analysis is as a matter of fact associated in the age of steam and iron with the ideal of mechanical or geometrical as opposed to vital or purposive efficiency. This has sought quantity rather than excellence derived from individual variations in production and consumption, and repressed some of those vital and perennial instincts and impulses which are conducive to the development of personality as well as of an all-round social well-being. Such repression has led to the disturbance of the economic equilibrium in a wide-spread industrial unsettlement and unrest ; and it is the aim of post-war economics to establish industrial peace as well as to correct that divorce of industry from art and from creative activity, and from the human and personal note without which the finer cultural developments of personality and humanity are impossible.

It need not be told that we have now come to recognise that economic efficiency exists in virtue of and in subservience to an all-round social and individual well-being. But this tardy recognition awaits elaboration in spite of the achievements of socialism, both in economic theory and economic practice. The post-war scientific industry has been shaping a programme for the satisfaction of those vital instincts and standards hitherto repressed in the era of machine production. But little attempt is made to take these into account in economic theory. The parental and family instincts have received little recognition from the economist in his calculation of the standard of efficient subsistence. In the theory of value, the cost of production has not taken into account the element of artistic workmanship as entering into the quality of the product, while in the demand for commodities, the estimate of utility has missed the value derived from the satisfaction of æsthetic impulse. The theory of production has ignored the instinct of constructiveness or creativeness which infusion with the instincts of self-expression and mastery are to-day becoming manifest in the attempt of the labourers to seek control over the industrial management. Our expanding social sympathy and the herd instinct similarly demand the emergence of new economic concepts such as co-operative productivity and ethical competition, which mark the transition of the economic process to a biological as well as to an ethical plane. Lack of co-ordination indeed characterises economic analysis which cannot lift the problems of production and distribution from the merely mechanical and physical plane. And in the exclusively mechanical point of view how easily and complacently the elements and factors are separated. The economic processes should not be looked at from the point of view of the employers or of the employees alone, as has still been the wont of modern economics, neo-classical or revolutionary, but should be broad based upon the fundamental values of concrete human life. Important applications have been recently made of physiology and psychiatry, seeking to bring about an increase of efficiency and welfare of the workers. In business sale and industrial management, in lessening industrial fatigue and in measuring intellectual abilities, the role of the consulting psychological examiner is gradually recognised by the industrial plants, which are coming to take into account the efficiency virtue of attending as strictly to their human outgo as to their human intake; of even selecting workers on the basis of natural fitness and considering the problem of promotion upon lines of vocational psychology. Clinics and hospitals are specialising on the treatment of industrial accidents and diseases, and the study of diseases in their relation to occupational conditions. The concept of "mass" medicine, sanitation and social welfare has received special emphasis during the war; the sociological view of industry is gaining ground, but all this has failed to change the traditional approach to economic theory, which was fixed by the Ricardian economists who wrote and flourished in an age which had small responsibilities for its great undertakings.

There has certainly dawned a conception of the complexities and perplexities of the psychological and technological factors of modern

industry, and of the differences in the calculus of production they bring about, but economic analysis remains still satisfied with the presentation of the simple formula of Land, Labour and Capital. Similarly, the theory of distribution still ignores not only the interdependence of the factors of production but also the costs of maintaining their constant flow which are the first charge of the industrial establishment. The deficiency has been brought to the front especially in the theory of wages. The post-war social conscience is demanding fair and living wages for all grades of labour as a matter of practical economic policy and legislation. But theories die hard. They are like the demons of the Ramayana who fought on the bellies when their hands and their stumps were off. The theory of wages still clings to the conventional concept of marginal or specific productivity of labour which does not adequately recognise the fact that labour as an agent of production must not show an ebb and tide but a regular and constant outflow and inflow. And this is possible only when the industrial plant recognises its responsibility towards the renewal of labour as a group in the productive process. The dynamic concept of economics refuses to be satisfied with anything less than a complete recognition of the above factor. This implies, again, a transformation of the economic concept of the standard of life to an ethical and normative concept, demanding the co-operation of each class involved in the productive process for the determination of the costs of maintaining the workingman's families in different regions, kinds and grades of employment. Fair wages should be determined in theory not merely with reference to local conditions of employment in specific regions and occupations but also with reference to the profits of the industrial establishment as a whole and as part of the national system of production of which labour is an integral part.

Modern economic unrest all hinges upon the fact that the high cost of living, an after-effect of the war, has encroached upon the labourers' means of subsistence; and unless the industrial establishments take upon themselves the responsibility of the recoument of labour as a productive group production will be paralysed. This is specially true in the case of the present phase of industrial transition in India. Labour in the east in our mills, mines and plantations has not yet weaned itself from rural and communal standards, and has especially been showing symptoms of a morbid pathology which should be treated in a sympathetic spirit that must seek to cure the ills of labour in an alien environment. The east has still preserved certain vital values and standards, which may yet be utilised in a saner and more righteous industrialism. We are gradually witnessing the emergence of a new industrialism which is based on the recognition of human values and standards, but this has been as yet unaccompanied by any real changes in the approach to economic theory.

In no other aspect has economics ignored more the standards of the east than in its urban predilections. In the east agriculture is fundamental, the source of livelihood for three-fourths of its population, and its social values are duly recognised though at present the tendency to subsidise urban development at the expense of agriculture has begun to be manifest as in the west. Both in Great Britain and the United

States of America, nearly two-thirds of the people live in the cities and towns, and the movement to the city had proceeded apace. The low birth rate and high mortality as well as physiological deterioration of urban populations mean a continuous deterioration of the race and of the level of civilisation. The war has taught that the subjection of agriculture to crises due to urban profiteers represents a drift too far in the wrong path of urban parasitism, and there has arisen an appreciation of the values of agriculture, its richer rewards of satisfaction for the normal human instincts, and its larger outlook to the progress of the race. Economics has been the formulation of urban interests and strivings, which have always exploited each other, giving us the picture of mutual conflict. To economists land has been a mere agent of production, a form of property or wealth as affecting industry and taxation, and not as an environment within which is set in harmonious setting the normal life of civilised man, a field for the exercise of the instincts connected with home-making and constructiveness, which have played the primary part in developing and maintaining civilisation. The want of perception on the part of the economists of the relations of agriculture to other forms of human activity has made the science so barren of results towards eugenic and eupsychic reconstruction; and nothing will tend more to bring about practical adjustment of human relations and activities than the re-orientation of the rustic, *i.e.*, the concrete biological, human-interest point of view. Even socialism has adopted the wrong psychology in relation to land. Fed by the passions of the landless proletariat, socialism has emphasised the abuses arising from urban land monopoly, and proposes even to take away land from farmers, and control it like an "industry" from the city. The repression of such a normal instinct as land-hunger has caused mob-outbursts, while the attempt to establish urban proletariat dictatorship over agriculture has wrecked farming and urban manufactures in Bolshevik Russia. Thus has abstract reasoning set at naught imperative human and social values. An inter-dependent system of rural and urban economy and exchange can alone maintain the structure of civilisation. The rural community movement and the co-operative organisation are thus in the forefront of social programmes to arrest the disintegrating tendencies of urbanism. The normal balance between agriculture, manufactures and commerce has been disturbed everywhere by the action of mercantile rings and syndicates who speculate in crops, heedless of the requirements of food consumption of the agricultural population. Commercial parasitism is seen in its worst forms in tropical regions where abundant cheap labour is utilised by white capital with a maximum of commercial activity and urban profit. Rural progress starts from rural self-sufficiency and consists in a rotation of multiple crops, while one crop system even while it leads to over-production does not lead to the satisfaction of the manifold needs of a relatively simple agricultural community. In one crop systems of agriculture as in tea, coffee, cocoa, jute, rubber and hemp plantations in the tropics we find a close approximation to factory methods and regulation along with the rise of slums

and sweated labour even in the midst of a sparse population. The one-crop system in Africa and Asia has been an agency of oppression and a cause of agricultural depression, and agricultural crises and famines show the dangers of urban exploitation. Indeed the acute problems of inter-racial economics connected with the exploitation of the tropical and sub-tropical regions arise on account of the disturbance of the normal equilibrium between agriculture, manufacture and commerce. Economics ought to appreciate better the general need of better relations between urban and rural interests. Civilisation must conserve the fundamental educational values of agriculture.\* But economics entirely overlooks them, and in its emphasis of urbanism ignores many other elemental instincts and deeper satisfactions of human nature.

In an admirable analysis of contemporary economic thought, Professor Fetter has recently shown the limitation of what he terms price economics, which has very tenacious roots and sprung up vigorously in the writings of authors where it had been blasted leaf and branch. He examines especially the dilemma of Alfred Marshall, the influence of whose book on economics teaching in India has not been quite healthy as encouraging an unreal and speculative outlook. In his price economics, Marshall is a faithful guardian of Ricardianism, though the human element evident in his enquiries and digressions is perhaps the firmest foundation of his reputation in spite of his eclecticism in matters of principle and his apologies for the sophistries of Ricardianism. The neo-classicists still talk Hamlet-like with the skull of an effete Ricardianism on the one hand, and the spectre of the economic man on the other. Problems of banking and currency, of price fluctuations and crises may be expressed in monetary or mathematical terms but they touch only the fringe of the real economic interest. For certain purposes averages and indexes may be absolutely useless. As a statistician observes, an average or an index cannot be used when the exact wage conditions of an industry or a locality is the fact to be ascertained. But for the study of the broad tendencies, an average still represents a very convenient method and when the tendency studied applies to many industries and many localities, nothing can supplant an index number. It must also be remembered that averages and index numbers should be applied not merely to the study of the world of labour as a whole but also more usefully to the investigation of wages and hours of labour in different occupations, localities and grades of employment, even as the new economic psychology should obtain its data from the variety and heterogeneity of types of labour and its behaviour, and their relation to the technological conditions of particular industry. Thus the average and index have and must have reference to one of the important issues of a concrete economic environment and its diverse and specific reactions on man and his wel-

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\*For the educational values of agriculture see O. F. Cook's "City and Country," and "Journal of Heredity," March and April, 1921, and my "Foundations of Indian Economics," Conclusion; and "Principles of Comparative Economics," Chap. IV, Vol. 2.

fare. The mathematical and the statistical method in order to be useful must shoot forth tendrils of human tendency; and, indeed, the new method must elude a graphical or mathematical representation inasmuch as human motives and tendencies cannot be measured quantitatively because of their element of uncertainty, and of the qualitative difference from the standards of measurement proposed. Even if we admit the measurability, these would have to be regarded as functions of such a large number of variables that any exact calculation will be rendered impossible. The fundamental basis of the new method will be the principle of adaptation, which being the essence of all economic tendencies, exhibits a manifold variety in diverse economic groups and situations. The conventional method of treatment is but an instance of geometry nibbling at the skirts of living issues. The relations of men to goods and to their enjoyment, the choice of industry and of profession, the satisfaction value derived from production as a creative activity and from consumption of material goods as a mode of enjoyment, social and individual valuation, the concrete economic situation with its complex processes and phenomena and their reactions on man and his motives and welfare, these and other problems which gravitate round the very centre of economic interest cannot be moulded in a Procrustean bed of classical or neo-classical formulæ, averages or indexes. In no other age, indeed, have economic theories been so much discredited and distrusted as during and after the war because of the obstinate attempt to interpret concrete problems and issues of life in terms of mechanistic valuation. They have been regarded as inadequate by administrators on the one hand, and abstract and dogmatic by the revolutionaries on the other.

Its effects have been no less harmful than that of the metaphysical theory of the state as propounded by German political philosophers. The abstract concept of the economic man, empty of content, clothed with the form of rationality the demands of competitive industrialism, the nineteenth century phase of western economic revolution even as the Hegelian theory of political obligation latterly came to justify the autocratic demands of the Prussian bureaucracy. The finalism of economic abstraction, which has found its modern champion in Marshall and his school, has been associated with a gospel of duty, separated from empirical purposes and results, which has gagged the vital impulses and values of individuals as well as of society at large. British economic metaphysics, if I may coin the term, fares no better in this respect than the post-Hegelian political philosophy; both set up as realities states and social economic laws impersonal and alien to, and lording it over the deeper and the dynamic phases of human life. And here again the corrective would be as in the case of the German idea of the state to go back to the realisation of the wholeness and completeness, rather than the unity of the group. And this realisation will bring in its turn the recognition of the group as a dynamic and integrative reality or the body intermediate between the state and the individual which will be the bedrock upon which new economic thought must stand.



The root fallacy in economic theory lies much deeper. Economic analysis has not as yet weaned itself from the obsession of the Darwinian theory of competition and natural selection which has made much of the competitive system among animals and neglected the co-operative system in organic evolution. This has strengthened and been strengthened by the older interpretation of individual behaviour by rational motives. Indeed both these strands of thought are hardly discernible, in the web of economic individualism, which the economists have woven and which has cast its spell over every field of human endeavour. That spell has now been broken after the strife and unrest which followed the unregulated development of capitalism and financialism with its inevitable nemeses of individual and social revolt. And to-day in the west we see tentative experiments of group formation which seek to check the evils associated with the centralised absolutist structures in polity and industry. But co-operative production has ceased to progress while organised unionism subordinates co-operative political lines to class interest and practically abolishes the older political order. Guild socialism and syndicalism are to-day each loudly advocating schemes of re-organisation on the basis of the group organisation of the economic life. In all these schemes of industrial reconstruction, however, the inherent rights of groups are asserted and emphasised in the same way as the natural rights of the economic individuals of the *laissez faire* days while in the attempt to bridge the gulf between the labourer and the Capitalist, the unskilled proletariat and the specialised worker, the social strife is repeated in another and perhaps a more extended field by ranging the forces of production against the army of consumers and brain workers. This will be the inevitable result of adopting the syndicalist plan of the substitution of the economic control of producers for parliamentary control by the consumers. The guild socialist's notion of two states is similarly inadequate for it does not present a practical solution of the difficulties that will arise in case of the conflict between the federation of trades and guilds on the one hand and the organisation of the consumers on the other.

The new economics must base itself on a more adequate theory of group-life and relations. Guild socialism and syndicalism break up the economic man into divergent and conflicting fragments which refuse to reunite in the political order. Socialism invokes the all-obtrusive authority of the state, with its inspection and inspectors, for compelling their co-operation in the exercise of the general will of the community it represents. Indeed all these movements originate from a vicious hypostasis of man and his functions ; only the calculating and hedonistic man of the classical days has yielded his place to an aggressive and intimidating economic man. The new economics will avoid these fundamental errors and base itself on a new type of group-life which takes into account the whole man and fuses any divergent and conflicting interests by placing the individual in the communal centre and the communal interest in the centre of the individual life. It will develop concepts of man as an evolving social being, who satisfies his needs by complex social co-operation and whose activities are not so mechanical

as the theory of competition assumes. These spring from the deeper and more elemental impulses, which determine economic standards and institutions and place the life economic in a harmonious setting of the collective life of the community. Economics will thus satisfy the inevitable and growing demand of the corporate social personality of man, so much repressed by the modern economic organisation. Indeed we are witnessing to-day far-reaching changes in the economic organisation itself. Industry is bound to be co-operative and creative in a much fuller measure than we now imagine. The future does not belong to State-socialism, for we already see a movement in the west towards the delegation of the authority of the state to the great trade unions. The nationalisation of industry in the phase at present before the industrial leaders has obvious difficulties. Yet through socialism and syndicalism, Guild socialism and organised unionism the west is steadily approaching towards the new industry and the new society in which the industrial groups will be better oriented and there will be neither any industrial compromise and forced acquiescence resulting in strikes and lock-outs nor any dissociation of the groups involving economic and social anarchy.

To-day the new group psychology, the new ethics, the new politics and the new jurisprudence are all based on a new conception of modes of association and of integrated individuals acting in groups. They are all giving up the tattered garments of the nineteenth century figure of the isolated man though owing to an imperfect conception of synthesis the sectional view of the social organism is reappearing in other guises. Indeed the whole anti-intellectualistic tendency and the trend of philosophical thought towards Pluralism have swept away the basis of that logical abstraction on which economics still rests. The re-instatement of man's composite personality and the healthy and the progressive group life and development insistently demands more adequate and correct economic concepts. This demand is being met in other humanistic studies, but economics still obstinately refuses it.

But a far more important defect in logical analysis arises on account of the neglect of wider cultural groups or types that comprehend the entire life of races and peoples other than the purely Eur-American whose rich, social and economic experiments have no less a significance in the evolution of world life. Economics has not hitherto sufficiently taken into the account diversity of environments and the variety of life-schemes, and economic values of cultural groups and regions, and different social and historic series in different environments. The impact between the east and the west has in recent years given birth to the sciences of comparative ethnology and jurisprudence; the types of communalism in Asian polity have been an eye-opener for the western student of political evolution, while the economic organisations of the east have no less a significance for economists. Social and cultural Anthropology has come to discover a variety of social values and life-schemes but economics still clings more or less to an analysis of western social history. The normal type of evolutions are furnished by the social history of Western Europe chiefly the phase known as industrialism, and all economic forms

and institutions which do not conform to it are regarded as primitive and rudimentary. The influence of conditions which differ by their quality, quantity and order of succession are thus ignored.

Confining ourselves strictly to the sphere of economic forces and institutions, we find in India a differential level and gradation of wages, which is not maintained by competition but is customarily adjusted to the standards of subsistence that take into account the needs of the family and the conditions of craftsmanship in our village communities and different classes or castes of labour. The Indian agrarian organisation has similarly rested on the basis of the association of the peasant with a homestead, so far as possible a hereditary one, and a few acres of land. Accordingly, the family instinct of the Indian for the fixed homestead and appurtenance of land has prevented the rise and development of the economic rent as a separate and separable share of a landlord, being merged in the farmer's earnings, or the communal share thereof, and has given to Indian rent the character of revenue or assessment for protective services rendered whether by the State or the village community, or some constituted local functionary. The strong communal tie has also imposed certain limitations on the individual ownership and use of land by emphasising communal rights and duties. But the changes brought about during the dismemberment of the Moghul Empire and the importation by the early British administrators, brought up in the school of Bentham and Ricardo, of individualistic ideas of property into Indian land revenue settlement have superseded the old Indian notion of rights of different grades possessed by different classes of the community in one and the same land. These have introduced landlordism with proprietary rights as well as the free transfer or alienation of land, which was not previously allowed except with consent of the family, the village community, etc., and have created the characteristic phenomena connected with economic rent. More alarming is the emergence of a class of land labourers, the counterpart of the wage-earning proletariat of the West, who fill our mines, factories and plantations. The fast increase in recent years of this class in some of the provinces is a problem alike of the administrator and the economist on account of the social disintegration it is associated with.

But it is not merely the social tradition which has given a characteristic mould to eastern economic organisation that has been ignored; other formative factors, such as the geographical or climatic, have been equally lost sight of. The scale of consumption, for instance, is adapted to a particular geographical environment. The true theory of food values can thus be formulated only after a comparative investigation into the dietary of different peoples. The level of the nitrogenous equilibrium is different among different races. Certain races have lived and done well with small starchy and sugary food. The importance of the natural organic salts and vitamins is also not sufficiently recognised. If we have the right balance of these, we may need less protein and less calories. Again, many other factors are to be taken into consideration, besides the amount of body weight, climate and so forth. The very

limited dietary of the Chinese and the Indian suggests that while not condemning altogether the orthodox theories of food values, at least as regards the body-building foods, and the natural salts and vitamins, we may be prepared to find that a far smaller amount, at least of protein and of the calories, will suffice provided that certain other conditions be fulfilled.

In India clinical researches tend to show that the level of proteid consumption which is sufficient for healthy subsistence and normal efficiency of an adult stands much lower than the same level for the European adult, being 60 to 70 per cent. of the latter's requirements. This has important bearings not only on the nature and standard of our consumption and nutrition but also on the conditions of employment of labour generally. Our metabolic changes and the processes of wash and repair connected with cell storage and cell discharge, necessitate not intense and intermittent spurts of energy but slow, steady leisurely work. This is partly also the character of Mongoloid consumption and metabolism. Accordingly those lines of manufacturing industry or types of organisation of labour which require long hours of steady, equable work and admit also of leisurely disengagement at intervals are peculiarly suited to the Indian labourer, who has been known to beat his European compeer in such forms of labour in the actual history of British Colonial development. In the recent history of factory industries in India we have too often witnessed the deterioration and degradation of labour, due to the violation or neglect of these primary conditions, and the universal complaint of mill-managers regarding Indian labour are traceable to the instinctive efforts of the labourers to correct the maladjustment in the fields of biological and sociological adaptation alike. This is also responsible for the development of the world's worst slums in our mill-areas, the seedplots of vice and disease, where the sanitary dangers of excessive agglomerations of population have been accentuated by climatic conditions of heat and moisture though our climate itself provides natural remedial agents like sun and rain, if only the plan of open-air and out-door life could be imported into our close-built *bustis* and *chawls*. Examples of economic and social maladjustment are too numerous to mention. A process of substitution, super-imposition or imitation is manifest in such phenomena of economic transition, characteristic of the East, as the disparity between rural and urban economic standards, the decline of cottage industries, the system of explorative advances, rack-renting and non-occupancy tenancy as well as the development of city economy and exchange independent of and sometimes antagonistic to agricultural life. Abnormal phenomena are those of the employment of forced, penal or decoyed labour, condemned to work in insanitary mines and noxious plantations, excessive ruralisation, a characteristic of economic backwardness or excessive urbanisation, a characteristic of economic parasitism, or again, the control of currency by capitalistic and financial interests. More important politically speaking are the phenomena of conflict of economic types such as those of the prohibition of immigration, or of free imported labour of black, brown or yellow stocks as in

America, Australia, East and South Africa or the forced reservation of vast areas in different continents. Asian labour which has taken a prominent part in the early development of the Colonies is now sought to be excluded on grounds of political expediency, and the economic argument is advanced that it tends to lower the standard of life and consumption of the European labourer though the latter is higher than the requirements of the region. But the claim of the Chinese, Japanese and Indian labourer to participate in the reclamation of Central and Northern Australia, of the Bantu races, supplemented if need be by the Indian stocks, to convert the wildernesses of Central and Eastern Africa is the claim of nature adjudged by science and ratified by humanity. And if international economics perpetuate the demands for the open door and the claims of industrialism to exploit the tropical regions of the East, the banged door in the West must be thrown open, and the claims of the Indian agriculturists, miners and traders in South Africa and America, and of the Mongoloid peoples of the Central Asian Steppes to take part in the pastoral and agricultural development of the Canadian and Alaskan wilds must be recognised. Cognate in nature are the phenomena which arise in the tropics out of an ill-regulated intercourse between rudimentary and advanced economic types, which has brought about the deterioration of white stocks as well as demoralisation and suffering and sometimes slow extinction of black peoples. Nature has decreed that human evolution should include a colour scheme which is an essential factor in the adaptation of man to his surroundings, and which is an outward and visible indication of his fitness for life under certain geographical conditions. And the time has come for international legislation and supervision to ratify the judgment of nature. In protection and segregation, in reserve and assignment to locations of particular races, in shut door or open door, the problems should be approached in the light of a scientific humanitarianism. This necessity will be felt in spite of the gradual and increasing control of industrialism by labour, for whatever promise international socialism may hold out, even groups of labourers are ready to exploit weaker groups of workmen. The new imperialism will recognise sooner or later the necessity of international control and supervision to protect the rights, liberties and welfare of coloured labour, and to revise land and trade policy in the plantations so that the social organisation may evolve unimpeded in the mutual adaptation of stock and climate. Railway, mining and trade rights will be secured by concession companies, and loans, national or international, will be advanced, so that the economic education of the immature or less advanced races of the world will proceed apace. And the benefits of such economic intercourse will be not merely material. The Indian and the Chinese communal consciousness, and its works and experiences will be utilised in a new industrialism that will supply the driving force and initiative to the old communalism and re-educate and renew it by the schemes and methods of group organisation now being advocated in the West. The implied socialisms and humanisms and the variety and vitality of group-life in China and India will furnish valuable data for the present industrial

reconstruction on the West, even as agricultural and industrial co-operation, and self-government in industry, according to the guild-socialist or syndicalist plan will be useful in the revival of the villages and the organisation and federation of industrial communities in Eastern communalism. Thus it is that there will emerge a true world scheme of economy, in which superior and backward peoples will help one another in the exploitation and distribution of the world's material resources and the moral resources both of the West and the East will be utilised in new economic and social experiments for bringing peace and harmony to a discordant and distracted humanity. It is this end that Comparative Economics will have in view, and it seeks to achieve it not only by an investigation into individual and social motivation as impelling economic activity but also ascending by a wider synthesis of life and history into the divergent economic values of different cultural groups and regions as members of the economic federation of humanity

## DISCUSSION ON DR. MOOKERJEE'S PAPER.

MR. BHATEJA after Dr. Mookerjee had summarised the contents of his paper said that he failed to understand why Dr. Mookerjee should have selected the Orient as the custodian of the science of group-life, and pointed out that the whole history of Russia was a striking illustration of a country which managed all economic and political institutions on a group basis. He pointed out that group-life existed in Germany also. He then went on to say that co-operation did not begin in India but in Germany, and he showed how it also flourished in France. Referring to village Panchayats he said that these institutions could not possibly flourish unless new life were infused into them and that practically meant converting them into new institutions. Finally he said that he failed to understand how a system of Indian Economics or Oriental Economics could be built up on local doctrines, local ideas and local theories.

DR. MOOKERJEE by way of reply said that a complex question had been introduced about the difference in group-life organisation as between India and the West, and pointed out that the history of the 19th century economic and social life in the West had been a history of over-centralisation. Again the Industrial Revolution had brought with it a scheme of life based on economic individuality as a result of which all those customs and usages which existed in the old village communities had been brushed aside. He regretted he could not explain in detail the various points raised in the discussion as he had to run for his train.

MR. KALE in concluding the discussion said that while recognising the existence of village groups they must remember that these groups had become disorganised, and he very much doubted whether the old communal or group spirit was likely to be of much use in starting new economic and social institutions. Referring to the case of Panchayats he said that the Minister of the Local Government in his Presidency found it very difficult to bring the Panchayat Act into operation because the villagers were not willing to stand for elections. This was convincing proof that it was not possible to revive the old Panchayats wholesale, or even to reconstruct their social and economic institutions on the old basis. In the face of the economic changes that were taking place he thought that though it might be desirable to make use of the old spirit of corporate life, they could not act wholesale through the old institutions. He pointed out that in certain parts there were co-operative credit societies and housing societies on a caste basis, but this he did not think desirable at the present time, and such societies in his opinion were better when formed on an altogether new basis.

**THE MEASUREMENT  
OF  
PRICE FLUCTUATIONS  
AND  
THE TIME INTERVALS  
BETWEEN  
PRICE MAXIMA.**

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# THE MEASUREMENT OF PRICE FLUCTUATIONS AND OF THE TIME INTERVALS BETWEEN PRICE MAXIMA.

## Section I.

### 1. Introductory.

There is little doubt that most people would prefer to hear about a new type of phenomenon rather than attend to the precise arithmetic expression of a group of recognised facts. Scientists are in many ways quite ordinary people, and are often endowed with a similar preferential interest. It is probably for this reason that the search for new periodicities in food prices, or in the annual yields of the harvests, or in the occurrence of years of great or small rainfall, has been more actively pursued than has the examination of the annual fluctuation of prices, which is based on a fact of common observation, namely the recurrence of the seasons.

Yet I venture to think that, apart from its own intrinsic value, the quantitative analysis of the details of annual price fluctuations, will be useful when engaged in seeking for periodicities which are unknown in advance. When, indeed, we thoroughly understand the numerical magnitude and characteristics of the yearly variation, we shall be much less likely to be deceived as to the significance of the values of the constants hammered out by the automatic machinery of periodogram and Fourier Series.

This quantitative examination will lead up to the examination of the results of harmonic analysis as applied to short term fluctuations of prices, for periods varying from 2 official fortnights to 48 official fortnights. As there are 24 official fortnights in the year this analysis will cover periodicities from 1 month to 2 years, though no broken periods of a fortnight have been included in the periods examined.

The paper will close with a theorem on the closely related subject of the time-intervals between successive price maxima, this theorem enabling us to deduce the probability of any particular time-interval. The correspondence between the theoretical frequency and the observed frequency of price-intervals, for wheat in India and England, and for American Cotton at Liverpool, will be exhibited.

### 2. The Data.

The annual variation of the retail prices of the 5 food-stuffs, wheat, jowar, maize, gram and gur at Lahore has been examined. The prices used are those known as the Fortnightly Gazette prices, which are supposed to represent prices as they stood in the principal market for the particular commodity on the 15th and on the last day of the months. The actual intervals between the dates for which prices are recorded vary, therefore, from 13 days for the second fortnight of February in an ordinary year, to 16 days. Properly speaking the data should be corrected for the irregular lengths of the official fortnight, but the error introduced by ignoring this irregularity is small with respect to the much more serious

errors in the recorded prices themselves. These prices are in fact only approximations, as they are simply the figures which the bazaar "chaudhri" thinks it desirable to supply to the Tahsil officials. As a rule it is to the advantage of both chaudhri and Tahsildar to exaggerate the actual price, as, should a demand for one of the commodities be made, it could always be readily supplied at the quoted figure. How serious such errors may sometimes be, can be illustrated from a recent case in which the Gazette prices were checked by reports from an independent industrial surveyor. The results are—

				Price as reported in the Gazette for 31-8-1922.	Price as reported by Director of Industries for 31-8-1922.	Percentage difference.
				Rs. A. Per maund.	Rs. A. Per maund.	Per cent
Wheat	..	..	..	5 11½	5 6	6
Jowar	..	..	..	5 0	3 12	33
Ghi	..	..	..	106 0	96 0	10
Bengal Coal	..	..	..	1 8	1 0	50

These are, of course, extreme cases from a series of prices of 24 commodities, and even in them the Tahsildar was able to produce written evidence that his quotations were accurate (*sic*), so that the true price was possibly intermediate between the two sets of figures. Yet, the instance emphasizes the need for caution in blindly accepting a single quotation as reliable, and the inaccuracies may be sufficient even to affect conclusions based on averages of a good many years.

In the method of examination of the prices adopted here, systematic errors are to a large extent eliminated by dealing only in the price level of any commodity expressed as a percentage of the antecedent years' annual average price for that commodity, so that a uniform percentage error of a quoted price in excess or defect will not alter the working ratio. There is no means, however, of deducing the true percentage price of a commodity from quotations which suffer from non-systematic errors, and we are obliged to fall back on a mathematical graduation, based on the unproved assumption that prices will, on an average, over a long series of years, exhibit no abrupt fluctuations.

This smoothing-out process is a common-place of all statistical and physical research, and its validity depends on the closeness with which the adopted graduation formula expresses the actual law underlying the data. In the case of the seasonal variation in prices, it is clear that some periodic function is required, and this condition rules out the application of parabolic, or exponential curves used in actuarial work, or Pearsonian Frequency curves. The obvious function to use is, therefore, the first harmonic of the Fourier Series, and this function has been calculated for all the seasonal price data given hereafter.

...est of place—or time-extrapolation, this method is put out of course as a practical solution. The commonly adopted alternative is to compare each price with the running average, or mean of the observed prices, equidistant ahead and astern of the central price. This procedure seems to be open to the practical objection that the instantaneous running average, that is the running average price at the present moment, is indeterminate, the result being that in order to make a prediction of the price, say, a month ahead, we should need simultaneously to predict, two, three, four or more months ahead as well.

The course adopted in this paper has been to divide each fortnightly price by the mean of the 24 antecedent fortnightly prices, and to express the result as the percentage. This was done in the case of wheat, jowar, maize and gram; but for gur, owing to pressure of time, the price in a particular fortnight was divided by the average price for the year ending on the previous 31st December. The figures obtained for gur will thus not be exactly comparable with those of the others for crops, but the difference will probably not be serious.

#### 4. Fluctuations exhibited as harmonic curves.

When each price had been expressed as a percentage, the average was found for each fortnight over a term of years and the first harmonic of the averages was calculated. In addition, the standard deviation from year to year of each of the fortnightly percentage prices were determined, this standard deviation being a measure of the divergence of the percentage price from its own mean; that is to say, that not only is the height of the yearly tidal wave of prices, but also the extent to which economic storms may super-impose special crests or hollows, has been measured. The greater, then, the standard deviation is for any particular fortnight the more reason we will have to anticipate economic disturbances at that epoch. The results obtained therefore (always with the limitation that random sampling may be at work) ought to be of considerable value to the business man and to the statesman who would launch his enterprise at the most favourable state of the economic tide.

The directly calculated percentage prices, and their standard deviations and co-efficients of variations, are given in statements 1—9. The first harmonics which represent the closest fitting of a sine or cosine curve with a period of one year are as follows:—

First Harmonics of Annual Grain Prices (Lahore) Retail in seers per rupee. Prices as percentages on 24 preceding Fortnights Average. Referred to First fortnight January as origin. For a calendar year  $t=1$ .

	Percentage Prices.	Standard Deviations.
<b>WHEAT.</b>		
Group I	.. $99\cdot1+5\cdot2 \text{ Sin } (2\pi t+278^\circ)$	$15\cdot5+3\cdot3 \text{ Sin } (2\pi t+129^\circ)$
Group II	.. $98\cdot9+7\cdot8 \text{ Sin } (2\pi t+288^\circ)$	$14\cdot3+2\cdot1 \text{ Sin } (2\pi t+175^\circ)$
Joint Period	$99\cdot0+6\cdot0 \text{ Sin } (2\pi t+283^\circ)$	$15\cdot0+2\cdot5 \text{ Sin } (2\pi t+143^\circ)$

Percentage Prices.		Standard Deviation	Range of prices, pass through- out
<b>JOWAR.</b>			
Group I	.. 99.5+9.7 Sin ( $2\pi t+109^\circ$ )	22.1+3.7 Sin ( $2\pi t+86^\circ$ )	
Group II	.. 103.2+6.6 Sin ( $2\pi t+118^\circ$ )	20.6+2.7 Sin ( $2\pi t+82^\circ$ )	
Joint Period	.. 101.0+8.3 Sin ( $2\pi t+113^\circ$ )	21.7+3.2 Sin ( $2\pi t+87^\circ$ )	
<b>MAIZE.</b>			
Group I	.. 97.9+9.2 Sin ( $2\pi t+96^\circ$ )	25.4+7.4 Sin ( $2\pi t+74^\circ$ )	
Group II	.. 100.2+8.9 Sin ( $2\pi t+24^\circ$ )	23.0+3.1 Sin ( $2\pi t+15^\circ$ )	
Joint Period	.. 99.3+7.5 Sin ( $2\pi t+53^\circ$ )	23.3+4.3 Sin ( $2\pi t+42^\circ$ )	
<b>GRAM.</b>			
Group I	.. 98.9+3.5 Sin ( $2\pi t$ )	18.9+2.6 Sin ( $2\pi t+147^\circ$ )	
Group II	.. 99.5+5.3 Sin ( $2\pi t+312^\circ$ )	19.5+3.9 Sin ( $2\pi t+283^\circ$ )	
Joint Period	.. 99.2+4.3 Sin ( $2\pi t+329^\circ$ )	19.4+1.4 Sin ( $2\pi t+249^\circ$ )	
<b>GUR.</b>			
Group I	.. 99.9+6.9 Sin ( $2\pi t+43^\circ$ )	8.4+1.1 Sin ( $2\pi t+113^\circ$ )	
Group II	.. 100.3+8.9 Sin ( $2\pi t+27^\circ$ )	9.1+3.2 Sin ( $2\pi t+112^\circ$ )	
Joint Period	.. 100.0+8.1 Sin ( $2\pi t+35^\circ$ )	9.0+2.9 Sin ( $2\pi t+112^\circ$ )	

It will be observed that on the whole there is substantial agreement for each crop between the amplitude and phases for the periods before and after 1898. \* This agreement appears in both the first harmonics of the standard deviations as well as of percentage prices, and must be regarded as indicating that, on an average, the ebb and flow of crop prices dependent as it is, on the regular recurrence of the harvests, is comparatively unaffected by non-periodic forces arising from political and international complications. †

To get a clear grasp of the nature of the seasonal change in prices the figures in the statements already referred to have been exhibited graphically in diagrams 1—17. These diagrams show, I think, better than any amount of description, what is the form of annual price curves.

In the figures given above the phases of all the first harmonics have represented the interval between the last ascending node and the beginning of the calendar year. In discussing price fluctuations, however, it is desirable to refer the price of each crop to the harvest time, and the following results are obtained which show the interval that ordinarily elapses between the harvest and the phase at which prices are a minimum (that is to say, when most seers per rupee are sold).

\*The only marked exception of this rule appears in the case of the standard deviation for gram, where the phases for the first and second group of years differ by no less than  $136^\circ$ , corresponding to an interval of just over  $4\frac{1}{2}$  months. As a result of this the greatest unsteadiness of gram prices which, prior to 1898, occurred at the end of October and the beginning of November, during the last 24 years, has shifted to about May or June. The amplitude, too, of the standard deviation has increased from 2.6 for the 24 years 1874-1897 to 3.9 for the 24 years 1898-1921. One may hazard the supposition that in recent years there has been more speculation in this crop at and after harvest time than previously.

† It is quite conceivable, however, that the historian of the future will regard the last 50 years in the Punjab, from an economic aspect, as a period of halcyon calm!

Crop.	Period elapsing between harvest and time of cheapest crop prices.		Time elapsing between harvest and period of greatest unsteadiness of prices.	
	Months.	Weeks.	Months.	Weeks.
Wheat (1874—1897) .. ..	..	3	5	3
„ (1898—1921) .. ..	..	2	4	..
Jowar (1874—1897) .. ..	6	2	5	..
„ (1898—1921) .. ..	4	..	5	1
Maize (1885—1897) .. ..	3½	..	4½	..
„ (1898—1921) .. ..	6	..	0½	..
Gram (1874—1897) .. ..	11	..	6	..
„ (1898—1921) .. ..	½	..	1½	..
Gur (1885—1897) .. ..	..	..	9½	..
„ (1898—1921) .. ..	½	..	9½	..

The conclusions to be drawn appear to be that even with such important crops as wheat, gram and gur, the full effect of the harvest in reducing prices is experienced almost simultaneously with the appearance of the crop on the market; whereas for jowar and maize the full effect of the harvest is not produced till many months later. This is particularly marked in the case of jowar for the period prior to 1898, and for maize since that date. In the latter case, in fact the observed time of lowest prices is at the end of April. Practically all prices, it should be noted, are steadier during the middle of the year than at any other time. The business community, therefore, appears to be more confident; and to be less inclined to gamble on the monsoon than are the framers of Indian Budgets.

It is impossible to notice all the interesting points suggested by the curves, but the following resumé, showing the annual range and unsteadiness of prices for all the years for which the statistics have been considered, may be given—

Crop.	Annual Range	Unsteadiness as represented by mean of standard deviation throughout the year.
	Per cent.	
Jowar .. ..	8·3	21·7
Gur .. ..	8·1	9·0
Maize .. ..	7·5	23·3
Wheat .. ..	6·6	15·0
Gram .. ..	4·3	19·4

Thus jowar is the crop with the greatest annual range of prices, whereas maize prices exhibit the greatest average unsteadiness throughout the year. The great annual range of gur prices must be interpreted in the light of war conditions which affected the prices of sugar, the annual range having risen from 6·9 per cent. prior to 1898 to 8·9 per cent. since that date. With unrestricted ocean traffic and the recovery of the German Beet-sugar industry it seems likely that a return to the neighbourhood of the smaller annual range of about 7 per cent. is imminent. The striking steadiness of gur prices from year to year is a commentary on the advantages of a market stabilised by world prices, and wheat, which is the next steadiest of the 5 crops examined, enjoys, though to a less degree, the same benefit.

In seeking a metaphor of the very clearly marked phenomena of annual range and unsteadiness of prices in the commodities noted above the best is probably that already used, namely, to compare the level of prices with the tidal waves of the sea, with crest and trough succeeding each other in yearly groups. The tendency of the rhythm is that crest and trough should recur at regular intervals, as a consequence of the uniform recurrence of the seasons and harvests. But, superposed on this tidal system, ripples or waves due to economic zephyrs, breezes or hurricanes, disturb the rhythmic rise and fall of prices, and may even, to the nonchalant observer, seem to obliterate the effects of the annual ebb and flow.

It is clear that we have moved but part of the way from a state of utter dependence on the seasons, when periods of harvest plenty alternated with want and starvation, and, that it is very necessary to join up India's economic "mare clausum" with the more smoothly heaving ocean of the world's markets.

The task of the statesman, and, I may add, of the far-sighted business man, is to take steps to reduce the extent of the annual rise and fall to reasonable dimensions, and to prevent the smooth progression from being unduly ruffled by political, social, or economic storms.

My figures show, for the crops examined to what extent this fundamental object has been achieved in the Punjab.



## SECTION II.

## 5. Short-term fluctuations in Punjab prices.

Attention has already been drawn to the fascination which the search for long-term weather, crop and price cycles exercises over many scientific men. Such cycles have been investigated by Dr. (now Sir Napier) Shaw, \* Sir Arthur Schuster, † Prof. H. L. Moore ‡, and most recently of all by Sir William Beveridge. § Schuster laid the foundations of a sound mathematical theory, but it seems doubtful whether the structure is yet complete, and, in applying Schuster's theory some limitations have been lost sight of by subsequent writers.

In all the investigations quoted the reality of the periods has been judged by a comparison of the magnitude of the intensity, namely the square of the amplitude, with the average "intensity" for all the periods sought. According to Schuster the probability that any particular intensity should be  $k$  or more times the mean value of the intensity is  $e^{-k}$ , but as Dr. Gilbert Walker || has pointed out in a fundamental theorem on the subject, if a very large number of intensities is calculated, the probability that the greatest of these intensities is  $k$  or more times the mean is very far from being  $e^{-k}$ .

We may carry Walker's analysis a step further by finding not only the probable value of the greatest intensity out of  $m$  observed intensities, but also the actual frequency distribution of the greatest intensities in repetitions of the  $m$  sets of observed intensities.

The extension is simple. For let the frequency with which the greatest intensity lies between  $i$  and  $i + \delta i$ , be  $f(i) \delta i$ , then, clearly the chance that the greatest intensity is less than  $c$  is

$$\frac{\int_0^c f(i) di}{\int_0^{\infty} f(i) di}$$

Then provided  $\int_0^{\infty} f(i) di = 1$ , we get

$$\int_0^c f(i) di = (1 - e^{-a/c})^m$$

\* Proc. Roy. Soc. Series A, vol. 78, p. 69.

† Proc. Roy. Soc. vol. 77 (1905), p. 741, "on the periodicities of sunspots" Phil. Trans. A, vol. 200, 1906.

"The periodogram of magnetic declination as obtained from records of the Greenwich observatory during the years 1871-1895".

Stokes' commendation, volume (1899), p. 107.

‡ "Crop Cycles in the United Kingdom and in France". Journ. Roy. Stat. Soc., May 1920, p. 445, and other papers.

§ "Weather and harvest cycles". The Economic Journal, December 1921 and Journ. Roy. Stat. Soc. May 1922.

|| "On the criterion of the reality of relationships or periodicities." Memoirs, Indian Met. Dept., vol. XXI, part IX, 1912.

Whence, differentiating with respect to  $\alpha$ ,  

$$f(\alpha) = \frac{m}{a} \left( \frac{1 - e^{-c/a}}{1 - e^{-c/a}} \right)^{m-1} e^{-c/a}$$
 and it is easy to show that the integral of  $f(\alpha)$  from 0 to  $\infty$  is unity. The actual value of  $f(\alpha)$  for various values of  $m$  and  $\frac{c}{a}$  is given in the subjoined table, and it will be seen that as  $m$  increases to 50 and over, the modal value of the greatest intensity occurs for values of  $\frac{c}{a}$  between 4 and 5.

Table giving the values  $m \left( \frac{1 - e^{-c/a}}{1 - e^{-c/a}} \right)^{m-1} e^{-c/a}$

*i.e.*, giving the distribution of the values of the greatest of  $m$  harmonics amplitudes from a group of average amplitude  $\alpha$

	$m=10$	$m=20$	$m=30$	$m=40$	$m=50$	$m=100$
$c/a=1$	059,279,5	001,207,6	000,018,5	000,000,3	000,000,0	000,000,0
$c/a=2$	365,629,2	170,823,9	059,857,3	018,643,8	005,444,0	000,007,6
$c/a=3$	314,416,1	377,349,7	330,060,1	271,764,3	203,850,5	031,724,0
$c/a=4$	155,084,8	267,820,4	321,460,1	356,274,2	370,180,0	293,789,1
$c/a=5$	003,465,8	118,753,5	166,653,3	207,887,8	243,117,0	348,519,4
$c/a=6$	024,240,0	047,310,0	069,198,3	090,043,5	109,745,5	193,875,2
$c/a=7$	009,044,3	017,924,2	026,642,2	035,200,3	043,600,9	083,313,5
$c/a=8$	003,344,5	006,666,6	009,966,4	013,244,0	016,499,5	032,449,9
$c/a=9$	001,232,7	002,462,4	003,689,1	004,912,7	006,133,3	012,191,0
$c/a=10$	000,453,8	000,907,2	001,360,2	001,812,8	002,264,9	004,519,6
$c/a=15$	000,003,1	000,006,1	000,009,2	000,012,2	000,015,2	000,030,6
$c/a=20$	000,000,0	000,000,0	000,000,1	000,000,1	000,000,1	000,000,2

In the case of  $m$  equal to 100, and this is less than the number of amplitudes worked out by Sir William Beveridge it would not be at all surprising to find a ratio of  $\frac{c}{a}$  greater than 8 or 9, even as a matter of pure chance.\*

The theoretical treatment for a small finite number of observations seems very difficult; and the present writer has set himself, therefore, only the much simpler task of applying periodogram analysis to Punjab fortnightly prices, not with the idea of discovering any new periodicities, but merely to see how the known yearly variation in prices, which,

\* The chance of the greatest intensity being 14.7 times the average as found by Sir William Beveridge in his Economic Journal paper, for a period of 15 years, is too small to be seriously considered, but then Schuster's theory does not apply accurately to values of the amplitudes calculated from only 20 summations.

as has been seen in section I, is a well marked phenomenon, will exhibit itself among a host of other amplitudes. For this purpose the fortnightly retail prices of Punjab Wheat at Lahore from 1874—1921, have been taken and examined for periodicities of 2 to 48 official fortnights, that is to say, from a time of 15 days, approximately, to 2 years. The amplitudes and phases are given for each group of years 1874—1897, and from 1898—1921 separately, in statement 10, while the periodograms for the 2 groups of years are exhibited in diagrams 18 and 19. The results do confirm, I think, our *a priori* knowledge, of the existence of an annual fluctuation, but no other periodicity is outstanding in both series of years. The following results are obtained :—

Years.	Maximum intensity.	Observed Mean intensity.	Period.	Ratio of maximum to mean intensity.
1874-1897 ...	55.50	8.21	46 fortnights	6.76
1898-1921 ...	57.15	4.44	24 „	12.68

The results are presented without comment, except to observe that the amplitudes show a general tendency to increase with the length of the period, which suggests that random sampling is at work for the higher periods, where only a few summations are available.\*

\* These seem to me many difficulties of interpretation, which must be solved before claiming the discovery of real periodicities. A first step is to compare the histogram of computed amplitudes with Schuster's theoretical frequency distribution

$$f(\rho) = \frac{N}{2\sigma^2} e^{-\frac{N\rho^2}{4\sigma^2}}$$

The immediate doubt arises as to whether the theoretical value of the "expectancy" should be inserted in this formula, or the observed mean intensity. Curves have been drawn, on both assumptions, for Sir William Beveridge's complete series, and for the 2 Punjab wheat periodograms. They could not, however, be reproduced here.

## SECTION III.

## 6. On the probable intervals between the occurrence of maxima in physical, social or economic phenomena.

It may be observed that a phenomenon may be of perfectly regular recurrence, but if its magnitude at any particular time is not represented by a sine or cosine curve, the amplitude of the 1st harmonic will not do full justice to the regularity. It seems possible, for example, that the periodogram analysis of the future may be based on other than Fourier Series.\*

From a practical point of view the actual times of a maximum or minimum price may be of more importance than the general aspects of the ebb and flow of values, and all business men, whether they are scientists or not, must be interested in estimating the interval that must elapse between one boom and the next.

The following investigation of the distribution of such intervals will, therefore, be of use.

If we assume that the time axis is divided into discrete intervals, and that the ordinate representing the magnitude of any variable is given at unit intervals of time, then the straight lines joining the values of the ordinate at successive units of time will have a series of maxima. It would, in the absence of any knowledge to the contrary, be reasonable to suppose that the magnitude is just as likely to increase as to decrease from the value it has at any given moment. It is assumed that the recorded differences of the magnitude are sufficiently fine to exclude the chance of neither an increase or decrease being recorded.

To test whether the supposition as to the equal probability of a rise or fall will explain the observed facts, let us assume generally, in the first instance, that the probability of the variable continuing to do between interval  $n$  and  $n+1$  what it did between interval  $n-1$  and  $n$ , to be  $p$  if the value is rising and  $q$  if it is falling. It seems necessary to assume that  $p=q$  for most series of statistics, otherwise the magnitude concerned would tend to increase or decrease without limit. Let the tendency, then, for the phenomenon to persist in the direction it is already moving in, be  $S$ , and the tendency to change be  $1-S$ .

Then the chance of a change of direction occurring after  $p$  intervals of time, measuring from the beginning of the interval which marks a change in direction, is clearly  $S^{p-1}(1-S)$ . The chance that another change of direction takes place after  $q$  further intervals is also

$$S^{q-1}(1-S).$$

\*Cp. L. N. G. Filon, "On the expansion of Polynomials in series of Functions". Proceedings of the Lond. Math. Soc., Ser. 2, vol. 4, parts 5 and 6.

Hence if we start with a maximum the chance that another maximum will occur  $N$  intervals later is the sum of such products as  $S^{p-1} (1-S) \times S^{q-1} (1-S)$

where  $p \geq 1$ ,  $q \geq 1$  and  $p+q=N$

i.e., the required chance of an interval  $N$  between maxima is

$$\text{Sum}_{p=1, q=1}^N \left( S^{p+q-2} (1-S)^2 \right)$$

The summation extends from  $p=1$  to  $p=N-1$ , and hence we have

$$C_N = (N-1)S^{N-2}(1-S)^2$$

So far we have obtained a general formula, which involves no appeal to the data themselves, and in order to apply it to a particular set of prices we shall need only to know from the figures themselves, the total number of maxima, which have occurred in a series of years, and the total time from the beginning to the end of the series. This is equivalent to knowing the mean interval between price maxima, and the total time of observation.

If we call  $\mu_1$ , the mean time-interval between maxima, we find

$$S = 1 - \frac{2}{\mu_1}$$

The calculation of  $\mu_1$  allows, then, the immediate application of the theoretical frequency formula.\*

The formula has been applied to the following series:—

- (1) Monthly average Gazette prices (per quarter of 480 lbs.) of English wheat since 1859. Data taken from the London Grain, Seed and Oil Reporter, August 25, 1922.
- (2) Weekly average prices of American Middling Fair Cotton at Liverpool, since 1912. Data taken from the International Year Book of Agricultural Statistics, 1909—1921, p. 444.
- (3) Fortnightly retail wheat prices at Lahore, given in the Punjab Gazette from 1872—1922.

The Diagrams 22, 23, and 24 show the correspondence of the calculated and observed frequencies, which is remarkably good for English wheat prices, fair for American cotton, and poor for retail wheat in the Punjab. Without undue consideration for the theoretical work I am inclined to attribute the want of agreement of the Indian figures to the known inaccuracy of the data. Only the collection of a really reliable series of prices will enable further tests to be applied.

\*The equation obtained is, of course, a special case of a truncated Pearson's Type III probability curve,  $Y = y_0 e^{-\frac{px}{a}} \left(1 - \frac{x}{a}\right)^p$  which requires the calculation of 3 moments instead of only the one required in the text.

The following table shows the observed and calculated frequencies of the intervals for the three cases examined :—

Time intervals.	ENGLISH WHEAT MONTHLY GAZETTE PRICES.		AMERICAN COTTON WEEKLY LIVERPOOL PRICES.		INDIAN WHEAT RETAIL FORTNIGHTLY PRICES AT LAHORE.	
	Observed.	Calculated.	Observed.	Calculated.	Observed.	Calculated.
2	20	24.16	20	19.23	36	16.11
3	29	29.09	24	21.92	26	22.55
4	27	26.19	12	18.74	30	23.68
5	22	20.88	16	14.25	20	22.10
6	19	15.66	11	10.15	8	19.66
7	12	11.26	9	6.94	11	16.25
8	8	7.89	2	4.62	10	13.27
9	5	5.41	4	3.00	4	10.61
10	4	3.65	1	1.92	10	8.36
11	2	2.44	3	1.23	3	6.50
12	1	1.61	2	.76	3	5.01
13	1	1.05	..	..	2	3.82
14	0	.68	..	..	3	2.88
15	0	.44	..	..	0	2.19
16	1	.28	..	..	1	1.64
17	..	..	..	..	0	1.22
18	..	..	..	..	5	.91
19	..	..	..	..	4	.68
20	..	..	..	..	0	.50
21	..	..	..	..	2	.37
22	..	..	..	..	0	.27
23	..	..	..	..	1	.20

The summarised results of the three cases examined are—

	Mean interval between maxima.	Value of S
English wheat prices	.. 5.02 months	.. .601
American cotton ,,	.. 4.7 weeks	.. .570
Punjab wheat ,,	.. 6.68 fortnights	.. .701

The fact that in all three cases S is greater than one-half, indicates that prices, during the years for which the data have been examined, were, on the whole, possessed of inertia, and tended after a rise or fall to continue rising or falling as the case might be. The probability of this continuance is given by the values of S. To what extent this probability affords a safe guide to prediction of the future must be left to a later examination, but at least the formula adequately sums up some of the features of the past behaviour of prices, in respect of the intervals between consecutive maxima.

In concluding I wish to express my thanks to Mr. Abdul Majid, M.A., and to Mr. Balwant Singh, B.Sc., who have given great assistance in the computations.

## STATEMENT 1.

*Yearly variation in price of retail wheat and steadiness of the same.*

Price measured as percentage of actual price in seers per rupee to average of previous 24 fortnights ( $\frac{1}{2}$  months).

First period 1874—1897.

Second period 1898—1921 (1912 excluded).

Time.	MEAN PRICE.		STANDARD DEVIATION.	
	Period I.	Period II.	Period I.	Period II.
January .. ..	(i)	94 92	10.5	14.8
	(ii)	94 92	15.7	15.8
February .. ..	(i)	93 92	17.2	13.6
	(ii)	97 97	17.8	11.6
March .. ..	(i)	96 95	16.0	10.6
	(ii)	99 99	15.4	12.2
April .. ..	(i)	98 100	14.5	11.1
	(ii)	101 103	12.8	13.5
May .. ..	(i)	105 108	11.8	12.8
	(ii)	105 108	11.5	13.2
June .. ..	(i)	106 109	11.5	13.8
	(ii)	106 108	11.9	16.4
July .. ..	(i)	105 106	12.9	13.7
	(ii)	102 103	12.2	13.1
August .. ..	(i)	100 101	14.1	13.5
	(ii)	99 101	14.4	14.1
September .. ..	(i)	100 99	16.2	10.5
	(ii)	101 98	19.2	16.4
October .. ..	(i)	100 98	19.7	17.4
	(ii)	98 96	18.8	16.9
November .. ..	(i)	96 97	18.5	16.2
	(ii)	96 97	17.7	16.0
December .. ..	(i)	95 92	17.9	14.7
	(ii)	95 92	17.5	15.3
			371.7	342.9
Mean =			15.5	14.9

## STATEMENT 2.

*Yearly variation in the retail price of jowar at Lahore and steadiness of the same.*

(Price measured as percentage of actual price in seers per rupee to average of previous 24 fortnightly Gazette retail prices.)

First period, 1874—1897.

Second period, 1898—1921. (Excluding years 1905, 1906, 1911, 1912, 1914, 1915, 1918 and 1919.)

Time.	Mean Price.		Standard deviation.		Co-efficient of variation.	
	(I)	(II)	(I)	(II)	(I)	(II)
January .. .. (i)	105	112	23·22	25·37	22·20	22·03
	(ii)	105	110	21·57	25·66	20·60
February .. .. (i)	103	109	26·09	25·38	25·39	23·30
	(ii)	101	106	26·42	23·06	26·06
March .. .. (i)	101	104	23·76	22·18	23·57	21·30
	(ii)	104	107	23·69	24·13	22·68
April .. .. (i)	99	103	24·74	20·30	25·00	19·70
	(ii)	98	99	23·39	19·12	23·93
May .. .. (i)	94	97	22·26	21·33	23·62	22·40
	(ii)	92	95	20·01	16·78	21·74
June .. .. (i)	90	94	16·50	16·75	18·32	17·39
	(ii)	86	91	17·53	15·86	20·43
July .. .. (i)	83	88	15·53	15·53	18·66	17·60
	(ii)	90	97	17·06	18·81	18·89
August .. .. (i)	90	104	17·41	17·77	19·29	17·10
	(ii)	98	110	20·85	24·42	21·02
September .. .. (i)	102	111	20·19	20·89	19·87	18·94
	(ii)	102	108	23·67	20·33	23·20
October .. .. (i)	105	108	23·86	21·32	22·76	19·83
	(ii)	107	106	24·73	19·78	23·11
November .. .. (i)	105	104	21·96	20·32	20·85	19·50
	(ii)	109	104	24·61	19·02	22·52
December .. .. (i)	110	106	24·93	23·40	22·65	19·18
	(ii)	109	105	25·72	20·72	23·56



## STATEMENT 3.

*Yearly variation in the retail price of jowar at Lahore and steadiness of the same.*

(Prices expressed as percentage of actual price in seers per rupee to average of previous 24 fortnightly Gazette retail prices.)

Joint period of 40 years, i.e., 1874-1921. (Excluding years 1905, 1906, 1911, 1912, 1914, 1915, 1918 and 1919.)

Time.				Mean price.	Standard deviation.	Co-efficients of variation.
January	..	..	(i)	107	24.38	22.65
			(ii)	107	23.37	21.90
February	..	..	(i)	105	25.99	24.69
			(ii)	103	25.24	24.43
March	..	..	(i)	102	23.20	22.71
			(ii)	105	23.89	22.67
April	..	..	(i)	101	23.17	23.01
			(ii)	98	21.70	22.19
May	..	..	(i)	95	22.15	23.20
			(ii)	93	18.62	20.18
June	..	..	(i)	92	16.70	18.23
			(ii)	88	17.09	19.43
July	..	..	(i)	85	15.72	18.45
			(ii)	93	18.09	19.45
August	..	..	(i)	96	18.80	19.61
			(ii)	103	23.13	22.42
September	..	..	(i)	105	20.94	19.89
			(ii)	105	22.60	21.57
October	..	..	(i)	106	22.91	21.64
			(ii)	106	22.89	21.51
November	..	..	(i)	105	21.32	20.34
			(ii)	107	22.69	21.17
December	..	..	(i)	109	23.29	21.45
			(ii)	107	23.96	22.31

## STATEMENT 4.

*Yearly variation in the retail price of maize at Lahore and steadiness of the same.*

(Price measured as percentage of the actual price in seers per rupee to average of previous 24 fortnightly Gazette retail prices.)

First period of 13 years, 1885—1897.

Second period of 22 years, 1898—1921, excluding 1906, 1912.

Time.	Mean prices.		Standard deviations.		Co-efficients of variation.	
	I	II	I	II	I	II
January .. .. (i)	103	104	29·31	25·35	28·41	24·31
	(ii)	104	107	24·27	27·32	23·42
February .. .. (i)	103	104	31·12	25·00	30·08	23·95
	(ii)	99	103	27·38	22·93	27·63
March .. .. (i)	101	103	27·01	20·79	26·83	20·20
	(ii)	103	106	31·91	24·62	30·87
April .. .. (i)	102	111	33·70	28·07	33·08	25·35
	(ii)	100	111	33·45	31·55	33·34
May ... .. (i)	96	109	31·70	29·11	33·05	26·72
	(ii)	91	106	18·40	26·49	20·30
June .. .. (i)	87	104	17·67	23·05	20·23	22·15
	(ii)	87	99	17·32	16·24	19·98
July .. .. (i)	84	95	13·82	18·75	16·48	19·81
	(ii)	84	91	13·49	22·53	15·99
August .. .. (i)	89	88	20·76	20·07	23·39	22·89
	(ii)	94	88	14·86	19·86	15·83
September .. .. (i)	94	89	18·72	21·66	19·82	24·48
	(ii)	95	92	17·45	18·98	18·46
October .. .. (i)	101	94	22·33	21·48	22·12	22·74
	(ii)	107	100	26·51	23·11	24·07
November .. .. (i)	107	98	28·88	21·40	26·88	21·73
	(ii)	107	101	31·59	22·38	29·44
December .. .. (i)	106	99	32·58	19·50	30·83	19·63
	(ii)	105	96	30·49	25·97	29·13

## STATEMENT 5.

*Yearly variation in the retail price of maize at Lahore and steadiness of the same.*

(Price measured as percentage of actual price in seers per rupee to average of previous 24 fortnightly Gazette retail prices.)

Joint period of 35 years, 1885—1921, excluding 1906, 1912.

Time.				Mean Price.	Standard deviations.	Co-efficients of variation.
January	..	..	(i)	104	26·89	25·92
			(ii)	106	26·28	24·82
February	..	..	(i)	104	27·43	26·37
			(ii)	102	24·81	24·40
March	..	..	(i)	102	23·31	22·84
			(ii)	107	27·07	25·93
April	..	..	(i)	107	30·59	28·47
			(ii)	107	32·06	30·40
May	..	..	(i)	104	30·75	29·53
			(ii)	100	24·95	24·85
June	..	..	(i)	98	22·70	23·30
			(ii)	94	17·04	18·71
July	..	..	(i)	91	18·24	20·13
			(ii)	88	19·82	22·42
August	..	..	(i)	88	20·34	23·09
			(ii)	90	28·41	20·40
September	..	..	(i)	91	20·82	22·95
			(ii)	93	18·44	19·77
October	..	..	(i)	97	22·02	22·74
			(ii)	103	24·77	24·15
November	..	..	(i)	102	24·83	24·30
			(ii)	103	26·37	25·54
December	..	..	(i)	102	25·37	24·92
			(ii)	101	25·07	24·75

## STATEMENT 6.

*Yearly variation in the retail price of gram at Lahore and steadiness of the same.*

(Price measured as percentage of the actual price in seers per rupee to average of the previous 24 fortnightly Gazette retail prices.)

First period of 24 years, 1874—1897.

Second period of 24 years, 1898—1921.

Time.	Mean prices.		Standard deviations.		Co-efficients of variation.	
	I	II	I	II	I	II
January .. .. (i)	98	95	19·20	17·06	19·65	17·96
	(ii)	99	95	18·69	15·29	18·88
February .. .. (i)	98	95	19·29	16·54	19·68	17·41
	(ii)	100	97	20·01	14·87	20·01
March .. .. (i)	101	99	17·59	12·81	17·42	12·94
	(ii)	103	103	17·86	15·47	17·34
April .. .. (i)	103	107	16·15	24·74	15·08	23·12
	(ii)	103	109	16·07	25·81	15·60
May .. .. (i)	103	107	18·09	24·49	17·56	22·89
	(ii)	101	104	16·72	23·81	16·55
June .. .. (i)	102	104	15·92	23·83	15·60	22·91
	(ii)	101	105	14·91	24·61	14·76
July .. .. (i)	100	103	17·02	23·02	17·02	22·35
	(ii)	97	102	17·77	21·27	18·32
August .. .. (i)	94	99	18·24	18·95	19·40	19·14
	(ii)	95	99	19·34	19·13	20·36
September .. .. (i)	94	98	20·12	20·47	21·40	20·89
	(ii)	96	98	22·42	19·54	23·35
October .. .. (i)	97	98	22·53	20·60	23·23	21·02
	(ii)	96	96	21·33	18·10	22·20
November .. .. (i)	96	96	21·77	18·82	22·68	19·00
	(ii)	98	95	19·68	16·99	20·08
December .. .. (i)	99	94	21·01	15·85	21·22	16·86
	(ii)	99	93	20·52	16·29	20·73

## STATEMENT 7.

*Yearly variation in the retail price of gram at Lahore and steadiness of the same.*

(Price measured as percentage of the actual price in seers per rupee to average of the previous 24 fortnightly Gazette retail prices.)

Joint period of 48 years, 1874—1921.

Time.				Mean prices.	Standard deviations.	Co-efficients of variation.
January	..	..	(i)	96	18·14	18·90
			(ii)	97	17·19	17·72
February	..	..	(i)	97	18·06	18·62
			(ii)	99	17·71	17·89
March	..	..	(i)	100	15·45	15·45
			(ii)	103	16·71	16·22
April	..	..	(i)	105	20·99	19·32
			(ii)	106	21·73	20·50
May	..	..	(i)	105	21·00	20·57
			(ii)	103	20·66	20·06
June	..	..	(i)	103	20·29	19·70
			(ii)	103	20·41	19·82
July	..	..	(i)	101	20·27	20·07
			(ii)	99	19·75	19·95
August	..	..	(i)	97	18·69	19·27
			(ii)	97	19·38	19·98
September	..	..	(i)	96	20·40	21·25
			(ii)	97	21·04	21·69
October	..	..	(i)	97	21·60	22·27
			(ii)	96	19·79	20·61
November	..	..	(i)	96	20·35	21·20
			(ii)	97	18·45	19·02
December	..	..	(i)	96	18·75	19·53
			(ii)	96	18·74	19·52

## STATEMENT 8.

*Yearly variation in the retail price of gur at Lahore and steadiness of the same.*

(Price measured as the percentage of the actual price to the annual average of the 24 fortnightly Gazette retail prices.)

First period of 13 years, 1885—1897.

Second period of 24 years, 1898—1921.

Time.	Mean Prices.		Standard deviations.		Co-efficients of variation.		
	I	II	I	II	I	II	
January .. ..	(i)	106	109	10·98	12·08	10·36	11·08
	(ii)	108	108	12·56	11·63	11·63	10·76
February .. ..	(i)	109	108	9·71	9·17	8·91	8·49
	(ii)	109	108	8·37	8·63	7·68	7·99
March .. ..	(i)	108	110	6·92	8·18	6·41	7·43
	(ii)	106	108	5·12	8·75	4·83	8·10
April .. ..	(i)	103	107	7·26	8·14	7·05	7·61
	(ii)	100	105	9·80	7·99	9·80	7·61
May .. ..	(i)	98	103	6·31	8·57	6·44	8·32
	(ii)	96	100	6·66	6·62	6·94	6·62
June .. ..	(i)	99	100	8·75	6·03	8·84	6·03
	(ii)	100	100	5·28	5·47	5·28	5·47
July .. ..	(i)	97	98	6·11	5·42	6·30	5·23
	(ii)	97	98	5·46	7·08	5·63	7·22
August .. ..	(i)	97	95	4·93	7·68	5·06	8·08
	(ii)	95	95	7·84	7·46	8·25	7·95
September .. ..	(i)	93	92	8·33	8·28	8·96	9·00
	(ii)	92	90	9·56	7·92	10·39	8·80
October .. ..	(i)	93	91	9·43	9·74	10·14	10·07
	(ii)	94	90	8·33	10·22	8·86	11·36
November .. ..	(i)	94	88	10·33	12·46	10·99	14·16
	(ii)	94	95	8·55	12·30	9·10	12·95
December .. ..	(i)	105	104	12·47	14·47	11·88	13·91
	(ii)	105	105	11·76	13·85	11·20	13·19

**DISCUSSION ON MR. JACOB'S PAPER.**

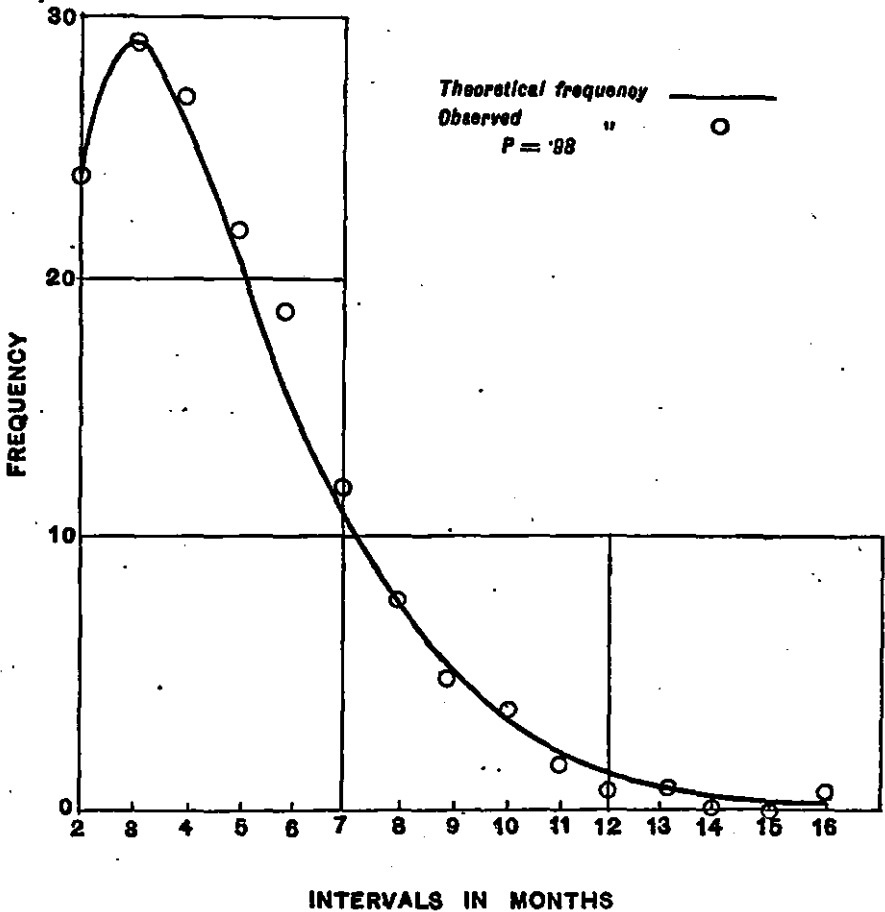
PROFESSOR J. C. COYAJEE congratulated Mr. Jacob on his very valuable and useful contribution, and also the Punjab province on its possession of such able officers who could give such important contributions—important not only to Indian economists but instructive to all students of statistics. As a member of the Fiscal Commission he was interested in the subject and said that although the restrictions on exports might cease he could not believe that bad abnormal fluctuations in the price of wheat would disappear, because there were other factors affecting its price, *e. g.*, the substitution of wheat for other grains with fluctuating prices.

PROFESSOR JEVONS said he desired to thank Mr. Jacob for putting before them the results of his very extensive inquiries into the fluctuations of prices. He would, however, like to see the investigation carried through the 19th century if reliable figures could be obtained. The period from 1872 seemed to him rather short. The results of the second period contradicted those of the first, and it would be extremely useful if the figures of earlier years could be got and examined.

It was put forward by another member as an explanation for the unsteadiness in the price of jowar that the production of this crop was very small and what was even more important the produce was consumed in such quantities that the stocks left over were normally very small.

MR. JACOB, replying, said he desired to thank members for the warm reception they had given to his paper. He said he personally would also like to go into the figures prior to 1874. He was inclined to agree with the suggestion put forth as a cause of the unsteadiness of the price of jowar and maize.

COMPARISON OF THE FREQUENCY OF THE NUMBER OF MONTHS BETWEEN THE MAXIMA IN ENGLISH MONTHLY GAZETTE PRICES OF WHEAT FROM JANUARY 1859 TO JULY 1922 (INCLUSIVE) WITH THEORETICAL FREQUENCIES.



Theoretical frequency curve  

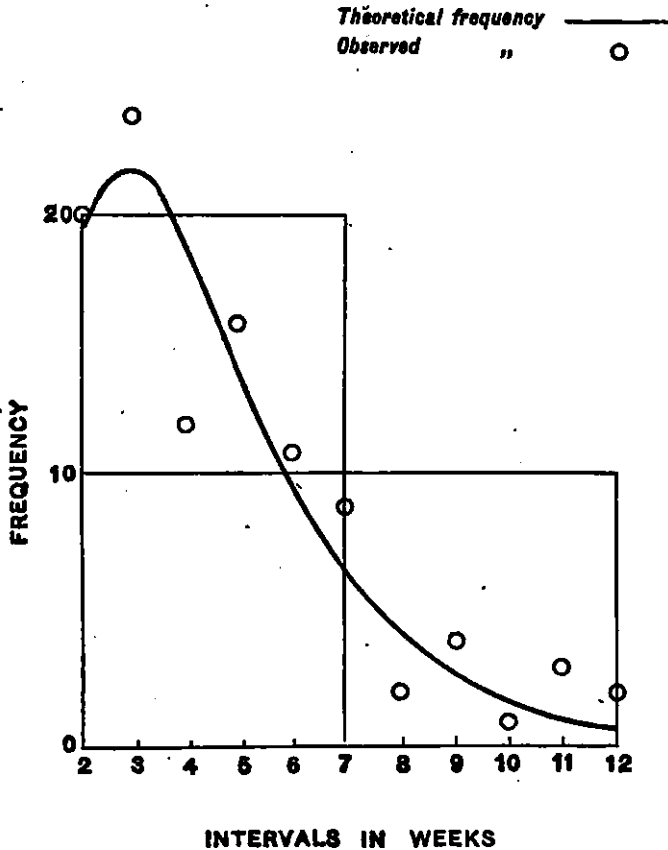
$$F_n = 151 (N-1) (0.6)^{N-2} (.4)^2$$

$$= 24.16 (N-1) (0.6)^{N-2}$$



DIAGRAM 23.

COMPARISON OF THE FREQUENCY OF THE NUMBER OF WEEKS INTERVALS BETWEEN THE MAXIMA IN WEEKLY AVERAGE PRICES OF COTTON-AMERICAN MIDDLING FAIR AT LIVERPOOL SINCE 1912 (INTERNATIONAL YEAR BOOK OF AGRICULTURAL STATISTICS 1909 TO 1921-P. 444) WITH THEORETICAL FREQUENCIES.

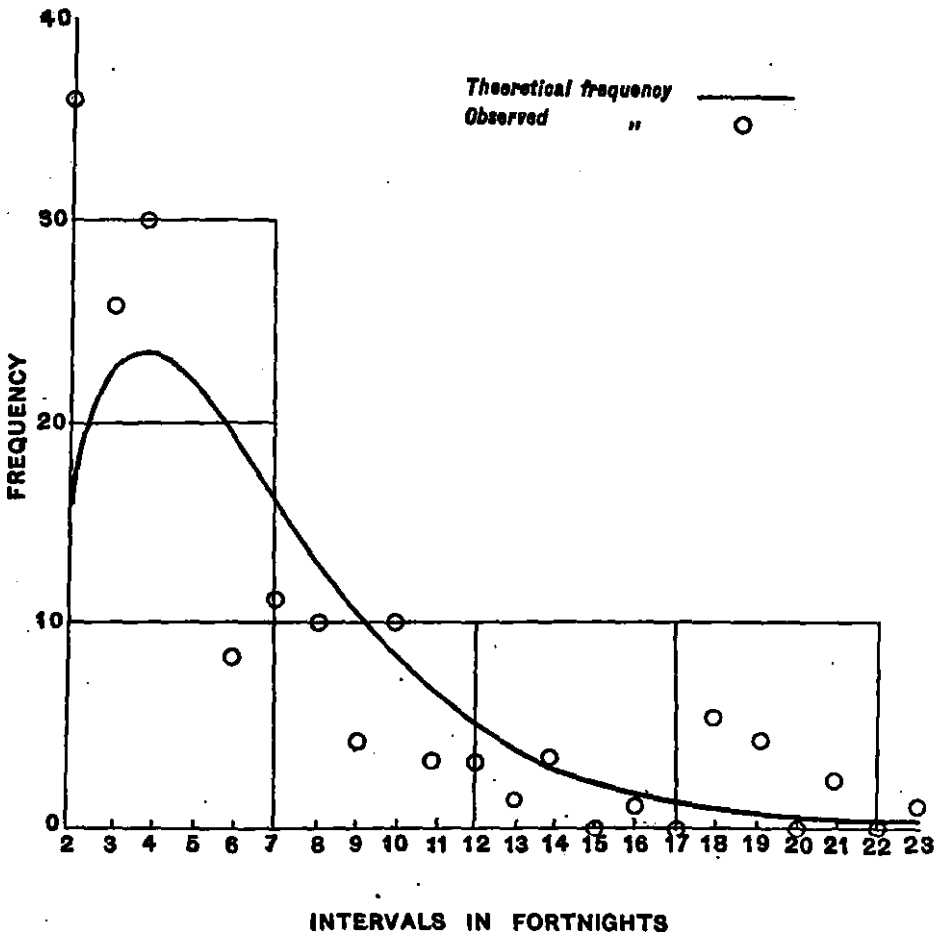


Theoretical frequency curve.

$$\begin{aligned}
 F_n &= (105-1)(N-1) (.57)^{N-2} (.43)^2 \\
 &= 19.24 (N-1) (.57)^{N-2}
 \end{aligned}$$

DIAGRAM 24.

COMPARISON OF THE FREQUENCY OF THE NUMBER OF FORTNIGHTS INTERVALS BETWEEN THE MAXIMA IN FORTNIGHTLY RETAIL WHEAT PRICES FROM 1872 TO 1922 (PUNJAB GAZETTE) WITH THEORETICAL FREQUENCIES.



Theoretical frequency curve  

$$F_n = 10.11 (N-1) (0.7)^{N-2}$$

# THE FUTURE OF THE INDIAN BANKING SYSTEM,

By B. RAMA CHANDRA RAU, M.A. (CAL.), L.T. (M.U.), LECTURER  
IN ECONOMICS AND COMMERCE, CALCUTTA UNIVERSITY.

(In the absence of the author, this paper was read by Professor Myles).

Indian banking is in a stage of transition. The banking embroglio and financial cataclysm of the 1913-15 period swept away the weak, unsound and more venturesome of the newly started Indian Joint-Stock Banks\* and ushered in a new era full of bright promise and hope. Close upon its heels came the recent war. It not only improved, re-organised and strengthened our banking system to a great extent but impressed the salient principles of banking theory better than a first-rate professor of economics would have done.

Attempts are being made to remodel our banking structure closely on the lines followed by the builders of the Federal Reserve system of the United States of America. The system of decentralised banking has been discarded in favour of the centralised banking system. A new turn to the banking wheel has been given by the creation of the Imperial Bank of India. The older Joint-Stock banks which emerged unscathed from the banking crisis have re-established their confidence and are expanding their activities into newer fields. A new type of banking institution, i.e., the Industrial Bank has been started and several banks professing industrial financing as their avowed mission have been lately started.†

* Year.	Number of Bank Failures.	Paid-up capital (000) omitted.
1913 (November and December)	.. 12	35,13
1914 .. ..	.. 42	109,09
1915 .. ..	.. 11	4,50

† The Tata Industrial Bank was the pioneer in this direction. Several others were immediately started. To-day we have the following Industrial Banks doing business in British India.

Name of the Bank.	When registered.	Place of business.
Tata Industrial Bank .. ..	.. 11th December 1917	.. Bombay and its branches.
Industrial Bank of Western India .. ..	.. 1st October 1919	.. Bombay Presidency.
Surat Industrial Bank .. ..	.. 30th March 1920	.. ..
Calcutta Industrial Bank .. ..	.. 20th September 1919	.. Bengal Presidency.
Karnani Industrial Bank .. ..	.. 26th September 1919	.. ..
Indian Industrial Bank .. ..	.. 26th November 1919	.. ..
Sthal Industrial Bank .. ..	.. 23rd December 1919	.. ..
Raikut Industrial Bank .. ..	.. 2nd January 1920	.. ..
Mongyr Industrial Bank .. ..	.. 23rd March 1920	.. Bihar.
Simla Banking and Industrial Company .. ..	.. 1st September 1919	.. Delhi.
Assam Industrial Bank .. ..	.. 17th May 1919	.. Assam.

Even in Native States, Industrial Banks are started with the special desire of fostering industries.

Name of the Bank.	Date of Registration.	Native State.
Mysore Industrial Bank .. ..	.. 24th July 1920	.. Mysore.
Gundulpet Industrial Bank .. ..	.. 24th August 1920	.. ..
Central Travancore Industrial Bank .. ..	.. 13th September 1919	.. Travancore.
South Malabar Industrial Bank .. ..	.. 6th April 1920	.. ..

The Co-operative Credit Societies are silently transforming our old village homes and are working a silent revolution amidst the field of desolation and havoc wrought by the sinister influences of selfish-minded capitalism. The Indian people are slowly acquiring the banking habit and in spite of occasional bank failures here and there, the Indian depositor is confiding more trust in the existing banking institutions.\* Many of the existing banks are increasing their capital† in order to provide the needed credit facilities in our money market. This increase of banking capital can be considered as an indication of the stability and financial capacity of the banks.

The banking profession is slowly becoming popular and a more intelligent class of people is coming forward to learn banking business and several of our progressive banks are rightly paying more attention towards the training of apprentices for the science of banking though it can be successfully learnt by intensive culture at the desk, yet the art of banking with its wonderful intricacies can be acquired by practical experience alone. There has been an appreciable increase in the number of banking offices either in the shape of newly started banks or in the form of branches‡ of the existing institutions, but this increase is not commensurate with the size of our country or the population to whose needs they minister. This inadequacy of banking facilities is being keenly felt as a wave of industrial activity is sweeping over our country thanks to the stimulating example of the activities of the Board of Munitions.

\* The total deposits in all the three classes of banking institutions increased from Rs. 92 crores to Rs. 235 crores in 1920. The respective shares in the total deposits in 1920 were: Presidency Banks 37%; Exchange Banks 32%; Indian Joint-Stock Banks 31%.

† The "paid-up capital" of the following banks increased during the years 1917 and 1920, as the Directors felt it necessary to increase their capital in order to widen the scope of their operations:—

- Bank of India (Bombay).
- Central Bank of India (Bombay).
- Indian Bank (Madras).

Some of the Eastern Exchange Banks also increased their capital but how much of it is being employed in India cannot be definitely ascertained.

‡ The following are some of the progressive Joint-Stock Banks which have increased their branches during recent years:—

<i>Name of the Bank.</i>	<i>Branches (sub-branches).</i>
The Alliance Bank of Simla .. .. .	51
The Allahabad Bank .. .. .	26
The Punjab National Bank .. .. .	25
The Industrial and Exchange Bank of India (Bombay) .. .. .	40
The Tata Industrial Bank .. .. .	11
The Central Bank of India .. .. .	6
The Bharat National Bank .. .. .	6
The Poona Bank .. .. .	5
The Bank of Northern India .. .. .	5
The Indian Bank .. .. .	4

The People's Bank of Lahore which failed in 1913, had nearly 80 branches.

The Exchange Banks have about 46 branches and the Imperial Bank of India about 76 branches. These compete with the Commercial Banks to a certain extent.

The policy of keeping an open door to all immigrant banks is leading to the establishment of powerful foreign banks\* who always aim to promote trade relations between the Indian Empire and their own mother countries. The indigenous banker of India is shaking himself free of his lethargy and torpor which has been the inevitable consequence of age-long absence of competition in the money-lending business.

Such are the interesting developments that are noticeable in Indian banking circles but much has to be accomplished before we can hope to reach the millenium of banking. Before a perfectly organised banking system can be developed, several improvements have to be effected.

The Imperial Bank of India should develop into a full-fledged Central Bank. Already a semi-state banking institution, enjoying full privileges and performing to a certain extent similar services which are rendered by the European Central Banks, it can rise to the full dignity and stature of a Central Bank.

During its short career of a year and a half, it has given promising signs of its alertness and usefulness to the community as a whole. The seasonal expansion of paper currency to five crores of rupees on export bills which has been recommended by Sir H. B. Smith's Committee† has been brought about by the action of the Imperial Bank of India during the last March when two crores of rupees were issued on export bills brought to the Controller's hands by the Imperial Bank of India.‡ Opening its branches in the interior of the country, it is expanding its field of usefulness and is bringing within easy reach of all sound banking facilities. Its promise to help the Alliance Bank of Simla to put its house in order betokens much. It is a sign that it is having a wide latitude of vision or "an imperial outlook" as Sir David Yule puts it.§

Performing more business with the banks than the outside public, thus justifying in reality the term bankers' bank, relaxing her policy of loaning to some extent, realising that it is the handmaid of trade and industry of our country whose imperative duty is to fulfil its everchanging requirements, caring less for profits than is the case at present, developing to a certain extent the newly permitted acceptance business and rendering help to all sound banks in their occasional hours of distress, the Imperial Bank of India can obtain real control in the money market

\*In addition to the old Exchange Banks conducting business in our country, new banks have recently been allowed to open branches in Bombay.

<i>Name of the Exchange Bank.</i>	<i>Date and year.</i>	<i>Head Office.</i>
Sumitomo Bank .. .. .	.. 31st December 1919	.. Japan.
National Bank of South Africa .. .. .	.. 31st March 1920	.. London.
Imperial Bank of Persia .. .. .	.. 20th September 1920	.. London.
Banco Nacional Ultramarino .. .. .	.. 31st December 1920	.. Portugal.
P. O. Banking Corporation .. .. .	.. 31st March 1921	.. London.
Reuter's Bank .. .. .	.. .. .	.. .. .

† *Vide* "Report of the Sir Henry Babington Smith Committee".

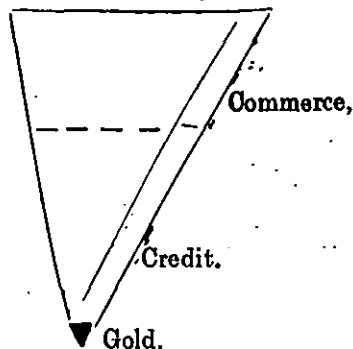
‡ *Vide* "Report of the Controller of Currency" 1920-1921.

§ *Vide* Sir David Yule's address to the shareholders of the Alliance Bank of Simla at their annual meeting held in August 1922.

and uninfluenced by political currents or the other members of the banking community, it should conduct the whole machinery of banking in the wider interests of society. A centralised system with the Imperial Bank of India acting as the mentor and guardian of the other banks is conducive to the establishment of a sound banking system.

Not only should the Imperial Bank of India pursue business of an unimpeachable character, but the ordinary commercial banks should keep proper cash reserves, rightly utilise their loanable money in liquid assets that can be instantly mobilised with the minimum of risk loss and be cautious in the granting of loans and in the proper selection of reliable and trustworthy clientele. So long as the commercial banks adhere to these golden rules there is no danger as regards their own self-preservation, but they must take care of their clients also and provide elastic currency which expands and decreases with the ebb and flow of business. They should adapt themselves to the changing needs of their customers and never unduly expand their credit by lowering the rate of discount and tempting business men to speculate or embark on wild ventures with easy money. Under the wise direction, legitimate persuasion, helpful intervention and restraining influence of the Central Bank that is arising in their midst, these commercial banks should successfully function to provide this country with sound and automatic currency and such amount of banking credit as is needed for its commercial, industrial and business requirements.

But it is neither the individual bank's conservative management nor the watchful guidance of the Central Bank, that can guarantee the soundness of our banking structure. Our people should realise that "the modern credit system is an inverted cone resting on an apex of gold" as Lord Avebury puts it. Sir R. Giffen rightly observes that "our credit system is to be likened to the long arm of a lever and the least touch on the cash basis displaces a heavy weight of credit on the opposite end." F. W. Bain who follows Lord Avebury's metaphor says, "the cone is a whipping top, the point alone on which it spins being of gold, the overhanging body consisting of paper credit. Confidence is the whipping which keeps the top revolving" and a rude shock to public confidence involving the withdrawal of gold from the banks, will fell the top to the ground and the beautiful structure will fall like a pack of cards. The late Sir Edward Holden illustrated this fundamental truth by the following diagram.\*



\* *Vide* Melrose "Money and Credit."

The bottom of the apex is the gold basis of the whole superstructure and a removal of a small portion of gold destroys a large portion of credit and it, in its turn, affects a large portion of commerce carried on on credit granted by the banks.

So our people should have confidence in the banks. Depositors, customers and shareholders should not easily lose their heads and reasoning faculties at the first sign of threatened danger and withdraw their support from the banks.\* The banks should be doing sound business and the customers, shareholders and depositors should repose perfect trust in them. They should have mutual confidence and this increases consistently with the growth of general prosperity and social sympathy.

The indigenous bankers should be alive not to their selfish interests alone but be mindful of the interests of our country and display a keen willingness and real desire to the economic regeneration of our country. They should realise that they have outlived their period of usefulness. They should be conscious of their duty to society and instead of acting as parasites gnawing its very vitals, convert themselves into useful and indispensable adjuncts of it.

In addition to the existing banking institutions more should arise and there should be specialising institutions such as pure industrial banks, investment banks, and mortgage banks. These institutions should establish a net-work of their branches all over their country. They should coax the unwilling people into becoming reliable and trustworthy clientèle. The secure beneficence of legitimate banking should be taught to the illiterate and suspicious minds. More bankers' Clearing Houses† should be started and the private banking firms should join them as clearing bankers in order to increase their utility. Some simple and carefully laid down legislative measures should be enacted to secure the confidence of the depositors, make the path of the existing banks an easy one and confine the newly arising smaller Joint-Stock Banks to the proper field of legitimate and conservative banking. The existing private bankers should emerge from their seclusion and play an active part in popularising banking business. The Joint-Stock Banks should publish informing balance-sheets and although some of the progressive bankers are publishing a better type of balance-sheet than the one

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\*Such a lack of confidence was displayed in the beginning of the late war in 1914. A rush was made on the Indian Post Office Savings Banks and the Joint-Stock Banks also. Even the Paper Currency Office was raided by note-holders for conversion purposes.

† There are about six clearing houses in all in this country.

Calcutta, Karachi, Bombay, Madras, Rangoon and Cawnpore possess clearing houses and the Imperial Bank of India facilitates the "clearing business" in all these places.

Calcutta has 23 banks, Bombay has 32 banks, Madras has 8 banks, Karachi has 11 banks, Rangoon has 10 banks, Cawnpore has 9 banks, and to facilitate their business there is a Clearing House at all these places. These publish the amount of cheques "cleared" during the course of their business operations. There is no reason why clearing houses should not be started at the following centres—Amritsar, Delhi, Lahore, Lyallpur, Lucknow, Rawalpindi and Allahabad. Numerous banks work at these places and the Imperial Bank of India has its branch operating in these centres also. It can easily take the lead and start C. H. organisation.

Amritsar has 9 banks, Delhi 11 banks, Lahore 13 banks, Lyallpur 9 banks, Rawalpindi 7 banks, Allahabad 7 banks, and Lucknow 8 banks

required by the Indian Joint-Stock Companies Act of 1913\* still much remains to be done in this direction to win the confidence of the public.†

It is a matter of some satisfaction to learn that the Indian Government is attempting to legislate on this matter, thus displaying its willingness to secure the interests of the depositors and accelerate the progress of the banking habit in our country. The pernicious tendency on the part of our Commercial Banks to encroach on the legitimate field of the Exchange Banks and their tendency to transact "mixed" banking business in their mistaken notion that such an action would bring about the economic salvation of our country are fraught with mischievous consequences and grave peril to their own existence and should be given up at the earliest moment. Again the present shyness on the part of some of the soundest banking institutions to amalgamate with each other has to be overcome. These are some of the important measures that have to be achieved before we can realise the full benefits of a vitalising banking system in our country.

Some of these measures have been discussed in detail in the last chapter of my book "Present Day Banking in India" published by the University of Calcutta. Attention will be paid in the following pages solely to the tendency of transacting "mixed" banking on the part of our commercial banks. Their grabbing desire to perform exchange banking business as well, will also be studied in this article.

*The tendency to perform "mixed" banking business.*

The classical exposition of commercial banking theory as expounded by Gilbert, Bagehot, Conant, Dunbar and Withers, has laid down that the chief business of the "commercial banks" is to finance the short-term needs of business men. The paramount duty of the "commercial" bank is to collect the floating capital of the community into its hands and lend it to *bona fide* business men or invest the money in self-liquidating and rapidly maturing loans or convert it into such other assets as not only to lie within its quick and easy control but may be also converted into standard metallic money with the minimum of risk attendant on such a conversion.

This is all theory proper but practice is rarely kind enough to conform to theory proper and one finds that "commercial banks" are making loans for investment purposes, creating fixed capital, helping speculators who dabble on the Stock Exchange, pursuing industrial financing, granting loans to persons for purely consumptive purposes and directing their control over the trade and industrial enterprises of their countries.‡

\*Form G, III Schedule of the Indian Companies Act of 1913.

† It is a matter of supreme gratification to note that the Government of India in order to protect the interests of the depositors, has at last decided to compel the Indian Joint-Stock Banks to publish a balance-sheet on the lines approved by the Cunliffe Committee.

‡ The granting of discounts and loans on the pledge of Stock Exchange securities as collateral on account of insufficiency of commercial or personal credit is not an investment operation. The banks are here acting as mere pawn-shops for securities. But definite investment in securities, promoting and underwriting operations and capitalisation of companies are the operations of the Investment Banks and not the commercial banks. The banks should not support speculation in the value of doubtful securities with the help of its money. It is better to let capital remain idle than venture out on these investments.



This tendency to "mix" commercial banking with investment business, promoting and syndicating operations is noticeable in the case of the banks of the United States of America and Germany.

As one American banker points out "the American commercial banks have been forced in self-defence to invade the business of the 'Investment banks' and one finds that only one-third of the loans of the American banks belongs to the category of commercial finance and the balance is mainly concerned with investment purposes." Another reason why these American commercial banks have taken to investment business is mainly this. They do not find enough employment for their huge resources. "Neither the call money market in New York, nor the rediscounting of country bank paper, nor the availability through the brokerage houses of the promissory paper of a limited number of widely known mercantile and industrial establishments will absorb the excess and recourse is had to the bond market." It is not difficult to find other motives for this kind of investment finance. "The desire to escape taxation, the anxiety to become banker to some corporation or municipality and the desire to secure high profits from promoting, syndicating and underwriting business must have induced them to descend to investment financing."

The case with the German "Grossbanken" or the "credit banks" of Germany as they are generally known is however different. As Dr. Reisser says the "Grossbanken" were forced to take up all these ultra commercial operations\* in order to meet "the real demand of German economic development." The German Banks do not aim solely at profit but consider the development of their industries as an important duty incumbent on them. One German Bank director while giving evidence before the American National Monetary Commission says that the "one difference between the Banks of England and Germany is that, in England, the primary purpose of the banks seems to be to secure large earnings for their shareholders. In Germany our banks are largely responsible for the development of the Empire, having fostered and built up its industries."

Another cardinal reason why the "credit" Banks of Germany were forced to conduct this "mixed" banking business was the absence of "financial agencies" and as there was no strict division of labour among the existing agencies the banks were forced as Dr. Reisser says "to occupy in the national economy the place held by the maid-of-all-work in the private household" and to take upon themselves all the tasks which in England are apportioned as a rule among numerous financial agencies other than the Joint-Stock Banks.

These were the reasons that forced the German Banks to attempt "adventuresome" banking as English critics put it. It might be wrong on their part to pursue their audacious policy of "peaceful penetration"

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\* The German Grossbanken perform the following banking operations (1) attracting deposits, (2) giving loans, (3) discounting bills, (4) capitalising industries, (5) floating new industrial companies, (6) regulating the value of the shares by selling and buying, (7) buying and selling securities largely on their own account. All banks are members of the Stock Exchange.

into foreign countries. Their assumption that "trade follows the bank as much as the flag" might not be wholly correct. Their policy of acting as the "brains of the industrial army" or the "general staff of German industry" might be questioned. But judging them by practical results and the notable success they have achieved so far, it is well-nigh difficult to condemn them. The remarkable absence of serious collapses\* helped these banks to pursue their own policy of "mixed" banking business unhampered.

It is only in conservative England, that the commercial banks are not so daring and venturesome as to "mix" commercial banking with other lines of business however tempting they may be from the view point of profits. They still stick to their conservative lines of banking operations and refuse to transact such operations as are alien or genuinely opposed to the true interests of the commercial banks.

But the tendency to perform "mixed" banking is noticeable in the case of our commercial banks also. Several of the "Swadeshi banks" of the Punjab† attempted industrial financing and smitten with an ambition to get-rich-quick they took to investment business as well. But the inevitable has happened and almost all of them were signally punished during the recent banking crisis.

Some of the existing Indian Joint-Stock Banks are trying to follow the path of the German banks. Some of our industrial banks which profess industrial financing as their avowed mission conduct ordinary commercial banking business as well. It is indeed strange to note that the Indian Industrial Commission itself recommends the pursuit of commercial banking by Industrial banks that may arise in our country. This may be partly explained as due to their desire to make the Industrial banks profit-reaping concerns from the beginning.

The promoters and organisers of several of our banks recently started during the years 1918 to 1920 have the laudable notion of our economic reorganisation. They aspire to utilise these banks as tools for the aggrandisement of their national ambition. But they should bear in mind that this attempt at "mixed" banking business is quite a difficult and risky one. The banks should be well managed and the bank managers should be shrewd, alert and honest. The mere display

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\* Even in Germany, instances of bank failures due to their "mixed" banking tendency are not rare. The Leipziger Bank failed in 1900 as it advanced 93,000,000 marks to the Trobertrooknungs-gesellschaft while its paid-up capital was only 48,000,000 marks. Any number of such failures occurred in the bubble era of 1870. (Grunderjahre). The 1901 crisis in Germany was attributed solely to the reckless investing of the German Banks in industrial ventures during the years 1897-1901.

† The failure of the Hindustan Bank, Lahore, was due to advancing large sums to the Punjab Musical Association and to the Punjab Brothers Company (a speculation shop in Karachi).

The failure of the Doaba Bank was due to advancing money to the Amritsar General and Flour Mill Company, Ltd.

The failure of the Lahore Bank was due to its financing a property dealing company and a leather factory

Some of the other Punjab Banks lent money to the cotton ginning factories which were started out of all proportion to the cotton producing capacity of the province.

of ingenuity in the matter of adopting a national programme similar to that of the German Banks is not sufficient. Wise and capable management should be forthcoming. Besides it is highly erroneous to labour under the misconception that Germany's rapid industrialisation, her economic transition and the development of her foreign trade were mainly due to the helpful attitude of their banks.

Of course the policy of the German Banks interlocking themselves with industrial companies helped the development of their industries but other causes operated as well to make Germany capture many of the world markets within a surprisingly short time. Dr. P. P. Gourvitch\* points out that German export articles were always adapted to foreign tastes, that there was a widespread industrial and commercial education and that German industries received extensive Government aid through different freight rates on Government owned railroads and through rebates and other shipping facilities. Dr. Reisser points out that the German Banks "combined"† to finance large industries which had more or less of a monopolistic character. He instances the Deutsche Bank of Germany which has acquired interests in the smaller banks and thoroughly controlled their policy.

Professor Hauser‡ says that Germany has affected the surprising *tour de force* of securing her financial supremacy in foreign countries while locking up very little of her own capital. He instances the cases where German banks obtained control over Italian business.

Mr. Shaw§ says that the German Banks always made it a systematic policy to obtain information about foreign customers and used their branches to act as information bureau. They always advocated German industry and obtained foreign orders for German manufactures.

Dawson|| says that "there was a development of scientific knowledge on a wide scale and that there was a close application of science to industry." Many of the big banks have a large staff of industrial experts to guide their banking officials in their attitude towards industries.

Again, the allied problems of finance, industry and transportation are treated as different aspects of one and the same problem and sometimes the German banks were undoubtedly used as tools for the aggrandisement of their national ambition.

It is apparently manifest, then, that it is entirely a misguided view to attribute the industrial prosperity of Germany and her ability to compete successfully with British and American industries, mainly to

\* Dr. P. P. Gourvitch "How Germany does business."

† Dr. Reisser "The Great German Banks." The American National Monetary Commission Report.

"The Deutsche Bank of Germany is represented in 116 companies, the National Banks in 98 and so on."

Sir R. H. Inglis Palgrave also speaks of this interlocking tendency in his article on German Banks in the Bankers' Magazine, June 1916.

‡ Dr. H. Hauser "Germany's Commercial grip on the world." He says that "German finance means German control, German espionage and penetration."

§ Mr. W. A. Shaw "Edinburgh Review," 1918.

|| W. H. Dawson "Modern Germany."

the financial assistance of the German banks. The German banks have responded well to the call made on them by these various industries but the helpful attitude of the banks is only one among several factors contributing to the prosperity of their industries.

As it has been remarked already, the German banks were well-managed from the beginning. They always insisted on a high paid-up capital of their own and supplemented their resources by attracting long-period deposits. As A. D. MacLaren\* says "the German banks were attracting 'time deposits' and with these they were able to grant longer credits (*long fristiger*)."<sup>†</sup> The German banks knew full well the dangers of locking up their "Commercial deposits" in long-period loans which would be the ultimate result of commercial banks attempting a "mixed" business. They realised that their own capital can be locked up with impunity in more lucrative but less easily realisable assets than short-term commercial paper and as the late Mr. A. Raffolovich and Conant point out, the increase in banking funds in Germany was due not to an increase of their deposit money as in the case of the English banks but due to "their genuine mania for increasing their capital."<sup>‡</sup> As Leopold Joseph says "the German people have full confidence in the administration of banks and in the integrity and responsibilities of the Board of Directors which are mostly composed of capable men. Stringent regulations as regards the responsibility of the Directors are in force and it is only a serious catastrophe that can shake this confidence."<sup>‡</sup>

It is highly reprehensible then on the part of the Indian Joint-Stock Banks to imitate the German bank tactics so long as they do not employ the same precautionary measures. It is a well-known fact that the paid-up capital of our commercial banks is very little, and ever since the days of our banking crisis, deposits generally are made for short periods, say 4 or 5 months, and it will be well-nigh criminal folly to grant long-term loans with short-dated deposits. Neither are these banks endowed with the requisite technical knowledge to pursue successfully industrial financing.

It does not necessarily follow, then, that our commercial banks should pursue a "Conservative policy" akin to that of the English and French banks.

Leaving aside the arguments of the late Adolf Wagner § and others who consider the German banking policy as eminently superior to that of the English banks' policy, as wholly irrelevant to our purpose it must be considered whether the "Conservative policy" of the English banks would suit our present national interests. Handicapped as the Indian industrialists are, by the absence of specialising financial agencies such

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\* A. D. MacLaren "German Banks and Peaceful Penetration." Quarterly Review, January 1919.

† C. A. Conant "Principles of Money and Banking," Vol. II.

‡ L. Joseph "The Evolution of Banking in Germany."

§ Lord Incheape on the other hand contends that the English Banking system is superior to that of the German Banking system.

as the "acceptance houses" underwriting and syndicating agencies which abound in any number in the London Money Market a rigidly conservative policy on the part of the Indian banks would severely bar their progress for the lack of adequate capital at the nick of the time.

Secondly, the existing immigrant banks in India do not possess the will nor have they the requisite capital at their command to pursue an ambitious national programme for our economic reorganisation. These banks have not succeeded in breaking the power of the mahajan who to quote Sir Daniel Hamilton's words "is still entrenched safely behind the money-bags, while the victims of his silver bullets lie all around in heaps." These foreign managed banks do not cultivate any business transactions with the small industrialists, business men or agriculturists. As Sir T. Morison says "these are too small to interest the great financial houses." The policy of existing foreign banks favouring European firms as against Indian managed ones is too well-known to need any elaboration here. One should only read the startling disclosures of Mr. Currimbhoy A. Peerbhoy before the Indian Industrial Commission to realise the truth of this charge. These banks never forsake the cardinal principle of "safety" which commercial banks should always possess in their minds. But managed as they are by trained westerners, these cannot realise the true needs of the Indian economic situation and their exclusive dependence on their "shroffs" is indeed too patent and pitiable.

Even in England, this "quiet" policy of the commercial bank has been criticised. Quite recently the tonic of war roused the English public opinion and the English banks were taken to task for their extreme timidity and conservatism. The model of the German Banks was placed before them for imitation but they have unitedly refused to be more "adventuresome" and advocated the specialisation of each function by separate institutions intentionally designed for these purposes. The result of this agitation ended in the formation of the "British Overseas Bank" and the "British Trade Corporation" to "fill the gap between the home banks, Colonial and British Foreign Banks and to grant facilities which the existing banks are not in a position to extend."\*

The doyen of the English Economists Dr. A. Marshall says the English banks should extend the scope of their work. No apology is needed to quote his well-balanced opinion *in extenso*. "While those services to which they devote most of their strength are of unapproached excellence, they make little attempt to rival German or even American banks in the direct furtherance of the large ventures of industry. By limiting their operations to a multitude of relatively small risks, they are enabled to base their advances chiefly on capital deposited with them; and therefore to return extremely high dividends on relatively small paid-up capitals. There are therefore some strong arguments both of equity and of national advantage in favour of the exertion of a slight pressure on them, by legislation or otherwise; tending to increase the ratio which their paid-up capitals bear to their total liabilities. They could then with safety to themselves and their depositors undertake a

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\* Report of Lord Farringdon's Committee on the proposal of a British Trade Bank.

rather greater share than they do now of the larger responsibilities of the country's business abroad, as well as at home, while they would still cover so great a part of their liabilities by fluid assets, as to be certain of their ability to meet promptly further larger demands that might be made on them."\*

So these British Commercial Banks, "the paragons of conservatism" as one disparaging critic styles them, do not afford the real model that our Indian Joint-Stock Banks should have in their mind.

Our Indian Joint-Stock Banks though they grasp the necessity of a liberal financial assistance to the existing industries and however much they may be animated with a desire to emulate the bold, daring yet fruitful policy of the German banks, must realise their own limitations. The small amount of their paid-up capital, the low proportion of their cash reserves and liquid assets, the short-term nature of their deposits and the absence of masterly financiers endowed with an ambition to display a Napoleonic faculty in its use, should warn the banks as to the dangers involved in extremely speculative courses or prohibit them to stretch their hands towards an absolute control of trade and manufacture.

Again the union of different operations in the hands of a single banking institution in close touch with deposit banking, has its own dangers. The task of keeping assets of a sufficiently liquid character in order to balance the demand obligations of a commercial bank is no slight one, specially when operations partaking of a permanent character, as for instance, industrial financing, are also attempted. Many an authority† has written deprecatingly of this tendency and points out that it only paves the way to commercial crisis.

The real remedy then lies in specialisation. Besides banks pursuing strictly commercial business, there should be industrial banks, investment banks, mortgage banks, and such other concerns to specialise in long-term loaning. Numerous financial agencies should be created so that our banks need not necessarily like the German banks be nicknamed "alerlei enterprisen" and maids-of-all-work or a kind of financial universal providers. There should be a strict division of labour among the existing banking institutions and those that may be created in the near future.

While realising that better success can be achieved by specialisation, these Indian banks should not forget that the real strength of the banking system depends on their recognition of their mutual interests. It is not mere emotional sentiment on the part of the existing banks that really counts. The real necessity of the situation seems to lie in a better understanding of banking business.

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\* Dr. A. Marshall "Industry and Trade."

† W. R. Scott says "there is an over expansion of credit caused by the exchange of investment securities for chequing accounts and that a forced liquidation of these securities to meet the depositor's call, entails a great loss and an enforced liquidation may bring about a commercial crisis."

H. M. Geiger says "that this practice of commercial banks to invest their funds has been one of the causes of industrial failures in the U. S. A. of several enterprising men who have seen their plans shrivel up and disappear under the sheriff's hammer to satisfy a note that had been "called."

C. A. Conant in his Modern Banks of Issue points out that the Bank of Italy, the Bank of Naples, the Bank of Sicily and the Roman Bank looked up in investments all their notes and failed miserably in 1892.

*The tendency to encroach on foreign exchange business of the Exchange Banks.*

Mention has been made in the previous section that the "commercial" banks are encroaching on investment banks, acceptance houses, and underwriting syndicates and are performing functions alien to their specialised business. The tendency to perform exchange business is also to be prominently seen.

The German Banks are as Lord Inchcape styles them "Clearing Banks," "Acceptance Houses," "Issuing Houses," "Discount Companies," "Promoting Syndicates," "Exchange Brokers," "Traders and Bankers."

In America, with the development of the acceptance business allowed by the Federal Reserve Act\* and with the opening of foreign branches by the powerful American Banks, the neglect of the fundamental distinction between commercial operations and other banking operations is to be clearly noticed.

Some of the English commercial banks are forced by competition to specialise in exchange business as well. With the advent of powerful foreign and colonial banks,† with their huge resources to be invested in banking operations in the London Money Market, the struggle for profits became very keen and the London Joint City and Midland Bank was the first Joint-Stock Bank to handle foreign exchange business. As it successfully pioneered the way, many other London Joint-Stock Banks began to dabble in foreign exchange as well and today there is a department in some of the English Banks devoted exclusively to this business.

Some of the Indian Joint-Stock Banks, viz., the Tata Industrial Bank, the Union Bank of India, the Industrial and Exchange Bank of Bombay and a few others have taken up this business as well. The old Presidency Bank of Bombay was the first to hanker after this business. Finding her capital to be somewhat great and feeling that legitimate discount business could not successfully absorb her capital, she began to agitate in the seventies of the last century for the repealing of the Bank Act of 1876 in order to permit the Presidency Banks to deal with Exchange business. Wisely or unwisely the Presidency Banks were not granted this coveted privilege‡. This section deals with the advisability or otherwise of our commercial banks handling foreign exchange business.

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\* See the Federal Reserve Board Circular No. 19 (November 29 1915). Also Paul Warburg's paper in the American National Monetary Commission Report.

† There were about thirteen first class foreign banks in the London Money Market before the advent of the late War, with about £ 50,000,000 of capital to be invested in banking operations there.

‡ For the reasons that prompted the Secretary of State for India, not to accede to their request, refer to the chapter on "Presidency Banks" in my book "Present Day Banking in India," Calcutta University publication.

Foreign exchange business is a paying one and the Eastern Exchange Banks so far as their dividend is concerned and as the high value of their shares on the Stock Exchange indicates, are thriving concerns and thanks to the Gold Exchange Standard system, the speculative element in their business has been removed and a satisfactory "par of exchange" as it were is established between the silver-using countries and the gold standard ones. When this has been accomplished the Indian Joint-Stock Banks are naturally too eager to share some of the profits arising out of this exchange business.

But the Exchange Banks who have so long monopolised this business, keenly resent any encroachment on their business on the part of the newly established Joint-Stock Banks. They have again succeeded in confining the exchange business of the Imperial Bank of India, solely to its own customers, and there is really no effective competition with the Exchange Banks.

The Exchange Banks might have been actuated with motives of personal gain in their attempts to retain the monopoly of exchange business for themselves. Their contention that "the Presidency Banks which were state-subsidised institutions should not compete with them" might be valid; but this argument will be of no avail to them against the competition of the Indian Joint-Stock Banks. Their threat that they would combine or amalgamate with the big Joint-Stock Banks of the London Money Market, if the Imperial Bank of India were to be allowed full privilege to handle the foreign exchange business, is an empty one, as the Secretary of State for India has already disallowed one such proposal recently.\* Again their argument that they bore the initial risks during the years of fluctuating exchanges from 1872 to 1892 and that they should be treated handsomely for their past services by not interfering with their vested interests, is not of much weight. No perpetual monopoly can however be tolerated on this score.

It is not these trivial arguments that the Exchange Banks have brought forward in the support of their monopoly that should really deter our Joint-Stock Banks from attempting exchange business also. Banking theory lays down sound arguments why there should be a division of labour in the matter of discounting and handling domestic and foreign bills of exchange. While the discounting of domestic bills of exchange is not attendant with grave consequences to the stability of the banks, provided these banks discount first class trade bills arising out of genuine trade transactions, banking theory dwells on the difficulties attending on the operations of foreign exchange and advises that "bills" arising out of export and import business are to be handled by separate institutions known as "the Exchange Banks."

Historically viewed, money changing was the primary and original function of banking. Foreign exchange is nothing "but the buying and selling in any financial centre of the monies of other countries, that is to

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\* The National Bank of India wanted to amalgamate with the Lloyd's Bank but the Secretary of State for India vetoed the proposal.



say, the exchanging of foreign monies for the money of that centre."\* So foreign exchange business is nothing but the exchanging of one country's money (say India's money) with a foreign country's money (say Great Britain) and *vice versa*. Hence it may be argued that our commercial banks are not undertaking any business dangerous to their prosperity or existence.

Another point which tempts the Indian Joint-Stock Banks to hanker after exchange business lies in the fact that there are few "bad debts" in foreign exchange. This feature differentiates it from domestic deposit and discount business. There is absolute freedom from risk as to the loss of principal unless there is a total failure of the parties to the bill. Losses do arise but they are due to fluctuations of exchange rates and mistakes in calculations rather than to the failure of parties to meet their liabilities.

But it must be pointed out that the conversion of foreign money into domestic and *vice versa* is no easy task and an element of speculation always enters in exchange transactions between countries having different metallic currencies. Though lucrative, this foreign exchange business is a most difficult and complicated business because the various influences that operate on the rate of exchange have to be properly understood. It requires an intimate knowledge of the trade relations between the two countries and this can be acquired only after several years' experience. The relative value of the two currencies of the trading countries should be known and any likelihood of trading expansion in the near future should be clearly realised. The business customs of the foreigners and a practical knowledge of their currency system and negotiable instruments used in foreign trade should be thoroughly mastered.

Besides overcoming these difficulties, the banks undertaking this business should avoid speculation in exchange on their own account. They should be careful at keeping their purchases and sales of exchange for various dates of delivery as nearly equal as possible. Occasionally they can make an excess of sales or purchases but broadly speaking an overbought or an oversold situation is not advisable. Their bounden duty is to help the mercantile companies who wish to protect themselves from all fluctuations in exchange by dealings in "futures," *i.e.*, they may make immediate use of payments as credits in local currency for the purchase of forward exchange. The banks in their turn should protect themselves in their purchases or sales of commercial "long bills" by corresponding transactions in its own or other futures.

The exchange business can be conducted safely during times of peace, when the currency situation in the several countries is quite normal and when currency is highly inflated by the States as an emergency measure the situation becomes complex and the fluctuating course of the exchanges baffles all rational conclusions and scientific reasoning.

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\* Hartley Withers "Money Changing," p. 132.

The domestic needs or policy of the bank should be borne in mind by the head of the foreign exchange department of the bank and it is difficult to keep both the domestic and foreign operations of the bank, each involving large outlay of capital, in close harmony with each other.

Such are the complexities that are attending on the foreign exchange business. Although there is nothing inherently unsound in the proposal of our commercial banks to undertake exchange business, yet it must be recognised that they are apt to underrate the difficulties of the business and their enthusiasm may land them into deep water. So long as the banks find ample, lucrative and safe employment for their resources, there is no reason why they should particularly insist on the handling of foreign exchange business. For a safe and efficient performance of this business, the foreign exchange department must be in the hands of a trained specialist. Clerks possessing a good knowledge of foreign languages are necessary. Branches in foreign monetary centres are necessary and the incidence of cost of such branches is very high in the beginning. Agents can be employed but they may mismanage and it has been announced recently that the London\* agent of the Alliance Bank of Simla failed to do this business properly and this virtually forced it to open a branch of its own in London. Again the Union Bank of India which was started about three years back with a capital of 10 crores now finds it difficult to transact exchange business and it has been proposed to reduce the capital to 5 crores. The chaotic state of the European exchanges forbids all sane people to meddle with it and so long as the depreciation of the European currencies goes on apace and no attempt is made to stay this drift by international authorities, it is not wise for those not well-versed in monetary matters to have anything to do with the exchange business.

It is only when no other avenue of successful business is open to them that our commercial banks should handle foreign exchange business. Our premier industry, agriculture, which gives occupation to 72 per cent. of our total population is almost famishing for want of capital. Instead of directing our capital to commercial banks, it behoves us to start industrial banks, agricultural banks, and mortgage banks. A connecting link should be established between the co-operative credit societies and the existing commercial banks. Our capital should be rightly used, for unless capital is rightly used, no further capital can be created.

However, for a long time to come this combination of commercial banking business with investing and promoting kind of business and exchange business will be on the increase. The temptation of larger profits is always alluring and no legislative measures can be devised to check this ominous financial combination. They must only realise that specialisation of each function will lead to better results.

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\* Owing to the failure of Messrs. Boulton Bros. and Co., the Alliance Bank of Simla had to open a branch of its own in London.

## DISCUSSION ON MR. RAMA CHANDRA RAU'S PAPER.

MR. BHATEJA said he regretted the way in which certain facts were presented, and he wondered whether the Association was liable for defamation for any statements made in the paper. He agreed that a special type of banks for promoting industrial enterprise was required. The problem was that of financing the industries. The English banks in India lend money to large enterprises, but they do not lend to the ordinary Indian trader or the small business man. If industries are to be developed, then the gap in our banking system will have to be filled up. In Europe the State filled up the gap by starting discount houses for temporary periods; this necessity was no longer felt there and State aid had therefore been withdrawn. As regards the question of an Industrial Bank taking to exchange business he agreed with the writer that exchange business was most complicated, but he did not see any reason why the banks here should not take up exchange business provided due caution was exercised. He could not agree that we should wait until our people get specialized in banking; the millenium may take a long time to be realized.

DR. TANNAN said that unless the Government transferred the work of the Paper Currency Office to the Imperial Bank the latter would not be in a position to render such assistance as the Central Banks in European countries are doing. He pointed out that the Imperial Bank had to pay a high rate of interest to Government for loans, and so they had to charge a higher rate of interest to the trades and industries of the country. This difficulty he thought could be overcome if the Imperial Bank were given greater facilities for drawing on the Paper Currency Reserves. He would also like to see the Imperial Bank affording facilities for the transfer of large amounts of money from the Head Office to its branches and *vice versa* at practically no cost as was the case in Germany. It had to be realised that the banking needs of India were very great, and he thought that Indians could readily be trained if the existing banks gave them facilities. At present liberal facilities were not afforded by the banks, although the Imperial Bank is now forced by Government to take at least 50 % of its new recruits from amongst Indians. He explained the difficulty of opening branches when the number of Indian specialists was few and the European Manager had to be highly paid. There was therefore a great necessity for Indian young men specializing in banking so that they might take up the posts of managing agents with the Imperial and other Banks.

DR. HYDER said he wanted to emphasise the point that we could have industrial banks provided there were capable men outside, not necessarily bankers, who would manage the factories and do other work. If such men were available we could have long term loans and other banking facilities, but it will take a long time in India to get such men, and therefore, in his opinion, industrial banks will have to wait.

4 P. M. GARDEN PARTY. Members of the Association attended an "At Home" at Shahdara given in honour of Dr. Sir Mohammad Iqbal.

THIRD DAY :—THURSDAY, JANUARY 18th, MORNING SESSION.

## RURAL ECONOMICS.

### CO-OPERATIVE FARMS.

BY C. F. STRICKLAND, ESQ., I. C. S., PUNJAB.

For the purpose of the present argument a co-operative farm is defined as land collectively owned or taken in lease by members of a co-operative society for their own cultivation. It is to be distinguished from (1) land owned by co-operators who employ other persons on a wage or a rent to cultivate it for them ; and (2) the employment by a landowner of labourers to whom he pays a share of profit on the year's transactions in addition to the ordinary wage. Under the first head fall the large areas owned and farmed in England, Scotland and Asia by the Co-operative Wholesale Societies of England and Scotland, the cultivators being ordinary employees, who are only indirectly, if at all, benefited by the co-operative movement. These estates are, however, often dignified with the incorrect title of co-operative farms. Under the second head, the mere incident of profit sharing clearly does not constitute co-operation, nor even approximate to it unless a predominant share in the control is also conceded to all active workers.

The objects of the true co-operative farm are threefold : (1) employment may be secured, in districts in which the supply of unskilled labour exceeds the demand, by a group of men cultivating a tract of land more intensively than a single owner or occupier would be prepared to do, since intensive cultivation calls for more labourers and can bear the additional cost. (2) The middleman or farming contractor may be removed if owners of large estates can be induced to dispense with him and to lease their land to a group of cultivators, the profit of the middleman being divided between the parties, the landlord receiving more and the tenants paying less. (3) A larger out-turn of agricultural produce may be obtained by improved cultivation, and the nation's wealth thereby increased. Except in so far as intensive cultivation provides more occupation and therefore more wages, this last object is appropriate to the ideas rather of organisers than of the cultivators themselves. The country gains through co-operative organisation of individuals whose primary aim is their own security or profit.

This system of farming has won its most notable success in Italy, though widely spread also in Roumania and found in scattered instances in other countries including England. Italian statistics are imperfect, but the number of existing farms in 1920 was estimated at 500, holding perhaps 200,000 acres, in addition to an equal area under semi-co-operative management by the State in a backward province. The movement is promoted alike by the Catholic and the Socialist parties, who favour opposing methods of divided and unitary management. On the former method the land held by the Society is leased to the members in small holdings, which, though not proprietary, may

be continuously occupied by the lessees, and on the death of a member are usually leased again to his heir. The holdings are, however, subject to adjustment in accordance with changes in the size of a member's working family; and since it is not permissible for any member to sub-let a field or to engage wage-earning labourers, his holding will be reduced if it exceeds his cultivating capacity, and in the reverse case may be increased if land is available. Some Societies in fact resort to a regular re-allotment every few years. The alternative method, preferred by the Socialists, to many of whom the institution of property is, theoretically at least, abominable, is to retain the administration of the land entirely in the hands of the Society on a unitary system: a skilled manager is appointed who directs the agricultural operations under the general control of the managing committee. The labourers and cultivators receive a regular wage while employed and are also entitled to a share in the annual profits; a part of the wages is frequently withheld until the conclusion of the year as a guarantee against possible losses and against disloyalty. In localities in which agricultural unemployment is recurrent, the members may prefer to prolong their employment and the receipt of even a diminished wage so long as the funds allow, abandoning the hope of a dividend and of the deferred balance of their wage.

These two types, in Italy and elsewhere, represent the rival doctrines of co-operative farming. In practice innumerable stages intermediate between them are accepted in one place or another. An extreme case of divided management will be the Society which either purchases land and re-sells it to members with full rights of ownership, itself thus ceasing to exist when the transfer has been completed, or which acknowledges a formal or conventional right in its lessee-members to a permanent and hereditary possession. A different class of Society will reserve a portion only of the land to the central management for collective purposes, such as the stabling of livestock and machinery, the growing of fodder, the storage of seed or of harvested produce. The Small Holders' Societies in England adopt this plan, hiring their land by collective lease in preference to purchase from county councils or individual landlords and sub-dividing among their members all but a few acres. Only one purely unitary farm of working cultivators was known to exist in England at the time of an inquiry made in 1920. Yet other Societies are found which surrender holdings with greater or less permanence to their members, the latter in return binding themselves to certain agricultural methods, either in the use of expensive machinery which could not be purchased unless its adequate employment were guaranteed, or by participation in a common agreement, *e.g.*, with an authority supplying water for irrigation. Purchase of land by co-operative cultivators in Italy or elsewhere is comparatively rare, since it locks up a larger capital than they can well afford and ties them to an ownership which the taxation of agricultural land (fully as heavy in most European countries as in India) may render unremunerative.

A third main type resembling the Society with unitary management is to be observed in the agricultural guilds now springing up in

England under the influence of the National Guild propaganda, the objects of which are:—(1) permanent employment of workers; and (2) work for the service of the community, not for personal profit; *i.e.*, the worker receives a constant and reasonable wage, even if there be insufficient work to do, and the profits of the undertaking, if any, are devoted, firstly to improving the conditions of employment, and secondly, to reducing the price at which the product is supplied to the community. These agricultural guilds appear to resemble co-operative farms under unitary management with a special—and fundamental—provision as to the disposal of profits.

The several varieties of internal organisation above described are adapted to the different ends which the co-operative farmers in each locality have principally in view. In an Italian province such as the Emilia and in parts of Sicily, where unskilled labour for both agricultural and industrial purposes is perennially in excess, the unitary management of the farm is effective both in distributing over the maximum number of persons the available work and in disciplining the labour mass for redemption and improvement of deteriorated land and for that high cultivation which alone can meet the original cost. Though the individual cannot be described as contented, he recognises that he is more fortunate as a labourer under his farming society than if he were a mere unit in a drifting crowd of surplus men. In other provinces where unemployment is not a chronic trouble landless men or tenant cultivators aspire rather to establish themselves as occupiers or owners of their own farms, and even the Socialists are forced to make large concessions to this preference for independence. The co-operators who obtain a lease for a term of years, on a rent possibly enhanced to cover the anxiety of the landlord as to the financial stability of the Society, are satisfied with possession of their home and land, and hope so to extend the system of collective leases to the exclusion of contractors and middlemen, that they may feel themselves free from these competitors and therefore secure in their tenure. The object of excluding the middleman is equally well attained by all types of farming society; though it should not be supposed that all middlemen are bad farmers, especially on soils and crops requiring the application of capital, yet many are deficient in agricultural knowledge or experience and all tend to be indifferent to those minor demands of the labourer or tenants, *e.g.*, in connection with housing, which make so overwhelming a difference to his happiness. When, however, we compare the varieties of farm in respect of their third aim, the increase of agricultural outturn, the superiority whether from the point of value or of quantity is entirely on the side of undivided management. The unitary Society employing a number of men under a single administrator naturally selects an expert for the post whereas a group of semi-independent tenants appoints one of its own members to be President and Manager and depends for skilled advice on the services of a travelling agriculturist who visits the estate from time to time on behalf of the Government or of the Union to which their Society belongs. A comparison of the outturn on the co-operative farm of Belpiano under the administration of an individual landlord

and under a co-operative society will illustrate the advantages of the unitary system. Area of the farm 290 acres :

<i>Produce in a year under private management.</i>	<i>Produce in a year under co-operative management.</i>
Wheat 574 mds.	Wheat 1,728 mds.
Maize 430 "	Maize 1,588 "
Oats 10 "	Oats 90 "
Grapes 70 "	Grapes 194 "
Tomatoes	Tomatoes 1,110 "
Seeds 3 "	Seeds 13½ "
Silkworm cocoons 2½ "	Silkworm Cocoons 9 "
Working livestock 23 head.	Working livestock 48 head.

The increase in the number of working individuals is not recorded ; the outturn per individual cannot therefore be compared. Nor again are similar figures for comparison forthcoming from a co-operative farm with divided holdings, for in such a case the collection of statistics is not easy, and since the land thus leased by co-operators was frequently, though not always, already in divided holdings under the middleman, the system of cultivation has not undergone a radical transformation at the hands of co-operators. Even, however, when allowance is made for a possible partiality in the institution which collected the above data (which are based on actual farm records), the agricultural improvement is sufficiently obvious to require no argument.

Rural unemployment being rare in the Punjab, the severity of unitary management will doubtless not prove acceptable to co-operators in this province who may wish to embark on a collective ownership or hiring of land. There may, however, be varieties of crops or circumstances which enforce such a joint tenure. It may be convenient in Bengal or in other crowded areas with which the writer is not familiar, to maintain united management both as a safe guard against unemployment and on grounds of agricultural advantage. A tea garden for instance would be best operated in this way, and on the occasion of the next Assam strike it is suggested that such an experiment be tried. It is also logically arguable that the agricultural area which it has been proposed to grant in a Punjab colony to tenants who should be bound to grow a certain proportion of sugarcane for a central cane-crushing and sugar-making factory may be better granted to a co-operative association handling the area as a whole, paying a regular subsistence allowance to its working members and distributing at the end of the year a further rebate on their wages and a limited dividend on capital. It does not appear probable that without some form of compulsion the Punjabi peasant will abandon his desire for a separate holding of his own, and in the absence of general unemployment such compulsion can only be applied by means of conditions attached to a Government grant of land. The unpopularity of a grant on these terms would only be faced by Government in furtherance of a special scheme, such as that of a sugar factory, in which economic policy might recommend a central control.

It remains to consider whether co-operative farms of the divided type can usefully be established in the Punjab or other Indian Provinces. Wherever a contractor interposes between the landlord and the individual cultivator, it is clearly desirable to substitute for him a co-operative society of tenants, financed by a credit society or a central co-operative bank, and acting towards the landlord in all respects as does the present middleman. The society should in fact be the middleman and should exact at least as high a rent from its members as does the independent contractor; the annual profits, after a sufficient sum has been carried to reserve, can be distributed as a rebate on the rents. *Prima facie* the landowner does not appear to gain from the proceeding; if that is the case, he is at least no loser; and if he is irrationally hostile, it should be practicable to bring him to reason by a tenants' boycott. On the other hand, it is justifiable to hope that tenants working in a society will be induced by their co-operative advisers to improve their methods of cultivation; the landlord will then benefit by the enhancement in the value of his land, by a more profitable share of the crop if rent is paid in kind, or by a higher cash rent when the lease falls due for renewal. Conditions suitable for such societies exist in numerous villages held by yeoman grantees and capitalist purchasers in the Punjab colonies, and also in a few old proprietary villages in which the tenants are not long-established residents; such proprietary estates abound in other parts of India and when leased to middlemen offer a proper field for co-operative farming, but it will be more difficult to bring together for a collective lease those tenants who, though not enjoying rights of occupancy, have nevertheless been cultivating the same lands without disturbance for several generations; they will prefer the friendly personal relation between landlord and tenant which there is no advantage in upsetting. The enemy of co-operators is the middleman, not the landlord. In the Punjab colonies the lessee of a village of a large holding is often the village money-lender, who in his double capacity is able so to confuse his various business transactions with the tenants, and so to dominate their daily economic and social life, as to plunge them in inextricable debt. Co-operative credit cannot save them, since when pressed by a creditor they are ready to migrate; while co-operative credit requires a certain minimum of stability; such stability can best be created, and the hope of escaping from indebtedness best excited, by uniting the tenants in a lessee society.

(It should be remembered that the average Indian peasant does not conceive that freedom from excessive debt is possible: he will only begin to make efforts when he has learned to hope). A very real danger in lessee societies, as experienced in co-partner building societies formed by tenants, is the tendency to demand too low a rent: just as consumers' societies on the Rochdale system charge the full market price for articles sold, and pay back the surplus to members as an annual rebate on purchases, thereby building up a reserve fund and guarding themselves against the eventuality of losses which in any year may leave no rebate to repay, so the lessee society must recover a full rent from its members, and after carrying a part to reserve distribute the remainder as a rebate



on rents or other economic dealings; the fund to be distributed will be formed by the margin between the rent paid to the landlord and the rents charged to the tenant members (a non-member tenant will receive no rebate), and also from transactions of collective purchase of seeds, agricultural implements, or domestic requirements, and of collective sale of produce. Such undertakings of purchases and sale will more readily be faced by tenants each of whom is liable—with unlimited liability—to pay to the landlord the full rent due from the society, and who will all in consequence realize the importance of helping each other to earn sufficient profits for each to pay his own rent to the society. Similarly the purchase and preservation of improved varieties of seed and implements and the adoption of more scientific methods, will appeal to men who have an economic and urgent interest in each other's proceedings. One reason for the prevailing retrograde and careless cultivation in the Punjab and doubtless elsewhere is that the cultivator feels responsible to no one but himself; if he prefers leisure and mental-indolence to thought and consequent profit, he believes himself to be the only sufferer. In this he is entirely mistaken, as any English landlord would make him realize, but he can only be shaken out of his mistake by combining his liability and that of all his fellows in a collective responsibility. The burden of a joint rent will renew that stimulus to activity which was formerly provided by the joint liability of the Punjab village for its land revenue, but which has been removed by the progressive reduction in the real weight of the assessment. The big landlord in villages suitable for co-operative leases is beyond the reach of such an appeal to the pocket, since the revenue, just as in Bengal villages under permanent assessment, means economically little to a big landlord; the tenant on the other hand may be more accessible through his rent.

It will be open to a co-operative farming society to pay rent to the landlord in cash or in kind as local custom or convenience may dictate. An absentee landlord will normally prefer cash. The society likewise can recover rent in cash or kind from its members. The advantage of a cash rent is that the lessee society and the cultivating members know that all additional profit earned by their intelligence or industry accrues to them only; but since the payment of a cash rent in years of unexpectedly poor harvests is uncertain, and the landlord will often be harsh to an impersonal lessee society, it may be wise to stipulate for payment to the landlord in kind until a reserve fund has been accumulated, and thereafter in cash. A rent in kind, taken by the society from its members, offers the advantage of uniting the members and the society in interest, a share of each man's visible crop being the property of all members, and also of inciting them to collective sale of their own surplus produce together with the share which the society has to sell on its own behalf. On the other hand collective sale being risky and tending to speculation will perhaps be deferred until after the accumulation of a reserve fund. The most prudent course for an infant society will be to pay kind to the landlord and receive kind from the tenants, converting the landlord's rent to cash when its funds can meet the strain of two successive bad harvests.

No co-operative farms have yet come into active being in the Punjab, and it is difficult without first-hand and detailed information from a co-operator, to estimate the worth of the experiments mentioned in the official reports of co-operation in other provinces. The zamindari societies of Bengal are of a capitalistic nature and are formed by non-cultivators: two at least of those existing in Madras appear to be rather ventures in contracting than associations of workers. A farming society of genuine cultivators belonging to Gujrat District in the Punjab has been registered and intends to hire land for cultivation by its members, but has not yet secured a lease on acceptable terms. Another project to finance the tenants of a large estate in purchasing their holdings has been discussed, and if this scheme matures it may prove convenient to vest the ownership in one or more land-purchase societies which can offer a more tangible security to the financing body than that of numerous and unpunctual peasants. The societies would no doubt be able to extend the term and lighten the instalments by which disunited individuals would otherwise be expected to contribute their purchase money. An exceptional opportunity for a farming experiment has been missed, in the writer's opinion, in connection with a grant of 100 rectangles (2,500 acres) of "bara" or low-grade land in Montgomery colony made by the Punjab Government in the past year to co-operators of some villages in Gurdaspur, Hoshiarpur and Lahore Districts, the former lands of which have been damaged by natural forces. The grants have been made to the Co-operative Credit Societies of the old villages which will nominate the cultivators, and though there is no reason to doubt that the grantees will make satisfactory arrangements for the cultivation so far as the conditions imposed by Government are concerned, yet the owning societies will be absentee landlords, and either the frequent rotation of tenants from the old home will diminish the vigour of the cultivation, or the nominees if allowed to remain continuously in occupation will acquire an interest and a moral claim divergent from that of their remote society-landlords. The land should have been given to *new* societies, to be formed in the colony villages by those members whom the old societies nominated for settlement, and the settlers should have been required to surrender their minute shares in the old homeland when proprietary rights in the colony were conferred. The societies would then have been landlords, but their component members would have been the tenants only, and a sufficient unity of interest would have been established to insure that attentive and progressive cultivation without which the low-grade lands in question will not be profitable. Future grants, whether of low-grade land in Montgomery, or of ordinary land in colonies hereafter settled, might be made on these lines.

Three minor objects, desirable in themselves, are attainable in the Punjab through co-operative farms :—

(1) Whether the land be bought or hired, the society will serve as a buffer between the cultivator and the subordinate staff of the revenue and other departments, from whom he is exposed to certain exactions. If the society owns the land, it should be the headman of

the village ; and whether the society is owner or lessee, it should perform the duties of the patwari (village accountant) and draw his pay and lawful fees : the secretary of the society would be as familiar with the records of the estate as any patwari, and far better acquainted with the true condition of the crops, the facts of cultivation, and the health of the human and animal community. A prudent society will employ a patwari as its Secretary.

(2) The curse of pre-emption will be lifted from those village communities in which a farming society becomes the landlord, since the admission of a new comer to membership will be dependent on the consent of the existing members.

(3) Fragmentation of holdings, and the consequent need for consolidation by repartition, will be reduced to a minimum, since the tenants who compose and control the society, though normally reluctant to disturb the possession of any well-behaved member of their body, will have ultimate power in general meeting to insist on a redistribution. This power will no doubt readily be used in cases of inheritance, and a separation of holdings prevented by necessary exchanges, for it must be remembered that the heir will be dependent on the consent of the general body for his admission to the holding of the predecessor. It will be to the public interest to encourage a similar demand for redistribution if one member believes that the land of another can be more profitably cultivated by himself than by the present tenant ; the successful farmer should have his holding increased, experimentally at first, and permanently if he justifies his claim by a better outturn.

Assistance from Government, other than the advice of the co-operative staff which will in the ordinary course of its duties be promoting the creation and prosperity of the farms, will seldom be required. The help of the Agricultural Department will be forthcoming so far as its limited personnel allows, and unions of co-operative farms will be well advised to engage their own experts at their own cost. The agreement of the revenue staff with regard to the post of headman, and of the revenue and irrigation departments with regard to the duties of the patwari must be won by the success of a few societies experimentally appointed to prove their capacity. A separate outlet for canal water on irrigated lands will also be a valuable privilege. Loans from the State to finance the farming societies, which are freely given by the Italian Government through the National Institute of Co-operative Credit, should be superfluous unless the creation of farms in large numbers and in a short period is contemplated : only the settlement of a new canal colony on co-operative lines, as suggested above, will necessitate a considerable advance of State money ; otherwise the Central Co-operative Banks should be equal to providing the sum needed in excess of that which tenants can contribute by selling their jewellery and their surplus cattle. If the tenants will not make this sacrifice, the Banks may well hesitate to lend to them. A general circular order from Government should invite administrative officers to examine with attention and favour all reasonable offers of a farming co-operative society for leases

of State lands and should confer on such a society the right of preference when its bid is equal to that of a private contractor or landlord. This preference is granted in Italy : in India, however, it will be ineffective unless officers of Government abandon the vicious practice of accepting an extravagant bid and afterwards remitting a part of the sum due in response to the supplications of the incautious or malicious bidder. A middleman who excludes the cultivator from a lease of available lands by offering an excessive rent must be held to his bargain in order to temper his hastiness or restrain his jealousy. His co-operative competitor can beat him on fair ground and will ask for no remissions.

## DISCUSSION ON MR. STRICKLAND'S PAPER.

MR. STRICKLAND in introducing his paper pointed out that the object was to increase the agricultural outturn. In a system of co-operative farming it would be possible to introduce improved methods of cultivation and also to have skilled persons to guide the cultivation of the different crops. These skilled persons would examine the capacity of the land to produce certain crops and could recommend its utilization to the best advantage. This was not possible under the system of individualistic farming, and moreover the individual farmer particularly in India was not in a position to indulge in experiments in new methods of farming. He illustrated the advantages of co-operative farming from the history of Italy. One great advantage was that the State under a system of co-operative farming could more easily give assistance to farmers. He showed by reference to figures that the burden of Land Revenue in the Panjab was very much lighter than the corresponding burden in Italy, and gave it as his confirmed opinion that the average Panjabi peasant was much better off and more intelligent than the average Italian peasant. He saw no reason why the system of co-operative farming should not be introduced into many parts of India. He recognised that it should be possible in highly congested areas though in scattered areas the people were often too conservative to part with their small holdings.

The first speaker said he was most doubtful about Mr. Strickland's comparison of the Italian and the Panjabi peasant, and asked the writer if he had sufficient evidence to show that the conditions of large peasants in northern Italy was worse than that of the Panjabi peasant.

PROFESSOR JEVONS complimented the reader of the paper and asked him to explain the sort of State assistance received by the co-operative farms in Italy. He pointed out the illustration of Russia where the Government had introduced State farms which were run on capitalistic lines with profits to the State. The experience of Russia also showed that it was not practicable to start co-operative farms in congested areas and that it was most successful in larger areas of waste lands very far from the inhabited villages. Finally he concluded that individualistic spirit was too strong in India and that 50 to 75 % of the cultivators refused at first to go into co-operative organisation.

DR. HYDER desired to know whether the average Panjabi peasant was much better off than the average Italian cultivator, or whether Mr. Strickland had not particularly in mind the cultivators in the new Canal Colonies of the Panjab. He would further like to know how Mr. Strickland had arrived at his conclusion—whether he had simply compared food and clothing, or had taken account of such items as education, sanitation, etc.

The next speaker said he would like to ask the writer what sort of tenure the establishment of co-operative farms would give. It had been said by one of the speakers that the day of the small holder was doomed, but he was rather of opinion that the modern tendency in Central and Eastern Europe was to split large holdings into smaller ones. As regard State assistance, he felt that the best help was self-help, and that co-operators must work for themselves and must not depend upon the State. Even in Italy, State aid had been given only under pressure. He thought there was ample scope in the Panjab to try the experiment.

MR. MYLES said that instead of the day of the small holder being doomed as one speaker had stated, he thought that in many parts of the world it was rather coming. He showed that the economic causes which had operated in England in the direction of large holdings in the later 18th and the early 19th century had now been considerably modified through the improvements in transportation which had facilitated the importation of food stuffs. One effect was a new demand for small holdings, but such of these as he was familiar with particularly in Scotland were not backed up with a good co-operative organization.

MR. STRICKLAND in reply said that in regard to the kind of State aid, the Government could lend loans to these Co-operative Societies without security, whereas in the case of individualist holdings they would have to take securities when granting loans. He thought that the Panjab Canal Colonies offered a good opportunity to try the experiment. He explained that in Italy large areas of land had been given for this scheme by religious bodies, and he thought this example might be followed here. He finally regretted that time did not admit of his answering all the points that had been raised.

## PROGRESS IN THE CONSOLIDATION OF HOLDINGS IN THE PUNJAB.

By H. CALVERT, ESQ., I. C. S., REGISTRAR, CO-OPERATIVE SOCIETIES, PUNJAB.

In a recent number of the *Indian Agricultural Journal*\* I gave an account of the experiment which we are making in the consolidation of scattered holdings in the Punjab; since that was written (September 1921) considerable progress has been made and much valuable experience has been gained. I propose now to bring the account up to December last.

The work has been chiefly carried on in the central districts of Jullundur, Hoshiarpur and Gurdaspur; these districts enjoy what is for this province a moderately good rainfall; two are sub-montane, and the third, Jullundur, has long been known for its fertility as the "Garden of the Punjab". They were cultivated at a time when districts to the south and west were barren wastes; the presence of a plentiful supply of water only twenty or thirty feet below the surface led to the construction of wells in a period when the possession of a well was a sign of wealth and prosperity; land could be mortgaged here when it was hardly worth owning elsewhere; it commanded a price at a time when land in other districts was almost without value. In a province of precarious rainfall, these districts became populous while others remained thinly inhabited and they have continued decade after decade to be the most congested tract in the province. According to custom, the land of each peasant proprietor has been divided equally amongst his sons, or his sons' sons; in the course of time, new fields have been formed out of the waste where it seemed that the effort would bring a reward; families have died out and left their lands to distant relatives; others have become poor and have been compelled to sell part or the whole of their property;† others again have been more fortunate and have been able to acquire plots here and there and add them to their possessions. In some cases, brothers have kept their possessions in common; in others they have divided it into shares; and where partition has been made, it has become customary for each co-sharer to get a part of each kind of land, and even of each field. Generations of inheritance and partitions, of purchase and sale, of breaking up the waste and abandonment of unsuitable fields, have led to the holdings of each family or owner being scattered all over the village area in anything from four to forty or even more separate small plots. In short the Punjab reproduces the same feature of excessive fragmentation which has characterised France, Germany, Japan and other countries, and this feature has become most marked in these districts of Jullundur, Hoshiarpur and Gurdaspur. The evil has long been recognised, but it has been accepted as an evil for which no suitable remedy has been found. Mr. Keatinge in Bombay prepared the ground for action by collecting information as to what was being done in other countries by legislation and otherwise and his work attracted attention here, with the result that the Financial Commissioners directed a pamphlet to be prepared showing the benefits

\* Vol. XVII, Part I.

† When a man has inherited through the female line, he has frequently been compelled by public opinion to sell the land back to other owners in the village (Joseph: Rohtak).

which might be expected from consolidation. Their interest in the matter led me to consider the practicability of an actual experiment, and to try to put forward a scheme which might prove attractive to the small owners of the province.

Before I pass on, it seems necessary to distinguish this work of consolidation from a measure with which it has sometimes been confused namely *killabandi*.

*Killabandi* is officially defined as the substitution of rectangular fields of the uniform size of one *killa* each for the irregular fields, some minute, others inconveniently large, and all of haphazard shape, into which the lands of a village are ordinarily found to be divided. The actual size of a *killa* is of minor importance; it is an acre or something similar. As originally devised, *killabandi* was to be applied to waste areas only; but its advantages where canal irrigation was beginning were so great that it was decided to introduce the measure into old proprietary villages wherever possible; the success attained has led Government to make its adoption a condition of irrigation from a perennial canal.\* This *killabandi* really consisted in laying out a village area like a chess board; it gave straight water-courses, even-shaped fields, and much convenience in the application of canal water. It provided a permanent measurement of the village, with fields in areas which the most ignorant peasant could understand; it saved constant disputes as to field boundaries, as these boundaries were all in straight lines; it facilitated crop inspection, and enabled owners and tenants to check the demand for revenue and water rates, for these were given per *killa*.† Another great advantage was that it enabled the people to manage their affairs without the interference of the patwari. The system has proved very valuable in several districts where canal irrigation has recently been introduced, but it has not been considered desirable to introduce it into other districts. Where the population is heavy, where land is valuable and where holdings are small, it has been the opinion that in the eyes of the people the amount of dislocation caused by the change would outweigh its advantages. An attempt to introduce it in Karnal failed and the Settlement Officer wrote that "it was soon evident that the self-cultivating owners of the Eastern Punjab were not disposed to accept a system which partitioned their best fields and obliterated the boundaries of their ancestral holdings, offering them only in return the remote advantages of more accurate canal assessments and possible immunity from remeasurement. The only success achieved was in estates owned by single proprietors, who recognised the advantage in having fields of a uniform size for calculation of their rental. Elsewhere the system was definitely abandoned." ‡

The main idea of *killabandi* was thus to secure a uniform and convenient size for fields, with straight boundaries; it was quite distinct from the attempt to collect the scattered areas belonging to the same owners into solid blocks; indeed, it was expressly prescribed that "efforts should be made to cause the least disturbance of existing hold-

\* Settlement Manual, Appendix XIV.

† See para. 33, Sett. Report, Hafizabad.

‡ Karnal Sett. Report, para. 33.



ings possible, and unless the people specially desire it, no attempt should be made to amalgamate holdings scattered in different parts of the estate".\* So far from *killabandi* being comparable with consolidation, it was almost antagonistic to it as the official order was that each *killa* should be given to the man who owned most of it before, † and the total number of fields was sometimes increased, instead of decreased ninety per cent. as in consolidation. In some cases, it is true that the owners gave up scattered fields and consolidated their holdings, ‡ and to this extent there was real adjustment, but this appears to have been an incident in the process of *killabandi*, rather than an essential part of it.

It is interesting to note that even against *killabandi*, there was considerable opposition; at first all the villages refused to have anything to do with it; the patwaris misled the people with tales of government treachery and foretold confiscation of property.§ Also it is worth noting that even this beneficent measure was not applied to land attached to wells and other valuable plots near villages where subdivision is minute.||

Enough has been said to show that *killabandi*, valuable though it is, is not the same as consolidation; in a few cases it was accompanied by consolidation, but the official orders incline to restrain the attempt to combine the two. In consolidation, the owners are assembled together after much preliminary preaching, and when all have agreed to the principle of amalgamation of scattered plots, and to the qualities of land they wish to be considered, each in turn is asked to indicate upon the village map the spot where he would like to have his parcel of land; when this is completed, the staff proceed to work out areas so that each owner shall have his land around the spot chosen. This involves much adjustment and unending search after compromise; but as the advantages are more and more clearly and more and more generally recognised the desire for the compact block of land becomes stronger than the desire for the particular spot, and minor differences melt before the joy of a compact holding. The actual process may take weeks or months, but the trouble is amply repaid by the results achieved. In carrying out *killabandi*, there were many disputes, leading to re-adjustment by higher authorities, and many appeals which had to be dealt with in the usual way. In consolidation, we have to get everybody satisfied before we approach the Revenue Authorities, as one successful objector might upset the whole arrangement.

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\* Settlement Manual, Appendix XIV.

† C.F. amongst other references para. 25, Settlement Report of Gujrat.

‡ Sett. Report, Wazirabad, Sharakpur and Gujranwala tehsils, para. 28, also para. 31 of the Report on the Hafizabad Settlement :—"In villages where the owners were reasonable and on good terms among themselves, they allotted the *killas* amicably in consultation regardless of previous possession, thus avoiding having each one's fields scattered about in all directions, the officials merely making entries in *khataunis* in accordance with such distribution and assisting at the end in making up deficiencies and reducing excesses compared with shares".

§ Sett. Report, Hafizabad, para. 29.

|| *Ibid.*

When I first made the suggestion to a number of owners that the Co-operative staff should try to effect consolidation, opinion was practically unanimous that local difficulties would prove too great. However, we had gained considerable experience of what could be done by steady preaching; we knew that we enjoyed the confidence of the people; we had in our societies men who had grasped the fact that great advantages were open to those who would sit down together and try to solve difficulties on a basis of equal treatment for all, and we thought that by patient persistent propaganda we should in time find a village where the owners would at least give the system a trial. A scheme was drawn up and placed before the people; experienced members of the staff worked hard in villages where the co-operative spirit was strong and finally succeeded in persuading some members to allow us to show what could be done with one or two small areas dependent on rainfall and so of less value than the rest. The work proved very difficult, but the importance of the subject was so great that the Financial Commissioners secured for me with effect from 24th March 1921, a special staff of two Inspectors and ten sub-inspectors to carry out the experiments. The sub-inspectors were selected from amongst patwaris for their honesty and sympathy with the zamindars; the Inspectors were selected from Kanungos on similar grounds. In spite of the financial stringency, Government has continued to provide funds for this small staff. The result of 20 months' work is that we have definitely passed through the experimental stage into that of positive achievement; we can now say that the people can be persuaded to repartition their lands into compact blocks, and that they fully realise the many advantages to be gained. In theory, the task seems simple enough; but the obstacles are very great. It is still a new idea, and old men do not like change. Widows, with a life interest only, do not see why they should be troubled with what appears to be a very risky exchange; they assume that they will suffer while stronger men will gain; the interests of minors require careful safeguarding; in many villages one or more owners may be absent in America, or Australia, or in a canal colony. Then there frequently seems to be present the memory of a sad experience over the partition of common land where the village patwari behaved dishonestly; even now the patwari generally opposes the measure just as he opposed *killabandi*; his earnings depend upon the amount of disputes and litigation in his circle, he has a small income from the supply of copies of the records and this will disappear; his influence is usually the greater where the records cannot be understood without his help, and the new records are so simple that understanding is easy; where he is himself an agriculturist he is now beginning to assist, but in other cases his influence is against us. Mortgagees have frequently acquired rights over scattered plots, and when credit was given with difficulty it was the best plots which were offered as security; naturally there must be good land given in return. Here again the opposition is disappearing. Then occupancy tenants possess in particular plots peculiar rights under different owners, and they fear that by the exchange their rights will suffer. Owners have, however, been very straightforward in dealing with these tenants, and this obstacle is rapidly giving

way before a better realisation of the advantages. In parts of these districts, and particularly in Hoshiarpur, there are hill torrents, known locally as *Chos*, which do great damage to fields. Every year there is loss, as the light sandy soil gives way before the flood. That this is not a fanciful picture will be clear when it is understood that about one-third of the land in one tehsil is subject to such damage. Now when an owner possesses small plots which are scattered all over the village area, it is one or other of these small plots which get carried away; but if his plots are consolidated into one block, then it is the whole block which may be in danger. This difficulty prevents much progress being achieved in a large tract but efforts are being made to surmount it by arranging the blocks so that each one impinges upon a torrent bed. The danger will thus be shared by all the owners, while each will have part of his land which will be comparatively free from risk.

Then there are difficulties arising from differences in the quality of the land; hitherto, the owners have offered for consolidation their *barani* land, that is the land dependent upon rainfall. But even this varies in quality and this necessitates each owner having a block of each kind. This difficulty also is becoming less marked, as owners are showing more readiness to give up quality for the sake of compactness.

There is one more difficulty that must be mentioned. The staff have not only to get each owner satisfied, but they have to get them all satisfied at the same time, and they have to convince the tehsildar when he comes to attest the new proprietorship, that they are all satisfied. That this is a difficult test will be appreciated by anyone who knows how hard it is to get the officials of one department to approve of anything done by another; but this very difficulty is an excellent safeguard against dishonesty on the part of my staff. Any favouritism shown as a result of corruption would be exposed before the tehsildar as all the people concerned have to signify their satisfaction before the repartition can be entered in the records.

So much for the obstacles, now for the results. In all, consolidation has been carried out to greater or less extent in 126 villages; it is being now carried out in several more. From this it must not be gathered that the whole area of these villages has been repartitioned. The owners usually give us a portion only at first, and see what we do with it; but the most convincing tribute to the work is that a further portion is not infrequently offered as soon as the first has been finished. Usually the whole rain-irrigated (*barani*) area is first offered; but sometimes it may be that only the Mohammadan or the Sikh section of the village will come forward with their land, and the remainder offer their holdings when they see how nice the first area looks.

In all some 8,500 persons have offered their rights for consolidation; thousands more are ready and will be dealt with as soon as their fellow owners have come round to the same view.

The area so far dealt with is rather less than 20,000 acres. In my previous account I gave details for the number of fields before and after consolidation and have been taken to task for exaggerating the work done. A careful investigation, however, showed that the decrease in

the number of fields is by no means a very inaccurate measure of the success attained. However, we now have tried to count the parcels held by each owner or body of co-sharers before and after consolidation. We may, I think, say that about 35,000 scattered parcels of land have been consolidated into 4,500. The average area owned separately in one place has risen from half an acre to 4 acres.\* Perhaps, the result will be clearer if I give actual instances.

In Sargundi (Tehsil Phillour), the 19 Sikh owners had 182 fields in 157 blocks, each has his land now in one place. One owner had his land previously in 26, and another in 24 different places; the average was 8 places per owner. The blocks are so arranged that as far as possible each touches a road, so that access is obtained without crossing the field of another. Two owners had only one block each before consolidation, so that it might appear that they had gained nothing from the change; but in each case, the plot has been moved so as to touch their well-irrigated land, with the result that they were bearing sugarcane, while the old plot was under *chari* (millet). The man who formerly held land in 26 different places has now a compact block of over 18 acres. The other half of the village is owned by Mohammedans who are awaiting the return on leave of one of themselves, before they follow the example of their Sikh fellows.

In Goraya, a small plot of rain-land (*barani*) was first consolidated, and the experiment was so successful that a large block of well-irrigated land was offered. The net result is that 543 fields owned by 24 owners (or bodies of co-sharers) which were in 494 different blocks have now been re-adjusted into 84 blocks. Owing to the local features, there had to be separate blocks for (1) *chahi* or well-irrigated land, near wells, (2) for *chahi* land distant from wells, (3) *barani*, or rain-irrigated land, that is to say that most owners had to be given two parcels of *chahi* land, as it was not possible to give to each all his *chahi* land near to the well. The happiest man there at my inspection was the owner of the smallest area. He had rather more than one acre, but it was scattered in seven different places; now he has one plot near a well and another in the *barani* area. In village Semi, the success was most marked; 494 blocks had been consolidated into 42. The Secretary of the local Khilafat Committee had his land gathered from 12 different places into one. Another owner had had his land in 44 places; it had all been collected into one solid parcel of 20 acres near to his well. An interesting case here was an occupancy tenant who was formerly poor and in debt with part of his land mortgaged. He joined the local co-operative credit society twelve years ago, and has now paid off all his debts, redeemed his mortgage, and has got a consolidated plot in which he has sunk a well out of his own money saved through the credit society. There are still some people who do not believe in co-operation; I wish they could have a talk with that man. The smallest owner here has had eight scattered plots consolidated into one.

In Chomo, up to the time of my inspection, 1,367 blocks had been replaced by 153; and the work was being continued with much

\* Under the original scheme, the repartition was to be temporary for four years only. With one single exception, possession has been exchanged permanently.

enthusiasm as the owners have offered the whole area of the village for consolidation. Usually it may be said that the number of fields is reduced to one-ninth or one-tenth of the former figure and the average area is increased nine or ten times. If we count, not fields, but blocks, then the reduction is to one-sixth or one-seventh of the former figure. In 33 villages in one circle dealt with last year, the average area in one place owned by each owner was about half an acre, now it is over three acres. In these 33 villages about 5,000 acres in over 11,700 blocks have been repartitioned into less than 1,600 blocks to the great delight of more than 1,700 owners.

In one village I visited, one man had had his small heritage of less than one acre (7 kanals) in ten different places; now it was in one, and, of course, was of far greater value to him.

We have found men with rights in several wells, and have given them all their *chahi* land around one well; we have found a man with a right in a well, but with his land so far away, he was not putting water on to it, now he has all his land within reasonable distance of one well. We have found areas so minutely sub-divided that they were not cultivated; the fields were of such small dimensions that they were not worth the trouble of ploughing; now these areas are in large blocks and are under crops. There have been many cases where individual owners had scattered plots so small that they did not cultivate them; they were either left waste or had been enclosed by neighbours; at Chomo, one man assured me that he had now half as much land as before, he had lost sight of tiny plots for years and now had recovered them in the form of a single parcel of land. In many cases, the fields were so narrow that they could not be ploughed crossways; these are now in convenient shaped blocks. From the enthusiasm of the cultivators, it is possible to understand what a great burden this fragmentation has been to them; it has restrained improvements, a man cannot use a Rajah Plough in many of these tiny fields; a man with eight acres in sixteen places cannot sink a well with advantage; but now his land is all in one spot, he is sinking a well. In Ghazipur, I saw five new wells in the ground and bricks for a sixth collected on the site; from other villages comes the tale of new wells or of a demand for *takkavi* to sink them. There is an actual increase of cultivation due to the recovery of the tiny plots mentioned; there is a stimulus to improvement everywhere; there is greater economy in the use of wells, as it frequently happens that a man's well will irrigate more land than he has got within reasonable distance; now his *barani* land is allotted near to his well and is coming under irrigation. There is saving in cultivation, in time and labour, saving to the womenfolk, saving in water, for it is found that more land can be irrigated with the same water when the land is in one block than when scattered. This has in some cases led men to give up *chahi* land and take *barani* near their well in exchange, or even *barani* in one block where a well can be sunk; disputes over boundaries should now decrease; rents have already risen, for tenants are quick to appreciate the advantages of the compact block. In re-aligning boundaries it has been possible to alter the village paths so that each man's land can be reached without crossing another's field. In short, we have here a measure that confers advantages to all

concerned, and injures none. In no other work that I have seen is there the spectacle of everybody pleased and no one claiming that he has suffered. This is not to say that no one complains, but the complaints are rare; they amount merely to a grumble that while great advantage has been gained, a little re-adjustment at some one else's expense would make these advantages still greater to the grumbler; I have not met a man who wanted the old scattered fields back again.

Here then we have a great reform that amounts almost to a rural revolution; a reform the advantages of which are readily recognised and should be permanent; a reform that ought to lead to great economy in the agricultural operations of these congested districts and may, if the example of other countries is any guide, result in increased production at decreased cost. It has one other merit: it is cheap. There is no object to be gained from an attempt to work out exact figures, but, so far, the actual cost is about one rupee or so per acre; if we put it at less than one rupee four annas per acre, we shall have a margin on the right side.

There is just one other point that deserves to be emphasised: so far as we have gone, our success has been obtained in villages where there has been a good credit society for a number of years. If a co-operative credit society has worked well for ten years, then it is usually found that there will be good chance of a consolidation of holdings society. Sometimes I find that even friendly critics suggest that this work has nothing to do with co-operation; these overlook the fact that it is the co-operative spirit, the spirit of mutual help, the spirit which seeks the good of each through the good of all, the spirit which accepts a little sacrifice for a common good, it is this spirit which makes consolidation possible. I think I am correct in saying that no consolidation has been done by the staff where there is no co-operation. The same characteristics which make for successful co-operation make also for consolidation. There must be the same subordination of factiousness, of selfishness, and of domination of the rich over the poor, of the strong over the weak. If this movement towards consolidation is to be successful, we must please the weak as well as the strong, the poor as well as the rich; every one must have an equal voice if we are to get the consent of all. The advantages are so great and so obvious that it is easy to underestimate the intense feeling of affection of the cultivator towards his ancestral holding. We are apt to forget what the small owner has to remember. He is asked to give up all he has, everything he depends upon for his livelihood, for what may or may not be a good exchange. If we try to place ourselves in his position, we shall be able to appreciate his fear that he may be a loser by this new scheme. It is for this reason that I advocate careful progress on purely voluntary lines for another year or two before attempting any measure of legislation. We have to create a strong public opinion in favour of consolidation, before we can think of forcing the pace. We are gaining popularity rapidly; we cannot meet the demands for the special staff, we are preparing the ground for a greater revolution. The experiment is worth your notice.

## DISCUSSION ON MR. CALVERT'S PAPER.

MR. CALVERT supplemented his paper on "Consolidation of Holdings in the Punjab" by laying a large number of maps before the Conference. One\* of these showing the position of a man who would not join in when redistribution was taking place created a great impression on members. He explained what progress had been made, and the difficulties the Co-operative Department had had to contend with.

MR. TREVASKIS circulated a series of maps dealing with the Enclosure Movement in England, and the similarity between these and Mr. Calvert's maps was most noticeable.

MR. GULERI read extracts from a paper he had prepared on the same subject. He pointed out that those who had been most enthusiastic in attempting to introduce some form of consolidation in India had been wholly prompted by the extraordinary success and added prosperity in European countries as a result of consolidation. But while he believed that the scheme would work with far greater success in India he felt that the law of succession in India would present insuperable difficulties. In England the law was one of primogeniture by which land was inherited only by one successor, whereas in India land was divided among so many sons of a proprietor; so much so, that even though the lands were consolidated now they would in the course of a few generations become divided into so many small holdings. He did not want to discourage the workers in this direction but only wished to point out that the results in India would not be the same as was the case in England.

MR. JEVONS complimented Mr. Calvert on such an important contribution. He referred to a more or less similar scheme attempted by Mr. Mehta in 1912 in the United Provinces and said that this was in reference to the lands under the Court of Wards where there was no confusion of ownership and where the question was only of tenancy. He then said that the scheme should be proceeded with in stages as otherwise it would become impracticable. Confidence had to be created in the people regarding the success of this scheme and when the people realised its advantages then it would be time for legislation to prevent the evil complained of by the previous speaker.

MR. MYLES asked if Mr. Calvert could inform the Conference as to what steps had been taken in France to prevent fragmentation a second time once consolidation had taken place. Up to the beginning of the war there had been much talk in France of the need for legislation to prevent fragmentation in the case of smaller holdings, and he would like to know whether such legislation had become a reality and how it was operating. He would also like to know if the writer would recommend such legislation here.

DR. HYDER said that all countries had done this work of consolidation and therefore India also should do it. As regards legislation he explained that there were diverse laws in regard to succession and that they were based on customs, etc., of a more or less religious character.

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\* Reproduced here.

It was therefore impossible to legislate on the matter and the only possible solution was to educate the people by propoganda and other means to establish a custom by which the land reverted to the eldest son or the younger son or to some such individual and was not divided at the death of the owner.

At this stage the conference adjourned for lunch.

**THIRD DAY :—THURSDAY, JANUARY 18th, AFTERNOON SESSION.**  
**Continuation of Discussion on Mr. Calvert's Paper.**

**MR. J. LEITCH WILSON** said that at one time in France there was talk of bringing in legislation to ensure that if the eldest son was able and willing to take the whole land and pay pecuniary compensation to his brothers then the other sons would be compelled to accept the pecuniary compensation in lieu of their share in the land. He was not sure whether there was now a statute to prevent sub-division, and he said it would be interesting to consider whether such legislation could not be introduced in India.

**MR. KALE** pointed out that they were discussing the question of consolidation and they would be complicating the case if they were to consider other questions such as the law of inheritance and impartiality. He then explained that an attempt was made by Mr. Keatinge, the Director of Agriculture in Bombay, to bring in a bill on the subject, but it had to be dropped owing to strong opposition. He suggested, however, that the solution of the difficulty lay in going round the people and educating them on the advantages of consolidation. After this had been done then the question of legislation in regard to impartiality might be taken up. He pointed out that legislation must be on a voluntary basis. In conclusion he did not want to complicate the matter by considering other issues at this stage.

**MR. STRICKLAND** agreed that legislation should be on a voluntary basis, and said that there was a law in the Punjab by which Jagirdars could not divide their lands. He said that when they had got a co-operative staff in the Panjab which was able to bring about consolidation, it would not be wise policy to defer consolidation because thirty years, hence even with consolidation people might have reverted to the same position as they were in now. It seemed to him much better to go ahead and take steps to rectify renewed sub-division when it appeared.

**MR. CALVERT** by way of reply said that as regards the law of succession they had worked only for twenty months which was nothing in the life of a nation. He said that they should go on with the work and make it as wide as possible and leave the solution of future difficulties to the next generation. He agreed with Professor Kale in thinking that they should not overburden this question with other considerations. He further emphasized that this was not an easy task and the co-operative staff had to work with patience.



## CO-OPERATION AND THE MARKETING CONDITIONS IN RURAL AREAS.

BY T. J. KUMARASWAMI, M. R. A. S. (LOND.), RESEARCH SCHOLAR  
IN ECONOMICS, UNIVERSITY OF MADRAS.

Any estimate of the probable effects of co-operative organisations for purchase and sale in the rural tracts must be based on an understanding of the present marketing conditions in those parts. So I shall begin with a description of the present conditions.

At present there is no organisation among the agriculturists themselves to market the farm produce or purchase their requirements, with the result that they get a very low price for what they have to sell though they have to pay dearly for their purchases. Now, middlemen, mostly money-lenders, assume the risks of distributing the surplus supplies of the villages. They are Mandy-merchants (Mandy—a place for marketing and storing commodities), owners or agents of rice mills, brokers and commission agents of the exporting firms and agencies. Immediately after the harvest the needy ryot who has to make a number of money payments takes the produce of his lands to the Mandy in the nearest town. As soon as he goes there he will find a number of people coming and asking for rates and inspecting his goods. Then the Mandy-merchant; if he has not any orders from outside merchants at higher rates, will arrange for the disposal of the commodities locally. He will get his commission from the seller as well as from the buyer. The buyer, if it is paddy, will husk and prepare it for the rice merchants who used to go to such people and gather in driblets to supply the distributing agencies; if it is ground-nut the agents of the European firms purchase it when it is brought to their godowns located in the neighbourhood of such villages. They prepare it afterwards for the market. Similar conditions are obtained in the marketing of cotton.

In all these cases a number of middlemen are engaged as brokers and commission agents to secure a good supply from the villages. If these crops are sold collectively by the villagers through a co-operative society they stand to gain at least 20 per cent. more than what they get at present. Co-operation aims at the elimination of the unnecessary middlemen and economic waste. If these crops are prepared for the market in the villages or in the neighbourhood they will provide some subsidiary occupation to our villagers not to speak of the training it may give them in business methods. Paddy can be husked, ground-nut decorticated and cotton ginned locally. This will save much in the carriage expenses. These economies will give a stimulus to the growth of capital in our villages:

Such savings will increase if similar organisations are formed for the purchase of the requirements of the villagers. Now he (the ryot) gets his cloth from the draper in the town on credit at a price which is generally 20 to 50 per cent. above that charged for others, and he has to

pay interest for that amount in kind which amounts to about 50 to 100 per cent. Sometimes these loans are renewed owing to famines or other unexpected happenings in the family of the ryot. Then the sum trebles itself in no time. The ryot purchases his other requirements as spices and articles of food, kerosene and implements at prices 10 to 20 per cent. above the rates charged for others.

In collective purchase more than in such sales the ryot stands to gain a greater amount by eliminating the unnecessary middlemen as may be seen by the abnormal prices charged for the articles he is in need of by the retailers who judiciously divide among themselves (like the middlemen in urban areas) the right of catering to such customers thus establishing monopolies of predatory rights for themselves.

In this connection, a description of the Shandies or periodical fairs will not be out of place. These fairs serve as collecting and distributing agencies for the local produce and they also cater to the villagers by selling some luxuries which are otherwise procurable only in towns. They are held at places which are at convenient distances to a group of villages and are generally well attended, the attendance being in a direct ratio to their importance. Generally they are held from 6 a.m. to 6 p.m. though half-a-day fairs in the afternoon only are not uncommon. They are held once a week and the prices in such fairs are determined solely by the intelligence and the bargaining capacity of the contracting parties. The ubiquitous middleman is omnipotent in such fairs. He will see that no bargain is concluded without him and he rules supreme in cattle fairs more than in others. Our agriculturists are like Goldsmiths "Moses at the fair" quite helpless in his hands at the cattle fairs. The importance of cattle to our agriculture can never be over-estimated. Judicious buying of cattle by co-operative organisations will save a great amount to our ryots.

All such savings will increase the efficiency of our agriculturists and at the same time will give a stimulus to the growth of capital in rural areas. And such an improvement will be beneficial to the country as a whole as our main occupation is agriculture.

It is not my object to subject the middlemen to a severe censure but merely to point out the importance of co-operative organisation to market the farm produce and to supply the requirements of the villagers. The average ryot is not financially strong, and individually is at a disadvantage in bargaining and in protecting himself against aggression. Hence the exploitation by the middlemen. Such a state of affairs can no longer be countenanced as it retards the best development of our country life. Unless we solve this problem we cannot improve the condition of our agriculturists. The good effects resulting from a solution of the other rural problems will also be greatly nullified if we do not find a solution to the marketing difficulties in rural parts.

Of late, something has been done in the Madras Presidency to combine the villagers to form co-operative trading societies and organisations for purchase by indent. In some *taluks* in the North Arcot

district there were sales amounting to three lakhs of rupees of articles purchased on indent and it showed a profit of Rs. 60,000, thus working up to a dividend of 20 per cent. Our former Registrar, the late Mr. F. R. Hemmingway, estimated that the members of the primary agricultural societies who were 170,000 in number could make a profit of 34 lakhs of rupees a year—calculating profits at a modest rate of 10 per cent. of the sales. Our late Registrar, Rao Bahadur A. Vedachala Ayyar, worked heart and soul for the success of such societies.

The method adopted by such societies was quite simple. On the requisition of the *panchayat*, the members of the primary societies sent an indent for their requirements. These indents were collected and a big order was sent to the best available wholesale supplier. The articles were distributed as soon as they were received for cash or on short time credit to be collected by the primary societies. Much of the success of those societies is due to the zeal and enthusiasm of the official and non-official votaries of co-operation. Similar arrangements were also made to sell the farm produce.

Such has been the success of co-operative organisations for purchase and sale in small areas. The success of such societies clearly indicates that more economies can be secured by a better organisation along those lines. First, we shall take the starting of such societies for purchase and sale.

The unit for such societies should be a village and in any case it must not exceed three villages. Else there will not be that mutual knowledge among members without which no society can be really co-operative in character.

The members must be made to understand the real necessity for the starting of such a society. Such societies must keep separate accounts and must be kept distinct from other co-operative undertakings though the personnel may be the same in the various co-operative societies of the villages. The membership must be restricted to agriculturists residing in the villages. If necessary, two separate societies may be organised, one to conduct the sales of the farm produce and the other to purchase the requirements of the villagers.

If success is to be achieved, the members must be loyal to the society and must be actuated by the spirit of co-operation—(all for each and each for all). After all it is not very difficult to secure the loyalty of the members if the management is really efficient and tactful. Nothing succeeds like success. If necessary, a paid manager may be appointed who knows his business thoroughly well.

In the trading societies referred to above no provision has been made for the godown accommodation of the articles. In the stores for distributing articles to members and in the sales societies formed for the disposal of the surplus produce of the villagers some sort of godown accommodation is necessary. It may be rented or owned. Everything depends on the magnitude and success of the business.

A share capital must be raised to provide funds for meeting such expenses. It must be greater in amount for the stores societies as they will have to pay for the purchases. If cash sales are insisted upon we need not raise much share capital as the proceeds of sales will increase the working capital. Members may also be encouraged to make deposits in such societies. The increasing economies brought about by such societies may also stimulate the growth of such deposits. We can also develop a system of co-operative exchanges by a mutual understanding between the societies for purchase and sale for persons who are members in both of these societies. The net profit must be divided *pro rata* to the contribution of the members, not to the share capital but to the sales or purchases as is common in the consumers' co-operative societies.

In the societies organised for selling the farm produce the following are the difficulties encountered :—

- (1) We have to collect, grade and sample the supplies on lines best adapted to meet the market requirements.
- (2) We have to maintain a granary or godown.
- (3) We have to make provision against loss by deterioration or damage caused by insects or other agencies.
- (4) We must avoid undue competition among ourselves.
- (5) We must find a market for the goods.

All these difficulties can be overcome by an efficient management. The agricultural department has suggested many methods by which we can provide against the loss due to insects, etc., in the granaries. The last two problems can be solved by a federation of village societies for purchase and sale and the urban stores and by a system of scientific distribution. We can get into direct touch with the wholesale agencies. If we organise ourselves properly the wholesale agencies as the big exporting firms, stores, etc., will themselves come to us. Our dealing in bulk is a distinct advantage in our favour. They are assured of the quality of our goods and getting a regular supply and in bulk which will save them much time and money. Our agricultural holdings are small and the return for the individual farmer is also small. Hence the imperative necessity for collective bargaining in marketing our farm produce.

The chief factor contributing to the success of such undertakings is business capacity. If we cannot get capable business men as honorary officers we shall appoint them as paid managers or secretaries. The wants of our agriculturists are not too many. Salt, kerosene, cloth and a few articles of food exhaust the list. Village stores will be a success unless it is mismanaged by inefficient or dishonest men. Perhaps the only difficulty will be the want of funds for the agriculturist to make cash purchases. This can to some extent be overcome by securing a short time credit accommodation within his means to the honest ryot at the primary co-operative credit societies who will guarantee or pay for his purchases at the stores,

The handloom weavers and those engaged in cottage industries may also be admitted as members in such sale and store societies.

In all such co-operative societies the members must be careful not to sully the fair name of co-operation by dealing in inferior and spurious stuffs or by bad practices as dealing out short weights, etc. If they are careful about it, their success is assured. Honesty is the best policy in such businesses.

Lastly, we may also start co-operative societies for preparing the articles to the market by providing for the husking of paddy, for the ginning and packing of cotton, for decorticating ground-nuts, for the crushing and refining of sugar-cane. Many of our rural areas producing such products are very near the ports from which they are exported. For example, in the South Arcot district noted for its ground-nuts and sugar-cane we have two outlets, namely the ports of Pondicherry and Porto Novo, very near the source of production. Such industries may be started at convenient distances to serve a number of villages and if the magnitude of business warrants it every village may have one such organisation.

By propaganda work conducted by the officials and non-officials and by mutual co-operation between them we can solve the marketing problems in no time. The economies effected by solving these problems will stimulate the growth of capital in the villages which in its turn is sure to result in increased efficiency in production not to speak of its good effects from a social point of view.

## DISCUSSION ON MR. KUMARASWAMI'S PAPER

Mr. TREVASKIS pointed out that in the Lyallpur District of the Punjab they had co-operative commission shops which sell agricultural produce in much the same way as had been described in Mr. Kumaraswami's paper. \*These shops were found to offer considerable advantages over the system of sale by "mandi." It could not be doubted that the zemindars lost a considerable amount on account of false weights when they sold their crops in the "mandis." Another great advantage of the commission system was that any agriculturist who was in urgent need of money was not obliged to sell his crop immediately at an unfavourable price but had only to bring it to the commission shop. There he could get an advance of 75 % of its value, and the crop would then be sold when a favourable opportunity offered. One difficulty that had arisen circled round the question of management, *viz.*, whether it was better to have a businessman or a zemindar. A businessman was generally better up in accounts and understood the system better; there were often complaints, however, that he was unsympathetic towards the zemindar. The zemindar, on the other hand, though sympathetic, had not as a rule got the business acumen necessary. The difficulty had in some cases been surmounted by having one as the manager and the other as the assistant manager. These commission shops were financed by the central co-operative banks which could advance money to them without asking for security, though this would not be possible in the case of individual dealers.

Mr. CALVERT explained that in the Punjab there were two or three European gentlemen with large private lands who had associated with themselves most of the cultivators around and formed a large co-operative society for purchase and sale for cultivators. He then explained that a scheme was pushed through to form a corporation of grain dealers but this failed owing to the selfishness of grain dealers who wanted to have all the profits to themselves.

Mr. KUMARASWAMI by way of reply said that in a co-operative organisation a really efficient manager was necessary. In the matter of credit accommodation to be given by the central banks he said that not much will be necessary and even the little accommodation required would be only for a short time and could be easily obtained. As regards the organisation of grain dealers referred to by Mr. Calvert he had the least sympathy for such an undertaking because the merchants would harass the poor cultivators. Co-operation was essentially for poor workers to combine themselves against the predatory instincts of the middlemen and if credit accommodation were given to these middlemen then people would be far away from the real spirit of co-operation.

\* See in this connection an article by Mr. Trevasakis on "Some Aspects of Agricultural Marketing as illustrated by the Lyallpur Co-operative Commission Sale Shops," in "The Agricultural Journal of India," Vol. XVIII, Part II, p. 116—Ed.

## RURAL DEBT IN THE PUNJAB—A FRAGMENT.

BY MALCOLM DARLING, ESQ., I.C.S., COMMISSIONER OF  
INCOME-TAX, PUNJAB.

### Previous Enquiries : (a) in the Punjab.

In the Punjab, though agriculture is still the only industry of any importance, there is almost no information available as to the extent to which the cultivator is in debt. From time to time enterprising settlement officers have attempted to collect figures for their districts, but for the most part despair of their accuracy has compelled them either to abandon the attempt or to admit that little reliance could be placed on the results. Apart from this, so far as I am aware, only the following enquiries have been made :—

(1) In 1876 the indebtedness of 61 villages in Hoshiarpur was ascertained.

(2) In 1878, in connection with the famine of that year, 223 family budgets were collected from different parts of the Punjab.

(3) In 1896 Mr. S. S. Thorburn, the brilliant author of "Mussalmans and Money-lenders in the Punjab," undertook an exhaustive enquiry into the circumstances of twelve villages in the districts of Shahpur, Gujranwala and Sialkot.

(4) Finally in 1919 and 1920, the two villages of Kabirpur and Bairampur in the Hoshiarpur District were respectively surveyed by Dr. E. D. Lucas and Mr. R. L. Bhalla.

I shall have frequent occasion to refer to the last but, so far as my present purpose is concerned, Mr. Thorburn's enquiry is the most valuable as it was devoted entirely to the question of indebtedness. It covers, however, too narrow a field for any conclusions to be based on it for the province as a whole and it is also somewhat out of date.

### (b) Outside the Punjab.

Outside the Punjab there is the same dearth of exact information.

The simplest way to show this is to enumerate the areas in which enquiry has been made, and in doing so it should be remembered that these enquiries afford all the information available for nearly 800 million people. The areas, with the dates of the different enquiries, are as follows :—

(1) 1875, twelve villages in Ahmednagar ;

(2) 1894, Nagpur (18,000 tenants) ;

(3) 1906—10, Faridpur, a district of Bengal, in which the late Major J. C. Jack, I. C. S., made an exhaustive house to house enquiry throughout the district ;

(4) 1913, Baroda State (a general enquiry made by the Baroda Darbar) ;

(5) 1917—19, Pimpla Saudagar and Jategaon Budruk, two villages in the Deccan, which were exhaustively surveyed by Dr. H. H. Mann ;

(6) 1918, Ajmer-Merwara (10,779 )

(7) 1919, Mysore State (24,350 )

(8) 1919, Bengal (4,000 )

members of co-operative societies).

In most of these cases there is very little information to be had about rural indebtedness beyond a few figures, some of which will be given later. Major Jack's report, however, and Dr. Mann's two studies are full of facts and very valuable of their kind, but they do not cover more than a district in one case and two villages in the other. The enquiry that is about to be described may at least claim this advantage that it is the first to embrace the best part of a province.

### Origin of the Enquiry.

When I first came into contact with co-operation six years ago I was struck by the fact that, though its primary object was to reduce debt, no one knew how far or to what extent debt prevailed. About the same time, to assist village banks in making advances to their members, a register was introduced in which were recorded the assets and liabilities of each member, including his debts. It was, therefore, a comparatively simple matter to ascertain how far co-operators were in debt. This was done during the year 1918-19 in the case of 55,308 members belonging to 2,106 societies. The returns were prepared according to a prescribed form by the inspectors of the Co-operative Department, all educated men and many of them graduates. The results may, therefore, be trusted. Necessarily only co-operators were considered, and it may be objected in consequence that the returns are not representative. The reply to this is that co-operators include all sections of the agricultural community. If, however, they err at all, it is not on the side of exaggeration. Subsequent official enquiry leaves no doubt as to this.

### Debt in Terms of Land Revenue.

Before concluding these introductory remarks, for the dryness of which I apologise, a final point must be noted. It is not enough to know how much a man is in debt. We must also find out if we can whether he is seriously involved. The best way to do this is to work out his family budget. In a limited number of cases this has been done—there is no time to give the results to-day—but for over 50,000 people it was obviously impossible. For the mass we must content ourselves with some rough and ready standard of general resources. For landowners, and this paper deals entirely with them, much the best measure of debt is the land revenue as, broadly speaking, the amount a man pays varies with the yield of his land. Viewed as such, it is a form of income-tax, and it is, therefore, not a bad indication of his general position. Accordingly in the tables that follow not only will the amount of debt be stated but also the ratio it bears to land revenue. This will give us some idea of the pressure of debt in different tracts and allow one tract to be compared with another. If, for instance, we find that in two neighbouring districts the amount of debt per head is identical, but that in one district it is 20 times the land revenue and in the other only ten, it is a fair conclusion that the former is twice as heavily involved as the latter.



It only remains to state for the benefit of those who are not familiar with the Punjab that it is on the whole a province of peasant proprietors and that the average cultivated holding per owner does not exceed 8 or 10 acres. The small size of the holdings is indeed the dominant feature of rural economics in the Punjab.

### Results of the Enquiry.

I now give the results of the enquiry for the province as a whole. They are as follows :—

No. of proprietors concerned.	Percentage free of debt.	Total debt (in lakhs).	Secured debt (in lakhs).	Average debt per indebted proprietor.	Debt's multiple of the land revenue.
43,733	17	168	67	Rs. 463	12

There are four salient points about each of which something must be said, *viz* :—

- (1) only 17 per cent. are free of debt ;
- (2) net mortgage debt is not more than 40 per cent. of the whole ;
- (3) the average debt per *indebted* proprietor is Rs. 463 ; and
- (4) total debt represents 12 times the land revenue paid by all concerned, whether indebted or not.

### The Percentage free of Debt.

Few if any competent judges have supposed that over 80 per cent. of the proprietors of the Punjab are in debt.

Yet this is what the enquiry suggests. The fact emphasizes the truth of Sir Frederick Nicholson's dictum that " the necessary complement of the peasant proprietor is the money-lender " and it explains too why there are 40,000 money-lenders in the province. In none of the five circles into which the province has been divided are more than 25 per cent. free of debt, and in three districts of the submontane area all but 5 per cent. are involved. Even Mr. Thorburn's enquiry of 1896, which moreover was confined to specially impoverished villages, did not give quite so bad a result as this, for out of 338 owners 12 per cent. were not in debt. Is it possible that debt is even more widespread than 25 years ago ? This, however, is a question that cannot be answered here.

For the rest of India few figures are available for the purpose of comparison. I give below all that I have been able to discover—

#### *Free of debt.*

1888, the tenantry in the Agra District	22 per cent.
1894, Nagpur (18,000 tenants)	40 per cent.
1901, Baroda State	nearly 40 per cent. of all land-owners.
1907, Faridpur (Bengal)	55 per cent. of all cultivators.
1919, Mysore State (24,350 co-operators)	37 per cent.

These figures suggest that debt is more widespread in the Punjab than elsewhere. On the other hand there is the opinion of the Famine Commission of 1901 that at least four-fifths of the cultivators in the Bombay Presidency are in debt, an estimate which curiously enough tallies almost exactly with the figure for the Punjab. But whether conditions in the Punjab are better or worse than in the rest of India, it is clear that the money-lender spreads his net over the whole country and is perhaps an even more formidable problem than was supposed.

### Mortgage Debt.

Net mortgage debt is only 40 per cent. of the whole and, though it varies from circle to circle, in each one it is less than half.\* The interest of this lies in the fact that, as the mortgage debt of the province has recently been ascertained, it affords a basis for calculating total debt. We shall also be able to determine its fluctuations from year to year. I have dealt with the importance of this elsewhere.

### Average Debt.

When it is remembered that the average cultivated holding in the Punjab does not exceed 10 acres, an average of Rs. 463 for each indebted proprietor is considerable. But a figure standing by itself is of little value. Let us compare it, therefore, with the results of the enquiries that have already been mentioned.

These can best be expressed as follows:—

PUNJAB.		<i>Average debt.</i>
	Rs.	
(1) 1896, 9 villages in Sialkot, Gujranwala and Shahpur. (Mr. Thorburn's enquiry).	562	}
(2) 1918, 43,733 proprietors, (present enquiry).	(a) 463	
		(b) 385 per owner.
OUTSIDE THE PUNJAB.		
(3) 1875, 12 villages in Ahmednagar ..	371	per occupant.
(4) 1907, Faridpur district ..	121	per indebted cultivator.
(5) 1913, Baroda State ..	450	per indebted holding.
(6) 1917, Pimpla Saudagar village (Deccan).	225	per indebted family
(7) 1918, Ajmer Merwara (10,779 co-operators).	379	}
(8) 1919, Bengal (4,000 co-operators)	120	
(9) 1919, Mysore (24,350 co-operators)	273	
		per indebted co-operator.

\*Not infrequently a man who has mortgaged part of his land will take a mortgage of part of his neighbour's land. By net mortgage debt, therefore, is meant the amount that remains after deducting the consideration for the latter from the consideration for the former.

No doubt figures collected in widely-scattered areas, at different times and under varying conditions can have but little comparative value; but these at least show that debt in the Punjab is not insignificant. Of all the figures given the most instructive for our purpose is the first, as it not only relates to the Punjab but is the result of exact enquiry. It is naturally higher than ours as the nine villages in question were seriously involved. It is even higher than appears as in 1896, owing to the greater value of money, a debt of Rs. 562 was a much more serious affair than it would be now. The Ajmer figure, too, is interesting as it relates to a tract not very far from the Punjab and the results are in both cases almost identical.

### Total Debt of Proprietors in the Punjab.

For the province as a whole debt is 12 times the land revenue,\* which means that the total debt of the proprietors of the Punjab is about 56 crores. Actually, however, there is good reason to believe that it is more than this. The mortgage debt of the province (excluding occupancy tenants) was last year ascertained to be about 34½ crores. As we have seen, my enquiry suggests that net mortgage debt is only 40 per cent. of the whole. If, as I think is fair, we assume that gross mortgage debt is not more than 50 per cent. of the whole, total debt will be 69 crores. To be on the safe side we may put it at 65 crores, which is about 14 times the land revenue. With this multiple as our standard we can form some idea of the pressure of debt upon the peasant proprietor of the Punjab. Broadly, the land revenue demand absorbs about one-fourth of the *net* income of the land. Accordingly, a multiple of 14 means that the average proprietor's debt is equal to 3½ years of his net income. Viewed thus the burden can hardly be regarded as light. On the other hand, if debt and sale value are compared, the burden can hardly be regarded as heavy, for during the five years ending with 1921 land sold in the Punjab at an average price which was equivalent to 181 times the land revenue payable upon it. It is, however, fairer to express debt in terms of net income than in terms of sale value, as the latter is notoriously inflated and bears little relation to yield.

### Comparison with Prussia.

At the same time it cannot be too clearly emphasized that in any Western country a debt of 65 crores or £43 millions, formidable as it is, would be considered a very small one for a province of 21 million inhabitants. A single instance will show what is meant. In 1902 the proprietors of Prussia who numbered about 600,000—in the Punjab there are well over 3 millions—were in debt to the tune of £377 millions,† and in a single year, 1913, net mortgage debt in rural areas increased by nearly £40 millions, that is to say by an amount which is not far short of the total debt of the proprietors of the Punjab. Yet before the war

\*For land revenue see Land Revenue Report, 1921, Statement IV (Col. 10).

†Figures given me by Professor Max Sering (University of Berlin).

Prussia was as strong in agriculture as any country in the world. It is one of the paradoxes of the subject that debt is as often an indication of prosperity as of poverty. If anyone is interested in this aspect of the question, I venture to refer him to an article of mine in the Indian Journal of Economics for January 1921 entitled "Prosperity and Debt in the Punjab."

## Part II.—DEBT IN FOUR SUBMONTANE DISTRICTS.

### The Causes of Debt.

Before embarking on the second part of my paper which deals with rural debt in four submontane districts, a word of explanation is necessary. As the result of the enquiry which has been briefly described I have been led to investigate the causes of debt in different parts of the Punjab, and I have come to the general conclusion that in the Punjab, and probably also in India, nearly all roads lead the cultivator into debt, or in other words that the causes of debt are innumerable. At the same time there appear to me to be four main causes which are continually forcing a man to borrow, *viz.*—

- (1) small holdings ;
- (2) the constantly recurring losses of cattle from disease and drought ;
- (3) the natural improvidence of a hot country combined with a great insecurity of crop ; and
- (4) extravagant expenditure on marriages and other domestic ceremonies.

In addition there are two causes that make borrowing easy, namely facile credit and a vicious system of money-lending. The first four explain why a man *must* borrow, the last two how he *can* borrow, and it is a combination of "must" and "can" that explains the ever-increasing debt in the Punjab.

Now it is not contended that these six causes are everywhere dominant. They vary indeed from tract to tract, and that is why it is not sufficient to study debt in one area alone. For the purpose of my own study I have divided up the province into six circles, and as six circles can obviously not be adequately discussed in a single paper, I have thought it best to give you my conclusions, such as they are, for a single circle only.

### Description of the Tract.

This circle embraces the four districts of Sialkot, Gurdaspur, Hoshiarpur and Ambala which lie at the foot of the Himalayas between the Chenab and the Jamna. No less than five rivers run through it, or seven indeed if we include the Ghaggar and the Ujh. Much of the tract is riverain country, which invariably means water-logging, disease and debt. Owing to a high rainfall, which runs from 30 inches to

well over 40, famine is unknown, and the land being fertile, population is unusually dense. Holdings are correspondingly small, and as the latter are generally split up into tiny fields scattered round the village, good agriculture is at a discount. Through most of the tract the Rajput predominates, a tribe that is notorious for bad husbandry and extravagance. Nor are the other tribes seen at their best. Finally, thanks to the security of British rule and to the slack-twisted character of much of the population, the tract has long been the happy hunting ground of the money-lender. The combined effect of all these factors is almost universal debt. In three out of the four districts only five per cent. are not involved, and of these areas it might almost be said in the words of the great but fallacious French philosopher that "man was born free, but is everywhere in chains."

### Results of the Enquiry.

I will not bother you with the figures for each district. Suffice it to say that returns were obtained for over 12,000 proprietors and that the following results emerge :—

- (a) only 11 per cent. are free of debt against a provincial average of 17 ;
- (b) average debt per indebted proprietor is Rs. 525 or over Rs. 60 more than the figure for the whole province ; and
- (c) total debt is 20 times the land revenue.

It is clear, therefore, that we are entering a tract that is seriously indebted. It is probably the worst in the province, a point that should be remembered in judging the results.

### The Money-lender.

Many and various are the causes of debt, and most of them are to be found here in greater or lesser degree. But dominating and aggravating them all and turning them irresistibly to his advantage is the money-lender, who has four-fifths of the cultivators in fee. Formerly the ally, if not the servant of the village community, he is now too often its master. The security of British rule and a legal system, in which the spoils are ever to the astute, have given him an opportunity which he has been quick to seize. With the Pax Britannica land rose rapidly in value and the cultivator was only too ready to pledge it to smooth away the difficulties of life and to meet the extravagant demands of social custom. In this the Rajput set the standard, and it was a standard that compelled frequent recourse to the money-lender. Nothing could be more demoralising, and though little is said about this factor in the present paper—the subject is being dealt with at length elsewhere—it must be remembered that throughout he is the evil genius in the background and his system the *fons et origo mali*.

### Small Holdings.

After the money-lender nothing has affected the tract more profoundly than the smallness of the average holdings. Nature is bountiful, but man is prolific. In the East every advantage of nature is

sooner or later neutralised by an increase of population. It may almost be said that the fertility of land is a measure of the fertility of woman. The pregnant truth, discovered by Malthus, that the happiness of countries depends "on the proportion which the population and the food bear to each other" has ever been ignored\*. Throughout this tract the yield *per acre* is high, but the yield *per man* is low. In the Hoshiarpur tehsil there are 960 people to every square mile of cultivation. In the low-lying riverain country of the Ravi, where little effort is required to secure a harvest, the density is over 1,000. In no tehsil is the average cultivated holding more than 8 acres, and in every tehsil of Hoshiarpur it is no more than 4 or 5. Now, as Professor Carver points out, small holdings invariably mean small incomes†; and in a backward country, where expenditure is less determined by income than dictated by necessity and custom, small incomes sooner or later mean debt. Only one thing can prevent this—lack of credit. In the Bengal district of Faridpur it was found that 50 per cent. of those who were classed as "indigent" had no debt at all as they were "too poor to have any credit." But in the Punjab, owing to the great rise in the value of land, every owner enjoys two or three times as much credit as he did 30 years ago. In parts of Hoshiarpur and Ambala land is four or five times as valuable as it was in the eighties. There is therefore no lack of security, and the money-lender sees to it that there is no lack of money.

Yet, it may be asked, if nature is bountiful why should a man borrow? The answer is that nature is infinitely capricious. The monsoon may fail, or, as so often happens near the hills, the rain may come at the wrong time; or a river may rise and sweep away harvest, hamlet and herd. Under such circumstances to support a family upon a few acres without getting into debt requires a level of skill, industry and thrift seldom attained in a hot country. Undoubtedly it can be done, just as a small sailing boat can weather the storms of the Atlantic. But, unless the boat is both well found and well manned, it will assuredly sink. In India the farm is too often neither the one nor the other, and nature can be almost as destructive on land as at sea. It is usually reckoned that a cycle of five years will give one good year, one bad and three that are neither good nor bad. Now it is only in the good year that the ordinary small holder gets through without a loan. In the bad he will have to borrow for everything he wants, for seed, cattle and clothes, and even for much of his food. It is then that compound interest swells the account and bondage begins. Even in the three middling years he will have to borrow now and again, perhaps to buy a bullock or marry a child. In these years, if he is careful, he will be able to pay the interest due on what he has borrowed before, but it is only in a good year that he can actually reduce his debt. Once in debt, therefore, it is almost impossible for the small holder to escape. If he were thrifty and businesslike he might succeed, but he is rarely either one or the other, and the money-lender is always there to tempt him deeper into the mire. "Holdings are so small" says a settlement officer, speaking of the Gujar Khan tehsil in the north of the Punjab

\*An Essay on the Principle of Population, Book II, Chapter XIII,

†Principles of Rural Economics, p. 253,

where the average is four acres, "and the margin of safety so narrow, that any misfortune may plunge the zemindar into debt from which he can never extricate himself. A series of bad years, the death of cattle or mere carelessness may lead to debt, while in the best years the surplus produce is so small that the interest is paid with difficulty and from the principal there is no escape. . . . Indeed life is hard and bitter to the cultivator who has to depend on his few acres to support himself and his family." Writing of India generally Mr. K. L. Datta comes to much the same conclusion. "Living as he (the small holder) does near the margin of subsistence, his production is just sufficient to meet his wants when the season is favourable, while in bad years he has no alternative but to fall into the clutches of the money-lender."\*

### Two Concrete Examples.

Let us now take two concrete cases, the two Hoshiarpur villages surveyed by Dr. Lucas and Mr. Bhalla, to which reference has already been made.† Kabirpur is below the average and Bairampur above it. The owners in the one are a thriftless lot of Sheikhs and in the other a hard working set of Hindu Jats. In Bairampur two-thirds of the land is partially irrigated, but in Kabirpur there is hardly any irrigation at all. On the other hand Kabirpur holdings average  $9\frac{1}{2}$  acres against less than 5 in Bairampur. In Kabirpur seven of the ten families of Sheikhs were found to be in debt and unable to make their budgets balance. "This," says Dr. Lucas, "is the state of affairs during normal years, when not a pice is paid back to the money-lender on account of money borrowed or its interest." In his view a small farmer can only pull through if he is not in debt.‡ Despite its greater prosperity the experience of Bairampur is not very different, for the advantages of character and nature are largely neutralised by a bigger population, which is a good example of what was said above. The family budgets show that a Jat with 14 acres cannot support a family of five (including himself) without getting into debt; and that, while in an ordinary year a Gujar with  $6\frac{1}{2}$  acres and a family of four can just make both ends meet, in a bad year he cannot get on without a loan. As 55 per cent. of the owners in Bairampur possess less than 3 acres and, including the land taken on lease, 23 per cent. cultivate less than six, it is clear that holdings as small as those that prevail in this area are incompatible with any real measure of prosperity.§ To secure this, either production must be increased or population reduced.

There is no doubt that throughout these four districts—and the same of true part of the central Punjab as well—population tends to outrun subsistence. As long ago as 1879, when holdings were larger than they are now, the Deputy Commissioner of Hoshiarpur remarked that the ordinary proprietor with ten or fifteen acres lived from hand

\* Enquiry into the Rise of Prices in India (1915), Vol. 1, p. 161.

† See the Economic Life of a Punjab Village (1920) by E. D. Lucas, and an Economic Survey of Bairampur (1922) by R. L. Bhalla.

‡ See pp. 64, 103, 109 and 111.

§ See pp. 26, 28, 167—72.

to mouth and was usually in debt, as his holding was barely sufficient to support a family.\* It is no mere coincidence that in Zafarwal (Sialkot) holdings are at once smaller and more heavily mortgaged than in any other tehsil of the district. The two are intimately connected, and if I had time I should be able to show you that the small proprietor in the Punjab is nearly three times as heavily indebted as the larger. It is not that the small owner runs up a bigger debt—the precise contrary is the case—but that debt presses more heavily upon the small farm than upon the large. The small holder is faced with two alternatives. Either supplementary work must be found, or he must be content with the low standard of living that bondage to the money-lender entails. The bolder spirits join the army, and in Hoshiarpur, as in Italy, the more enterprising emigrate. Others set up as carters or, like the Irish reapers who flock to Scotland for the harvest, go off to the canal colonies once or twice a year to pick cotton or cut corn. Most, however, with the characteristic fatalism of the East, resign themselves to the money-lender as the line of the least resistance, and they do so the more cheerfully as it is a life of comparative ease. Dr. Lucas reckons that a three or four acre farm leaves a man with 200 idle days in the year, and he regards this enforced idleness as a great cause of the peasant proprietor's poverty.† Yet if the latter seeks work elsewhere, as often as not it will be at the expense of his land. Either he will mortgage it, and land is rarely the better for being mortgaged, or he will try and combine two occupations, in which case, as a recent writer says, his cultivation will be poor and his outturn low.‡ From every point of view, therefore, holdings as small as those described are a manifest evil.

### Fragmentation.

And the worst is still to tell. Small holdings are the result of large population and of laws of inheritance which prescribe that each son shall get an equal share of his father's land. That is bad enough, but what are we to say of a custom which requires that the few acres each son receives should be split up into as many fragments as there are different soils in the village, so that all may get an equal share of every kind of land, good, bad and indifferent? Yet this custom is well-nigh universal. In Bairampur the village lands were found to be divided into 1,598 fields averaging about one-fifth of an acre each. Twenty-eight per cent. of the holdings had over 30 fields, and in three cases plots were so small—the smallest was only  $\cdot 014$  of an acre—that they had been lost sight of by their owners and had passed into the hands of others. Even the wells are sub-divided and a man's share may be as minute as the odd fraction that governs exchange.§ The more fertile the land, the more it is split up, as fertility and population go together. Accordingly the denser the latter, the greater the evil, and nowhere is it worse than in the thickly populated parts of this area and the Central Punjab.

\* Hoshiarpur Gazetteer, pp. 73-4.

† P. 58.

‡ Keatinge, *Agricultural Progress in Western India*, p. 60.

§ Bhalla, *op. cit.*, pp. 33-4.



In other parts of India too it is as bad, and of the Bombay Presidency we read—"there is hardly a holding that will now conform in size and shape to economic requirements."\* The results of this are obvious. Land is wasted in innumerable boundaries, labour and time are lost in going from plot to plot, enterprize is paralysed and developed agriculture is out of the question. All the evils of small holdings are aggravated a hundredfold, and it may be safely said that till they are consolidated, there can be no permanent advance.

### Cattle Disease.

I come now to the second of our basic causes of debt, the constantly recurring losses of cattle from disease and drought. Year in year out, there is nothing that more insistently drives the cultivator to the money-lender than the ever-present necessity of replacing his stock. Indispensable everywhere, in the East cattle have an almost religious significance. It is not for nothing that in the Bible the rainbow is represented not only as a token between God and man but also between Him and every living beast, and that many hundred years later the ancient but immoral city of Nineveh is finally spared from destruction because, *inter alia*, it contained "much cattle." For anyone who has not lived in a primitive country it is difficult to realise how much a peasant's life may depend on his cattle. Without them his fields remain unploughed, store and bin stand empty, and food and drink lose half their savour; for in a vegetarian country what can be worse than to have neither milk, butter nor ghi? Indeed it is difficult to have anything at all, as all cooking is done with cakes of manure. The very "hukka," beloved of the rustic, can hardly be smoked without the cow-dung fire that is almost universally used. It is not surprising then that India probably contains more cattle to the square mile than any other large country in the world.† Yet in a bad year drought or disease will make holocausts of thousands.

In the great famine of 1869 four districts in the south-east of the province lost over 40 per cent. of their stock or a total of over 600,000 head. Two Rajput brothers, says the official report, lost 8 bullocks, 10 milch buffaloes and 40 cows and calves. Everything died and they themselves, deprived of their only means of livelihood, were forced to sell whatever else they had to keep body and soul together.‡ Even as recently as the last two years the Sirsa Subdivision of Hissar is said to have lost 40 per cent. of its stock by sale, transfer and death. These, however, are famine conditions and, thanks to a good rainfall, serious famine has not to be reckoned with in the districts near the hills. The enemy is disease and it is almost as bad. In 1877 an epidemic carried off two-thirds of the cattle of the Ambala District, and not long ago I came across a group of

\*Keatinge, *op. cit.*, p. 69; see also pp. 70-1, 195-223, and H. H. Mann, *Land and Labours in a Deccan village*, 1917, pp. 47-54.

†In 1920, India had 101·5 bovine cattle, horses, mules, donkeys and camels to the square mile, whereas the United States (excluding Alaska) had only 31·2—see article in the *Pioneer*, dated 24th June 1922.

‡Famine Report, Vol. 1, p. 12, and Vol. 4, p. 73.

villages near the Beas, the river that finally stayed Alexander, where in two years 233 co-operators had lost 1,361 head of cattle or about half their total stock. Losses on this scale cripple a man for years, for they have a way of occurring when harvests are bad and resources low. To replace them, in nine cases out of ten, the peasant has to borrow. There can be no doubt, therefore, that loss of cattle is a main cause of debt, a view moreover that was held by both Mr. Thorburn and Major Jack.

It must not be supposed, however, that cattle disease on a large scale is the peculiar misfortune of India. The fact that last year's epidemic of foot and mouth disease in England and Scotland cost the country nearly £1,000,000 is emphatic evidence to the contrary. Only two years ago in Germany I met a landowner who had lost 23 cattle in two months, but—and the point is important—they were all insured. This, rather than the evil itself, is the main difference between East and West. In the West everything, cattle, crops and buildings, can be insured and in the more advanced countries generally is, but in the East almost everything is left to fate—or magic, as the following episode shows. Two years ago an epidemic broke out in the neighbourhood of Bairampur, the Hoshiarpur village that has already been mentioned. The Veterinary Surgeon came out to help, but the villagers to a man flocked to a quack *faqir* whose "charms" made cattle "invulnerable" against disease, and they were all so much of one accord that the *faqir* was paid out of the village fund.\* Similarly in the Rohtak Gazetteer we read that the favourite remedy for cattle disease is a rope strung across the entrance to the village with little tin boxes suspended on it or rolls of cloth containing charms dictated by *faqir* at a rupee apiece. All the cattle of the village are driven out under the rope in a struggling herd and water is sprinkled on the houses on either side with a switch of grass. Finally a magic circle of milk and water is drawn round the whole village, and a pot containing rice or sugar is secretly buried in the land of an adjoining village, presumably in the hope that the disease may pass off that way. Superstitions like these show how primitive agriculture still is in parts of the Punjab, and incidentally they help to explain why the cultivator is like wax in the hands of anyone so astute as the village money-lender.

### The Burden of Debt.

Before concluding this very brief survey of the submontane area some estimate must be attempted of the burden of debt in each district. Fortunately the mortgage debt is known in each case.

The figures are as follows :—

		Lakhs.
Sialkot	..	264
Hoshiarpur	..	222
Gurdaspur	..	215
Ambala	..	180

\* Bhalla, op. cit., p. 134.

To obtain total debt a certain percentage must be added on account of unsecured debt. My enquiry indicates that net mortgage debt in these four districts is 48 per cent. of the whole. Gross mortgage debt is probably not much more, but to be on the safe side let us assume that it is 60 per cent. Total debt, with its measure in terms of land revenue, will then be as follows :—

	Total debt in lakhs.	Debt's multiple of the land revenue.
Sialkot	.. 440	25
Hoshiarpur	.. 370	20
Gurdaspur	.. 358	19
Ambala	.. 300	20

In each district total debt is £2 millions or more, while in Sialkot it is well over £3 millions. These are formidable figures, but are they crushing? This most difficult question we must endeavour to answer. Everything depends upon resources and in this case the main resource is land. What relation then does debt bear to the land? The total debt of the four districts is 21 times the land revenue.\* As land revenue represents roughly one-fourth of the net income of the land, we may assume that debt is equal to five years of the latter.

Or it may be expressed in terms of gross yield. With the help of the Agricultural Department, I have worked out the latter for two out of the four districts, thus—

	Gross yield per cultivated acre.
	Rs.
Gurdaspur	.. 48
Hoshiarpur	.. 42
Average	.. 45
For debt the corresponding figures are—	
	Debt per cultivated acre.
	Rs.
Gurdaspur	.. 49
Hoshiarpur	.. 64
Average	.. 56

As these two districts are less heavily indebted than Sialkot and not more so than Ambala, it may be generally stated that debt in this area certainly exceeds the value of a year's produce.

One more method may be applied. Elsewhere I have worked out the average income of 193 proprietors living in ten villages of Hoshiarpur and Gurdaspur at Rs. 124 a head or Rs. 558 a family. For our present purpose, however, something substantial must be deducted, as their holdings are nearly twice as large as the average for the whole tract. Bearing this in mind I think an average owner's income may be put at Rs. 360 a family or Rs. 80 a head. Now the present enquiry shows that,

\*My own enquiry gives a multiple of 20.

excluding those who are not in debt, sub-montane debt averages Rs. 525 per co-operator peasant proprietor. We may therefore conclude that it is roughly equivalent to 18 months' gross income of those who are in debit. In case this is considered excessive, it may be mentioned that in 1878 it was calculated that 62 per cent. of the owners of the Punjab were in debt to the extent of two years' gross income and that for 70 per cent. in Hoshiarpur it was thought to be even higher, in fact twice as high as the present estimate.\*

To sum up, the debt of owners in these four districts may be broadly stated in three different ways, *viz.*, as

- (a) equal to five years' net income of the land,
- (b) exceeding the value of a year's total produce, and
- (c) roughly equivalent to 18 months' gross income of those who are in debt.

In stating these conclusions no claim of course is made to exactitude, but in their favour it may be urged that, though derived from independent sources, they are not I think mutually inconsistent. Thus (a) and (b) read together suggest that net income is about 15 or 20 per cent. of gross yield which is probably not far from the mark; and, if there is a difference between (b) and (c), it was to be expected, as owners do not get the whole produce and those who are not in debt are excluded from (c). Moreover (b) is corroborated by an acknowledged authority. Mr. Calvert estimates that land revenue in the Punjab is equal to about 5 per cent. of a year's gross produce.† If debt somewhat exceeds the latter, it should be somewhere between 20 and 25 times the former. Actually the multiple is 21. Altogether it is difficult to resist the impression that in this area at least debt is a heavy burden. The impression is strengthened if we compare the tract with the moderately prosperous district of Faridkot in Bengal. Twelve years ago total rural debt in the latter was found to be not more than one-fifth of total income, and only 5 per cent. of the cultivators were in debt beyond half their income.‡

#### Debt in relation to the value of Land.

There is one way of stating debt which reduces it to comparatively modest proportions, and that is to express it in terms of the value of land. In the two years, 1920-21, land in our four districts has sold at an average price of Rs. 289 an acre, whereas the corresponding figure for debt is only Rs. 56. For the debtor however, this is a dangerous way of stating the case, for it obscures the fact that debt should be repaid out of income and not out of capital. As we have seen, measured in terms of income, debt is unquestionably high. That in relation to capital it should be comparatively low is due to the enormous rise in the value of land that has taken place in the last 20 years. This is no doubt a sign of prosperity and to the man who sells an obvious advantage. But, as I have endeavoured to show in my article referred to above, prosperity has its shadow, for as land prices rise, debt increases. A man who

\* Punjab Famine Report, 1878-9.

† The Wealth and Welfare of the Punjab (1922).

‡ The Economic Life of a Bengal District (1916), pp. 72 and 198.

20 years ago could raise only Rs. 100 on his land can now borrow thrice that amount and he frequently does so. This would matter little if income kept pace with debt, but for the small holder it becomes more and more difficult to repay one out of the other. In many cases his only way is to sell part of his land, but no true Punjabi sells unless he must. The alternative is bondage and in bondage as often as not he remains.

And here this paper must end, and in conclusion I would ask you to remember that it is only a fragment of a more detailed study upon which I am at present engaged, and that much is unavoidably omitted which is necessary to a proper understanding of the subject.

## DISCUSSION ON MR. DARLING'S PAPER.

MR. DARLING briefly reviewed his paper and pointed out the extreme complexity of the subject and the difficulty of putting one's finger upon the causes of debt. Even so the subject was one of such importance that he considered that enquiries made in the proper spirit would yield most fruitful results. As illustrating the complexity of the subject he showed that particular castes in a certain locality would be free from debt whereas the same castes in another locality were over-burdened with debt. He also pointed out that in districts where economic conditions were prosperous, *e. g.*, Amritsar and Ferozepore, indebtedness prevailed to a large extent. Though a great deal was said about the malpractices of the money-lenders, he personally felt that it was the system that was at fault. He explained that the great indebtedness of the Indian agriculturist was due to his borrowing money for unproductive purposes. Another bad feature was the high rate of interest. He then referred to the various causes of debt such as marriage, domestic expenses, extravagance and litigation. In conclusion he said that it was throughout a gloomy subject, and in his opinion the only effective remedy was co-operation.

LALA SHIV DAYAL complimented the author of the above paper and asked to be informed as to the effect of the Land Alienation Act upon agricultural indebtedness. In regard to co-operative credit societies as a remedy for indebtedness he was surprised to see that the spread of co-operation had been accompanied by an increase in agricultural indebtedness. As to the causes of indebtedness he said he was in entire agreement with the paper.

MR. CALVERT said that through co-operation eight lakhs of old debt had been repaid during the last five years. He then gave statistics to show how much co-operative societies had done towards the reduction of debt, and also explained that the increase of debt referred to by Mr. Darling was for the major part confined to those who were not members of co-operative societies. As regards agricultural money-lenders he explained that legislation might be necessary in order that the agriculturists may not indulge in money-lending or that at least some stigma should be attached to agricultural money-lending as was the case in England. With regard to the Land Alienation Act he said that though it may seem desirable to sell a portion of the land to discharge debts it was not advisable. It was rather a thorny question and it would be a surprise to many to learn that the Hindus of the Punjab were mostly cultivators and they strongly favoured the Land Alienation Act.

DR. HYDER said that there was no increase in the agriculturist money-lenders as was generally supposed. He agreed with Mr. Darling in saying that marriages accounted for a large portion of indebtedness and suggested that it would be better for the parties entering into matrimonial relations to make economic enquiries about one another just as they made enquiries into their family history.

Mr. SODHBANS said that there was no doubt that a class of agricultural money-lenders had sprung up on account of the Land Alienation Act. The agriculturist somehow or other managed to get money from the rich money-lenders and advanced it to small agriculturists. Another feature was that the *bantias* or shopkeepers also made advances to small agriculturists at a high rate of interest because they knew that they could get their money back in the shape of produce. He then said that even in localities where co-operative societies existed people borrowed money from the money-lenders to pay the loans borrowed from co-operative societies, and they again borrowed from co-operative societies to repay the money-lenders.

Mr. ANTIA pointed out the necessity of a Money Lenders' Act similar to the one in England. In addition to the money-lender being registered there should be a provision fixing the maximum rate of interest chargeable and the manner in which the interest should be assessed. As regards the cause of agricultural indebtedness in India he did not believe that marriages, want of thrift, spending money for domestic purposes and similar causes could be regarded as basic causes. The most fundamental cause he said was the poverty of the ryot and his poverty was increased by recurring famines. The remedy did not therefore lie so much with co-operation. What should be done was to enable the ryot to get a fair price for his produce. Another difficulty was that the ryot was unduly taxed as regards the articles he had to buy. The remedy he suggested was in the starting of purchase and sale societies which would do away with the middlemen. Another remedy was to find some occupation for the agriculturist during his spare time.

Mr. CHAMAN LAL KAPUR said that he did not see how prosperity and indebtedness could go hand in hand. He wanted to know how the causes of indebtedness given in the paper should be particularly operative in places which were very prosperous.

Rev. E. D. LUCAS spoke of the relative prosperity of the Chamar classes and attributed this to the fact that they had no security to give and so could not get into debt; they also had to spend very little on domestic occasions. Besides the Chamar can turn to any kind of work and had no scruples about doing any type of work and so he was kept employed all the year round.

Mr. DARLING by way of reply said that the points raised in the discussion were so wide and varied that it was not possible to answer them all within the limited time at his disposal. In regard to the fact that prosperity and indebtedness go hand in hand, he did not mean that they occurred together, but what he meant was that when there was prosperity the people began to play "ducks and drakes" with it. As regards the opinion expressed that poverty was the cause of debt he did not agree, as when there was no security to give then it was not possible to get loans. As regards agricultural money-lenders he said they certainly were on the increase, and he actually knew of a case where a man who had gathered a few hundred rupees in the course of twenty years in the Army became owner of thousands of rupees in the course of four or five years by money-lending.

## THE PROBLEM OF CATTLE IMPROVEMENT IN INDIA.

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(In the absence of the Author, this paper was taken as read.)

An important question which has for some time been exercising the minds of our public men is how to improve the cattle of India. It is felt that such improvement is urgent both in quantity and in quality. Usually the emphasis is given on quantity but, as will be seen below, the need is more for improvement in quality than in quantity. Only in a few places in India, for example, in Sindh and some parts of Madras is the quality of stud bulls at all satisfactory. At present, in some Government dairies, the problem of solution is being attempted by importing stud bulls of superior quality and utilising such bulls of India wherever they are of the desirable quality. Such experiments have been universally successful although they have hitherto been too limited for a vast country like India. The quality of milch cattle also requires to be improved in India. At present the yield of a full grown cow in India is rarely more than six seers (about 12 lbs.) per diem during the period of lactation. In this direction also successful experiments have been made. At Bangalore and Mhow, for example, a full grown cow has been made to yield more than sixteen seers per diem. Thus it seems to have been proved that it is not difficult to improve the quality of our cattle, both draught and milch, when proper efforts are directed in that behalf. The problem is how to make such improvements widespread in India. The solution of this problem again depends upon the problem of how to make the results of such improvements available to the poor masses of the country.

In connection with this question of increase and improvement of our cattle, two measures are usually advocated. One is the stoppage of slaughter of cattle, and the other is that of their export. The arguments advanced for stopping the slaughter are mainly of three kinds, *viz.*, (1) religious and humanitarian, (2) medical, and (3) economic. (1) I shall not deal with the religious aspect of the question because I feel that I am not competent to judge whether or not it is a sinful act to eat meat and slaughter cattle for that purpose. But it should be remembered that the use of meat diet is very restricted in India. The high caste people among the Hindus do not eat meat, and the lower caste Hindus and the Mussalmans, who have no objection, cannot afford to eat meat as frequently as people of western countries do. Yet the number in the aggregate is very large for the whole of India. Sometimes humanitarian motives are advanced against slaughter of animals, but these, however powerful in the breasts of some noble souls, cannot justify a compulsory measure depriving a large number of human beings from having what food they desire to have. This is a matter entirely for propaganda and educating public opinion. The movement of *gou-shala* (cow preservation society) is in this direction. One can only



hope that the same humane sentiments will be extended also to other animals besides the sacred cow.

(2). On medical grounds it is urged that, for people living in a tropical country like India, meat diet is not suitable. This, however, is a point on which medical authorities must agree before economists or other laymen should dogmatise. And when they agree there will be no need of proscribing slaughter of cattle because people will themselves give up the harmful diet. Apparently such authorities are not of one opinion yet. Sometimes authorities are quoted, who condemn the excessive use of meat in western countries. The opinion of such authorities must be cautiously applied in the case of India. What they usually condemn is not the use of meat as a dietary but its excessive use. Excess of most things is bad even when they are vitally necessary for life. In any case it seems that medical authorities will take long to agree on such a question inasmuch as the food requirements of the human body have not yet passed the stage of investigation. The elusive vitamins, for example, one class of which is derived from meat diet, must yield up their secrets before medical authorities can agree finally on this important question. Moreover, if we are to judge of results from experience India is the only important country in the world, an appreciable portion of whose population are averse to meat eating; this aversion originally arose out of religious scruples and is of late being justified by arguments based on medical grounds. Thus neither medical grounds nor experience will justify a person to stop slaughter of cattle for purposes of providing food. Further, if, on medical grounds, meat diet is to be condemned in India, such persons who desire it should condemn and abolish first the consumption of other articles, the effect of which on human body is much worse than meat, *e. g.*, alcohol, opium, tobacco, etc. It is only during the last two years or so that, as a result of the new political movement, a few such articles are being condemned on a wide scale.

(3). The third argument against slaughter is economic. It is said that cattle should not be slaughtered because India has not had enough of cattle to spare. The rest of this paper will deal with this economic argument. But here it need only be pointed out that the aid of economics is usually invoked to cover religious scruples inasmuch as little objection is raised against the slaughter of buffaloes or goats, the milk of which is widely consumed in India. Moreover, the buffaloes supply richer milk than that of cow, the quantity of which is at least proportionately equal to that of cows when the cost of maintenance is taken into consideration. Further, as draught animals buffaloes are as frequently used as bullocks, and can do more arduous work than the latter.

As to the stoppage of export of cattle, the only economic argument advanced is the short-sighted one of present shortage in cattle for the purpose of internal use in India. It is said that, at present, the number is not enough even for India. We should only export the surplus if there be any. As there is no surplus now, we should not allow any export. It is evident that the amount of surplus is a matter which is vitally

connected with effective demand for that article within the country. Ordinarily, the need of a community or country cannot be ascertained by considering the quantity of the commodity only, but also its demand price. This is affected by the use of the commodity as also by the relative position of demand and supply prices. The fact that a substantial quantity of a commodity is exported is enough in itself to show that the demand price in India plus the cost of transport, etc., is lower than the demand price abroad. This roughly proves that the use of such commodity within the country is not very great or that the consumers are so poor that, to them, the value of money is very high. I believe that both these operate in the case of cattle in India, the latter perhaps with greater force than the former. It should be noted that the export of Indian cattle is small. From the point of view of supply, we should take into account the cattle breeder in relation to the demand for cattle. Thus a study of the side of demand is essential to a proper appreciation of the problem of cattle supply in India.

The demand for cattle resolves itself into several demands. (1) *The services of draught cattle and stud bulls.*—In India not only are draught cattle used universally for purposes of agriculture which directly engages more than seventy per cent. of the population, but they are used for purposes of conveyance throughout the country. The rural population consisting of about ninety per cent. of the population depend, to a large extent, on draught-cattle for conveyance within the country. By far the largest volume of internal trade moves by this primitive method of conveyance, and, except in a few localities, especially near the towns, the same is the case with conveyance of human beings. (2) *Milk required by the country.*—The country depends wholly on the milk supply of its own milch cattle. In some parts as in Bengal this is mainly from cows, but in greater parts of India, cows and buffaloes are equally used for this purpose. They supply the whole country with milk and all its products such as butter, ghi, curd, *chhana*, etc. To a limited extent, the milk of goats also is used, especially for children. (3) *Hides.*—India holds a partial monopoly in supplying the world's skins, and its supply of hides is also very large. The demand for these is both internal and external. (4) *Meat consumed by India.*—The demand for this, as has been pointed out above, is limited to certain classes, and even among them, limited by their means. But, in the aggregate, this demand is very large. Among ordinary people, the demand is usually for meat of goats and sheep. But among the Musalmans, who form about seven crores in number, and the Europeans including the British troops in India, there is a great demand for beef as well. Beef is also much cheaper than mutton. (5). *Dung* is widely used as fuel, and, to a more limited extent, as manure. Its use in the latter capacity needs wide extension which, however, is a question wholly of cheap fuel for the rural population.

Now it is evident that the supply to meet the demands for (1) (2), and (5) above is joint supply. The cost of keeping up cattle must be covered by the demand for their services, milk, and dung. As the price of dung is very low, the price of the other two must necessarily

be comparatively high. If there be any deterioration in quality, this latter will rise higher in comparison with the cost of maintaining cattle. The same result will accrue if the cost goes up without a corresponding increase in the price or improvement in quality of cattle fetching better prices.

*Secondly*, the supply of (3) hides and (4) meat would normally be joint supply. But in India, owing to the restricted use of meat, a large proportion of the total supply of hides is independent of the supply of meat, and is obtained from carcasses of dead animals. If the improvement of hides be desired, better quality of hides must be obtained from healthy and youthful animals. The price of such high class hides is much higher in the market both in and out of India than hides of worse quality. The world's supply of hides is limited, and the demand for leather goods is increasing much faster than the increase in the sources of supply. Even in India where the use of leather goods is not wide, the demand is increasing. It is, therefore, apparent that a progressively better market is opening up for hides. The profit out of this market is however limited by the demand for meat inasmuch as the cost of maintaining cattle for this purpose must be realised from the services and dung of such cattle during their life time which will be short, the price of hides, and the price of meat. In India at present little use is made of meat to supply the external markets as is done, for example, in Australia. Any such opening up of new markets for Indian meat is bound to make cattle breeding for purposes of supplying meat and hides highly profitable.

*Thirdly*, it must be realised that the supply of the services of draught cattle or milch cattle and their dung on the one hand and of meat and hides on the other is alternative supply so far as hides are not obtained from carcasses. Even in the latter case, although it is beyond human control, the source of supply of one is the negation of the source of supply of the other. In such cases the purpose of the cattle breeder will be regulated by the price of high class meat and hides on the one hand and the price of high class draught cattle or milch cattle and their dung on the other. This question is very important for the future of India. Cattle breeding needs to be developed on a scientific basis, which must be so developed by special encouragement for the benefit of the rural population, and, with regard to milk and meat supply, for that of the town population as well.

Now it is apparent that the growth of an industry is best facilitated by securing the widest and the best market for its output. By limiting the market, the price must fall and therefore discourage the industry. If slaughter of sheep were prohibited in Australia or export of cattle from Canada, the industry of stock raising will be destroyed in those countries. This explains the great discontent in Canada against the policy of the United Kingdom to restrict its import of cattle. Indeed, every country in the world attempts to develop new markets for its produce. In India, however, a large body of people seem to advocate the contrary method. By stopping either export or slaughter of cattle the alternative source of demand will almost be destroyed. Will this

improve the market for cattle breeders? If not, will this develop the industry? It is often argued that the free export and slaughter have not improved the quantity or quality of Indian cattle. Assuming that it is so, will such restriction do so or will it lead to greater deterioration of our stock? No article, which is not perennial and needs re-production can improve with a more restricted market, and the position of cattle in this respect is exactly that of any other article which has to be produced for satisfying human wants. The consumer is rarely benefitted by hitting the producer. The latter is immediately affected, but, in the long run, the former is no less affected through adjustment of supply to the new conditions of the market.

In the case of cattle breeding, there are certain special considerations which add to the force of the foregoing arguments. To improve the quality of cattle in India it is necessary to select stud bulls and even cows of a superior quality. This means importation from outside and selection within the country. Also to increase the number it is necessary to work on a large scale. Now costly experiments with imported or specially selected bulls and cows require large capital so that the cost of failure of an experiment or death of a costly bull may not mean the death of the industry itself. Thus production on a large scale, apart from its inherent advantages, is a necessity for stock raising in India. Of course, there is a limit to the growth in the size of this industry as there is in the case of most industries. In cattle breeding the need of special attention to individual units, of cleanliness, and various other factors fixes a limit beyond which an ordinary farm cannot grow. But this limit yet leaves a very wide scope for such industries to develop in India since their present size and organisation are almost insignificant. The nearer is the size of a farm to this limit, the greater will be the economy and efficiency of its working and the less will be its chances of failure through inability to work with costly bulls and cows or other costly implements. Also there is less certainty in cattle breeding than in most other industries inasmuch as it deals with a living factor over which man has only limited control. Allowance must, therefore, be made not only for unequal output fetching different prices for the same cost, but also for death by, say, epidemic or other causes. Thus the risk is greater than in ordinary industries. All these make the industry a special one which can succeed only with comparatively high profit per unit of output. Therefore, the price must be higher in proportion to the cost of production than in ordinary industries. Further, however much man may try, standardisation cannot be carried to the same length in this industry as in others. Thus, the cattle breeder must work on a large scale, must have a comparatively high price, and must cover his risk of loss through greater uncertainty.

At the same time competitive production requires to be assured in the interests of the consumers and, ultimately, in the interests of the industry itself. Thus only can there be a rapid increase in the number and quality of the cattle bred in the farms, and thus only can the price of cattle be kept down as low as possible. In the beginning the Indian market is not likely to offer as good chances as it would later on. The

reason is the poverty of the people who would not venture easily to work with better cattle before their increased value is fully brought home to them. This is a matter of time. Thus, cattle breeding in India cannot develop without a good market from the beginning, and Indian market in the beginning cannot be so very good owing to its shyness towards innovations and its poverty. Even looking to the distant future the widest market is the best stimulus to cattle breeders. Even if the export be not substantial, the fact of its being open and of the possibility of its development is sufficient to exercise a healthy influence on the industry itself. Therefore, any limitation of the market has its dangers whether it is by preventing the slaughter of cattle and thereby choking the demand along a particular line or whether it is by prohibiting export and thereby cutting off the external market. The fullest advantage both of the producers and of the consumers can be obtained only by keeping the market open and allowing free play to the forces of competition in the alternative forms of demand, *viz.*, draught and milch cattle and their dung against meat and hides.

Coming now to look into the facts with regard to cattle in India we find that the number of cattle is not so deplorable as it is usually assumed to be, although the situation is far from satisfactory. From Table I which gives the figures for British India and the United Kingdom it will be seen that the number of agricultural draught animals and cattle

Table I.

1919.	Population (millions).		Agricultural animals and cattle (millions).			Agricultural animals and cattle per cent. of		Agricultural draught animals per cent. of agricultural population.		Total cultivated area in millions of acres.	Number of draught animals per 100 acres of cultivated area.
	Total.	Agricultural.	Draught animals.	Milch cattle.	Total †	Total population.	Agricultural population.	Milch cattle per cent. of total population.			
British India ...	247	178	55	51	149	60	80	30	21	222·8	25
United Kingdom...	47	2·8	*2	†8	14·5	31	518	71	16	20·7	9

\* Horses used in agriculture. | † Calculated. | ‡ Including young stock.

including young stock is 31 per 100 persons in the United Kingdom and 60 in British India. This is usually the comparison which is shewn in some publications aiming at proving India's favourable position. But apparently this is very misleading when we remember that such animals, especially the draught animals are almost wholly used for agricultural purposes in the United Kingdom, but in India they are widely used for purposes of transport, and that the proportion of the agricultural to total population is 72 per cent. in India and 6 in the United Kingdom. Thus, the proportion of agricultural animals and cattle to the total agricultural population

is 80 per cent. in India and 520 in the United Kingdom, or six and half times that of India. Similarly, if we take draught animals the corresponding figures are 30 for India and 71 for the United Kingdom. Here the position of India is much worse than is revealed by the figures, for the use of draught animals for ordinary conveyance is much more extensive in India than in the United Kingdom. In India this is practically the only means of conveyance in rural areas. In the United Kingdom this is so to a much less extent, other means of transportation having been so well developed. On the other hand it must be said that the use of cattle for meat is proportionately much greater in the United Kingdom than in India. However, this affects little the position of draught animals in the United Kingdom, which are horses and little used as meat. As against the use of cattle for meat in the United Kingdom, it should be remembered that the United Kingdom does not depend for its meat supply on home cattle only. There is a large import of meat, especially from Australia. The total import is about £175 millions or £4 per head of the total population per annum. The Indian import is almost insignificant and is consumed mainly by the resident European population. The Indian import of canned and bottled provisions—which include other provisions than meat—is only £40,000.

Again, the percentage of milch cattle to the total population is 21 in British India and 16 in the United Kingdom. The position of India seems to be better. But it is to be noted that the yield of milk per cow in India is less than one-third of that in the United Kingdom, also the period of lactation is less in India, just as the dry period is longer; as against this the cost of maintenance is also less in India. Besides, there is a large import of milk and its products or substitutes into the United Kingdom from Canada, Denmark, Switzerland, Norway and Holland. The total import of butter, cheese, lard, margarine, and condensed milk is £68 millions per annum or about £2½ per head of the total population per annum. The Indian import is only £19,000, consumed mostly by a few rich people.

The percentage proportion of the number of draught animals used in agriculture to the total cultivated area in acres is 25 in British India and 9 in the United Kingdom. The position of India in this respect is much better than in any of the above comparisons, although it is not so good as the figures would seem to indicate. Because, in the United Kingdom, horses are used in agriculture, which are better suited for, and can do quicker and better work than bullocks in agriculture. Also, up-to-date implements and machinery are used in the United Kingdom, while India works with an age-old primitive system. Yet it should be said that the position of India in respect of its number of draught animals available for agriculture is better than what is usually represented, even when we make proper allowance for the wider use of them in ordinary conveyance than in the United Kingdom. In this connection Table II showing the numbers of persons, cattle, and sheep per one hundred acres of total area will be of interest; this compares British India with some of the European countries only. In the number of

Table II.

Per one hundred acres of total area.

Countries.	Persons.	Cattle.	Sheep.
British India	33	20	7·5†
Austria*	39	12·4	3·3
Belgium	104	25	—
Denmark	28·5	26	5·4
England	105	16·3	42·7
France	30	9·6	9·5
Germany*	49	16·3	4
Holland	75	26	10·5
Hungary*	26	7·7	8
Ireland	21·6	24	17·7
Italy	49	9	16
Scotland	25	6·4	37
Switzerland	38	14·6	1·6
Wales	43	16·5	78

\* Pre-war figures.

† Including goats.

cattle India's position is fifth, while in density of population it is very much less. This makes the position of India comparatively better, as also the fact that only one-third of the total area of India is under actual cultivation ; the proportion is very much higher in most of the countries mentioned in the above table. As against these we should set the fact that the proportion of population dependent on agriculture differs considerably, being about three-fourths of the total in the case of India.

If we take the case of India alone and look to its position during the last twenty years or so, we find that the picture is certainly not so dark as it is sometimes depicted. Usually it is said that export of cattle should be stopped to retain sufficient cattle for home use. But the cry is born of ignorance of facts. The normal export of cattle from India is less than 2 per 10,000 heads of cattle, that is, 0·02 per cent. It may be said that, although the number is small, yet some of the best cattle are thus exported. If it be so, it should be considered whether such cattle would be raised at all if their export were stopped. The chance of their use within the country will not be increased by stopping their export, thereby stopping their raising, but by popularising them by experimental use in India and proving that their extended use will be economic in the long run. The case of sheep and goats is similar, although their export is more extensive than that of cattle. The normal export is 34 per 10,000 heads, that is, 0·34 per cent. Certainly the amount is not such as to create alarm even if stoppage of export were an effective remedy. In this connection it will be interesting to compare the export of cattle from India with that from Ireland whose position in this respect is very much allied to that of India. Table III shows pre-war figures which

Table III.

	1914.	Total cattle. (000).	Number exported (000).	Percentage of export to total.
British India .. ..	..	143,200	32	0.02
Ireland .. ..	..	5,000	945	19.0

*N.B.*—The post-war cattle export of India has considerably diminished.

have been taken to avoid the effects of Irish political complications of recent years. In 1914 India exported 0.02 per cent. of its total cattle, whereas Ireland exported 19 per cent.

Nor has the increase in the number of cattle in India been very unsatisfactory. I do not mean to say that the total number is adequate, but the increase is assuring as will be seen from Table IV. The increase in

Table IV.

In millions.	1900.	1910.	1920.	Percentage 1910 on 1900.	Increase of 1920 on 1910.
Total population ..	232	244	247	5	1
Agricultural population ..	151	169	178	12	5
Total livestock ..	137	174	209	27	20
Bovine (including buffaloes)	87	119	149	37	25
Ovine (sheep and goats) ..	47	52	56	11	7

total population from 1900 to 1910 and from 1910 to 1920 has been 5 and 1 per cent. respectively. The corresponding figures of increase in agricultural population is 12 and 5. At the same time the increase in total livestock has been 27 and 20 per cent., in cattle it has been 37 and 25 per cent., and in sheep and goats, 11 and 7 per cent. Therefore, the increase in cattle is much greater than the increase in agricultural population, and very much more than that in the total population. As the number of cattle or draught animals per head of population is less than one and as the proportion of draught animals to total cattle remains practically the same, a more rapid increase in cattle than in agricultural population means a proportionately greater increase in the number of cattle per head of agricultural population. Thus, India is gaining and not, as it is often stated, losing ground in respect of its supply of cattle or draught animals. Not that the conditions as they exist are satisfactory but that the movement is in the right direction, as it is not in so many other directions, and requires to be accelerated. Any attempt to lower prices by reducing the market by prohibiting either export or slaughter is almost sure to retard this progress. Means should be devised to encourage immediately and remotely the industry of stock raising in India.

At the same time provision should be made for keeping up the improved quality of cattle when these have spread widely in India as also for improving the existing stock within the country. For



this purpose, pasture lands should be provided, and proper care taken to develop such lands. The present tendency is unfortunately against this. Common pasture lands in and near villages are being steadily and rapidly converted into cultivated lands. This short-sighted policy, pursued practically throughout India, has its inevitable reaction on the quality of cattle as also ultimately on their number. It will be seen from Table V that, in ten years, the increase in the net cropped

Table V.

Complete figures are available only since 1907-08.

	In thousands of acres.		
	1908-09.	1913-14.	1917-18.*
Area under forest ..	82,489	82,623	86,925
Area not available for cultivation ..	157,639	147,169	142,783
Cultivable waste other than fallow ..	113,066	115,587	111,485
Fallow land ..	5,153	52,620	48,466
Net area cropped ..	218,040	219,192	227,848

area is less than 5 per cent. But the area not available for cultivation and culturable waste other than fallow has decreased. The latter is rather uncertain in its movements, and its decrease is also small. The former has decreased by about 10 per cent. (about 15 million acres). This area should usually increase with the growth of population and the need of habitable accommodation. The increase in the net cropped area (about 10 millions) is not explained by the decrease in fallow land (1·7 millions) and in culturable waste other than fallow (1·5 millions). At the same time the area under forest has increased (4·5 millions). During the same period the total area by professional survey decreased by about three million acres. Thus, some of the area not available for cultivation has been converted into cultivated area and forest. The portion of the former, which can be conveniently transferred in that way, is the pasture lands which are more fertile than other parts of it, and therefore can be converted either for cultivation or forestry. This confirms the impression of those who have travelled widely in villages, and seen the complete disappearance in some and great reduction in most localities, of the common pasture lands for the cattle of rural India.

As against this it must be noted that there has been a substantial increase in the quantity of fodder crops. From Table VI it will be seen

Table VI.

	In thousands of acres.		
	1907-08.	1913-14.	1917-18.
Lands growing fodder crops in India..	4,908	5,910	8,194

\* 1917-18 is taken because 1918-19 was a famine year, and 1919-20 and 1920-21 were also abnormal.

that more cultivated lands are producing fodder crops, the area having increased by 67 per cent. during the ten years for which complete figures are available. Of course, fodder is obtained from various other sources, for example, gardens and orchards, fallow land, by-products of substantial crops, etc. Yet the need for pasture lands is not less for the healthy growth of cattle, and measures should be systematically taken to provide for such lands where they do not exist and to increase them where they are insufficient, because the health of cattle will improve by open air grazing and by fresh food on the pasture lands as also by the regular exercise which they will receive in grazing on such lands.

To conclude then, it appears that India should give attention to the improvement of the quality of its cattle first and to the increase of their number next. To achieve both it is vital that not only the market, home and foreign, for services, meat, and hides should be kept open, but that it should be extended by all means in every direction in order to encourage rapid development of the industry of stock raising. By this means alone can the quantity of cattle be increased, their quality improved, and their prices kept low. In order to keep up the quality when improved cattle will be used in India, as also to support a larger number, pasture lands should be provided in all convenient localities, and fodder crops raised only as a competitive crop. If the value of India's cattle increase, higher prices will be paid for fodder, and it will be raised in competition with other crops. The value of cattle can be increased not only by improving the quality but also by finding new use for them. In this respect the use of dung as an excellent manure needs to be made widely known; but this is more or less a question of providing cheap fuel to India's rural population. Finally, the situation, especially as to the number of cattle and their increase, is not desperate as some people imagine. The progress is going on in the right direction. What is necessary is to accelerate the pace of progress, and organise the industry of stock raising on purely business principles. In this attempt, the Government of the country will have to play an important, perhaps a leading part, although not in the direction which the advocates of prohibiting slaughter and export recommend.

### DISCUSSION ON MR. PRAPHULLACHANDRA BASU'S PAPER.

MR. CALVERT said he desired to compliment the writer on the way in which he had handled a difficult subject, and said that he agreed with most that the paper contained. The one thing they must realise was that there were too many cattle in India. In any country the tendency was for the number of cattle to increase up to the limits of the food supply and the one method of improvement was to eliminate the surplus cattle. Otherwise they were sure to deteriorate in quality through want of sufficient food to supply them all. He referred to the part played by religion in the matter of the elimination of cattle in India, and said that in this respect there must be a change of sentiment if they wanted to improve the breed. He next objected to the system of the common grazing grounds. This, he said, led to the mixture of good cattle with the bad and led to a deterioration of the general breed. The use of private grazing grounds is essential. In conclusion he said that so far as cattle were concerned the great difference between India and Europe was that in the latter they venerated the cow as a species whereas in the former people venerated the cow as an individual. He pointed out that in places where Mohammadans preponderated the cattle were generally of a good breed because the useless and surplus cattle were eliminated and there was sufficient pasture for the rest.

4-15 P.M.—Members attended an “At Home” given by Sir John and Lady Maynard at their residence in Lawrence Road.

FOURTH DAY :—FRIDAY, JANUARY 19th, MORNING SESSION.

**NECESSITY CESSATION ZONE AND ITS SIGNIFICANCE  
IN THE THEORY OF VALUE.**

By B. G. BHATNAGAR, ESQUIRE, M.A., F.S.S., LECTURER IN ECONOMICS,  
UNIVERSITY OF ALLAHABAD.

According to leading economists a commodity is said to have inelastic demand if a fall or rise in price causes very little or inappreciable change in the quantity that can be sold. I should not be very far from the truth if I were to say that as the term demand is always thought of with reference to a market, which according to the late Professor W. S. Jevons, is best defined as a group of buyers in active and uniform competition with each other, so the term inelastic demand should also always be understood with reference to one and the same set of persons, in active and uniform competition with each other. To this preliminary qualification we may add one more and say that the conception of elasticity or inelasticity of demand should not be interpreted in that narrow way which has been adopted by Dr. Marshall, while defining elasticity in these terms. "The elasticity of demand in a market is great or small according as the amount demanded increases much or little for a given fall in price, and diminishes much or little for a given rise in price." Although this definition is in perfect accord with the generally accepted definition of the term *demand*, yet it seems to be more desirable to extend the idea of *elasticity* from the changes in quantity demanded due to the changes in price to the changes in demand prices due to the changes in quantity offered for sale also. This is necessary because it is only when we extend our conception of elasticity in this way that it becomes more or less approximate to the actual facts of life. This fact has been very well recognised by modern economists in the drawing up of demand schedules, and by Dr. Marshall in his definition of the *Law of Demand*. Here *demand* is interpreted not in its narrower sense where it only means quantity that finds sale at a certain price in a market but in its wider sense where it also includes the price that buyers will offer for a certain quantity. It is the only correct way of looking at demand, because there are two ways open to the suppliers to influence the market. Either the suppliers may increase or decrease the quantity offered for sale, and we may be asked to notice the change in the demand price, or the suppliers may increase or decrease the price per unit of a commodity, and we may be asked to notice the change in the quantity that will be sold; and it is for the demand side to notice changes in both the cases.

**THE NECESSITY CESSATION ZONE.**

Conception of inelastic demand extended in this way, though largely true, is yet incomplete because it loses sight of a very important point that came to me last year when I was taking the M. A. previous class. For every commodity for which demand is inelastic there seems to exist a maximum quantity and a minimum quantity which is essential for the consumption of a given set of people. The difference between the maximum and the minimum necessary for the given population is very little and is inappreciable for perfectly inelastic demand commo-

dities. If we had a commodity for which demand was perfectly inelastic then the points of maximum and minimum demand would coincide, but as a general rule we have not got any such commodities, and the difference between elastic demand commodities and inelastic demand commodities is only of degree, and for most inelastic commodities we can say that the distance between maximum demand point and minimum demand point is very little. If we agree to call this distance between the two points as the necessity cessation zone, then we would find that changes in the price and quantity are sudden above and below the NECESSITY CESSATION ZONE, and are not very marked within it.

Let us suppose that people in the city of Allahabad which we may take, for the sake of argument, to be isolated, requires 10 maunds of salt per month at the maximum and 9 maunds at the minimum. Now let us take the case where supply is less than the NECESSITY CESSATION ZONE, and study the behaviour of the price.

## SALT.

Quantity offered for sale.	Price per seer.
	As.
8 maunds .. ..	10
8½ " .. ..	9½
9 " .. ..	9½
10 " .. ..	9½
11 " .. ..	8½
12 " .. ..	7
13 " .. ..	5

NECESSITY CESSATION ZONE.

So long as the quantity increases up to the Necessity Cessation Zone the fall in price is very little, but beyond that Zone the fall becomes rapid and ultimately precipitate. This is well illustrated by the graph A.

Taking the opposite case where the quantity begins to decrease from above the Zone downwards, we should find something as below—

## SALT.

Quantity offered for sale.	Demand price per seer.
	As.
14 maunds .. ..	3
13 " .. ..	3½
12 " .. ..	3½
11 " .. ..	4
10 " .. ..	4½
9 " .. ..	6
8 " .. ..	8
7 " .. ..	11

NECESSITY CESSATION ZONE.

Here also we notice that so long as the quantity offered for sale is above the Zone, rise in price is not violent or sudden, but when it begins to fall below the Zone, the rise in price becomes very much marked. This is very well illustrated by the graph B.

We may now begin the other way where the seller induces change in the price, and start from a state of affairs where the price of salt stands very high and then begins to decrease. Under these circumstances we may expect some such movement as follows :—

## SALT.

Price per seer.	Quantity sold.
12 annas .. ..	8 maunds
11 „ .. ..	9 „
10½ „ .. ..	10 „
10 „ .. ..	11 „
9 „ .. ..	11½ „
8 „ .. ..	11¼ „
7 „ .. ..	11 „

Here the changes in the quantity sold produced by change in price are different, and we find a fairly rapid rise in the quantity sold up to the higher limit of the Zone as price goes on falling but a very inappreciable change above that. This is illustrated by the graph C.

Taking the other case where price begins to rise from a low point we would expect some such movement as follows :—

## SALT.

Price per seer.	Quantity sold.
6 annas .. ..	12 maunds.
6¼ „ .. ..	11 „
6½ „ .. ..	10½ „
7 „ .. ..	10¼ „
8 „ .. ..	10 „
9 „ .. ..	9¾ „
10 „ .. ..	9⅝ „
11 „ .. ..	9½ „
12 „ .. ..	9¼ „
13 „ .. ..	9⅓ „

Here the decrease in the quantity up to the first line of the Zone is fairly marked, but beyond that it goes on getting less and less marked. This is illustrated by the graph D.

The usual graph and schedule do not bring out all these peculiarities of the inelastic demand, as no account is taken of the NECESSITY CESSATION ZONE. However I believe that if the above method of exposition of inelastic demand were adopted then it would throw much light on the modern theory of value, and help us a great deal in explaining many an important case of the determination of ratios of exchange in the market. Thus at present we only recognise that if the demand for a commodity is inelastic a rise or fall in price influences the quantity to be sold very little. But this is not the whole truth: Recognition of the existence of NECESSITY CESSATION ZONE would tell us many things more. To begin with it would help us in finding out the true behaviour of rise and fall of prices, when the quantities offered for sale are below or above or within the Zone. It would tell us that they would be different for the three cases. It would further help us in understanding more accurately the behaviour of quantities demanded at different prices asked by the sellers, as these prices happen to be demanded for quantities above or within or below the NECESSITY CESSATION ZONE for a certain commodity.

## DISCUSSION ON MR. BHATNAGAR'S PAPER.

MR. BHATNAGAR supplemented his paper and said that by the "necessity cessation zone" he meant that for every commodity there existed a maximum quantity and a minimum quantity which was essential for consumption of a given set of people and this difference he called "the necessity cessation zone." He then explained by means of graphs that in the case of salt so long as the quantity increased up to the necessity cessation zone the fall in prices was very little and that beyond that zone the fall became rapid. He also explained the relative rise in prices when the quantity offered for sale was above or below this zone.

MR. JEVONS in welcoming this paper as treating of a very important branch of Economics regretted that the subject was not more fully put before them. He pointed out that the figures given in the paper were of a deductive nature and based perhaps on introspection and not on statistical evidence. He recognised the difficulty of obtaining statistical evidence but said that in the case of salt the necessary data were obtainable as the Government controlled the whole supply. He said that he considered that the shape of the demand curve given by Mr. Bhatnagar was correct for the salt which was consumed by people, omitting what was used for cattle and for industries. In conclusion he desired the reader of the paper to collect more reliable figures from statistics and make his investigations as to how the demand curve really ran.

MR. MYLES said that after hearing the explanation given by Mr. Bhatnagar he did not think that much had been added to Marshall's treatment of Demand and Elasticity of Demand. He considered that it would lead to great confusion to extend the term "Elasticity of Demand" as was suggested by the writer, and in support of this view compared the definitions of the Law of Demand as given by Marshall and by Chapman. The former he considered the better in that it did not introduce the quantity offered for sale. He also felt that Mr. Bhatnagar had not sufficiently distinguished between changes of demand under statical conditions, *i. e.*, in response to changes in price, and changes of demand under dynamical conditions, *i. e.*, when the circumstances affecting the demand had changed. He concluded by saying that if the figures given had been the actual figures, the results would have been most interesting.

MR. BHATNAGAR in reply to the criticisms said that his paper was worked out on a deductive basis and that he could not get at actual figures. He knew the paper was not perfect. He brought it before the Association only that he might derive inspiration and that he might benefit by the suggestions that would be made at the Conference. He promised to try to obtain actual statistics and work out the results. In conclusion he thanked the members for the very valuable criticisms and suggestions.



## THE INDIAN CHAMAR.

BY B. L. VAJPAYEE BHIMPURE, M.A., PROFESSOR OF ECONOMICS,  
VICTORIA COLLEGE, LASHKAR, GWALIOR, C. I.

In a small low-roofed kuchcha house almost always single-storeyed, containing one room in the majority of cases, and sometimes two rooms, there lives the Chamar—the shoemaker of India, with his family consisting usually of himself, his wife, and two or three children and in a few cases the old parents.

His house is much cleaner than he and the members of his family. His usual and hereditary industry is the making of shoes of the Indian type. From time to time he has also to supply labour in Begár. He has to carry the dead bodies of cow, ox, buffalo and such other animals for which he receives an anna or two besides the hide which he cures himself and uses for the soles in his industry. He is usually immobile and as a conservative sticks to his own ancestral industry. His standard of living is ridiculously low. He takes his food twice a day but often half meals. Juar or bajra, pulses, salt, turmeric and pepper and sometimes some cheap vegetable form his food. It is only on ceremonial occasions that he tastes ghee, gur and oil. The fuel for cooking his food is usually supplied to him by his young ones who collect cow and horse dung and pieces of dry sticks and grass in the streets. A worn-out and dirty kurta and equally dirty safa and dhoti form his dress. He does not take his bath daily for want of clothes. His children wash their faces perhaps once a fortnight and are very dirty to look at. The surroundings of his house are very unhealthy. He has no power of seeing into the future perhaps because he is illiterate, does not know the benefits of thrift and possibly because he has never been told these things. He is in the majority of cases a drunkard. The females help him a deal but his children are all vagabonds and good for nothing. The grown-up boys take to the repair of shoes in the streets and sometimes to the doing of other unskilled works such as the carrying of stones and other heavy things.

### *His Industry.*

Shoes of the old Indian type which the Chamar makes usually require raw hides (*charsa*) of buffaloes for the purpose of making the soles. The skins of sheep and goat are used for the uppers. The price of the buffalo *charsa* in Lashkar, where I have conducted an economic survey into the life of some eighty Chamars living a corporate life in a group of twenty-nine houses, is from four to six rupees and that of the skins six annas to two rupees. He colors the *charsas*, oils them, and after washing them finally uses them in his industry. From the two prepared *charsas* he then cuts the soles and the uppers. Women then take up the uppers and adorn them with imitation lace called *kalabattoo*. The uppers are then lined by the females. The males prepare the heels and press the soles.

The soles, the heels and the uppers are then sewn together sometimes with leather and often with twined threads which is usually run over with wax. One pair of shoes is usually prepared in one day of some 10 hours. He works from morn till eve but never at night except when the demand for shoes during marriage days is very great. He prepares only two kinds of shoes (i) plain and (ii) ornamented. The former are more durable. He often puts in riff-raff into the soles of the ornamented shoes.

The various instruments required for his industry are (i) *summa* for driving thread or nails inside, (ii) *ranpa* for levelling and softening the surface of the soles, (iii) *ranpi* for cutting the leather and (iv) *majhola* and (v) *katanni* for sewing; besides a slab of stone, and a small long piece of wood for sharpening the instruments and helping the process of sewing respectively. He makes use of no machinery whatsoever. (A few Chamars have however taken to the preparation of shoes and boots of the western type, in the making of which they certainly do use some simple machines).

From one *charsa* he gets material for six pairs and the cost of thread and lace is two to four annas. Approximately therefore the cost of production excluding the wages of a Chamar is Rs. 1-4-0 and a pair is sold these days for two rupees. He thus earns twelve annas per diem which for a family of five and an indebtedness of about 60 rupees is quite insufficient.

#### *His socio-economic condition.*

He is Hindu by religion. He remembers Ram before beginning his work and before taking his food. He also worships the sun. In or about his house there is sometimes a very small so-called temple of a Hindu deity. The marriages and other ceremonies are all performed after the Hindu style. Some of the Chamars worship on Thursdays the Mohammedan Sayyad Wali always kept in a niche. Most of them perform the worship of Satya Narayan on which occasion many of the caste-fellows are sumptuously fed. Except on ceremonial and religious occasions feasts are not held because the majority of them has to borrow to perform these feasts. Most of them take their food often on the dirty stone required in shoe-making. He is quite ignorant of the laws of sanitation and hygiene. He does not perhaps know what recreation and leisure mean. Temperate doses of wine on some days might therefore justifiably be allowed to him as affording him relief from his exhaustion and making him forget his otherwise undesirable, pitiable and even lamentable lot.

Early marriages are performed as a rule. There is no widow marriage among them although a widow can live as a wife with any man of the same caste. This is known as *Natra* or *Dharicha*. In my recent survey I came across a four years old wife.

He has no other capital with him except the house which is often owned and possessed by the occupant, the simple implements required in his trade, some silver ornaments of the value of twenty to thirty

rupees, one or two brass utensils and sometimes a pair or two of ready made shoes. In times of emergency he has always to look to the Bania.

The winter days are perhaps the worst for him because in a very small room the whole family has to lie down in the midst of things dirty and offensive. He has almost nothing to cover his body with except a patch-work of worn-out and cast-off clothes.

#### *Horizontal and vertical mobility.*

The ties of conservatism are getting loose and a Chamar is now seen working as a porter (Hammal), driver, builder, sculptor, contractor, cloth-merchant, etc., but never as a confectioner.

The recent fall in the price of necessaries of life has certainly benefitted him for his wages which do not fluctuate so quickly as prices do have not fallen in consequence of the fall in prices. His real wages have thus increased. But his improvident, spendthrift and drinking habits cannot allow him to make a proper use of this unearned increment.

#### *His Panchayat.*

Every Chamar is by virtue of his caste a member of the Panchayat. The Panch are however elected. The system of election though rudimentary and imperfect is yet followed in principle. An elected Panch works as such for his life. He can however be disqualified but for very serious breaches of the laws of morality. He does not go to the court except for cases which do not come under the jurisdiction of the Panchayat. It is not the nature of the case nor the nature of the plaintiff but the wish of the plaintiff and the defendant that determines the jurisdiction of the Panchayat. Suits of civil, criminal and religious nature are all tried by the Panchayat. The award of the Panch which is arrived at after long and free discussion in which all the members take part (females are not eligible for membership) is final. There is no appeal from it. The award takes the form of (i) fine of a few annas or rupees according to the status of the defaulter or (ii) *Hukkapani Band* which is ex-communication of the defaulter from smoking from the same *hukka* and joining the caste-dinner. If the amount of the fine is substantial a part is utilised in giving a feast to the caste people and a small part goes to charity. If the amount is small sweets and charity are the rule.

Some of the Chamars have, under the ægis of their Panchayat, begun to sign a bond on affidavit, promising not to take wine at all. This is often broken after a period of four or five months. Yet this is an auspicious beginning.

Some rich Chamars have also begun to dedicate and set apart a small yet commodious house for the use of their caste-fellows.

#### *Suggestions to better his lot.*

Legislation is not likely to change his lot for the better. Co-operation and education are the only two things to solve the problem of

Chamars in particular and that of labourers in general. Co-operation does not in his case mean the establishment of a credit bank or purchaser's stores. He has simply to be advised to purchase together with others his tobacco over which he spends half an anna per day, the thread, *kalabattoo*, and *charsas* for his industry. This will give him the profits of wholesale purchasing.

In order to bring him on to the habit of thrift a small box might be supplied him and he might be advised and brought round to decide to lay by unto that box one anna from the sale price of every pair. It has often been seen that he drinks away the whole of the producer's surplus. To wean him from the evil habit of drinking, early marriages, insanitary and ugly ways of living and also to increase his efficiency and raise his standard of living the intelligentsia should create opportunities of mixing with him frequently and should relate to him stories from the Ramayana to enlighten him and make him feel that he is one of us and with us. He cannot and should not be left behind in the economic advancement of India. It should also be the purpose of such visits to tell him the ways of living clean and decent and the advantages thereof. For example, it has been found that the children of the Chamar often wash their hands with the water with which the *charsa* has been cured. The nails, the eyes, the teeth of the children are dangerously dirty. I announced to the 33 children of the Chamargarh of 29 houses that I would distribute sweets on a certain day only to such children as would be found keeping their faces, eyes, and teeth clean. To my astonishment I found that on that day 30 children were all ready to receive the sweets with their clean hands, nails, teeth, etc. This shows that the Chamars are living in ignorance and stand in need of an informing impetus.

Like all other labourers they have no regard for their word. Along with the starting of Insurance Funds I should like to suggest the starting of a Damages Fund for every corporate group of labourers. The Chamar, for example, takes an anna or two as earnest money and promises to supply the shoes at a fixed hour on a fixed day. But like most commercial and industrial dealers he often fails to keep his word although he knows that his brother who is true to his word has been prospering very quickly. The Damages Fund is to be under the supervision of the Panchayat and every producer who fails to supply the commodity at the promised hour should be required to contribute a small fine. The amount thus collected may be awarded as a prize to those that are true to their word or be returned in a larger proportion to such of the defaulters as have corrected themselves. This is likely to raise the commercial morality and consequently the goodwill of the producers in general.

Agents of Labor Bureaus should try to inform the Chamar and other laborers of the existence of factories in and about their places, the nature of the work done there, the rate of wages obtainable there and the opportunity and environment advantages.

## DISCUSSION ON MR. VAJPAYEE BHIMPURE'S PAPER.

Mr. Bhimpure read his paper.

MR. KUMARASWAMI wanted to know how the Chamar can be brought to the habit of laying by some money as Mr. Bhimpure suggested when in another part the writer said that the Chamar "earns twelve annas per diem which for a family of five and an indebtedness of about Rs. 60 is quite insufficient." As regards co-operation he explained that the attempt made in this direction in the Madras Presidency proved a failure due probably to the conservative habits of the Chamars. Referring to a Damage Fund he said it would not work properly as it was not possible to weld all the Chamars together even for ordinary production on a large scale, and this fund would act adversely on the ability of subsistence.

MR. KALE said that the remedies suggested to improve the conditions of the Chamars and the difficulties to be encountered in connection therewith went to show that it was not possible to reconstruct on the old corporate tendencies of the people about which so much was talked by Mr. Mookerji two days ago. He also pointed out that the difficulties mentioned in this paper in regard to the amelioration of the conditions of the Chamars were common difficulties experienced in the case of almost all handicraftsmen and that what applied to Chamars applied also to weavers and other classes of workers. Their outlook was narrow and unless this was widened there was no prospect of improving their lot. He said that a change should come in the social system. In regard to starting co-operative societies for these people he agreed with Mr. Kumaraswami in saying that they would not serve the purpose as they cannot work as members of a corporate society. He suggested that the one way of improving them socially, morally and economically was to divert them to new industries.

SARDAR PRITAM SINGH pointed out that any sudden change in the standard of living of these people by diverting them to other industries would affect them adversely and suggested for the consideration of the Conference a middle course, namely, that of distributing power in a manner that might reach the homes of these people who worked in cottages, and thus slowly bring about industrialism.

MR. SODHENAS said that no difference was made socially among the Brahman Sikhs against the Chamar and that all who were baptised in Sikhism were socially equals. He also said that the Chamars of his religion worked in the same manner as zamindars and were earning their incomes in a decent manner. He concluded that the solution of the difficulties raised in the paper consisted in raising the social standard of life of this class of people.

MR. TREVASKIS said that in the Punjab co-operation was doing good work in the matter of ameliorating the condition of these classes, especially in the Hoshiarpur and Lyallpur districts. He also pointed out that as a result of the working of three Christian societies in Gujranwala the Ohamars had given up the habit of drinking and gambling.

MR. VAJPAYEE BHIMPURE in reply to Mr. Kumaraswami said that the Chamars on certain occasions did earn more than what they required and were in a position to lay by something. He also explained how by persuasion he was able to make them lay by four annas a month. He then said that the object of his paper was to show that it was not possible to raise them unless they went to these people and tried to improve their lot. The Chamars, he said, were in their present position owing to ignorance and want of education and were capable of improvement if lectures were held for them on questions of cleanliness, decency, sanitation, thrift and so on.

## **FACTORY LEGISLATION AND ADMINISTRATION IN THE PUNJAB.**

By W. H. ABEL, INSPECTOR OF FACTORIES, PUNJAB.

(In the absence of the writer, this paper was read by Prof. Myles.)

Legislation to protect workers in factories without unnecessarily hindering and handicapping industrialists is a question offering much scope for a diversion of opinion. The many angles of vision taken by administrators, producers and workers create endless discussions, all of which should tend for better legislation and greater efficiency.

Whilst factory legislation should for many reasons be as uniform as possible, the peculiarities of each province must be taken into consideration when framing rules which are to apply to its products.

The Punjab being purely agricultural, such industries as exist are for the convenience of agricultural developments, and except in instances where big engineering workshops have outgrown their original purpose, as in the case of Railway Workshops and such essential industries as printing and power generating, the industries of the Punjab are, generally speaking, subject to the whim of the agriculturists.

Uniform legislation is aimed at for many reasons and found on broad principles to be the most satisfactory. Labour of any particular sort is not confined to any one locality, travelling is comparatively easy, news of every kind travels in India with remarkable rapidity; therefore workers would quickly flock to industrial centres where in their opinion legislation and conditions were more favourable: this is a strong reason for aiming at uniform legislation. Another point is that big industrialists have several factories in two or three provinces often controlled from one central office; purely provincial legislation and administration would be as difficult to these factory owners, as it would be to the one administrator, who probably has three or more provinces to control. Further, markets would vary according to the efficiency or adaptability of legislation to one particular province, and industry would gradually move into that district, involving much unnecessary transport of raw material to manufacturing centres and denuding other provinces of their town population. Until recent years the States of America were individually responsible for factory legislation and it was not unusual for one State to compete against another to entice factory owners to start industries in their particular States. Regardless of health, physique and efficiency, workers in some States were allowed to be employed for 18 hours a day, working unceasingly at high pressure. Naturally health had to suffer, and eventually the State; since operatives were totally exhausted after a few weeks, and had to take complete rest. It is not surprising that such legislation, or lack of it, was quickly changed, and a legislation administered, which endeavoured to give the worker the best conditions to enable him to produce the most efficient work.

1922 was the first year that a uniform set of rules made under the Amended Factories Act (July 1922) was adopted in India. It is too

early to judge as to how far this adoption will prove a success, but the Act itself being uniform for the whole of British India, the broad principles of uniformity were always taken as the frame work on which provincial rules were framed and they differed only slightly from each other.

As an agricultural province it is interesting to note the development of industries wholly dependent on the products of the land, helped tremendously by vast irrigation schemes. Industrial centres have sprung up in a very short space of time bringing in their train more efficient legislation. In 1914, there were 149 cotton ginning factories working under the operation of the Factories Act, one oil mill and 6 flour mills employing a total of 10,247 operatives : whilst in 1921 the numbers had reached 212 cotton ginning factories, 3 oil mills and 11 flour mills, with a total number of operatives of 15,733.

Much of the labour necessary for the increased industries is drawn from provinces other than the Punjab. Possibly as much as one-third of the factory workers are from Rajputana and Central India ; invariably this class of worker has little interest in agriculture as he possesses no land, whereas the Punjabi is naturally of the land and usually has a small plot of land belonging to him or to his family which keeps him interested and invites his attention during the harvesting season. Where factory work is seasonal and casual, labour is taken exclusively from the land and this forms a very convenient method for country people to earn a livelihood between the season of sowing and reaping. Cotton ginning factories are all seasonal and draw their labour from this type. Factory legislation and administration for this class of workers requires careful consideration. Firstly the workers themselves know nothing whatever about discipline, method or the dangers of machinery. Secondly a factory working for 4 to 6 months a year, is not kept up in the same efficient condition as a perennial factory ; and thirdly, since these factories are situated in the country and therefore further removed from the influence of law and order, they know very little about legislation. Cotton ginning factories might almost be described as constituted of family parties—all members of a family contributing towards the daily work. Children are often found taking over their parents' duty for an hour or more while the parents are taking meals, or a whole family will congregate for their meals on a heap of cotton in the ginning room, regardless of excessive dust, or the fact that the younger members of the family may wander off amongst the dangerous gins and machinery. Legislation has done much to prohibit children from entering ginning rooms, the success of which is very marked. It would be interesting to compare any statistics possible, to show as to how far the health of the children has improved since a genuine attempt has been made to keep children out of the dusty rooms of the factories. Factory owners in Rajputana give us a lead in respect to dealing with the children belonging to their workers, which might be followed with advantage. Men and women are employed extensively on wool picking and cleaning ; they come in from their villages to the factory every morning bringing with them their children and food, and remaining in the factory or compound until the



end of the day. In the larger factories a nursery is provided, usually a godown fenced off, where all children too young to work, are placed under the care of one or two women.

The godown is used as a feeding room in which all workers collect during the rest interval, getting clear of the dust and heavy atmosphere of the factory for a whole hour. Whilst this may be looked upon as a primitive method of disposing of children for the time being, it offers all sorts of possibilities, and might easily develop into something extremely useful.

Those in charge of the children might be chosen from an educated class, capable of instructing the children in cleanliness; discipline might be taught, and if a real effort were made at education it is not unlikely that District Boards could be persuaded to take an interest in these nurseries, eventually bringing them up to the style and standard of a school. Many methods of showing a keen and intelligent interest in their employees might be adopted by factory owners, examples of which go to prove that the advantages of such schemes are mutual. We have only to look up such co-operative schemes as are in existence in big industrial concerns in Europe and America, and note that invariably these industries are in a flourishing condition, to realize that there are immense possibilities for similar successful schemes in India.

Such a scheme, still in its infancy, and therefore, necessarily careful of not running before it can walk is a scheme being worked by the Birla Cotton Spinning and Weaving Mills, Delhi. This scheme although only in its second year of existence has a most promising future, and is already in a flourishing condition. With a hope that this scheme may catch the eye of industrialists in the Punjab, keen to do their best for the benefit of their workers, it is given here in detail.

**“ Scheme for Officers and Workers participating in the profits of the Birla Cotton Spinning & Weaving Mills, Ltd., Delhi.”**

The following scheme for Officers and Workers participating in the profits of the Birla Cotton Spinning & Weaving Mills, Ltd., Delhi, was adopted at an Extraordinary General Meeting of shareholders held at the registered office of the Company at No. 137, Canning Street, Calcutta, on Tuesday, the 30th November 1920.

1. Ten per cent. of the net profits earned by the above-named Company in every half-year left after making provisions for—

- (a) Directors' fees and commission,
- (b) Managing Agents' Commission,
- (c) Depreciation Account,
- (d) Income-tax, Super-tax or other impositions of the Government, Municipality or other public body,
- (e) or any other account that the Managing Agents may consider should be included in this group,

but before making any provision for the Reserve Fund, Distribution of Dividends and carrying over to the next half-year shall be distributed among the Officers and Workers by the Company at its Mills if they are found to have the qualifications and not be subject to the disqualifications hereinafter set forth.

2. All Officers and Workers, who were in employment on the 1st January 1920, or have been or will be employed since that date and have continuously worked at the Mills for a period of at least 1½ years and have continued to work at the Mills until the General Meeting sanctioning the payment under this Scheme for the relative half-year is held, shall be deemed to be entitled to the benefits of this Scheme.

Explanation (1)—The term 'continuously' means that the person should not have absented himself from work without the previous permission of the Head Officer in charge of the Mills.

Explanation (2)—Misconduct includes—

- (a) Fomenting Strikes,
- (b) Going on Strike,
- (c) Disobedience of Superiors' orders,
- (d) Continued short or bad production,
- (e) Creating disturbance with a fellow-worker,
- (f) Any act of commission or omission tending to injure the interests of the Company or the aiding or the abetting thereof or entering into any conspiracy therefor.

Explanation (3)—The certificate of the Managing Agents or their authorised representative shall be deemed to be conclusive as regards the qualification or disqualification of any person.

3. A declaration of the Managing Agents or their authorised representative as to the amount divisible under clause (1) hereof shall be deemed to be conclusive and no Officer or Worker shall be entitled to challenge the correctness thereof or to have inspection of any books, accounts, vouchers or other papers whatsoever or to have any explanation whatsoever.

4. The sum of money declared under clause (3) hereof shall be divided among the Officers and Workers qualified under clause (2) hereof in proportion to the number of coupons held by them respectively. The first payment shall be made in respect of the half-year ending on the 30th June 1921.

5. As soon as possible after this Scheme comes into force, each Officer and Worker (unless temporarily engaged) will be deemed to be entitled to as many coupons as his monthly remuneration prevailing at the time shall be multiple of ten and for this purpose amounts less than Rs. 5 will not be counted and amounts over Rs. 5 will be counted as Rs. 10. At the end of each half-year (and for the purpose of this clause the first of such half-years shall be the one ending on the 30th June 1921) such coupons shall be renewed on the basis of the monthly remuneration earned in the last preceding month.

*Illustration.*—A person earning a monthly remuneration of Rs. 55 will be entitled to five coupons and a person earning a monthly remuneration of Rs. 56 will be entitled to six coupons.

6. Service Cards will be issued to each Officer and Worker on which will be entered the number of coupons to which the holder is entitled under the last preceding clause and on which will be noted on each payment day the conduct of the holder during the preceding period. The Service Cards must be produced by each Officer and Worker for inspection by the Distributing Officer on the closing of each half-year to enable him to see if the Officer or Worker is qualified for the benefits of this Scheme. Payment day means the day on which the remuneration or wages of each coupon-holder shall be paid.

7. The Managing Agents shall be entitled to add to, alter or amend this Scheme or the method of working thereof:

8. The interpretation and working of this Scheme or any provision thereof by the Managing Agents or their authorised representative shall be final and no suit or legal proceeding whatsoever shall lie at the instance of any Officer or Worker. The decision of the Managing Agents on any question arising under or out of or in connection with this Scheme or any modification thereof shall be final and binding."

(Sd.) G. D. BIRLA,

*Chairman.*

Such schemes undoubtedly do a great deal towards making a factory a success ; they aid smooth running and create *esprit de corps* amongst employees and employers ; they are reflected favourably in every direction and not least of all on the duties of administration of Factory legislation.

## DISCUSSION ON MR. ABEL'S PAPER.

MR. MYLES in opening the discussion said it was interesting to find a profit sharing scheme in our midst. There was nothing new at all about the scheme; in fact such schemes had been tried time and again in England during the past hundred years. But as the Report on Profit Sharing and Co-partnership in the United Kingdom showed such schemes had in practice generally proved unstable. Only in a few instances had firms been on a profit sharing basis for any length of time. There was a tendency for the system to spread during times of industrial prosperity and to disappear in times of depression. The attitude of the modern Trade Union was not favourable towards such schemes, though in the Coal Settlement in the summer of 1921 the general principle was accepted. He hoped that the new scheme in Delhi would be successful.

LALA SHIV DAYAL expressed disappointment at the way in which certain important points had been omitted in the paper. The important question he considered was whether labour in India was mobile or not. He regretted that the paper in one word assumed that labour was mobile because of the facility of communications. The paper did not take into consideration the fact that India was a country of distances and there was also the further difficulty of language. On account of this difficulty he believed that there was no movement of labour from the south to the north or *vice versa*. He suggested to the author of the paper the consideration of the question of mobility of labour in detail and if he found that labour was not mobile, to adopt factory laws which might be more in harmony with the conditions prevailing in the provinces concerned. Another point was the difference in climatic conditions in different provinces. In his opinion all these considerations led to the inference that factory legislation should be a provincial concern and not an imperial one. The next point he referred was to the profit sharing scheme and he asked whether there was any factory in the Punjab or any Government concern such as the North-Western Railway or the printing presses owned by the Government where this scheme had been adopted. He concluded by saying that the reference to people coming from Rajputana was very meagre.

MR. ANTIA said that in regard to mobility of labour India cannot be regarded as one country but as a group of countries. It was too much to expect a Punjabi labourer to go south. Mobility of labour can be expected only in certain common linguistic provinces. In Bombay he found several labourers from the Central Provinces, Konkan and Bijapur. In Madras the labourers came from various parts of the Province. He therefore concluded that mobility of labour can be applied only to certain linguistic zones.

. MR. SODHBANS speaking on the mobility of labour said that there were a good number of Punjabi labourers in Behar and Orissa working in Tatanagar and in several coal mines, and similarly several labourers from the Central Provinces and Rajputana and from other parts of the country came to the Punjab thus showing that mobility of labour did exist in this country.

**FOURTH DAY :—FRIDAY, JANUARY 19th, AFTERNOON SESSION.**

**ANNUAL BUSINESS MEETING.**

**Indian Economic Association**

**PROCEEDINGS**

**of the**

**SEVENTH**

**INDIAN ECONOMIC CONFERENCE,**

**BOMBAY.**

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*January 22nd, 23rd, 24th and 25th, 1924.*

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**PRICE RUPEES TWO**

**1924**

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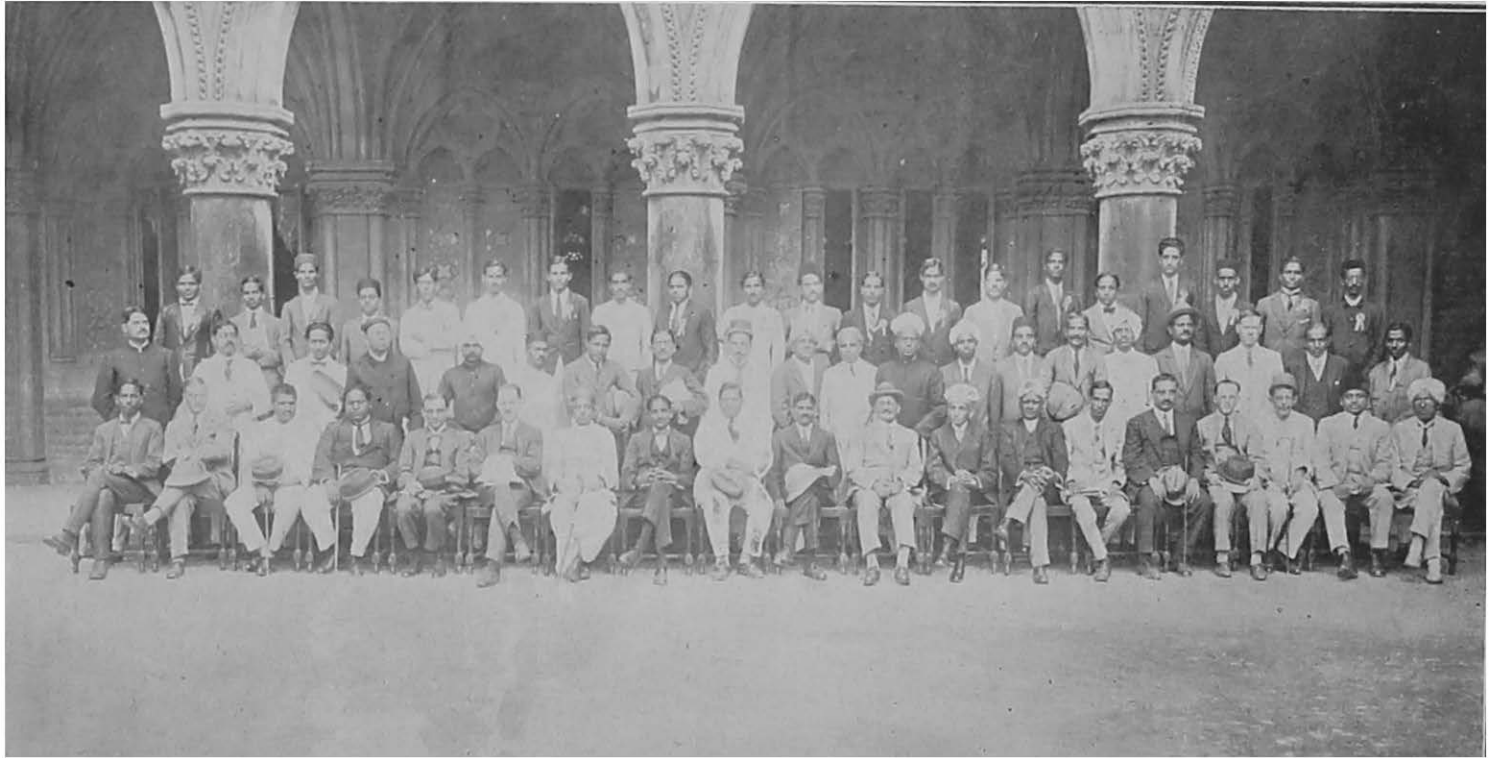
## NOTE.

*It was proposed to get the papers submitted to the Conference printed and circulated to the members of the Indian Economic Association some days previously. But in view of the fact that several contributors delayed sending in their papers to well within the last week, it was not possible to do this and the papers could only be distributed on the opening day of the Conference. The papers having been thus printed off in a short time, we regret that mistakes have escaped correction.*

*Further, the report of the discussion on a particular paper could not be placed just after it, unless the papers were printed after the Conference, and reprinting, for reasons of economy, we had regretfully to give up.*

H. L. KAJI,  
*for self and co-secretaries.*





**THE SEVENTH INDIAN ECONOMIC CONFERENCE, BOMBAY :**  
*Members and Visitors.*

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# INDIAN ECONOMIC ASSOCIATION.

## Constitution.

1. The objects of the Indian Economic Association shall be
  - (a) the holding of annual conferences,
  - (b) the publication of the proceedings of the annual conferences,
  - (c) the publication of a journal and its free issue to members,
 and (d) such other action to promote Economic Science and the dissemination of economic information as may be deemed advisable.

2. The membership of the Association shall be open to teachers and students of Economics and to other persons interested in Economics in general or in special economic problems, if duly elected.

3. The government of the Association shall be vested in a Committee of not more than twelve and not less than six members elected at the annual conference, exclusive of *ex-officio* members.

4. (a) The officers shall be a President, an Honorary Secretary, an Honorary Treasurer, and a Local Honorary Secretary.

(b) The posts of Honorary Secretary and Honorary Treasurer may be held by the same person.

(c) The Local Honorary Secretary shall be elected for one year at the annual conference from members resident in the locality selected for the ensuing conference, for which a local Committee shall be formed.

(d) The officers shall be *ex-officio* members of the Committee.

(e) The tenure of office of the Honorary Secretary and Honorary Treasurer shall be for one year or until their successors be elected.

5. The agenda of the annual conferences shall be drawn up by the Honorary Secretary.

6. In addition to papers from members the Honorary Secretary may arrange for papers from associates and non-members, if thereby valuable contributions can be obtained from experts on particular questions.

7. The annual contribution from members shall be Rs. 12. This shall entitle members to attend conferences and to receive copies of such papers read at the annual conferences as may be published, and any other publications of the Association unless expressly excepted.

8. The annual contribution for associates shall be Rs. 6 and this shall entitle associates to attend conferences and to receive such reports of the proceedings as are published by the Association, but not to vote on the affairs of the Association.

Members of the general public may be admitted as visitors to the conferences by ticket at the discretion of the local Committee, at a charge to be fixed by the General Committee.

9. Candidates for membership shall be proposed and seconded by members and accepted by the Committee by a two-thirds majority.

10. Applications to become associates shall be submitted to the Committee by the Local Honorary Secretary.

11. A Member on paying a contribution of Rs. 200 shall become a life member, exempt from all further contribution.

12. It shall be the duty of the Committee to arrange for such cordial co-operation as may be found practicable, with local Economic Associations and with all-India Associations having cognate aims.

13. It shall be the duty of the Committee to arrange for the publication of the proceedings, either through existing journals or independently.

14. Notice of proposed amendments to existing rules and of proposed new rules shall be forwarded in writing, not later than 31st October preceding the meeting to which they are to be submitted and not less than two months before the meeting, to the Honorary Secretary, by whom they shall be circulated to members not later than 25th November, and not less than one month before the date of the meeting.

15. A two-thirds majority of the members present and voting at the Annual Meeting shall be required to alter the Constitution of the Association.

16. The annual accounts shall be closed at the end of September and shall be submitted, after audit, to the Annual Meeting by the Honorary Treasurer.

17. One or more Honorary Auditors shall be appointed by the Committee.



# INDIAN ECONOMIC ASSOCIATION.



## A.—Executive Committee.

1924.

*President :*

The Honourable Mr. Lallubhai Samaldas, C.I.E.

*Members :*

Prof. C. J. Hamilton (Patna)	Prof. H. Stanley Jevons (Rangoon)
„ W. H. Myles (Lahore)	„ P. C. Basu (Indore)
„ B. G. Bhatnagar (Allahabad)	„ M. L. Tannan (Bombay)
„ A. C. Sen Gupta (Nagpur)	„ T. K. Shahani (Bhavnagar)
„ John Matthai (Madras)	Mr. H. Calvert (Lahore)
„ J. C. Coyajee (Calcutta)	„ B. F. Madon (Bombay)

*Honorary Secretary :*

Prof. R. M. Joshi, Sydenham College of Commerce & Economics, Bombay.

*Honorary Treasurer :*

Prof. H. L. Kaji, Sydenham College of Commerce & Economics, Bombay.

*Honorary Auditor :*

Prof. S. S. Engineer, Incorporated Accountant, Sydenham College of Commerce & Economics, Bombay.

## B.—Hindi Technical Terms Committee.

1924

Prof. Bhimpure                      Dr. Bal Krishna  
Mr. D. S. Dubey (convener)

## C.—Official Statistics Committee.

1924.

Mr. G. Findlay Shirras                      Dr. John Matthai  
Prof. H. L. Kaji (convener)

# SEVENTH INDIAN ECONOMIC CONFERENCE.

## A.—*Reception Committee.*

### *Chairman :*

Mr. K. S. Aiyar, B.A., L.T.J.P., Incorporated Accountant.

### *Vice-Presidents :*

Mr. Jehangir B. Petit      Sir Hormusji Cawasji Dinshaw  
Sheth Narottam Morarji

### *Members :*

Mr. B. F. Madon	Prof. S. S. Panandikar
Sheth Hansraj Pragji Thackersey	„ B. K. Thakore
„ Gulabchand Devchand	„ C. N. Vakil
Prof. S. S. Engineer	„ S. N. Pherwani
Principal M. L. Tannan	„ A. C. Fernandez
Mr. Mansukhlal A. Master	„ N. N. Lala
Prof. P. A. Wadia	„ G. N. Joshi
Principal E. Blatter	„ B. G. Sapre
„ T. K. Shahani	„ P. M. Limaye
„ S. R. Davar	„ M. R. Palande
Mr. J. A. Madan, I.C.S.	Mr. Fazul Ibrahim Rahimtula
Dr. Harold H. Mann	„ J. K. Mehta
Mr. G. Findlay Shirras	„ G. B. Trivedi
The Hon. Mr. Pheroze C. Sethna	„ C. S. Deole
Sheth Devidas Madhavji Thackersey	„ V. L. Mehta
Prof. Patrick Geddes	„ T. H. Khanna
„ K. T. Shah	„ P. K. Wattal
„ H. L. Kaji	„ J. A. Wadia
„ M. J. Antia	Dr. P. N. Daruwala
„ R. M. Joshi	

Besides these, "A Sympathiser" gave a generous donation of Rs. 1,000 and Sir Dinshaw M. Petit of Rs. 200. The following Bombay Associations also contributed generously to the funds of the Conference :—

The University.

The Chamber of Commerce.

The Indian Merchants' Chamber and Bureau.

The Grain Merchants' Association.

The Bombay Provincial Co-operative Bank.

The Bombay Shroff Association.

The Central Co-operative Institute.

The Social Service League.

**B.—Executive Committee**

*Chairman :*

**Principal M. L. Tannan**

*Honorary Secretaries :*

**Prof. P. A. Wadia                      Prof. H. L. Kaji**

**Prof. M. J. Antia**

*Members :*

<b>Mr. J. B. Petit</b>	<b>Mr. J. K. Mehta</b>
<b>Sir Hormusji Cawasji Dinshaw</b>	<b>Prof. K. T. Shah</b>
<b>Mr. Fazal Ibrahim Rahimtulla</b>	<b>„ P. Geddes</b>
<b>Dr. P. N. Daruwalla</b>	<b>„ R. M. Joshi</b>
<b>Mr. G. Findlay Shirras</b>	<b>„ C. N. Vakil</b>
<b>The Hon. Mr. Lalubhai Samaldas</b>	<b>„ A. C. Fernandez</b>
<b>Mr. B. F. Madon</b>	<b>„ N. N. Lala</b>



## SEVENTH INDIAN ECONOMIC CONFERENCE.

## PROGRAMME.

Tuesday, 22nd January.

12 Noon :—Welcome Speech by *Mr. K. S. Aiyar.*

Inaugural Address by *H. E. The Rt. Hon. Sir Leslie Wilson,*  
Governor of Bombay.

Vote of thanks to *H. E. the Governor.*

Election of the President.

Presidential Address by *Sir M. Visvesvaraya.*

*Lunch Interval.*

2-30 p.m. to 4 p.m. :—Reading and Discussion of the following papers :—

- (i) British Imperial Economic Relations, by *Prof. Saunders.*
- (ii) The Tariff Board and Indian States, by *Sirdar M. V. Kibe.*
- (iii) Export Duties and Protection, by *Mr. S. Subbarama Aiyar.*

4-15 p.m. :—Visit to (i) The Sir Currimbhoy Ebrahim Workmen's Institute,  
De Lisle Road, near Lower Parel Station (B. B. & C. I. Ry.)

- (ii) The Bombay Workingmen's Institute, Elphinstone Road,  
Poibawdi, Parel, near Elphinstone Road Station  
(B. B. & C. I. Ry.)

Wednesday, 23rd January.

11-30 a.m. to 1-30 p.m. :—Reading and Discussion of the following papers :—

- (i) The Government of India and its Currency Policy, by  
*Prof. P. A. Wadia & Prof. G. N. Joshi.*
- (ii) Gold Exchange Standard before and after the War, by  
*Prof. Chatterjee.*
- (iii) Gold Exchange Standard (Pre-war Period), by *Mr. T. J. Kumaraswami.*

*Lunch Interval.*

2-30 p.m. to 4-30 p.m. :—Reading and Discussion of the following papers :—

- (i) Non-Credit Agricultural Co-operation in India, by  
*Mr. J. A. Madan.*
- (ii) Distributive Co-operative Societies in India, by *Prof. H. L. Kaji.*
- (iii) Housing of the Working Classes, by *Rao Bahadur S. S. Talmaki.*

5-15 p.m. :—The Reception Committee At Home at the Sydenham College of Commerce and Economics, near Sir J. J. School of Art, Hornby Road, Bombay.

**Thursday, 24th January.**

11 a.m. to 1-30 p.m. :—Business Meeting of the Indian Economic Association.

(For members only.)

*Lunch Interval.*

2-30 a.m. to 4-30 p.m. :—Reading and Discussion of the following papers :—

- (i) The Population Problem in India, by *Prof. C. J. Hamilton.*
- (ii) Agricultural Improvements in India, by *Prof. P. Basu.*
- (iii) Agricultural versus Industrial Development in India, by *Prof. R. M. Joshi.*

**Friday, 25th January**

11-30 a.m. to 1-30 p.m. :—Reading and Discussion of the following papers :—

- (i) India's Real Balance of Trade in 1922-23, by *Mr. G. Findlay Shirras.*
- (ii) The Problem of Poor Relief in India, by *Mr. K. G. Ramakrishna.*
- (iii) Indigenous Banking in the Madras Presidency, by *Mr. T. K. Duraiswami Iyer.*
- (iv) Supply of Labour to the Madras Cotton and other Industries, by *Mr. P. S. Lokanathan.*

*Lunch Interval.*

2-30 p.m. to 4 p.m. :—Reading and Discussion of the following papers :—

- (i) Excise Policy in South India, by *Dr. J. Matthai.*
- (ii) Indian Economics, by *Prof. P. Basu.*
- (iii) New Methods in the Teaching of Economics, by *Prof. S. N. Pherwani.*
- (iv) The Trend of Indian Thought in Economics, by *Mr. B. C. Bhatnagar.*
- (v) The Dawn of Economic Science, by *Mr. C. Gopal Menon.*

Concluding Remarks by the President.

Vote of Thanks to the President.

4-15 p.m. :—Visit to the Harbour and Cotton Green, Sewri, by Steam Launch from the Ballard Pier.

**H. L. KAJI,**

*For self and co-secretaries.*

## SEVENTH INDIAN ECONOMIC CONFERENCE.

FIRST DAY :—*Tuesday, 22nd January 1924.*

The seventh session of the Indian Economic Conference was opened by His Excellency The Right Hon. Sir Leslie Wilson, Governor of Bombay, at 12 noon in the University Convocation Hall in the presence of a large and distinguished gathering of citizens, including many prominent officials and leaders of different communities. Among them were to be seen the Hon. Sir Ibrahim Rahimtula, the Hon. Mr. Cowasji Jehangir, the Hon. Mr. C. V. Mehta, the Hon. Mr. Hidayatullah, the Hon. Mr. B. V. Jadhav, Sir Lawless Hepper, Sir Frank Nelson, Principal A. L. Covernton, Mr. Narottam Morarji Goculdas, the Hon. Mr. Pheroze C. Sethna, Mr. J. A. Wadia, Mr. G. Findlay Shirras, Mr. H. G. Sayer, Prof. Patrick Geddes, Mr. G. K. Devadhar, Mr. N. M. Joshi and others.

On arrival His Excellency was received by Sir M. Visvesvaraya, the President-elect, the Hon. Mr. B. V. Jadhav, Minister of Education, Mr. K. S. Aiyar, the Chairman of the Reception Committee, Principal M. L. Tannan, Chairman of the Executive Committee, Professors H. L. Kaji and M. J. Antia, Secretaries, Sheth Narottam Morarji, one of the Vice-Presidents and Prof. R. M. Joshi, Secretary of the Indian Economic Association, and conducted to his seat.

Mr. K. S. Aiyar then began the proceedings by a welcome speech. He said :

**YOUR EXCELLENCY, BROTHER DELEGATES, LADIES AND GENTLEMEN,**

I rise in obedience to the orders of the Reception Committee to accord to one and all of you a hearty welcome on their behalf.

We are exceedingly thankful to Your Excellency for your having so graciously accepted our invitation and agreed to inaugurate the proceedings of our Conference this year. I may assure you, Sir, that we have no sinister motives in inviting Your Excellency to this Conference, as we have no lists of grievances to enumerate, and there will be no direct or covert appeals for financial aid from Your Excellency's Government. The Reception Committee's financial condition is sound, and we hope to be able to close with a credit balance at Bank after meeting all our reasonable and legitimate expenses. We have been lucky in enlisting the services of a past-master in the science and art of *begging*, in the person of the Principal of our College of Commerce and Economics, Professor Tannan, who knew when and where to beg in this city of Industrial Magnates and Merchant Princes. The velocity with which Principal Tannan successfully relieved our Bombay friends of some of the contents of their purses alarmed some of us and he had to be

requested to stop his predatory activities so that we may not be loaded with a surplus for which we have at present no use. We hope to be able to present out of our surplus a small purse to the Indian Economic Association and enable that Association to start a journal of its own, where members can from time to time, expound their views and publish the results of their researches. The presentation of this purse will, however, be only a voluntary contribution from Bombay to the All-India Association of which we form a part, and will therefore materially differ from the annual contribution levied, may I say, "extorted", by the Government of India from the Bombay Government out of the legitimate provincial revenues of this Province.

We must here express our thankfulness to the public spirited citizens of Bombay, but for whose ready response, our financial condition would not have been so satisfactory. We are also indebted to the University of Bombay for their handsome contribution to the Conference funds, and for the sympathy and support of the Vice-Chancellor and the Syndicate who have cordially helped our Committee in organising and holding this Conference in Bombay.

To you, Sir M. Visvesvaraya, we accord an equally hearty welcome. We are grateful for your having come down all the way from Bangalore at such short notice to take part in and to preside over the deliberations of this Conference. As an ex-Dewan of Mysore you have carved out for yourself a *niche* in the economic history of that model State, and we may congratulate ourselves on our having secured your co-operation and guidance on the present occasion.

We are also proud to note that our invitations have been accepted by so many distinguished visitors, several of whom are our leaders in commerce and industry—the practical economists of the day. We are exceedingly thankful to them for the interest they have thus evinced in the proceedings of our Conference.

Brother Delegates, this Conference is yours, and we, members of the Bombay Reception Committee, welcome you most cordially, and assure you that we shall do our best to make you feel at home during the period of your stay amongst us. Your enthusiasm and your eagerness to advance the interests of economic science have made you travel long distances at considerable discomfort, that you may give this Conference the benefit of your expert knowledge and of your valuable experience. We of the Bombay Reception Committee, therefore, accord you a special welcome to our City—a City recognized as taking the lead in indigenous mercantile enterprise. We have arranged for visits to Welfare-Centres and Workmen's Institutes, a cruise in the Harbour followed by a visit to our Cotton-Green at Sewri. The cruise will demonstrate that ours is an Island City and that we can not only motor down from one part to another part of the City, but

that we can also go by boat from the commercial centres of our City to other portions of our Island. We trust you will enjoy these visits and welcome such interruptions to your learned discussions.

Ladies and gentlemen, the economic upheavals and disturbances set up by the Great War of 1914-18, gave such rude shock to some of our economic theories that Professor Hamilton of Calcutta, and the late lamented Principal Anstey of the Sydenham College of Commerce and Economics, considered it desirable to start, in consultation with professors of Economics in other Provinces, an Indian Economic Association, and it was resolved to hold an annual Economic Conference in one or other of the principal University centres of India. The first of such Conferences was held at Calcutta in 1917, the second at Bombay in 1918, while the 3rd, 4th, 5th, and 6th Conferences were held respectively at Madras, Allahabad, Patna and Lahore. This is the seventh Conference and the second occasion on which we hold it in Bombay.

Though Calcutta may dispute the right of Bombay to be ranked as the Commercial Capital of India, Bombay may with some confidence claim to be the financial barometer of the continent of India. In respect of indigenous enterprise, Bombay is easily first, as it is here that we have the largest number of successful Indian financiers, industrial magnates and merchant princes, who have established industries and opened out overseas trade and thereby proved the capacity of the Indian to excel in the world of commerce and industry. A visit to a City so circumstanced will enable the economist to explore the reasons for the successes as well as the failures of Indian commercial enterprise. My association with the business houses of Bombay for the past quarter of a century has impressed on me one special feature of the business world in Western India, *viz.*, the harmony with which business men of all communities, Europeans, Parsees, Hindus and Muhamedans, work together. In practically every kind of business, members of these different communities are intimately connected with one another either as partners of firms or as Directors of companies; and to put it at the lowest, their enlightened self-interest makes them work together without any friction. Those engaged in business cannot afford to quarrel; for if they do, it injuriously affects the financial interests of each one of them. They therefore agree to differ and speedily arrive at a satisfactory compromise, and every business man relies upon friends belonging not only to his own community but also to every other community. Such friendships are fostered in Bombay by ignoring the weaknesses and idiosyncrasies of business associates and magnifying their merits and virtues. This is a frame of mind which helps the consolidation of business intimacies and the assimilation of the merits and virtues of associates in business.

Bombay is essentially a man-made City; and no small portion of the credit of having converted this marshy Island of Fishermen into such a busy



**HIS EXCELLENCY THE RIGHT HONOURABLE SIR LESLIE ORME WILSON,**  
**P. C., G. C. I. E., C. M. G., D. S. O.,**  
**GOVERNOR OF BOMBAY.**

centre of commerce and industry, is due to our industrial and commercial magnates, drawn from different communities. The study of the economic history and growth of a city so situated must prove fascinating to enthusiastic economists. There was therefore some appropriateness in the first College of Commerce and Economics having been established in Bombay by the joint efforts of the University, the merchants and Government of Bombay. The great war having unsettled some of our economic theories, it was natural to expect the Professors of our College of Commerce and Economics to take an active part in the deliberations of this Conference; and they have accordingly attended every annual conference and exchanged views with their fellow economists from the other provinces.

Ladies and Gentlemen, during the next four days the learned delegates of this Conference will be engaged in exposing economic fallacies, exploring economist truths, investigating Indian economic problems, and trying to reconcile post-war economics with pre-war economics. I will not detain you any longer with a rambling speech as you must be eagerly waiting for the inaugural address of His Excellency the Governor, and I have therefore the honour and the pleasure to request Your Excellency to deliver the Inaugural Address and to declare the Conference open.

His Excellency in declaring the Conference open, delivered the following inaugural address:

LADIES AND GENTLEMEN,

The opening words of the speech of the Chairman of the Reception Committee have filled me with confidence and have added considerably to the pleasure which I feel in being present at this gathering. It is indeed unusual to find an occasion when Government is not asked either directly or indirectly for financial assistance, and I find myself to-day in a gathering which I am tempted to call unique, living as we do in a world full of troubles and anxieties, where there is such a complete lack of grievances as I find here. The Chairman has also given me, perhaps inadvertently, some most useful information, and I can assure you that I shall not hesitate to borrow, if I can possibly acquire them, the services of Professor Tannan, as I myself have some schemes in mind in which his invaluable services as pastmaster in the science and art of begging will be of the greatest value to me. I shall also be able to suggest to the Chairman of the Reception Committee some, in fact many, methods by which he can be relieved of that incubus of a surplus under which at the present moment he is staggering.

In the few words which I shall say to you, I should like, in the first place, to congratulate you on this annual Economic Conference, and I am glad indeed that the seventh Conference should be held in Bombay so shortly

after my arrival here. I should indeed hesitate to tread the dangerous and controversial path of discussion and argument as to the respective merits of Bombay and Calcutta as the commercial capital of India. but even in my short time among you I have been much struck by what you, sir, call the cosmopolitan character of the business community of this great city, and even before I arrived here I have had ample evidences of the manner in which men of all communities carried out their industrial undertakings working whole-heartedly together for the industrial and commercial development of the city and the Presidency.

Nothing to my mind can be of greater use or advantage to the business world than that there should be so many who can be brought together to discuss the vital question of economics, particularly economics as affecting India in an atmosphere where political feelings play no part and where the greater good of the community is the sole consideration.

We are fortunate in Bombay in the possession of the Sydenham College of Commerce and Economics and I am particularly fortunate to-day in hearing a very eloquent welcoming address from Mr. Subramani Aiyar, its first Principal, whose services not only to the College but to economic education in general have been so remarkable and to whom we look in the future for a continuance of his great assistance.

Many of our theories on economics were sadly disturbed by the war. But now we have had time to learn the economic lessons of the war and I can think of no more suitable occasion to hold unbiassed investigation to which you, sir, have referred than at the present time. We have seen the effect of the great war on the curtailment of the productive services. We have felt the result of a complete derangement of all our per-war financial systems and the world is called upon now to endeavour to make up a deficit of losses, human and financial, losses of a magnitude which ten years ago would not have been thought possible.

In all our problems, great as they are, it would seem to me that the greatest danger we have to meet is that too much attention should be paid to financial deficits and too little attention to the human deficit. Let me not be misunderstood and let it not be thought that for one moment I do not advocate the strictest economy in public and private life. That is vital at the present moment but we cannot over-estimate the danger of not doing all that lies in our power to wipe away these deficits in education, production and industrial development due entirely to the ravages of war.

Undoubtedly, a great task lies before every nation at the present time and it is only in the hard cold school of economic thought that we shall find solutions to those problems which confront us. It was a great man who once said that some talk, as if some people in the world had a natural



cleverness and could do things without trouble, but he had never heard any one who did anything worth doing without taking a great deal of trouble, and that is a great truism. You will spend your time at this Conference, tempered I hope by an adequate amount of relaxation, in discussing these great problems, problems which even though your conference is called the Indian Economic Conference, are just the same as those which are trying the mental strength of the economists of all countries, and in inaugurating this Conference not, as you, sir, have suggested with an inaugural address but with these very few remarks, I wish you well and may your deliberations result, as I feel sure they will, in practical suggestions which will be of benefit not only to this great country, but to the world in general !

Principal Tannan in proposing a vote of thanks to His Excellency said : I deem it a great privilege to be entrusted with the most pleasant duty of proposing a hearty vote of thanks to His Excellency the Governor for inaugurating this Conference. I am sure, I am voicing the feelings of all of you when I say that His Excellency has laid us under a deep debt of gratitude by coming here this morning to declare the Conference open and to wish it success. I must confess that when I was asked to approach His Excellency soon after he assumed charge of the high office he holds to make a request to come and open this Conference, I felt very diffident about the success of my commission. It was indeed a matter of pride as well as rejoicing when we learnt that in spite of the numerous calls upon his time His Excellency had kindly consented to accept our invitation. It is therefore quite clear that we are extremely grateful for the trouble he has taken. With these few words I commend the proposition for your acceptance and trust you will carry it with acclamation.

His Excellency replied : I am really grateful to you for so cordially accepting the vote of thanks for coming here. I speak in all sincerity that it is a great pleasure to have been present and have the opportunity of saying a very few words in inaugurating this Conference. But I regret I have other engagements which compel me to go away now. I shall take a copy of the Conference Papers with me. I do wish the Conference every success. You will have difficult problems to consider but I trust your deliberations will result in suggestions serviceable not only to yourself but to the public particularly at the present time.

His Excellency then left.

Dr. John Matthai (Madras), in proposing Sir Visvesvaraya to the chair said that Sir Visvesvaraya had proved himself on three grounds best fitted to

preside over their deliberations. As the Chairman of the Reception Committee has already told us, Sir M. Visvesvaraya comes to this Conference with a long and distinguished career as an engineer, and as the Divan of a premier Indian State. What is of interest to us is that in both of these capacities he has given his best to the solution of the most difficult economic problems in this country. I am sure he will be very welcome to us at this session of the Economic Conference. He is a tried and a tested administrator and an old alumnus of the University of Bombay. On this account I have very great pleasure in proposing Sir Visvesvaraya to the chair, and in commending the proposition to your acceptance (cheers).

Sir M. Visvesvaraya then took the chair.

Prof. H. L. Kaji then read out a letter sent by the Hon. Mr. V. G. Kale, the President of the Association for 1923 :—

“I regret that owing to important and pressing duties here I cannot get away to preside over and even to attend the Economic Conference. This is disappointing to me personally but I have not the least doubt that under the distinguished presidentship of Sir M. Visvesvaraya, the Conference will prove a splendid success. The progress which economic research and study are steadily making in India is gratifying and I am sorry I shall miss the opportunity of meeting the many active and zealous economist friends who will assemble in Bombay. Several problems of the highest national moment to the economic development of India await correct diagnosis and effective cure and I trust that devoted students of these problems will be able to make their legitimate contribution to the task of finding and applying the remedies. I wish the Conference every success.”

Sir M. Visvesvaraya then delivered his Presidential Address :—



**SIR M. VISVESVARAYA, K. C. I. E.**  
*President, Seventh Indian Economic Conference, Bombay*

# Seventh Indian Economic Conference.

*Bombay, Tuesday 22nd January 1924.*

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**Presidential Address :—By Sir M. VISVESVARAYA.**

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When I received the request of your Executive Committee to take up the duties of President of this Conference a few days ago, I was travelling in the interior. For several reasons, the shortness of notice being one of them, I hesitated to comply at first, but, when later I gave my consent in response to a more pressing message, I did so with a mental reservation that I would not inflict a lengthy address on you.

I do not intend to dwell here on the present depressed condition of industry and trade in the country which, let us all hope, is a passing phase. I propose rather to discuss some of the more permanent factors, including certain glaring defects in economic equipment, which have retarded the progress of this country for some time past.

Many of you, particularly businessmen in Bombay, who have always taken an honourable share in public affairs will realise how difficult it is to discourse on Indian Economics in a practical spirit without coming up against controversial topics. In discharging this difficult task, however, I propose to take special care that, as far as possible, no words of mine shall have a jagged edge.

Indian Economics has been in a state of complaint ever since the subject came to be handled by men of courage, ability and independent thought. Questions germane to the subject have been discussed with great candour in the past in the writings of eminent men like Dadabhai Naoroji, Romesh Chunder Dutt, William Digby and others.

The All-India Industrial Conference, which until recently used to meet annually, also dwelt on topics of allied interest. The late Mr. Ranade wrote books, published magazines and carried on propaganda for several years. Under the auspices of that great Indian, annual industrial conferences were held in the nineties in the city of Poona. I lived in those days in Poona. In spite of its early awakening there has been no actual wealth-building in that city. While the intellectuals of Poona were investigating intricate economic problems, prominent commercial communities of Bombay, *viz.*, the Parsis, the Bohras, the Bhatias and the Banias with their keen business instincts were engaged in building up trade and wealth for themselves and for their city. Bombay owes the wealth and prosperity it enjoys to-day to the enterprise and example set by the leading men of these communities—the Tatas, the Petits, the Currimbhoys, the Mehtas, the

Goculdases, the Thackerseys and many others, who have built up enduring reputations for themselves and left behind large business concerns for their successors.

We must not in this connection forget that the growth of Bombay, as a great commercial centre, is primarily due to the stable conditions built up by British rule. The present economic framework of India is a British framework, originally meant for British commercial needs, at a time when population was sparse and food cheap and the advantages of factory industries and modern systems of commerce were not sufficiently known or understood in this country.

### General Economic Situation.

One great disadvantage under which we labour here is the unsatisfactory state of its economic statistics. Such statistics as we have are incomplete and indefinite. For example, the money value of production from agriculture by villages or districts is not known to the Provincial Governments. The correct capital and production from industries and the Indian share in them and in the country's commerce is not known. If the approximate money values were available, as is the case in smaller countries like Canada and Australia, we should have a basis upon which to judge our position from year to year, compared with other Dominions and advanced countries. As matters stand, there is no means of appraising our real economic situation. Nobody, except perhaps the professors of the Sydenham College, go into these root facts.

Such statistics as we have, however, reveal a very unsatisfactory position. With your permission I will call attention to a few typical features. The wealth of India before the War was estimated at £3,600 millions or Rs. 5,400 crores. This meant an average property or wealth amounting to Rs. 180 per head of population. The corresponding figure for Canada was a little over Rs. 4,400; that for the United Kingdom Rs. 6,000. Again, the annual income per head in India at the present reduced value of money varies from between Rs. 45 and Rs. 60. Even assuming the maximum figure of Rs. 60, it would mean an average income of Rs. 5 per head per month. The corresponding yearly income given for Canada is Rs. 550 and for the United Kingdom Rs. 720. The trade for the whole of India comes to about Rs. 20 to Rs. 25 per head. For Canada and the United Kingdom, the figures are Rs. 510 and Rs. 640 respectively. On account of the general low level of occupations and low standard of living the death rate in India is very high, being over 30 per 1,000 while the same is less than 14 per 1,000 in the two countries named. The average expectation of life is about 24 years in India while it is about 45 in European countries. Education is extremely meagre, less than 6 per cent of the population being literate. Every other primary test that you may apply will show the same low standing, the same low level of efficiency.

Besides this such property or wealth as there is, is unequally distributed. Industries are confined to three or four large cities like Bombay, Ahmed-

abad, Cawnpore, Calcutta and in a small way to a few other places like Madras. I have already referred to the unprogressive character of the city of Poona, unprogressive I mean as regards material wealth. An eminent Bengali economist told me a few weeks ago that over 80 per cent of the wealth of Calcutta was in non-Bengali hands. Vast numbers of population cling to occupations which outside competition has rendered unremunerative but there is no agency to advise and no one to go to their help.

### Ignorance and Poverty.

The monthly income I have just stated is Rs. 5 per head. This is the average but the income of the poorest classes is of course much lower than this. The masses of the population are steeped in poverty bordering on destitution, poverty to which there is no parallel in Western countries. You will agree that a people with so low a record of literacy as 6 per cent. and so poor an income as Rs. 5 per head per month cannot be said to be equipped for the struggle for existence and yet our late Governor, Sir George Lloyd, in a speech he made in November last, before a meeting of the Associated Chambers in Bombay, read the situation in a very different light. Said Sir George :—"The more closely the situation is examined, the more amazed does the student become, not at India's poverty but at her prosperity and wealth." He then went on comparing the increase in the cultivated area, in the production of wheat and rice, within the past 20 years. Sir George Lloyd was able to push, to the stage of sanction, the Sukkur Barrage project, which, it must be admitted, is a scheme of great economic importance to the country. We commend this measure ; in other respects, his view is by no means the Indian view. As you know, this statement which I have quoted has been hotly disputed by Indian publicists all over the country. Sir George in making it has adopted a wrong basis for his comparisons. A progressive Government would take pride in the growth of production from industries, of volume of commerce, of science, of arts and crafts and of technical education. Our late Governor, however, referred to none of these ; he chose rather to point to the increase in certain *agricultural* products as evidences of India's prosperity. For example, he said that in 20 years the area under rice rose from 50 million acres to 80 millions and wheat from 25 to 30 million acres. If he had compared the figures for wheat with those of some of the Dominions, he would have found something startlingly instructive. For instance in Australia in the same period mentioned by him, the area under wheat rose from about 3.6 million acres to a little over 9 millions ; in Canada, the increase was from under 4 million acres to nearly 23 millions. Agriculture, as we know, is the least remunerative of occupations and no country can maintain a civilized existence on agriculture alone. Then he compared India's present condition not with any average progressive country outside but with the past condition of India itself. That is the usual official way of demonstrating progress in this country. In

a competitive world, it is not what we are to-day as compared with our past that matters, but how we stand with our competitors in other parts of the world. The fact that we were once doing very ill in some respects but are now better is no proof that we are doing anything appreciable in comparison with our neighbours.

It will be seen from the facts I have adduced that the general economic position of India may be summed up in the two words, ignorance and poverty. What pains every thinking Indian who is anxious about his country's future is that there is no policy in the administration and no continuous effort on the part of our public men to combat these two evils. It is the obvious duty of Government to compile and maintain correct statistics to show the progress made by the people of the country in matters relating to their development. The absence of such statistics creates the suspicion that their maintenance is inconvenient because it leads to the obvious imputation which the figures convey. There should be, in fairness to Government, no scope for criticism of this nature. I am grieved to learn that, as a measure of retrenchment, even some of the meagre statistics which were being published till recently are being discontinued and the country is being plunged into deeper darkness.

In the educational activities of the country, it is an undeniable fact that technical and commercial education has come last and come late. The training available for industrial and commercial pursuits is extremely limited. The Sydenham College of Commerce and Economics was started only ten or twelve years ago. Even at this late date there does not exist, within the four corners of the Indian Empire, a single well equipped College of Technology such as we find in Europe or America.

I hope you will not mind if I give one or two instances from my own personal experience.

Some sixteen years ago, I served on a Bombay Government Committee which went into the question of the improvement of the College of Engineering, Poona, and that committee recommended, *inter alia*, what arrangement should be made for instruction in the highest branches of electrical engineering. The then Government approved of the recommendations made but the degree in electrical engineering, then proposed, is not established to this day. Some of you may be aware that a Technical and Industrial Education Committee was appointed by the Bombay Government in March 1921, of which I happened to be the Chairman. We laboured for a year under difficulties and produced a scheme. The unanimous report of the Indian members of that committee was, as far as I know, approved by the entire press with the exception of one influential paper. But so far as the public is aware, Government have taken no action on our Report for over 20 months. The state of the finances may be a reason, but if the Government were in earnest, they might have approved of the scheme or at least one of the two schemes presented,

and laid down a programme and asked the people to do what they could by their own unaided efforts, until funds could be found. But unfortunately there has been no inclination so far in that direction. In 1918 the Indian Industrial Commission, although debarred from considering questions of fiscal policy, made some recommendations calculated to give an impetus to industrial development. I could name a dozen instances in which the more important recommendations have remained a dead letter. No public official in this country deems it his duty to discuss these questions from the broad standpoint of policy or national interest. There is no visible move on the part of any one in authority to remedy many of the root defects I have enumerated.

### A New Economic Structure.

We miss, in this country, the equipment and many of the measures usually found in the Dominions and progressive countries to protect or promote their economic interests. This is admitted. The semi-official review, *India in 1922-23*, states the bare truth when it says that "the country is not at present organised for the production of wealth." It is this organization and other concomitant measures, which are overdue, that we want our Government and public men to take in hand without further loss of time. The object of this new economic structure should be to provide the machinery and agencies needed to promote agriculture, industries, commerce, banking, communications, technical and general education and the multiplication of occupations generally.

You are aware that Boards of Industries have been established as a result of the recommendations of the Indian Industrial Commission. There is much room for improvement in the performances of these Boards. Sometime in 1922, I met the well-known Industrial expert Sir Alfred Chatterton in this city and as he and I had previously worked together on industrial questions in Mysore for about seven years we exchanged views about the new Boards of Industries, "How is business, Sir Alfred." I enquired. "Oh very bad, they are only manufacturing files," was his reply. He meant of course files of correspondence.

The Board of Industries in each Province ought to work under the control of the Minister-in-charge of the Development Departments and he ought to be advised by a Development Committee of the local Legislative Council. There is a large amount of opinion in favour of the present Boards being made a statutory body; the members instead of being nominated should be elected from among prominent businessmen and agriculturists. One section of the work of the Board should relate to industries with the Director of Industries as Secretary. A second section should concern itself with agriculture, commerce, technical education, co-operative societies and propaganda work generally to create an economic atmosphere, and this section should be in charge of a General



Secretary. The Board should have its subordinate and expert staff in all the districts and work in collaboration with the local people's associations.

People's associations exist in many places already, chambers of commerce, manufacturers' associations, District and industrial associations, agricultural associations etc. The creation of new agencies or new associations should be encouraged in localities and regions where none exist at present and the activities of the whole body of them should be co-ordinated if possible through a central body of the headquarters of the Presidency or Province. This central body may be an existing association or it may have to be newly created. The people's associations which may be actively engaged in practical development work or propoganda ought to be assisted with technical advice and other help by the officials and experts of the Board of Industries.

As in Japan, every city, town and village, or if the village is too small, a group of villages, should have a council or committee or panchayat to attend to increase of production under agriculture and industries and the spread of education, including vocational education and discipline. As in Japan, each city, town and village should maintain statistics of production and education through its own agencies and the Government Departments should be held responsible to compile figures for the district and the Province and at intervals to review and comment on the actual progress achieved not only in individual unit areas, cities, towns and villages—but also in regions and Provinces.

The Member or Minister of the Government of India in charge of the Development Departments should work in association with a Committee of the Central Legislature and should be able to enunciate policies and programmes which command popular support and review the progress achieved from year to year. The Provincial Minister should do similar work in the Province.

All-India Associations like the Indian Economic Association should be up-to-date business organizations with paid Secretaries and office equipment and should be in constant communication with the leading merchants and manufacturers, the Central and Provincial Governments and the Development Committees of the Central and Provincial Legislatures.

Lastly, to meet the difficulty so frequently urged of want of funds for developing industries and education at a time of financial strain like the present, it is suggested that for the next ten or fifteen years, the development projects be financed by loans. We have some unproductive debt already at present. We spent Rs. 150 crores or more on the great war. We might as well add to that debt a little more to fight ignorance and poverty. These loans will, of course, be Provincial. Such an expenditure, even though financed by loans for which interest and sinking fund charges would have to be met from current revenues, if it helps to reduce illiteracy and poverty, will in the long run prove a valuable investment.

We require an economic survey for the Provinces to prepare estimates of their present assets. Starting with the results of this survey as a basis, progress should be watched in each of the developments by yearly and periodical stock-taking. Yearly, and in some cases monthly, returns should be published showing the attendance at educational institutions, growth of joint-stock undertakings, of production, of indigenous banking and shipping interests, etc., in each local area or region as well as in the Province as a whole.

There should be a constant and cordial co-operation between Government agencies and people's associations and representatives, and in the present state of development, Government aid is of the greatest value. But under a healthy organization we may confidently expect that the responsibility for stimulating and maintaining economic activities will be shouldered more and more by public bodies as time goes on.

### Other Special Measures.

Such is the main structure I would recommend for economic regeneration. I do not say that the scheme as outlined by me is the best. But it includes the essential features usually borne in view in progressive countries. In saying this, I have two countries particularly in view, namely Japan and Canada, countries which I have twice visited, of whose economic framework I can claim some knowledge. Any other similar scheme will answer, provided there is no deviation from the principles indicated.

In addition to providing a new economic framework, there are a few special measures which the State should take in hand, simultaneously, to promote the material prosperity of the country. An impetus should be given to the manufacture of railway materials and rolling stock in India. This will come about automatically if Government places orders for railway materials and rolling stock within the country, through local merchants and contractors, subject to delivery according to specifications. I think for some time Indians should consent to purchase in England all such materials as cannot be had in India. Under present abnormal conditions, even British-owned factories in India fail to secure Government patronage. In Germany, before the war, not only were all railway materials purchased from firms within the country but each State insisted upon orders for plant and machinery for its railways being placed within the State itself. Similar measures of State patronage in each Province will go far to help to build up industries in India.

The manufacture of locomotives, machinery and motor cars will not take long to be established, if suitable subsidies and freight concessions on railways are granted. In the case of such new industries, dividends at reasonable rates for stated periods might be guaranteed or part of the capital needed for starting them provided by the State. Some money should be spent, or wasted, by the Government to make a start.

The manufactures for which there is a market within the country should receive earliest attention. At present, we are exporting Rs. 40 crores worth of raw cotton and Rs. 13 crores of cotton manufactures making a total of Rs. 53 crores per annum. We are importing cotton piece goods valued at Rs. 60 crores. But it is superfluous to remind a Bombay audience that there is room for 300 more cotton mills in the country and that with a little forethought and preparation, we ought to be able to manufacture for export cotton goods valued at about Rs. 75 crores more. The country might have an income of Rs. 68 crores from cotton and cotton manufactures instead of a loss of Rs. 7 crores as at present. Employment can be found for the poorer classes in Bengal by utilising some of the raw jute which is now exported. It does not seem right that, while unemployment is rife in this land, the Indian should be allowed to remain idle and expect richer nations to spin and weave for him!

As regards protection, a high tariff policy may not be good for a country like England, which depends for its support on manufactures and services, but as the experience of all the Dominions has shown, it is the only sound policy for India. The detailed enquiries into the steel trade, the meticulous care with which the Tariff Board are weighing pros and cons are a superfluity. From the close enquiries I have made in foreign countries, especially Canada, the case for protection for the steel industry in India is fully established on general grounds. Under similar conditions no Dominion—no civilized country in these days would hesitate one moment to protect this basic industry.

The country has demanded shipping and banking facilities for a long time past and perhaps it is time that strong committees of the central legislature were formed to vigorously promote these much needed facilities.

The present system of sterling exchange and the practice of maintaining a token coin for internal circulation should be speedily replaced by a standard gold currency. Every impartial expert I have consulted is of this opinion.

The extension of technical and commercial education should be pushed forward by the elected Boards of Industries already referred to. One good College of Technology and one Commercial College will be needed in every province and liberal scholarships should be provided for each province for training our young men in England, America and Germany.

There is one more point on which I wish to lay some emphasis at this stage. Whenever Government appoint Commissions or Committees in future to investigate any reform or forward move such as industrial development or technical education, or forest exploitation, they would do well to depute those bodies to the Dominions and the progressive countries which have specialized in such subjects. The Commissions or Committees

would learn far more in a month in those countries than they would in India in a year if they toured gathering opinions of persons who have had no practical acquaintance with any better state of things.

These are some of the more important measures which the country wants and which the Government of India would undoubtedly have adopted long ago had that Government been amenable to Indian public opinion, had India been free to mould her economic destiny.

### Conclusion.

I have had to dwell on topics, some of which may seem controversial. But how could I avoid them? My theme has been ignorance and poverty and measures of amelioration. I have an idea that no more appropriate subject could have been chosen for discussion at the present time before an All-India assembly of businessmen and economic experts such as this Conference is.

There is a steady attempt in progressive countries like U. S. A. and Canada to raise the standard of living by a liberal extension of education and by multiplying the use of machinery and by restricting immigration. Leading American economists have begun to declare with pardonable pride that their country is already within striking distance of abolishing poverty. From the facts I have placed before you, such a hope for India looks like a distant, very distant dream. The country is not organized for the production of wealth, says the latest semi-official report; then what is it organised for? We know the population is growing but we are not aware of any deep-laid plans or thought-out purpose in the Government either to provide for or to combat this increase. If there is a policy or programme for economic uplift in the councils of Government, let us know what it is. If it is a sound one, why every patriotic citizen, every association in the country would work for it. But if there is no policy, no programme and if it is just a case of drift, the situation seems grave. We owe it to our country, and posterity not to rest content until suitable remedial measures are adopted.

It is true large irrigation schemes have been developed under British rule and railways extended from one end of the country to the other, but that is no reason why, if bigger economic schemes are possible, they should not be attempted. There are vast tracts of country still undeveloped and vast forests and mining resources remain untouched. The industrial possibilities alone are immense. America shows how extensive railway systems could be made if every ounce of iron and steel required were manufactured in the country itself. ...Millions and millions of money have gone out of the country to purchase iron and steel products and machinery in the past. We have got the raw material, we have got the men. We are already making pig iron cheaper than it can be manufactured in any other part of the world. If timely measures

are adopted, steel manufacture and machinery can be made equally cheap within the country. People are hungry for employment. We know that in many parts of rural India the cultivators obtain remunerative employment only for 6 or 8 months in the year and that quite 80 per cent of them live in mud huts sheltered by thatched roofs. We know what unemployment means and we cannot but deeply feel for the great numbers of the unemployed in England. But for every million of unemployed in the United Kingdom, there must be at least 30 millions in India, but we keep no unemployment rolls, we make no returns.

If the necessary organizations, both semi-official and public, are brought into existence in the manner explained already, if policies and programmes are laid down duly endorsed by legislative enactments, if a correct inventory of the present-day position is taken and if the progress in production from agriculture and industries, banking power, growth of jointstock companies and other similar matters is watched from year to year, if we know what assets we have and what debts we owe and have the satisfaction that from year to year our assets are growing or our debt is diminishing, or if there is no improvement we keep ourselves informed of the reason why, then the country can be sure that good use is being made of its opportunities, or if good use is not being made, that it must be due to causes which are unavoidable or beyond human control.

The inference must be plain to you all now that a change in the present economic structure, which is old and out of date, is overdue and that in future a permanent union between Great Britain and India should be promoted and maintained on the basis of mutual benefit and healthy common interests. But the change will not come about unless fiscal autonomy is first conceded. There is an awakening in the people who now know that they will not be able to get on without education and industries and are willing to make sacrifices. We have huge resources and an enormous population which has not been adequately mobilised. If the measures suggested here, or other equally effective ones, be adopted, there is every prospect that we may be able to double production from agriculture, and quadruple that from industries, in less than fifteen years. With the creation of reasonable facilities, there is every hope that the material progress of the country will proceed at a pace which will astonish the world.

## BRITISH IMPERIAL ECONOMIC RELATIONS.

BY PROF. A. J. SAUNDERS, AMERICAN COLLEGE, MADURA.

Some time ago I was talking with a friend, a man British born, who had great fears for the future of the British Empire. He said :—“ The Empire has become a Commonwealth of Nations ; it is too large, it cannot be properly handled, its diversity of interests cannot be co-ordinated, I fear it will eventually break up, because it has not a sufficient and strong enough cement to hold it together.” While I do not share my friend’s pessimism I do recognise at the same time the serious nature of some of the dangers which were causing him anxiety.

The growth of the British Empire during the last two hundred and fifty years has been a most astonishing and wonderful thing. There has been nothing like it in the whole history of the world. The might and power of Rome in her golden days, and even the extent of the Holy Roman Empire, do not compare with the political and economic position of the British Empire in the world to-day. Her political objective, in regard to which there have been many serious and concerted efforts to unite upon and work a common policy, is a commonwealth of free nations but bound together by the strongest ties of an enlightened and progressive imperialism. Politically we have a policy, and we are trying to work it out together. . . But the thesis that I want to discuss with you to-day is—The British Imperial Economic Policy has not kept pace with our political policy. We are just beginning to go together and talk of an Imperial Economic Policy. The recent Economic Conference in London was a great step forward in this direction. But as I have said we are just beginning to consider an all-British Industrial and Commercial Policy.

Our former policy, or more correctly speaking, lack of policy was a practice of *laissez faire*. . . Each country set up its own form of house-keeping and its independent spirit would not allow to be dictated to by any other sister country, not even by Mother England herself. And so Canada, Australia, and South Africa have formulated their own economic and fiscal policies irrespective of Britain ; and India will do the same thing as soon as she gains her freedom. Now, do not misunderstand me ; I am not condemning this practice. For it is the absolute right of free nations. But, what I am pleading for is a policy arrived at by conference that shall determine Imperial Economic Relations in which imperial advantage and national advantage shall be so adjusted that the result will be the greatest good to the greatest number in both the Empire and the individual nation. I am an Imperialist, but not at the expense of the nation ; there must be worked out an economic relationship that will be able to conserve the interests, of both. The two most important considerations in such a rela-

tionship at present, as it seems to me, are the protection of our own production against foreign competition and especially dumping, which shall lead us to a consideration of Imperial Preference and the allied question of conserving and extending our own markets within the British Empire. These are the two great economic problems—Protection and markets, before our Empire to-day, and I would like to discuss them very briefly with you this afternoon.

### I.—Imperial Preference.

Imperial Preference is not a new idea which has just come to the British mind ; it is a revival of an old controversy—Protection *versus* Free Trade, and simply means a system of mutual concessions in the matter of imports and exports to member nations of the British Commonwealth, but protection against the goods of the outside world.

It was the influence of the French Physiocrats in the 17th and 18th centuries, Adam Smith and his *Wealth of Nations*, the American War of Independence and the French Revolution, and the Anti-Corn Law League which changed England into a Free Trade Country in 1846. That policy has been followed ever since for over three-quarters of a century. It was a bold adventure of faith ; it was an ideal which England hoped would be followed by other nations, but in this she was mistaken. As Professor Marriott in his recent book—“*Economics and Ethics*” (pp. 205-216) says :—“Applying to International trade his fundamental principle of division of labour, Adam Smith argued that all the world would benefit if each national unit were to devote itself to the production of those commodities to which it was, by nature, best adapted, and freely exchanged its own products for the products of other national units. In the realm of practical affairs, Pitt, Peel, and Gladstone enthusiastically espoused the doctrines of Adam Smith, with the result that in England the policy of free trade displaced that of protection, as the theory of *laissez-faire* superseded that of mercantilism. But the commercial lead so rapidly established by England did quite as much to alarm its neighbours and competitors as to encourage imitation. Free trade, it was argued, might well conduce to the prosperity of a country so wealthy and so peculiarly situated as England, but less fortunately situated and more backward countries could not afford the luxury. Other causes, mainly nationalist and political, combined to induce a considerable reaction against the theory of *Laissez-faire*, especially in countries where the practice of protection had never been abandoned. On the side of theory, the publication in 1841 of Friedrich List’s “*National Political Economy*” proved a very effective counterblast to Adam Smith’s cosmopolitan doctrine. On the side of practice the rapid progress of Germany seemed to suggest that industrial prosperity was at least not incompatible with high protection.”

"It may well be that the time is not yet ripe either for universal free trade, or for universal disarmament. But the disciples of the Manchester School, even if their proposals were premature and their policy were carried out with undue precipitancy, were at least rigidly logical. They hoped for and expected the reign of peace, and they desired to accelerate its advent by throwing down all commercial barriers, and by treating the whole world as a fiscal unit. They failed; but who shall say that their success might not have averted Armageddon?"

Within this present century we can recall persistent efforts directed towards tariff reform, such as the Tariff Reform League of Joseph Chamberlain in 1903; the Imperial War Conference in 1917, when it was resolved that:—"The time has come when all possible encouragement should be given to the development of Imperial resources, and especially to making the Empire independent of other countries in respect of food supplies, raw materials, and essential industries. With these objects in view the Conference expresses itself in favour of (1) the principle that each part of the Empire, having due regard to the interests of our allies, shall give, specially favourable treatment and facilities to the produce and manufacture of other parts of the Empire;" and the recent British Election on the clear-out issue of protection or free trade.

It is true that for the second time in the last twenty years Protection has been voted down by a majority of the electors in Great Britain. But there is this to be said of the recent vote—the 1923 election shows a very large increase for Protection over the returns of 1906. The Protectionist Party is the strongest single party in Britain to-day. I ask—does not a comparison of the results of the tariff elections in 1906 and 1923, and also the position of the Protectionist Party in England to-day, warrant one in drawing the conclusion that public opinion in Britain is tending towards the policy of protection? In this opinion I am supported by no less an authority than Mr. Garvin, who, writing the other day in the *Observer*, said that the tariffs will one day be carried in Great Britain, as in Australia, by Labour co-operation, but, while dropping this plank, the Conservatives must adhere to Imperial Preference safeguarding the industries and agricultural aid.

### The Real Issue.

The three things which have brought England and the Empire face to face with the real issue involved in the problem are—the ugly and persistent fact of considerably over one million unemployed people in England, the chaotic economic state of Europe to-day, and the strong demand for some system of imperial preference on the part of several of the Dominion representatives at the 1928 Imperial Economic Conference. Mr. Stanley Bruce, Prime Minister of Australia, has been one of the prime movers in this agitation for preference. He desires to see the Empire growing by means of



" a great common Imperial trade policy 'into' the greatest and strongest economic Empire that the world has ever seen or ever dreamt of ". In one of his speeches he said :—" The problem with which we are confronted to-day is not so much of production as disposal of the goods produced. Australia needs markets. We are pursuing a great developmental policy, which must be proceeded with, and we are hurrying men out to populate our empty spaces and produce more goods. We must now find markets... Britain depends upon the Dominions for the absorption of the bulk of her exports. We depend upon each other. That position should be developed and consolidated and translated into a definite policy. Australia has already granted a measure of preference to Great Britain, and now it asks that Great Britain should reciprocate and place our trade relations upon a definite basis. Unless this is done, the scheme of Empire migration and settlement devised to keep Great Britain's sons within the Empire must fail through lack of markets for the goods they produce. The danger will be avoided if, as a result of the deliberations of the Economic Conference, an Empire policy is evolved of mutual benefit to Great Britain and the various Dominions."

The answer to that position is, and herein we come to the real issue so far as England is concerned: "You cannot give a preference to the Colonies unless you put a tax upon food." The problem so far as Britain is concerned is—which is better to protect the home industry from foreign competition, or to maintain cheap food? But we are not so much interested in that question as we are in the larger issue—has not the time come when we should formulate a great common Imperial economic policy which should result in mutual benefit to the several member-nations and also to the Empire as a whole?

### The Imperial Preference System.

A start has been made as the following brief summary will indicate (see Mysore Economic Journal, October 1923, p. 402), but it will have to be greatly extended before it can accomplish the object desired.

**GREAT BRITAIN.**—It was not until two years after the Imperial War Conference that this country, under the Finance Act of 1919, introduced preferential rates of duty on Colonial imports. Such goods in order to come within the scope of the concession, must be shown not only to have been conveyed from, but "grown, produced, or manufactured in the British Empire." On the "revenue" duties, the chief of which are levied on tea, coffee, cocoa, currants, etc., sugar and tobacco, the deduction allowed is one-sixth of the ordinary duty. One-third is deducted from the duties levied in 1915 on motor cars, musical instruments, clocks and watches, etc., while a varying preference is granted to imports of Colonial wine and spirits.

**CANADA.**—The development of Canada's preference system has been spread over a quarter of a century. In 1897 a preference of one-eighth, raised in 1898 to one-fourth and in 1900 to one-third, was allowed on all duties except those levied on wine, spirits, sugar, tobacco, and related products. The preference was extended during the first two years of its operation to the United Kingdom, British India, New South Wales, the West Indies, New Zealand and South Africa. In 1907 the flat rate of preference was abolished and specific reduction granted in the case of the separate commodities subject to duty, the preference on certain goods yielding large amounts of revenue being nil. This system is still adhered to in the case of Canada, and now applies to almost the whole of the Empire except Australia and Newfoundland. It amounts generally to about one-third of the duty, but in the case of many important classes of British goods to 10 per cent *ad valorem*. The value of the preference, however, is reduced by the application of an "intermediate" tariff to certain countries entitled to most-favoured-nation treatment. A recent attempt to increase the British preference to 50 per cent was defeated in the Canadian Legislature. It is understood that arrangements are to be shortly undertaken under a reciprocity agreement for the application of the preferential duties to Australian goods.

**AUSTRALIA.**—In 1906, a preference was accorded by Australia to South African products, and in 1908 to British goods. The latter was considerably increased in 1920, and at the present time amounts in the majority of cases to 10 per cent *ad valorem*, and in more than a quarter of the total number of commodities to 15 per cent. The system therefore resembles that of Canada inasmuch as it varies between different articles on the tariff schedule, and further in the fact that concession to British goods is liable to be reduced by the introduction of an intermediate tariff, which has not yet, however, been applied by any reciprocal agreement with other countries. It differs from the Canadian system in that the geographical scope of its application is much narrower. This difference will be rendered less conspicuous in the event of the negotiations with Canada reaching a favourable conclusion.

**NEW ZEALAND.**—The introduction of Imperial Preference in 1903 took the somewhat peculiar form of the levying of a sur-tax on goods not having their origin in the British Dominions. The tariff now in operation, dating from 1921, gives a preference to goods of imperial origin in the case of two-thirds of the items on the schedule. On the majority of these items the preference amounts to from 10 to 20 per cent *ad valorem*. As in the case of Australia, an intermediate tariff has been introduced, but not yet applied.

**SOUTH AFRICA.**—A preference on United Kingdom products was first granted in 1903. The favourable rates were extended by reciprocal

agreement to Canada, Australia and New Zealand shortly afterwards. The preference, while accorded to most classes of goods, is small, as compared with those given by other parts of the Empire and amounts at the present time to about 3 per cent *ad valorem*.

INDIA.—No preference is at present accorded to goods of imperial origin. There is, in India, at the present time, a strong movement for protection. The majority report of the Indian Fiscal Commission, published last autumn, recommended the inauguration of a tariff system to be applied separately for revenue and protective purposes. On the subject of imperial preference the report recognized the possibility of granting substantial advantages to British goods by this means, but held that this could only be done by imposing a serious burden on India itself. Accordingly the Commission took the view that preference, if granted, could only be given in the case of a comparative small number of commodities.

From this brief summary, it will be seen, that the Dominions in general lean far more towards protection in their fiscal policies than does Great Britain. But if Britain will adopt the policy of protection it will give the daughter nations of the Empire a basis for the negotiation of reciprocal trade concessions between each other, and that will place them in a much better position in meeting the competition of foreign trade.

#### India and Imperial Preference—

The great problem, however, in this whole scheme of preference is the attitude of India. Indian public opinion does not want Imperial Preference. The reason is expressed by St. Nihal Singh writing recently in the *Daily Herald*. "Anyone can easily realise why Indians have no use for preference. If they are to lower their tariff wall for the bulk of the imports into their country, they may just as well have no tariff wall. If Indian industries need protection; they manifestly need protection from the imports from Britain, which constitute something like three-quarters of our imports. When protection comes in India, it will be mainly directed against British exporters and manufacturers."

Now there you have the issue. India demands the right to buy in the cheapest market, and she has at present no great desire to further the interests of the British Empire of which she is a part. She is willing to take preference from England and the Dominions, but she is not so ready to extend concessions to them.

The attitude that we must all develop is live and let live, give and take, mutual benefits for all. I have no out-and-dried scheme to place before you to-day. We are not ready yet for an actual scheme of tariff preferences. We need first to develop an attitude of mind in India which shall be willing to consider a policy of Imperial Preference, if it can be shown to include mutual benefits. The question is:—if India is allowed preferences in jute and cotton goods by Britain will she not allow correspon-

ding preferences to Britain in machinery, steel goods, and glassware? Can not we as an Empire agree to allow mutual concessions to one another in the matter of tariffs while at the same time protect ourselves against foreign competition? The time has surely come when we should formulate a policy of Imperial Economic relations which shall aim at developing and protecting the resources of the Empire, and at the same time recognising the rights and interests of the several member-nations. And we can do that if we will agree to stand and work together as free and equal members of a great world Empire.

### II. The Question of Markets.

Sir Philip Lloyd-Greame, in his opening speech at the 1923 Imperial Economic Conference, stated that the Export Trade of Great Britain was far below the pre-war standard, and that steady employment could be restored and maintained in England only by wiping out the deficit and increasing our old proportion of trade to meet the needs of an expanding population, and that the vital problem was the restoration of old markets, and particularly the development of new markets.

Mr. Stanley Bruce, Prime Minister of Australia, has pointed out the same great need. He has said:—"The problem with which we are confronted to-day is not so much one of production as disposal of the goods produced." The member-nations of the British Commonwealth are becoming more and more exporting countries. It should be a part of our economic policy to provide markets for these products. Our first concern must be to secure markets for our goods within the Empire itself by a system of mutual preference. Let each country of the Empire produce what it can best produce and exchange its surplus products with other nations of the Empire. Our imperial policy should be to become as self-contained as possible, and the vast size and diversity of the British Commonwealth is such as to make that objective easily attainable. With a thorough-going imperial policy of markets actually working we will then be in a position to negotiate with foreign nations for surpluses which may be available for the world market. An imperial protective policy will strengthen our position in such negotiations. The great Dominions are constantly receiving offers for reciprocal trade relations with foreign powers. That is a good thing, but such foreign trade relations should occupy a secondary place. The Empire should stand first. So that the question of markets resolves itself into this:—Let us develop our own markets within the Empire along the lines of Imperial Preference, and the surplus we will trade with foreign nations on the best available terms.

### Conclusion.

I fear I have kept you too long; I have only time for this word in conclusion: In 1846 England possessed of a great ideal which she hoped would appeal to and be followed by the rest of the nations adopting Free

Trade. It still is the ideal and the only right economic policy in connection with a sane Internationalism. But England following Free Trade alone cannot stand against a protectionist world. England must now protect her industries against foreign dumping and so this paper advocates a policy of protection for the British Empire against foreign competition, but urges strongly a discriminating scheme of preferences for the mutual benefit of the member-nations of the British Commonwealth. It advocates a policy of protection for those Indian industries which have a chance to live and can be made to succeed, but it urges also upon Indian public opinion as a part of this general scheme the advisability of coming into and adopting the policy of Imperial Preference. If that scheme can be worked out successfully it will save our markets for Imperial trade, and it will afford a basis of negotiation with foreign powers for our surplus production. It is along these lines, as it seems to me, that we shall build up a strong, self-contained British Commonwealth of nations that need fear nothing from the rest of the world, which will be the better able to contribute in ideal and action to the progress of mankind, and in which we all-British, Indian, Canadian, Australian, and African, as brothers and sons of a common Mother can be happy and prosperous.

## THE TARIFF BOARD & INDIAN STATES.

BY SARDAR M. V. KIBE, INDORE STATE.

It is a glaring anomaly in the economic life of India that the subjects of the Indian States are taxed by the British Indian institutions, not only without the consent of the people taxed, but also without that of the Sovereigns of those States. The sound principle that there should be no taxation without representation is in no case more defied than in this one.

But this is not all. The responsibility of governing the subjects of the Indian States does not primarily rest with the authority that taxes them. They are governed by their own rulers who exercise, in some cases at any rate, full sovereign powers. The system thus works in an unjust manner in more than one way. The Indian rulers have to govern their subjects with diminishing resources and with no idea as to what they would be. Their subjects have to bear the burdens of a double taxation.

It is the British Indian Legislature that has created the Tariff Board. The evidence which it has recorded hitherto relates to conditions in British India only. But the results of its recommendations will also affect the one-fifth population of India which is under the rule of Indian States.

While making its recommendation, the Board will apply the laws of Economics as modified by the existing condition of the people and the system of governing it.

It was for this last named reason that Professor Jevons while admitting the justness of the claim of the Indian States to a share of the custom's revenue of British India suggested that the claim should be admitted only in proportion to the expenditure incurred in works of public utility by a State. Such a recommendation, howsoever in accordance with abstract justice, is not practical politics.

But it is no doubt true that the life of a State is guided by its political institutions. If the resources of a State have not been developed in a particular manner or have not reached a certain stage in its development, a tariff laid down according to certain notions might prove its ruin, instead of its salvation.

It is plain to anybody who has eyes to see, that all parts of India are not equally developed. Had they been under one system of Government the backwardness of one part may have been compensated by development of another. For instance, increased and rapid means of transport are desirable in proportion to their efficiency, but to a purely agricultural State railways may be too costly and be eventually detrimental to the economic interests of its people. For a big State containing differently developed parts, a system of Tariffs aimed at a particular object may be good in the aggregate, but could it be so to a State which is quite unsuited to a particular tariff?

Hitherto, the policy of the Government of India in the matter of customs duties was purely guided by its revenue requirements. But the Fiscal Commission has declared itself for a protectionist policy, only modified by the proviso that it should be applied with discrimination. It is as the result of this recommendation that the Tariff Board has come into existence. It is out to examine every industry that is existing or could be brought into existence and to recommend how much or if at all protection is to be given to it by means of tariffs, bounties, or some other sort of preference. It is obvious that the last two measures will not directly affect the subjects of the Indian States except that they may support a competitor. But any raising or lowering of the duties will not fail to influence their economical life.

The Cotton Industry is perhaps the largest industry in India. The inroads of the foreign cloth detrimentally act to the interests of India as a whole. There may be cloth manufacturing by machinery in some Indian States only, yet it is or was an almost universal industry in India. Any protection given to it will be welcomed by all the Indian States including British India. Similarly any protection given to the manufacture of glass will be welcomed all over India as any inconvenience caused by the higher price of that commodity is not only bearable but could be gladly borne in the general interest of the country. So also duties levied on the import of sugar, if they would lead to an increase in its production in the country, would not be grieved.

But perhaps such would not be the case with steel, or at any rate, in the case of all its products. They are required for internal developments, some of which could not wait or would be against the human nature to wait and if the protective duties would lead to a rise in their prices owing to the want of an adequate supply of the home-made articles, then some other means for their protection than the levying of high import duties on steel and its products are required in the interests of the Indian States at any rate, so long as the production in India has not increased to such an extent as to meet all the legitimate demands of country as a whole, i.e. what is governed by one tariff system.

If the findings of the Tariff Board are not to be unjust to any interest, and the question which affects one-fifth population of India cannot be excluded from that description, it is necessary that the Indian States should be represented not only before it but on it. Since the recommendations that it will make will not only affect the economic wealth of the people in British India, but also of the Indian States under Indian rulers they must be based on a clear understanding of the economic, social and even the political life of the people, not only as a whole but also under different governments. It may be that in the political life, in the interest of the majority, minorities have to be sacrificed. That is perhaps the economi-

tant of the struggle for existence. But it is one thing to take a certain step blindly and it is another to do it after understanding its pros and cons. In these days of moral fervour, when solicitude is shown for the representation of minorities, even the democracy in British India will admit that while it itself claims the application of the principle of no taxation without representation it would be wrong for it to deny it in the case of the large population inhabiting the Indian States. To pure economists, the point of view offered by the States in the matter of currency, customs duties and tariff reforms opens different avenues of economic thought. So long as a foreign bureaucracy governed the destinies of the country it was at least expected to be impartial and just to all the parties concerned.

Since however it is being replaced by democracy which may be more careful of its own interests than of those whom it unconsciously and indirectly, nevertheless powerfully, governs. The duty then of guiding it according to pure economic principles at least in the case of those affected by its rule devolves both upon the abstract thinkers and the practical economists. The future Tariff must therefore take account of the Indian States and the Tariff Board at work will run the risk of being partial and unjust, if it ignores their point of view either through non-representation or some technicality.



## EXPORT DUTIES AND PROTECTION

By S. SUBBARAMA AIYAR, ESQ., LECTURER IN ECONOMICS, MADRAS  
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The main recommendation of the Fiscal Commission as regards exports duties—which, by the way, is unanimous—is contained in paragraph 182:—“Export duties should not be imposed for the purpose of protecting industries, but may be imposed for revenue purposes provided there is a reasonable probability that the tax will fall mainly, if not entirely, on the foreigner, and there is no appreciable danger that the production of the commodity in India will be affected. In short, export duties for revenue purposes should be employed sparingly and with great caution, and should be imposed only on articles in which India has a monopoly or semi-monopoly, and in every case the duties should be moderate.” This recommendation consists of two parts:—(1) Revenue export duties are not the best form of taxation, but if found necessary they should be pitched at as low rates as possible; and (2) protective export duties are objectionable in theory as well as practice.

The objection against revenue export duties is based on their incidence which is summarized as follows in para 175:—“Ordinarily an export duty tends to fall on the home producer and consequently to discourage production, except in the case of a monopoly; even monopolies are endangered by any considerable rise in price: and therefore a heavy export duty even on a monopoly may be paid in part by the home producer as a preferable alternative to risking the loss of the monopoly by an attempt to pass on the whole of the duty to the consumer.” Another objection which, according to the report, in the case of India deserves special notice is that if the duties diminish the exports an adverse effect on the balance of trade would be produced and it may cause for a time at least difficulties in regard to foreign exchanges (para 176).

On general economic grounds the principles of incidence discussed in paragraphs 173 and 174 are unexceptionable, but it is necessary to remember that excises imposed on commodities entering into the internal trade have more or less similar effects. The remedy is to impose export duties at such rates and on such commodities as will not impair the faculty of the State. If this can be done, the effect on the balance of trade will be *nil*. The sensitiveness shown by the Commission as regards the balance of trade is to be explained by their desire to retain the sterling exchange standard, but this anxiety will disappear when the Indian standard is placed on a more normal basis.

The main problem of interest as regards fiscal encouragement to industries is the advisability of imposing protective export duties. The Commission does not deny that “an export duty may form a potent method of

protecting an industry, for it either raises the cost of the raw materials in foreign countries or depresses the cost of raw materials at home and in either case the home manufacturer has the benefit of getting his raw material at a lower cost than his rivals abroad" (para 177). The main objections against protective export duties, according to the Report, are four:— (1) The general feeling in foreign countries is against any such measure for "the peculiar characteristic of a protective export duty lies in the fact that the protection operates on the raw material of the industry, and therefore places the whole foreign product at a disadvantage, whereas a protective import duty merely affects such portion of the foreign product as would ordinarily come to the protected market." (para 177). In support of this contention the Report quotes the view of the Economic Section of the Provisional Economic and Financial Committee of the League of Nations (para 178). (2) But the main objection to a protective export duty is the economic loss it causes at home; it taxes production instead of consumption (para 179). (3) There is a tendency for protective export duties to be high, for to produce a given difference in the cost of the finished article it is necessary to put a heavier duty on the raw material than the duty it would be necessary to place on the finished article; when export duties become heavy they tend to become unfair and even disastrous to the producer (para 180). (4) Even in the case of monopolies in which there is a reasonable probability that the export duty will not fall on the Indian producer, it should not be imposed for purposes of protection; for the protective duty, to be effective, has to be at a comparatively high rate and the dangers of export duties at a high rate will drive other nations to find substitutes or do away with the monopoly article and thus injure the home production. The history of the duty on saltpetre is given as an illustration (para 183).

These objections are based on certain general assumptions. The committee assumes that the present volume and course of Indian exports are to be maintained to keep up the level of production at home, a circumstance which does not square with the economic conditions in India. One does not deny that that may be true in the case of some articles at present, but the Committee forgets that in the new era of development of internal trade and industries the present dependence on the foreign market will become decreasingly important. The danger of economic loss will therefore get decreasingly less with the improvement of Indian industries.

Moreover the Committee altogether exaggerates the importance of price as a factor in stimulating or discouraging the production of raw materials and food-stuffs in India. The ordinary Indian peasant tries to produce as much as possible whatever the price. There is a general belief, which is also shared by the Fiscal Commission, that high prices of raw materials and foodstuffs tend to further the economic prosperity of the agricultural classes.

This is wrong, for the facts of economic life prove just the contrary. "Out of 217 millions or 72 per cent of the population of India engaged in pasture or agriculture, 167 millions are cultivators of their own or rented land. Those who have a surplus for sale (and these form the minority) would ordinarily benefit by a rise in the price of the commodities they produce. If, as is often the case, the cultivator has received advances for his maintenance and for seed, repayable in grain after the harvest, any increase in the value of the grain repaid benefits the money-lender and not the cultivator. The agriculturist who has little surplus produce to sell and lives on what he produces would, in so far as he maintains himself on his produce, be unaffected by a rise in the price of foodstuffs. Farm servants and field labourers, estimated at over 41 millions, would ordinarily stand to lose by a rise in prices, except in so far as their wages are payable in kind and not in money. Those agriculturists whose holdings are uneconomic will be adversely affected since they have to buy their foodstuffs at a higher rate in the market." (Report of the Babington Smith Committee, page 21.)

The sharp distinction made by the Report in para 179 between a tax on production and one on consumption is not clear. Import duties are said to fall on the consumer and the export duties on the producer, but such a hard and fast distinction between the producer and the consumer is not applicable to Indian conditions. The vast body of producers of foodstuffs are also consumers of their produce. Supposing that the producers of commercial crops such as cotton, jute &c. are adversely affected by a protective export duty on those articles (which, however, need not be the case if the internal demand for them increases due to the industrial development), what may happen is that foodcrops will be substituted in places where it is possible and this, other things remaining the same, will tend to depress their prices. A fall in the price of food-stuffs will be beneficial to the growers of commercial crops as well. Since the Committee was prepared to ask the Indian consumers to put up with some loss and recommend discrimination to reduce the period and extent of the burden, a discriminative export duty, whenever suitable or necessary, should not be grudging in the interests of Indian manufactures.

One can quite understand the feeling in foreign countries, especially European, for they depend for their raw materials to a large extent on tropical and semi-tropical countries including India. If their feeling is to be the guide, not only export duties but import duties as well would have to be abandoned. Again it is not suggested that export duties alone would suffice to do away with the differences in the cost of finished articles in India and abroad, but coupled with import duties they may be judiciously employed for the purpose. Most of the civilized countries are exporting manufactured commodities and there is really no need in their case to impose protective export duties to give encouragement to indigenous

industries. The high export duty on saltpetre which the Government at one time imposed and which ruined the Indian trade in saltpetre does not teach the lesson that the Commission wants us to learn, for that duty was not imposed for the purpose of protecting an indigenous industry.

The principal exports and their value are as follows : —

(In Lakhs of rupees.)

Items.	Average Average		1919-20.	1920-21.	1921-22.
	of	of			
	1909-10	1913-14	1919-20.	1920-21.	1921-22.
	to	to			
	1913-14.	1918-19.			
Grain, pulse and flour	.. 45,82	37,42	15,15	25,65	29,99
Tea .. .. .	.. 13,07	17,55	20,53	12,15	18,22
Raw cotton	.. 33,28	33,63	58,65	41,63	53,97
Raw Jute	.. 22,20	12,80	24,70	16,36	14,05
Seeds .. .. .	.. 24,37	12,17	26,27	15,83	17,41
Hides and skins, raw	.. 10,32	9,88	23,41	5,25	5,98
Jute fabrics	.. 20,25	40,19	50,02	52,99	30,00
Cotton fabrics	.. 11,41	11,73	27,41	18,27	15,65
Hides and skins, tanned or dressed.	4,30	7,19	12,71	3,30	4,03

Of these cotton, jute, oil-seeds, and hides and skins are the raw materials of industries, while food-grains and tea are consumption commodities. Having rejected the principle of protective export duties, the Report discusses the incidence of revenue export duties on these articles in paras. 185 to 195. Chapter XII is devoted to the discussion of special problems connected with restrictions on the export of food grains.

The Committee hold that the present duty on raw hides and skins (which was intended to have a protective effect) is wrong in principle and causes injury to the producer without corresponding benefits to the tanning industry. The reason why the tanning and leather industries have not been able to take full advantage of the present duty is that the other conditions for their development such as good transport and banking facilities, so essential for the growth of business and extension of the market, are not yet fully developed, while the Government which is one of the chief consumers of leather goods in India often makes its purchases abroad. Even in the case of protective import duties an industry cannot be successful in the absence of these conditions. Our contention is that if at any stage of the progress of the Indian industry, a fall in the value of the raw material brought about by an export duty is very helpful, there should not be any objection to its imposition.

Take the case of oil-seeds. The Committee writes in para 194. "Certain oil-seeds are grown very largely for the export trade. The Indian demand for the oil and the cake would be quite insufficient to absorb the

whole product, if all Indian oil-seeds were crushed in the country. At the same time there are considerable difficulties in exporting the oil, and it is unlikely that any appreciable export trade in oil could be built up. The main result therefore of imposing a protective export duty on oil-seeds would be that the producer would be sacrificed to an unsound economic theory, and that the production of a valuable crop would be discouraged." It is true that large quantities of oil-seeds are exported at present, but the Report has not adduced any reasons for the statement that the Indian demand for the oil and the cake would be quite insufficient to absorb the whole product, if all the Indian oil-seeds were crushed in the country. The present course of the Indian foreign trade is largely determined by the existing facilities for transport, currency and banking, and no organized and intelligent attempts have so far been made to divert such commodities to enter into internal trade. If we understand aright the ideal laid down by the Fiscal Commission, it has emphasized the importance of internal trade in its discussions regarding the import duties, but it is curious that the same solicitude is conspicuous by its absence in its discussion of the need for export duties. The *potential* demand for the oil and the cake is undoubtedly great; and an industrial India will certainly convert the potential into an actual demand. In exporting the oil at present lack of proper packing and transport facilities and the inability of the would-be manufacturers to utilize the bye-products which are very valuable and tap the Indian as well as foreign markets are difficulties in the way. Our contention, let us repeat, is that, if these external conditions are helpful and the country takes on a definitely industrial turn, the export of raw materials may be checked, if found necessary, and internal trade in those articles encouraged thereby without the danger of sacrificing the interests of the producer or discouraging the production of a valuable crop.

The Committee is right in its view that the use of manures under present conditions is not likely to be promoted by export duties, for the real obstacles are prejudice or ignorance of the cultivator as well as his incapacity to use artificial manures, the former more important than the latter. If this prejudice or ignorance is overcome, then the problem will become purely one of prices. There is, however, a fallacy in the line of argument adopted by the Report in its consideration of the effects of a low price of the oil-cake upon its users and producers. "The reduction in the price of the oil-cake," we are told in para 195, "would be effected at the expense of the producer of the oil-seeds and that therefore this potential user of the manure would be impoverished and might not be able to afford to use it even at a reduced price. Further, if the manure is cheapened to such a degree as would be likely to stimulate its consumption largely, it is probable that production would diminish owing to decreased profits, and eventually prices would again be raised." This statement assumes

that a fall in demand in the foreign market caused by a protective duty would diminish the actual sale of manures; this would be the case if the internal demand has not increased meanwhile. Secondly, since it is not a fact that the user of the manure is in all cases a producer of it, the producers of crops other than oil-seeds will not be adversely affected by a fall in its price or 'impoverished so as not to be able to afford to use it even at a reduced price.' If the manure is cheapened and consequently its consumption is stimulated, production will not be diminished (as the Report assumes), but the increased quantity consumed will tend to keep up the price-level and consequently production as well, while the larger quantities of agricultural products that can be raised by an intensive use of manures will enable the agricultural buyers to pay a higher price.

In the case of raw cotton, the Report considers that an export duty would fall on the cotton producer in India and would have the effect of discouraging the production of cotton, (para 186). Here again the Committee overlooks altogether the possible intensity of Indian demand for raw cotton in the near future and exaggerates the importance of Japanese demand to keep up the rate of home production. One has heard that it is cheaper to export raw cotton from Tuticorin to Tokyo and import the finished commodities back than to transport the same quantity to and from Bombay. Though one is not in possession of facts to vouch for the truth of this, there is nothing improbable, for the Japanese firms have access to excellent and convenient means of transport in their national mercantile marine. The remedy is to provide better facilities for transport within India, but occasions may arise when the export duty on raw cotton may have to be manipulated in order to help the home producer. This is likely to be more effective than a corresponding duty on imported cloth. The committee seems to concede this position when they write in para 197 that "they are not prepared to say that in special or extreme cases the imposition of such duties should be absolutely excluded from India's fiscal policy, provided they are based definitely on defensive considerations and have no taint of economic aggression."

The Committee is of opinion that differential export duties are generally inadvisable as the system is quite obnoxious to countries discriminated against and it will give rise to serious practical difficulties in administration. "Further it is difficult to ensure that any country discriminated against is not able to get supplies of the commodity from countries against which no discrimination is exercised and unless the cost of rehandling and retransporting happens for special reasons to be very heavy this would inevitably be done." (para 196). On these grounds the Committee recommends that the present preferential export duty on hides and skins be abolished at once (para 198). This raises the larger question of Imperial Preference which is outside the scope of the present observations.

## AGRICULTURAL IMPROVEMENTS IN INDIA.

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By agricultural improvements we mean two things, *viz.*, (1) improvements by which the output of land is increased more than the increase in the cost of production, and (2) increase in the share of the income from land on the part of the agriculturists. The former is a question of production while the latter is one of distribution. It is evident that an effort towards agricultural improvement should proceed along both these lines. The need for such improvement is urgent now because the agricultural income per head tends to decrease as a result of the increase in the population which is dependent upon land. This increase is the result of two sets of causes, *viz.*, (1) increase in the total population and the consequent increase in the number which has to be supported directly by land in productive employment. This is so because India is an old country and therefore the increase in the area under cultivation cannot be as rapid as in new and developing countries, unless means be devised to divert this surplus population to productive employments other than agriculture. (2) Owing to the disorganisation of India's industries as a result of the competition of machine-made goods, an additional number has been forced upon the land, which formerly lived by other industries. The hand spinner and the handloom weaver are the typical example of the condition. During the last one hundred years or so, there has been an almost continuous rise in the price of food grains. This makes agriculture profitable. At the same time the profits of the artisan classes have diminished as a result of the growing competition of machine-made goods both locally manufactured and imported. The result is that these classes tend to abandon their traditional occupations. They usually take to agriculture, and to a much less extent, to manufacturing industries. Many existing village artisans are also partly dependent upon agriculture. Therefore, we find that in 1891, 62 per cent. of the total population of India subsisted upon land. In 1901 the percentage was 68, in 1911 it was 72, and in 1921 it was also 72. This last is really no improvement since during the decade ending in 1921 the total population increased by less than two per cent. This is mainly the result of the influenza epidemic of 1918-1919 which especially affected the rural people. †

According to the census figures of 1921 the total number which subsists by agriculture is 178 millions out of a total population of 247 million acres, that is, the acreage per head of the agricultural population is about 1.5 whereas in the United Kingdom it is about 16 acres. This together with the improved methods of farming in the latter country shows

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† Census of India Report for 1921.

the difference in the economic condition of the agriculturists of the two countries. Sir T. W. Holderness says † : " Subtracting the land utilised for supplying foreign markets from the total area under cultivation, we shall find that what is left over does not represent more than two-thirds of an acre per head of the total population. India, therefore, feeds and to some extent, clothes its population from what two-thirds of an acre per head can produce. There is probably no country in the world where the land is required to do so much." This makes it imperative to develop our lands as much as is possible with the aid of modern science. Again, the value of Indian agricultural products is higher than that of British agricultural products, in spite of the improved methods of the United Kingdom. This will be apparent from the following table ‡ :—

	Total value of agricultural output in millions of rupees. §	Total area under actual cultivation in millions of acres.	Value of agricultural output per acre in rupees.	Total agricultural population in millions.	Value of agricultural output per head of agricultural population in rupees.
India ..	17,250	223	77	178	97
United Kingdom ..	2,946	47	62	3	982

From the above it is evident that the pressure of population on the soil is acute in India. This pressure can be relieved by four ways: (1) By releasing the population from agriculture for absorption in other industries. With this question we are not now concerned. (2) By extending the area of cultivation. The total area under cultivation in India is now 223 million acres and the current fallows 52 million acres. But culturable waste other than fallow is more than 113 million acres. Most of this land is now far away from human settlement and difficult to reach or is otherwise unattractive. But with the growth of the means of communication and the redistribution of population by internal migration from the densely populated to the sparsely populated areas, some of these lands are likely to be converted into agricultural lands. The chance is especially good for lands in Burma, Assam, the Central Provinces, and Central India. Systematic efforts should be directed towards facilitating this.

† Peoples and Problems of India.

‡ The figures for India are taken from the " Estimates and Yields of Principal Crops in India, 1919-20," No. 1344, 1921, and the Prices and Wages, " 1920, No. 1512, 1922. Those for the United Kingdom are taken from the " Final Report of the Census of Production, Cd. 6320, 1913.

§ This is the gross income from agricultural lands, from which the expenses of farming should be deducted to get the net income. This surplus is the share of the cultivator, the landlord or landlord middlemen, all the merchant middlemen dealing in agricultural output, and the State,



(3) By improvements in the methods of cultivation, including the methods of reorganising the agricultural system in order to make the improvements more effective than they would otherwise be. This will not only increase the total output and thereby relieve the present distress, but will also release labour from land for use in manufacturing industries, for a shortage of labour is now felt there rather acutely. (4) By improved methods of organisation. This will help to redistribute the income from land, diverting more to the actual tiller of the soil from the middlemen, whether landlords or traders, who now receive a substantial share of the total income from land.

For a substantial increase in agricultural output three things are necessary, *viz.* (1) efficient and industrious labour, (2) improvement in the implements used in agriculture and introduction, so far as possible, of machinery, and (3) improvement of the soil.

(1) Whatever may be said of our factory worker our cultivator has always been found to be industrious and efficient. "At his best the Indian ryot or cultivator is quite as good as, and in some respects the superior of the average British farmer, while at his worst it can only be said that this state is brought about largely by an absence of facilities for improvement which is probably unequalled in any other country" †. This opinion has been confirmed by later authorities who are familiar with the Indian cultivator ‡. The industry of the Indian cultivator is also well-known. His most arduous work is the cultivation of the terai lands on the slopes of the foot-hills of the Himalayas. Rice cultivation is also very hard work which is carried on in Bengal, Burma, Madras, and certain parts of Bombay and the Central Provinces. In other parts of the country his work is easier although he is engaged in continuous work for long periods during the working seasons.

(2) The Indian cultivator ordinarily uses only a few simple implements. The most important of these are the plough, scarifier, seed drills, harrow, sickles, and winnowing sieves. The power used is universally that derived from human beings and animals. Thus improvement in this line requires a two-fold innovation, *viz.* the introduction of better and more economical implements, and the use of automatic power from machines using steam, oil, or electricity §. For this purpose as also for that of improving the soil it is necessary to have more capital invested in this main industry which supports and, in spite of any scheme of developing manufacturing industries, will continue to support, the major portion of the people of India. But Indian capital is attracted mostly to manufacturing industries or financing businesses of the country. This probably is to be explained by the gap which now exists between the rural cultivating classes and the capitalist middlemen. Little of rural hoarded wealth which may be utilised for pur-

† Dr. Voelcker's Report on Improvement of Indian Agriculture.

‡ Dr. Mann's Life and Labour in a Deccan Village; Mackenna's Agriculture in India.

§ Report of the Indian Industrial Commission, pages 58-59.

poses of production has as yet been coaxed out to be used in agricultural or any other rural industry. Most of the active capital of India has been made in trade or manufacturing industries, and it naturally seeks re-investment in the hereditary line. This is due to ignorance of the facts and prospects of an industry, which is not confined to what are considered as advanced areas. The first need, therefore, is to draw more and ever more capital for investment in agriculture and allied industries. Another desideratum is to facilitate the use of modern implements of agriculture through the hire-purchase system.

The use of power-driven machinery can come only at a later stage of development. The motor tractor, for example, can be purchased by either of two ways. The landlords or the village communities in those areas where they exist can co-operate with the cultivators and buy for the use of the latter such costly implements and machinery. In such circumstances the relation between the landlord and the tenant must be reorganised on the basis of the system of *metayage*. Or, the cultivators must be advanced enough to co-operate on a large scale and buy or hire such machines for the joint use of several villages. In either case a condition precedent seems to be the consolidation of the agricultural holdings which, in the existing conditions of inheritance for both the Hindus and the Musalmans, are sub-divided into too small plots and which, even when owned or held by one person, whether a family or an individual, are widely scattered over one or more village. In the alternative some scheme must be devised to distinguish different holdings without the aid of a complete boundary line round each plot, since such lines cannot exist between different plots of land of small area when the motor tractor is in use. This device is probably not difficult to find out if the boundary lines are not zig-zag, or if a portion of the boundary line is removed in order to allow the tractor to move from one holding to another. So long as such machinery cannot be introduced means may be devised to change the present light-weight plough and have a heavy one in its place, so that a greater turning of the turf and a deeper furrow may help the plants to draw more upon the nutrition provided by the soil.

(3) The most important need towards increasing the agricultural output is to improve the soil itself. This can be done by irrigation and manure. It is necessary to devote attention simultaneously to both these inasmuch as the full effects of the one are not realised without substantial development of the other.

### Irrigation.

In India irrigation is undertaken systematically in only a few parts of the country. Out of a total cultivated area of 275 million acres, including current fallows of 52 million acres, the irrigated area is only about 50 million acres, that is, less than 20 per cent. Of these again irrigation in

the scientific meaning of the word does not exist in all parts. In the rest of India the cultivator ploughs the land and sows the seed as his forefathers did thousands of years ago. After that his function is mainly to look up to the gods for rain or drought or flood. This is not pursuing a profession. It is agriculture by gambling in rains. It is necessary to distribute water according to the needs of the soil and crops standing on it, supplement the rainfall by supplying the required water by irrigation, drain the land if there be too much rainfall and the consequent flood, and by irrigation, be, as far as possible, independent of rainfall by devising means of an artificial but regulated supply of water. The effect of such a system of irrigation is best seen in the Panjab where canal irrigation has, within a generation, converted traditionally arid land into one of the best lands in India. The Ganges-Jamna-Doab together with the hinterland on either side is similarly fed by irrigation canals constructed from two of the most constant rivers in India. In Southern India too there is canal irrigation, especially in Orissa and Madras.

In Mysore the river Cauvery is being utilised, and a huge dam, the second biggest in the world, has been constructed, and the waters are used to irrigate the agricultural lands of the State. But in Southern India, owing to the nature of the soil, tank irrigation is more suitable. Water is held in reservoirs, natural or artificial, during the rainy season, and is used in the course of the year. Sometimes what is known as overflow irrigation is preferred in these parts. The need of Bengal is different. Most of the lands here receive a plentiful supply of rainfall, and they are, especially in Eastern and Southern Bengal, flooded with water. This is very good for jute and rice crops. What is necessary is the regulation of this natural drainage, so that all lands may participate in the advantages. This need is urgent in Northern Bengal. In the rest of India, that is, in the middle part of the sub-continent, there are not overflowing rivers, nor indeed any constant riversystem, neither is the soil suitable for the construction of reservoirs for purposes of irrigation. But these regions are particularly rich in underground water channels, so that well irrigation is the easiest thing in these parts. There is scarcely any part here, including the higher regions on the Vindhya, where underground water is not available within easy depths.

The control and management of most of the important irrigation works are in the hands of Government, and this is undoubtedly one of the most efficient work which Government are doing. Wells are all privately owned, and Government help the agriculturists to dig wells by giving them *takavi* loans. But this system has not developed well-irrigation as well as might be desired. This may be attributed partly to the paucity of Government funds used in this behalf, and partly to the inertia of the agriculturists themselves. The extreme sub-division and fragmentation of agricultural holdings is also responsible, to no small extent, for the unsatisfactory development of well-irrigation. Also there is not the requisite amount of concerted action among the agriculturists and those who work on their behalf,

Here also it seems that an important problem is that of attracting capital. Government help by granting *takavi* loans can never be to the desirable extent. Funds must be raised otherwise, and this can be for the ultimate good of the country only if the organisation is on a business footing, that is, the capital invested must earn a reasonable return. From experience in various parts of India it appears that the enterprise is highly profitable as a business endeavour. This shows that, under proper organisation and co-ordination of efforts between the villagers and the capitalist middlemen, well-irrigation can be widely extended.

When this problem is tackled another follows in its wake, viz., the problem of a more rapid lifting of water from wells on an extensive scale.

The present method is too crude to be very effective. But if the problem of sinking wells be properly handled, the work of water lifting will improve inasmuch as mechanical devices may be introduced for lifting water. † The system of tube wells will probably help to solve this problem to some extent.

#### Manure.

Besides irrigation the soil can be improved by manuring it. Owing to the ignorance of the Indian cultivators and the want of funds which they command, very little is now done towards manuring the soil. But this is so important a problem that it must be tackled if the main industry of India is not to remain moribund.

Usually the soil is gradually exhausted of some chemical substances which feed the crops. Different crops do this differently, and some crops even replenish to the soil what others take away. Thus a proper rotation of crops can prevent a rapid exhaustion of the soil with regard to some chemical substances. But the best guarantee against soil deterioration is to supply directly to the land what is deficient in it. Normally there are three things which require to be artificially supplied to land, viz., nitrogen, phosphoric acid, and potassium. Sometimes it is necessary to add lime also. Nitrogen is supplied to land by nature to some extent through rainfall, soil erosion, silts, etc. In India nitrogen is artificially supplied to the soil usually by growing a leguminous, e.g. gram, crop on it and while the crop is standing on the soil it is ploughed into the soil. This helps the soil to have nitrate which such plants contain in the nodules of their roots as a result of the ceaseless work of nitrifying bacteria. In more advanced systems of agriculture nitrogen is supplied differently in some mineral form e.g. nitrate of soda, sulphate of ammonia, etc. Phosphoric acid is the most important thing of the soil which is exhausted by every kind of crop. It is very necessary that this should be restored to the soil. But unfortunately there is no such practice in wide use in India. Hence experts think that the Indian soil is generally

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† Report of the Indian Industrial Commission, pages 59-60.

deficient in phosphorus. This is supplied to the soil of other countries in the form of superphosphates. These may be made from bones, called bone-meal, or from the mineral tricalcic phosphate of lime. Phosphate of lime is very efficacious probably because it gives lime also although its effect is not so immediate as, for example, bonemeal. A deficiency in potassium can be made up by feeding the soil with some variety of the many mineral salts of potassium. Usually kainit is used to supply potash to the soil. There are also various other things which are taken out of the soil by the crops but usually these are in such abundance in the soil or are so easily replenished by natural processes that there is little need for restoring them to the soil by artificial means.

Here it should be noted that desirable results can be obtained only by manuring the soil with the proper proportion of all the necessary constituents of the soil. Hence there is the need of soil analysis in order to find out its deficiencies. Otherwise the quantity of one item may be more than what is necessary, while that of another may not be enough. Just as a proportionately larger amount of capital or labour or land, when combined with an insufficient quantity of the other factors of production would mean that the excessive quantity of the former will remain unutilised to its full extent and thus be partially wasted, so also the want of proper care may lead to such a wastage in applying the manure to the soil if the proper elements are not given in the right proportion. Therefore, the success or failure of any experiment with a particular manure does not prove anything so long as all varieties are not given in the necessary form and amount. Sometimes a manure rich in nitrogen or potassium or phosphorus yields satisfactory results, sometimes it does not. This only shows that in the former case the other constituents existed in the soil, whereas in the latter case they did not. Therefore, to be effective, soil analysis is essential for right manuring. Hence it is desirable that Government, through their agricultural farms, should provide for all facilities for soil analysis throughout the whole country, and find out the deficiencies in the soil in different parts of the country. The results of such analyses should be made available and known to the cultivators in their villages. It is not enough to publish them in scientific books or journals like the Proceedings of the Agricultural Institute or the Agricultural Ledger. Such practical information should be distributed broadcast through pamphlets in the vernacular languages or through peripatetic lecturing bodies who will carry the results of soil analyses and the knowledge of restoring the soil, to the remote villages. At the same time all facilities should be given by which the cultivators will be encouraged to have their soils analysed and avail themselves of the expert knowledge of the Government agricultural farms.

In India most of the cultivated lands are deficient in phosphorus. The reason is not far to seek. The most important manure which is used is dung

of cattle, although only a tithe of the total dung is utilised for this purpose. But of all the chemical substances of the soil, which cattle absorb from the plants eaten by them,—and these latter are rich in those elements of which they rob the soil,—little of phosphorus is found in the dung inasmuch as phosphorus is mostly drawn away as a constituent of the blood and milk. Therefore, the effect is cumulative. The milk deteriorates in quality at the same time that the soil deteriorates in phosphorus, thereby making useless a portion of the nitrogen and potassium with which the soil may be artificially fed. It appears therefore that a good manure in India would consist of dung supplemented by the necessary quantity of phosphorus in some form. One of such forms, although not so effective, is cattle urine which is not utilised now.

Except for its deficiency in phosphorus, dung is the best manure easily available. But unfortunately dung is so widely used in India as fuel that only a small proportion of the total quantity produced is actually used as manure, the rest being burnt as fuel. And this, in spite of the fact that the use of dung as manure is much greater than its use as fuel. This state of things is partly the result of ignorance and habit, but more of the reckless policy of cutting down forests which might otherwise be used for supplying cheap fuel to the rural population. Thus a right policy of re-forestation is vitally connected with the regeneration of agriculture on a scientific basis. Dis-afforestation has injured the lands in another way also. It is well-known that forests and grass lands stem the rushing tide of torrential rains and thus prevent the denudation of the surface silts which contribute so much to the fertilisation of all lands. The ever-increasing amount of arid land in the northern and western parts of the United Provinces of Agra and Oudh, especially the district of Etawah, is attributed to rapid dis-afforestation. Trowseed says: "The forests where the Emperor Babar hunted the rhinoceros are now a waterless tangle of ravines," and "the beautiful country along the Foot Hills is now buried under sand and gravel" †. According to this writer this devastation of the land is due to "fire and axe". By river-bed erosion the Jumna has been lowered fifty feet during the last five hundred years because the torrents are unhampered by the roots of plants and trees which have been indiscriminately destroyed. The result is that in the district of Etawah the desert is rapidly increasing. The rate is calculated to be two hundred and fifty acres per annum. The same is the case in the terai lands of Saharanpur. All this is due to the opening up of ravines by torrents of rain, which are unchecked owing to the policy or want of policy or want of policy in dis-afforestation ‡.

Thus it will be realised that one of the means of preserving our agricul-

† Article in the Indian Forester, August, 1921.

‡ The Agricultural Journal of India : Article on the Afforestation of Etawah by Venskin, page 685.

tural lands as also of releasing dung to be used as manure is to develop our forests. This development for the purpose is not so difficult or costly as is ordinarily imagined. Nor does it take very long time to do so. According to experts *babul*, *shisham*, teak, etc., grow to a height of between twelve and twenty feet in three years †. On the hills the *eucalyptus globulus* grows quickly, and in dry lands *tamarix* is such a tree ‡. All the above trees are specially suitable for use as fuel. Therefore, a proper policy of re-forestation in the neighbourhood of villages or groups of villages, with the object of supplying cheap fuel to the rural people and grazing lands to their cattle, will help a wider use of cattle dung as manure for agricultural lands.

We would now give some illustrations of the results of experiments carried on in India by agricultural experts. In estimating their practical use to our agricultural system it is necessary to make proper allowance for the great care which is taken by our experts in their experiments and the like of which the ordinary cultivator can never be expected to do. In this direction our cultivators no doubt require to be improved but in spite of all probable improvement they can never afford to be as careful as the agricultural farms under the experts. The following table will show the results of some of the experiments made in India :

Output per acre.	Without manure	With manure.	Percentage increase in output on unmanured crop.
A. Rice ..			
100 mds. cowdung per acre.			
§1. Grain	lbs. 1,374	lbs. 3,556 .. ..	159
Straw	.. 2,172	.. 4,479 .. ..	106
3 mds. bone-meal, 30 sers saltpetre			
§2. Grain	.. 1,374	lbs. 4,389 .. ..	219
Straw	.. 2,174	.. 6,178 .. ..	184
2 tons ashes, 8 cwts. bone-meal, 12 tons dung.			
§3. Grain	.. 1,084	lbs. 3,484 .. ..	220
Straw	.. 840	.. 2,464 .. ..	198
1½ cwts. ground-nut, 1½ cwts. bone-meal, 75 lbs. kainit.			
§4. Grain	.. 408	lbs. 1,337 .. ..	227
Straw	bundles 9	bundles 22 .. ..	144

† E. A. Symthies, I.F.S., on the Afforestation of Etawah.

‡ R. S. Troup's Silviculture in India.

§ John Kennys Intensive Farming in India. He gives the results of experiments made by many other's. The illustrations quoted give his own results and some of those obtained by Newman, Davis, Dr. Leather and others.

Output per acre.	Without manure	With manure.	Percentage increase in output on unmanured crop.
<b>B. Cotton</b>			
§1. Crop	lbs. 50	4 tons cattle dung.	60
		lbs. 80 .. ..	
§2. Crop	" 50	1 cwt. nitrate of soda.	200
		1 „ super phosphates.	
		1 „ kainit.	
		lbs. 150 .. ..	
§3. Crop	" 50	2 cwt. ground-nut cake.	300
		2 „ superphosphates.	
		2 „ kainit.	
		lbs. 200 .. ..	
Poundrette or dry human excreta.			
<b>C. Wheat</b>			
§1. Grain	" 1,083	lbs 1,603 .. ..	48
2. Grain	" 820	3 mds. saltpetra.	90
		lbs 1,558 ... ..	
§3. Grain	" 900	14 tons farmyard manure.	120
		lbs. 1,980 .. ..	
<b>D. Potato</b>			
§1. Crop	bushels 145	bushels 349 .. ..	150
<b>E. Oats</b>			
§§1. Grain	lbs. 562	Green manure and superphosphates.	140
		lbs. 1,451 .. ..	
Straw	" 1,175	lbs. 2,380 .. ..	98
		lbs. 2,380 .. ..	
Green manure and superphosphates.			
1. 1st year	" ..	lbs. 960 .. ..	62
		" 1,560 .. ..	
		" 1,840 .. ..	
F. Maize	" ..	Green manure and superphosphates.	91
		lbs. 1,599 .. ..	
		lbs. 1,458 .. ..	
§§2. Grain	" 752	lbs. 1,458 .. ..	94
		lbs. 1,458 .. ..	
Straw	" 1,732	lbs. 2,841 .. ..	64

*N. B.*—The numbers indicate different experiments.

§. Jhon Kenne's Intensive Farming in India He gives the results of experiments made by many others. The illustrations quoted give his own results and some of those obtained by Newmau. Davis, Dr. Leather. and others.

|| T. Basu's article in the Agricultural Ledger, No. 19, 1893.

§§ Proceedings of the Board of Agriculture at Pusa, December 1, 1919.

||| A Study of the Indigo Soils of Bihar by W. A. Davis published by the Agricultural Research Institute Pusa.



It is important to note that the above increase should be realised in terms of the costs of manuring as compared with the value of the increase in the output. The increase in the output should be taken as less on the farmer's own land than on the agricultural farms under the management and supervision of experts. Calculating even without this latter consideration it will be seen from the above table that in many cases the cost of manure is too high in comparison with the increase in output. In some cases the cost is even greater than the increased value obtained. Take, for example, the third experiment under wheat, that is, C. 3. in the table, where the increase in the output is the greatest under wheat. This is 1,080 lbs. or a little more than 13 mds, the price of which will be about Rs. 80. To raise this extra amount 14 tons of farmyard manure was used, the price of which will be more than Rs. 80. On the other hand, take the first experiment under rice, that is, A. 1, where the increased output is 2,182 lbs. or 26½ mds., the price of which will be about R 150. The manure used was 100 mds. of cow dung, the price of which will be about R 50; thus leaving the substantial net profit of about R 100 per acre.

It seems that experiments which do not care much for cost are merely academic in their interest, and have little practical importance. Nor does the manure used show any result unless it is known what was the result of soil analysis of the particular land to which the manure has been applied. What is necessary is to find out the maximum efficiency point at which a particular soil with known deficiencies will raise the maximum crop with the minimum manure, or rather the maximum value of crops with the minimum cost of manure used. In many cases this viewpoint is maintained with good practical results. It is necessary now to emphasise this in all cases. For the use of those who want to work out the problem in the above table I give the approximate prices of manures which are widely used in Government agricultural farms in India. For nitrogen, phosphorus, and potash, the manures usually used are respectively superphosphates (Rs 2 per maund), Chili nitrate (Rs. 4-8 per maund), and kainit (Rs. 2 per maund).

Finally, in attempting improvements of the agricultural system of India, whether by soil improvement or by introducing improved implements and machinery, especially the latter, one caution is necessary. The full significance of that can only be realised by those who are actually handling the problem in its entirety and not one aspect of it merely "In India there is an agricultural practice built up on the traditional custom of years and in which reside, though unexpressed and unexplained, deep scientific principles, the reasons for which can only gradually be elucidated"‡. It is necessary to attempt unravelling these mysteries in order to preserve what is best in the present system, so that what is really good may not be

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‡ Mackenna—Agriculture in India.

destroyed by the iconoclastic zeal for improvement on the part of the technical scientist or the lay worker on behalf of the cultivator.

### Improvements in Organisation.

Improvements in organisation help improvements of agriculture in two ways. Better organisation can facilitate the improvement of the soil and the increase in the area under cultivation. Secondly, it can bring about a redistribution of the present income from land so as to enable the cultivator to retain more than what he does now.

Under the first head will come all means by which any portion of the 113 million acres of land which is now waste but which is cultivable can be made available for actual cultivation. Some of this land can be brought under cultivation by developing easy means of communication. Information in this behalf and facilities to settle on such land should be organised in order to induce people from more congested parts of the country to migrate to these parts. In this way many places are being developed, *e.g.*, parts of Assam and Burma. By developing such lands by means, for example, of irrigation not only has the output been increased but a greater population has been attracted, *e. g.*, in the Panjab and Sindh,

Again, such organisation is necessary to introduce improvement of the soil. The most important organisation is the co-operative credit society. In India co-operative credit societies are developing rapidly, although their number is yet insignificant in the vast country. But these societies are mostly based on the Raiffeisen principle, the object of which is to protect the cultivators from the exactions of the local usurers. The loans are for short periods only and based on personal credit. Apparently no permanent improvement of the land can be undertaken by means of short-term loans, nor can long-term loans be granted on personal credit only. Therefore, for the improvement of agricultural lands in India, organisations of the type of the German *Landschaften* are needed. These grant long-term loans for permanent agricultural improvements on the security of land itself. Such loans can be given on the understanding that the Society will have the right to see that the money is spent for the purpose for which loans have been sanctioned. The borrower is required to pay interest on the loan, a small charge towards the reserve fund and the cost of maintenance of the Society, and a portion of the principal which is necessary to extinguish the debt at the expiry of the period for which the loan has been granted.

Such organisations are voluntary in Germany but are helped and encouraged by Government. In India ordinary co-operative credit societies depend for their main support upon the Government of the country. The reasons are not far to seek. The people who are benefited by the system are mainly the rural folk who are ignorant about the affairs of such institutions. Moreover, owing to the poor condition of the country it is difficult to find sufficient men with leisure to devote their time and services to such

work. Further, the extreme illiteracy of the people makes it difficult to find men to check and supervise the work of the officials of the Societies. And it is such direct participation in their working which can create an abiding interest in these institutions.

Thus it cannot be expected that new organisations of the type of the German *Landscheften* will be introduced in India without Government initiative and support. It is a mistake to suppose that these can be opened only after the other type has developed in the country. The two types must go together in order that either may be effective. Also such new societies cannot grow at all without at least some legislative help from Government. For landed property to be used as a security for loans in the case of such institutions, certain conditions must be brought about which can exist only by legislation in that behalf. For example, there must be a public register showing the titles to lands as also the existing charges on them. Without this the existing liabilities of any land cannot be definitely ascertained and therefore the amount which can safely be lent against that land remains uncertain. Thus all mortgages or other liabilities on a land, whether anterior or subsequent to the loan, must be compulsorily shown in the register. The claims of the society should have priority over all claims not so entered subsequent to the contraction of the loan from the Society. This can apparently be enforced only by proper legislation to that effect. Again, it is essential for the success of any such organisation that ready and cheap methods should be provided for the recovery of debts as also, in the required cases, for the pledged property of the borrower. Government help is probably necessary for the right valuation of the lands which are accepted as pledges for loans.

Such institutions, if properly organised, can bring about immense improvements of land. The advantages are many and widespread. (1) The cultivator will welcome the system because he is freed from the present contingency of being suddenly asked to repay his debt to the moneylender (such loans are renewed but granted for short periods only and often payable on demand) when he has sunk capital in his land which can repay itself with profit only if he can wait for a long period during which the full effects of the improvements would accrue to him. For example, if he provides for irrigation, drainage, fencing, or even using improved implements, machinery, or cattle, the return will come to him spread over some time. Therefore, the time for repaying the loan should vary according to the particular way in which he applies the borrowed capital. The society can lend money for such long periods because the land is pledged to it, and, in case of inability on the part of the cultivator to repay, the land can be easily transferred to another before the effects of the improvements are exhausted since transfer of such lands will have been facilitated by law and since the repayment

is to be by instalments each of which must be paid in due time, failing which the society will take steps towards their collection or towards the transfer of the land to another who can pay regularly. (2) The money-lender or the capitalist will come to such a society because he can never rely on the punctuality of the cultivator † and because he will now have to depend upon the credit not of an individual about whose affairs his knowledge can never be so minute but upon that of an association whose credit will be the joint credit of all its members besides its prestige as being supported by Government. Also the trouble of examining the securities of individuals is obviated by the substitution of the society as his debtor, which will undertake this work with much greater facility if the conditions explained above be brought about by necessary legislation. In such circumstances it is to be expected that, with greater credit and less trouble and risk of loss, the moneylender's charge for interest will also fall. This fall will mainly go to the borrowing cultivators since the society will be of the co-operative credit variety. (3) Thirdly, this will bring many and various benefits to the community at large. The burdens on all lands, particularly the cultivators and the small proprietors of lands, will be considerably reduced at the same time that the improvements adumbrated in the beginning of this lecture will be realised. With the improvement of agricultural lands, their value will naturally increase. This will improve the condition of all proprietors of lands as also that of the non-proprietor cultivators if suitable arrangements are made in tenancy laws which will retain to them the effects of their improvements. Again, the improvements which can be introduced now are only minor and secondary. With the adoption of this system the expenditure on permanent agricultural improvements will be more liberal and to that extent the country will be benefited. The producers will be directly benefited by the increased output and the general body of the people will participate in the advantages in the form of lower prices of agricultural products unless of course there is a proportionately greater increase in the population. Also raw materials in the form of agricultural output will be cheaper. This will stimulate industries dependent on agricultural products. This improved condition of the rural classes will naturally react on another problem, viz., that of the thoughtless immigration from country districts to large towns on the off-chance of earning a living there. The sudden and more or less unexpected release of the rural labourers from all bonds of social ties which exist in the village homes probably in too great an extent but which practically do not exist in the new urban environments has not always been very happy, especially in their moral effects. With greater

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† "Landed security is good, but not easily or rapidly realisable; debtors are uneducated and have no idea of business methods or of punctuality in meeting their obligations; ..... and partly in self-protection, the *mahajan* charges a rate of interest which local custom readily tolerates" Report of the Indian Industrial Commission, † page 211

premeditation in migration this also may be partially remedied. Further, the prosperity of the rural classes will naturally react upon all classes of the labouring population of the country, and this will make the people better payers of indirect taxes on articles of general consumption. Thus Government revenue will automatically swell with such improvements. Finally, there will be a check, partially at any rate, upon a vicious system which prevails in India, especially in Bengal, Bombay, Bihar, and the United Provinces. Now there is excessive subdivision of agricultural holdings, which often makes profitable cultivation impossible. The reasons are several, the most important being a rigid adherence to the letter of the law of inheritance and the attempt on the part of all to live on land. Another important cause is the extreme indebtedness of the rural classes. This compels them to repay their debts by selling or surrendering a portion of their holdings. The temporary effect is to lighten the burden of their debts, but the more permanent effect is to involve them in greater debts inasmuch as the same family or families must now live on a smaller land. Under the proposed system of developing lands there will be no such pressing debt to be repaid, its amount being earned from the improvements made on land and its repayment with interest being settled on terms of easy instalments.

Another means of introducing such improvements of land, besides the institutions based on the principle of *Landschaften*, is to organise co-operative purchase stores in rural areas. These may be utilised for buying consumption articles. But their work in behalf of land improvements should be to purchase improved agricultural implements, better manure, cattle, seeds, etc. The principle will be co-operative, not necessarily based on the credit system, although the latter will be more effective inasmuch as it will allow the buyers to make payments out of the increased income derived from the use of better implements, cattle, manure, seeds, etc. Such organisations can only be instituted on the initiative and direction of Government for the same reasons for which co-operative societies and *Landschaften* require Government help. Government help should, in the beginning at any rate, be given to them in the form of loans with Government money just as it was given and, in many parts of India, is even now being given.

In this connection it is worthy of note that some Government measures have indirectly retarded the progress of rural areas. In some parts of India, for example in the Punjab, Bundelkhand, Chhota Nagpur, and certain parts of Bombay and the Central Provinces, law forbids the alienation of agricultural lands to non-agricultural classes. Unless this is accompanied by adequate provisions for credit, it merely means a fall in the value of land and creates greater difficulties in finance for the cultivators. Owing to the extraordinary development of the Punjab and Sindh irrigated areas it has not affected these parts so badly but inherently the measure is defective.

Some other means must therefore be devised to prevent the transfer of agricultural lands to the money-lending classes who never intend to cultivate their lands themselves. If that be not practicable the present law should yet be dropped. Another such defective law which undermines both the morality and material prosperity of the borrowers is the Usurious Loans Act of 1918. The courts of justice have the right to determine a fair rate of interest. This is usually accepted as twelve per cent. per annum, rarely more than eighteen per cent. But if the money-lender really runs a risk as he thinks that he does, he evades the law by forcing the borrower to recognise a higher amount as borrowed than the actual amount, so that the court's decree on this higher amount at a lower rate of interest will yield him his lower amount at the higher rate stipulated for. This is not only morally degrading to both the lender and the borrower but inevitably creates difficulties for the borrower who is the weaker party.

The foregoing methods of helping the cultivators by having co-operative societies of various kinds will also help the cultivators in receiving a greater share of agricultural profits. But more direct methods require to be devised to bring about a redistribution of the income from lands, by which the cultivators can get more of it than they do now. At the outset a warning needs to be repeated that the exploitation of the cultivators by the middlemen traders is not so great as is popularly supposed. In most cases the exploitation is more oppressive from the landlords or middlemen holders of agricultural lands above the actual cultivators. Thus improvements in this behalf should proceed along two independent lines. The systems of land tenure and the tenancy laws should be so modified as to help the cultivators out of a substantial portion of the present burden of rents and other dues, which varies according to the capacity of the middlemen tenure holders or the ease with which the law can be dodged. Besides, there are many illegal exactions on the part of the landlords or their officials. Such practical oppressions must be stopped if the cultivators are to be improved in their material condition and moral outlook. It seems that one of the methods of doing so is to amend the tenancy laws in order to give greater proprietary rights in land to the actual cultivators. Insecurity of tenure is an effective weapon to compel the cultivators to submit to illegal exactions for the purpose of keeping their hold on lands which can be transferred from them to others on some pretext or other. On the other hand the danger is that, with the security of tenure, the cultivator tends to develop into a middleman tenure holder by sub-letting his land to others and thus himself becoming a "rent-eater". Thus the change of the law should provide for certain general rights of the actual tiller of the soil, whoever he may be, including the regular workers on land who are now employed by the cultivator himself. This will effectively check such sub-letting inasmuch as the present holder will gain nothing by doing so.

Secondly, there is now an excessive handling of crops by the middlemen traders in moving them from the fields to the ports or the internal distributing centres. There is no doubt that more of the income from lands can be retained by the cultivators with a little organisation. For this purpose the organisation of co-operative sales' associations is imperative. These need not be separate from the co-operative purchase stores. These associations will finance the cultivators till their products can be sold in the best markets. Such bodies will naturally find the customers coming to their doors for making purchases since they will find a large stock from which to choose, and these associations can bargain for much better prices than individual cultivators can ever hope to do with their pressing needs for cash to pay the money-lender, the landlord, and Government, and to find money for their ordinary expenses as also many extravagant expenses often required by social or religious customs.

Another method by which the cultivator can earn more is to market his goods after passing them through some of the minor processes through which they are carried later on and which can be done without much organisation and expense. He "can prepare crops for the market in most profitable form. This includes such operations as fibre and oil extraction, wheat grinding, paddy husking, coffee pulping, tea manufacture, and, most important of all, sugarcane crushing" §. He may also "prepare materials required for agriculture such as bone meal for manure, and crushed or chopped cattle food" §. Such work on the part of the cultivator will increase his income very much without much cost or loss of time. This will also solve the important problem of providing supplementary occupation to him since during certain parts of the year he remains compulsorily idle. Moreover, the transport charges will be reduced inasmuch as the raw things are always heavier and more bulky than the part-manufactured articles. Further, the bye-products which are often of great value to him, e.g., oil cakes, and which now leave him along with the raw things, will be left to him to be utilised for his requirements.

In conclusion it requires to be emphasised again that the above suggestions can be more effectively carried out if attempts be made simultaneously along all the lines instead of being confined to a few only. Piecemeal development is impossible in any department of life. It is especially so when the various branches of economic development are so closely related to and so interdependent upon one another. Therefore, there is the need of organised effort which, in a country like India as probably in all countries, can be successful only if the initiative and the driving force come from the Government of the country.

## AGRICULTURAL *VERSUS* INDUSTRIAL DEVELOPMENT IN INDIA.

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The great economic problem of India is the problem of poverty. India is one of the poorest, if not the poorest, country on the face of the earth. There is no disputing about that fact. The remedies proposed, however, for curing that disease of poverty differ according to the diagnosis of the disease. And they differ to such an extent sometimes as to appear antagonistic. That is why I think it essential to clarify our ideas on this subject of fundamental importance.

For the last twenty years at any rate, if not more, the demand for industrial development in this country has become increasingly vocal and persistent, if not very definite in its details. The Industrial Commission of 1916-18 was an outcome of this demand. The report of that Commission gives a good description of the industrial deficiencies of India. It omits, however, to establish the vital relation between these deficiencies and the chronic poverty of the country. The Fiscal Commission of 1921-22, which was the complement of the Industrial Commission, appears, however, from its report to have had even a less clear idea than the earlier Commission of the vital significance of industrial development in India, for the report merely says: "That the industrial development of India has not been commensurate with the size of the country, its population and its natural resources, and that a considerable development of Indian industries would be very much to the advantage of the country as a whole." The Commission evidently do not believe that the most important remedy for the poverty of the country is industrial development. The latter is simply quite a desirable thing, in the opinion of the Commission. What they mean by "considerable development," or at any rate what the majority of the Commission mean by it, is seen from what they say elsewhere in the same report, viz. "India for many years to come is likely to concentrate on the simpler forms of manufactured goods and these are precisely those in which the United Kingdom has the smallest interest."

It is the halting pronouncements of the above two Commissions on which the policy of the State in the matter of industrial development is at present based. But there are people in various camps who have already taken a fright at it. Here is the chairman of the Calcutta Port Commissioners who recently delivered himself of the following before the Tariff Board: "India is predominantly an agricultural country. You have agriculture as your prevailing industry and you have to find a market for a certain amount of surplus agricultural produce. In order that agriculture might flourish in this country there might be a point at which it might be undesirable to



develop manufacturing industries unless that can be done without damaging agriculture. It is hardly fair to agricultural interests to develop those industries at the expense of agriculture. I admit that nobody could object to the natural development of the iron, coal and other industries, but one might object to official aid." The chairman of the Commissioners does not by any means stand alone in this type of advocacy of agricultural interests. There are big landholders, *e.g.* in the Council of State, who tell us through that council and the Press that the one great need in the economic life of the country to-day is the establishment of land-mortgage banks with a Central National Bank at their back. There are many honest co-operators (in the economic sense) all over the country who cannot at all understand why other people waste their time and energy over fighting battles, say, about fiscal policy when the one thing needful for the economic uplift of this country is the salvation of agriculture by means of co-operation. Then there are people who back up agriculture because they are filled with holy horror at the sight of the slums in some of our industrial cities like Bombay. These people are convinced that industrial development means dark, stuffy factories with chimneys belching out clouds of smoke and surrounded by mean, filthy over-crowded tenements wherein human beings live more or less like worms. Did not Ruskin and Carlyle say so? Does not Parel exemplify it? What if Letchworth and Bournville and Port Sunlight prove exactly the opposite? What if Tatanagar proves in this very country what an industrial town can be like if only things are wisely planned at the right moment? It is amusing to note that these enthusiasts for rural life seem blissfully ignorant of the fact that a vast mass of villages all over the country are simply pocket editions of the slums of industrial towns. They seem equally to ignore another fact, *viz.*, that the older towns of India, entirely unaffected by modern industry, especially the sacred cities of the land, present a spectacle of dark, stuffy, congested houses separated by narrow winding lanes, which can compete successfully with the slums of industrial towns. The whole attack seems to be based equally on an ignorance of what is and of what can be. But enough of this digression. My point is that in the present period of renaissance, when all that is old has temporarily become gold, there are plenty of people opposed to the industrial modernisation of this country.

Now let us examine the statement that India has always been, is and will remain predominantly an agricultural country. In a sense, this statement may be truly made not only of India but of every country on the globe. Why, even in England—by far the most industrialised country in the world—agriculture is the most important single industry even to-day and occupies the largest proportion of the population. The nature of agriculture has changed, radically changed, as compared with the condition of things two centuries ago. Much less wheat is produced than used to be the case or than what could be produced. But it only

means that the land which used to produce wheat now produces beef, mutton, milk, eggs, butter, cheese, pork, ham, potatoes and other vegetables, pears, apples etc. etc. Decrease in indigenous wool production has also occurred because the alternative products above mentioned pay the farmer better. But agriculture in this comprehensive sense, is not only very much alive but is as a matter of fact the industry which employs the largest number of people to-day. In the other industrially advanced countries, agriculture is very much more important than in England. In France, half the population lives by it; in Germany a little more. In the United States, one-third of the population is engaged on the land. Japan, of course, still is as much an agricultural as an industrialised country. In the past, all countries of the world, not merely India, were agricultural. If anything, India was more full of the handicrafts of those days than were the countries that are noted for their industries to-day. History bears ample testimony to that. In the future, as long as food continues to form the most pressing of human wants and as long as it continues to be derived from land, cultivable land even in industrialised countries will naturally be made to yield all that it can of food whatever its form may be. Agriculture cannot but remain the parent industry in every country. There is nothing very peculiar in the very nature of things which distinguishes India for all times as regards the position of agriculture in national economy, as appears to be implied in the statement under review.

Let us make a brief comparative survey of the change which has come over the economic organisation of the industrialised nations of the world and over that of India during the last century or so. Let us start with England. Before the Industrial Revolution, England was a country of small villages engaged in agricultural activities supplemented by handicrafts of the domestic type. There was the hand-spinning of wool as a more or less universal spare-time occupation and the hand-weaving of the yarn by a specialist class of weavers. And there were a number of other handicrafts catering for the needs and conveniences of the people and partly for the luxuries of the lucky few. The industrial revolution spelt the ruin of most of these handicrafts and spare-time occupations and the consequent displacement of large masses of people from the villages and smaller towns and from their ancient occupations. But the industrial revolution meant at the same time the opening of more fields of new kinds of employment than it closed. It meant the opening of coal mines and iron mines, of smelting furnaces and foundries, of rolling mills and factories making the thousand and one requisites of railways of textile mills and other factories, of machinery-making factories and workshops, etc. As a result of the Industrial Revolution, wooden ship-building of course practically disappeared in England. But a much larger industry of iron and steel ship-building replaced it. Railway transport,

ocean shipping, commerce, insurance, banking opened so many new careers that the disappearance of the old handicrafts appeared as a bagatelle. Agriculture itself came to be re-organised in such a manner as to economise the human factor and to specialise in the most remunerative channels, be they wheat, meat, wool, dairy-produce or market-gardening. The upshot of it all was that a much smaller proportion of the total population came to be occupied on the land but the per capita income in that as in other industries increased with surprising rapidity. The change in the economic organisation was indeed attended by a large amount of hardship and gave rise to evils which were unexpected because of the suddenness of the change, but many of these evils people have now learnt enough to be able to foresee and forestall if they so desire.

England was the country where the Industrial Revolution came first.

The new era was the era of iron and steel, of steam and electricity. England fashioned for herself the tools and implements of the new era, the rails, locomotives, coaches, wagons and other railway stores, the iron and steel plates for ships, the marine engines and other marine stores, the machines for textile and other factories etc. And when England had equipped herself with these new tools and implements, she was not only ready to supply the various goods produced with their help but also similar tools and implements themselves.

Now, the other nations that have successfully modernised their industrial fabric first thought of doing so when their handicrafts of the domestic type began to decay because of the competition of the machine-made goods of England. They started by equipping themselves with the new tools and implements which they first imported ready-made from England. But these countries were shrewd enough to perceive that there would be no real modernisation of their industries until they began to make their own tools and implements *i.e.* to build their own railways and steamships with their own materials and brains and supply their own mills and factories with machinery and stores made by themselves. The last of the modern nations which deliberately brought about such an industrial revolution in its midst was Japan which accomplished that feat in the course of a single generation.

In all the countries which are considered industrially advanced to-day, the old handicrafts have nearly disappeared, people have had to give up the occupation of agriculture unless they could see a chance of making in it as good a living as they could elsewhere and only those remained on land who could make good business out of it. But the large numbers of people thus displaced from their hereditary occupations were absorbed in the mines, factories, dockyards and a hundred other fields that were opened anew.

Now let us see what happened in India. Here even before the era of railways and steamships, various classes of handicraftsmen had begun to

move on the path of decadence because the things which they used to make and which were taken by their own people in their own ships to other lands for sale were becoming less and less wanted there and what were wanted began to be purchased by the foreigners here and taken away in their own ships. So the first attack was on our external trading and navigation activities and also on the volume of our manufactures sold abroad. The contraction of these activities meant decreased employment for various classes of people. Then came the invasion slow but sure, of the home market by cheaper machine-made goods. The handicrafts of the country put up a tough fight for defence, but it was a losing game. Then came the era of railways and wherever the railway penetrated the doom of the handicrafts, which had supplied the ordinary necessities and conveniences of the mass of the people for unnumbered centuries in the past, was very swiftly sealed. This process was accelerated when steamships began successfully to ply through the Suez Canal and the cost of transport of the machine-made goods even over thousands of miles of water or rail came to be so surprisingly reduced as compared with olden times. All over the country wherever the railway went, the spare-time occupation of spinning of the agriculturists was gone, hand-weaving was threatened, so was the blacksmith, the metal smelter, the glass maker, the oil-presser, etc. The field of employment of all the handicrafts-men who supplied the ordinary necessities of life was getting rapidly contracted and the supplementary income of the agriculturists getting extinguished. But why could not these people be absorbed in new fields of employment of a new industrial era as had happened in other countries, as was happening just then in Japan? For the simple reason that the new fields of industrial employment did not open in India as they did elsewhere. Our railways were built for us by imported material and imported brains. We did not like other countries merely get started in this way and then set ourselves to open our own coal and iron mines, smelt our own ores, make our own rails and locomotives, wagons and coaches and other railway stores. Our wooden ships became a back number but we did not replace that industry, by a much bigger iron and steel ship-building industry, we did not build our own marine engines, make our own other marine stores and open out a great navigation industry as well. We did not learn to make our own machinery for textile and other mills and factories. In short, we never learnt to make the tools and implements of the new industrial era, we never grasped its key and so the new industrial era is still coming. We did not, of course, remain altogether devoid of specimens of industry of the modern type. There is a cotton industry of some growth which is the result of indigenous enterprise. There is a much better organised jute industry which is the result of foreign enterprise. Then there are the repairing workshops of the railways and a few coal, iron, manganese and gold mines and latterly there have been established the Tata Iron and Steel Works which are struggling as yet

for their very life.

What development there has been in these matters has taken place mainly during the last twenty years. But it was in the seventies of the last century that the rapid decadence of the handicrafts, employing large numbers of people as they supplied the daily wants of the mass of the population, began to take place, and at that time there were no new fields of employment available wherein these people could be absorbed. Hence they fell back upon agriculture which was the only industry in which machine-made goods did not compete. Even agriculture was affected in so much as the spare-time occupation of spinning was gone. If in the other countries people were taken away from agriculture into new industries thus necessitating the reform of agriculture itself, in India more and more people were thrown back upon agriculture and the result of it was the excessive subdivision and fragmentation of land, the diminutive incomes of agriculturists, the growth of indebtedness, diminishing power of resistance in case of droughts, high death rate and all the melancholy succession of fevers and plagues too well known to need repetition. That is the origin of most of the serious agricultural ills for which we all seek remedies. It is not a matter for pride or congratulation that seventy, eighty or ninety per cent of our people live directly or indirectly on the land. It is a matter for serious anxiety. We know that in those parts of the country like the Punjab where new land for cultivation was made available by irrigation, the first colonists prospered but later with increased pressure of numbers into the agricultural field the same evils of subdivision, fragmentation, growth of indebtedness etc. followed. So the decay of handicrafts brought about the decay of agriculture. The gloom of the situation went on thickening during the last two decades of the nineteenth century. It was not the excessiveness of the land revenue demand but the miserableness of the individual share of the income from land which was and is the cause of all the trouble. Matters would have been worse than they were but for one thing. The same steamships and railways which brought cheap machine-made goods of everyday use from thousands of miles and took them to the nooks and corners of the country were ready to take bulky goods like foodstuffs and raw materials in the other direction, and there was a growing demand for these goods in the industrialised countries of the world. For the first time in the history of the world, voluminous trade in bulky goods of small value became possible and agriculture in India began to respond more and more to this situation. Since the beginning of this century, efforts have begun to be made through the Agricultural and Co-operative Departments of Government to improve the condition of the agriculturists. The development of industries on modern lines has also begun and has made the agricultural population mobile. But neither the Government nor the people seem to be convinced that we have got far too many people engaged in agriculture in this country. There has now emerged a new class of people who are agriculturists for four or six

months of the year and mill-hands for the remainder. Needless to say, they make neither good agriculturists nor good mill-hands. We get twenty families trying to live by tilling twenty acres of land, each with a holding of one acre, not all in one block, but made up of ten scattered strips each of the size of a fraction of an acre. That is the kind of agriculture we have got. We do want all the cultivable soil to be cultivated and to be made to yield the maximum of produce it can, be it foodstuffs or raw materials or whatever it pays best to produce therein. But we want only as many people to be engaged therein as can find a wholetime occupation and can make a decent living out of it. The rest must be provided for in some other occupations. Let those who have temporarily to migrate every year, because their holdings are too small be induced permanently to migrate by an improvement in the conditions of life and work in the industrial centres they go to. They will thus do better for themselves and also enable the people that are left in the village to do better than they used to. In short, my thesis is that there has been a terrible overcrowding in agriculture because of the decadence of the handicrafts which used to supply our daily needs. That overcrowding has been the main cause of the many ills that we complain of in agriculture and also of the great poverty of the country. The main remedy, therefore, for the improvement of agriculture is the diversion of perhaps a third of the people, engaged in it, if not more, away from it into other industries. It is not a question merely of application of scientific methods or of co-operative organisation or of the search for subsidiary occupations. These things will not touch the core of the problem. For genuine agricultural development itself, what is wanted is the industrial development of the country on modern lines. The two are complementary rather than antagonistic.

## HOUSING OF THE WORKING CLASSES.

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So much has been written and said on the subject that the following few lines are intended merely to afford a few points for discussion.

The housing of the working classes is an important economic problem in all growing cities, especially in those where trade and industries are making rapid progress. Most of the modern cities were allowed to grow without any sort of control or a definite plan, their need not having been felt at the earlier stages of growth. This initial neglect rendered future control and solution of the problem a task of considerable difficulty and cost.

The problem has not been receiving in our country the same amount of attention as in other civilised countries, where the State, the local bodies, and even the employers of labour are making vast strides of progress in the matter of the housing of the working classes. On the other hands in our country the State was for a long time a mere lookeron collecting statistics and figures, while the local bodies did not go further than framing byelaws for regulating the construction of buildings by private owners,

Neither have the employers of labour fully realised how important it is to house the men working under them in sanitary dwellings and how much work would be more than amply repaid by the greater efficiency of the worker and by creating in him an increased interest in his work and higher degree of skill. It is well-known that about 20 p. c. of the men working in our mills are constantly absent on account of illness. Improvement in their housing conditions would not only prevent loss from this cause, but would stabilise labour and create a sense of self-respect among the men.

Nowhere in our country are the housing conditions of the working classes so miserable as in the city of Bombay. The outbreak of plague in 1896, spreading the fell disease from the miserable abodes of the poor into the comfortable houses of the rich, carrying death and devastation before it, opened the eyes of the authorities to the need of improving the housing of the masses. The city of Bombay Improvement Act was passed in 1898 with the object among others, of making provision for the improvement and for the future expansion of the city, by removing or altering insanitary buildings, by constructing new sanitary dwellings for the poorer classes and by laying out vacant lands. The objects of the Act were, no doubt, commendable, but it placed the destruction of slums first in the programme of work before making any provision for the residence of the dishoused people, with the result that these people

overcrowded the neighbouring dwellings and brought them to the condition of fresh slums in the making. The rents in Bombay began to rise abnormally and the Act became unpopular with the people. This initial mistake was however realised by the authorities, and the Improvement Board thereafter directed its efforts to the work of improving the insanitary buildings by making therein such changes as to admit more light and air. The Board also commenced the construction of new buildings for workmen. In the latter work, however, the Board's operations are limited, inasmuch as the statute requires the Board to house only a portion of the people dishoused by its schemes.

Thus the City Improvement Act was unable to do much in the way of improving the housing conditions of the working classes. In 1918 the Act was amended so as to enable the Improvement Board to construct buildings for the working classes on behalf of any employer of labour on his paying in advance 20 per cent of the cost of the proposed buildings, and undertaking to repay the remaining amount with interest by instalments in the course of 28 years. This scheme, too, did not prove to be attractive to the employers, only one cotton mill having availed itself of the facilities afforded by the Act.

Meanwhile the two Railway Companies, the B.B. & C.I., and the G. I. P., the Bombay Municipality and the Port Trust undertook to house the workmen employed under them and each of the bodies built a number of tenement chawls for them.

All this while the State as such took no part, either direct or indirect, in the housing of the working classes. The Indian Industrial Commission appointed in 1916 by the Government of India recommended in their report issued in 1918 that in view of the peculiar conditions of the city of Bombay the State in co-operation with local authorities should adopt a definite programme of housing the working classes, levying further taxation in such a way as to fall mainly on the employers of labour. This led to the appointment of the Bombay Development Directorate in 1920, which undertook, among other things, the Development of the suburbs and certain parts of the city, as well as the programme of construction of 50,000 rooms for the working classes in Bombay. A special cess on cotton brought into the city is being levied to meet the charges of the schemes undertaken by the Directorate, whose programme of constructing the working class dwellings is making rapid progress.

In the work indicated above regarding the housing of the working classes, it would be difficult to say that it has or is proceeding on right lines. In the first place, the initial mistake made by the City Improvement Act has already been noted. Secondly, all the buildings constructed so far consist of single room tenements, three to four stories high, of the type of pigeon holes, which cannot be termed dwellings in any sense of the term,



affording merely boarding and lodging accommodation for the poor classes. Thirdly, the two Railway Companies should not have been allowed to construct their working class buildings, much less their workshops in the city-proper. They could well have acquired cheap land in Salsette in the proximity of the lines of their route, and constructed small and cheap cottages for the people with pieces of garden around them. Even now these Railway Companies could be made to undertake this course, the chawls already constructed by them in the city being taken over by the Development Directorate as part of its own programme. Fourthly, the Development Directorate should in the first instance have taken in hand the rapid development of the suburbs in Salsette. Such a course would have brought about a diversion of a large number of upper and middle classes to those places, resulting in a fall in the prices of land in the city for the benefit of those of the working classes who cannot be removed far afield from the seat of their work.

The excuse that is generally put forth for constructing one-room tenement chawls is that it would not be an economic proposition to do anything better in the city where land is so very dear. But the question has never been boldly faced ; as to how many of the people could be made to move out into the suburbs to be housed on cheap land in a better class of dwellings.

Life in chawls, especially of one-room tenements, is scarcely worth living, even by the working classes. Privacy is conspicuous by its absence, and it is no wonder that people living in them should shut or cover up the windows in the attempt to secure some privacy even at the cost of light and air. The common services, such as privies and water-tap rooms, are always found to be in the most insanitary condition, for it is nobody's care to maintain them in good condition. They moreover afford frequent cause for quarrel among neighbours. A chawl with a number of storeys is a multiplication of these evils.

The all round construction of one-room tenement chawls several storeys high for the working classes, even in cases where they could be avoided, is a sad mistake which might take ages to rectify. Even two-room tenements in a chawl are bad enough ; and one-room tenements are abominable. It has been found by experience that child mortality is heaviest in one-room tenements. The minimum standard should be two-room tenements in ground floor structures with an open veranda and a small piece of yard for gardening like the few sets of buildings designed by the Port Trust in its Antope Hill Settlement.

The houses of our working classes are merely eating places, not even sleeping places, as many of the people are found to use the open roads for the latter purpose. They are much less the places where self-respect could be preserved, comfort secured, and domestic pleasure enjoyed. The people are crowding together in foul localities possessing no element of health, comfort and decency. The results are inevitable—loss of self-respect, failure of health and premature death especially among the children. Loss of self-respect

brings about crime; failure of health involves frequent interruption of work and loss of income, and the depression brought about thereby is the main cause of drunkenness. It is no wonder therefore that a large number of workmen should seek pleasure and company in the liquor shops. The degradation of the men brings about the degradation of their families. In other words a large section of the community is going down in the scale of humanity.

Increase of salaries of the workmen is the general remedy suggested by many well-wishers of labour against all the ills suffered by them. But a careful observation of the effect of the recent increase in the wages will go to show that the increase must be indirect and not direct. Instead of paying the increment in hard cash, it would be better spent towards the well-being of the people, such as death benefits, and provision for sickness, old-age, child birth and marriage. Payment of amounts on these accounts, and even on a slightly increased scale where the worker himself effects a saving under those heads, would go a long way in inculcating the habits of thrift and providence. With regard to improvements in housing conditions, not only a better class of dwelling should be constructed, but the people themselves must be taught to keep their houses tidy and comfortable. Most of our working classes come from rural areas with no idea of the life to be lived in towns. Unless therefore, they are taught the way of living in a city, such as is calculated to fulfil the requirements of a wholesome and cleanly home all other efforts for the improvement of their housing conditions would be of little avail. Were the working classes taught to shun unwholesome dwellings and to value wholesome and cleanly houses, the demand for the latter would automatically increase, and owners of property would be compelled to improve the character of their dwellings and to construct a better class of dwellings.

Nor can improvements in dwellings be effected by municipal regulations, unless we can succeed in carrying the improvements further into the homes of the people themselves. It is therefore extremely desirable that an effective agency should be created to teach the working classes to value wholesome and cleanly homes as also the habit of thrift and providence calculated to improve their economic condition. Government or Municipal agency is least suited for this purpose. There are several private agencies which would be able to do this kind of work most effectively, such as the Social Service League, the Central Co-operative Institute etc. The Development Directorate and the City Improvement Board, would be well advised to set apart specific sums for such work, and get the work done through the agency of such private bodies. Construction of houses is a part of the programme, and not the only programme of improving the housing conditions of the working classes, and it would remain incomplete till the people are taught the proper use of those houses, by making them healthy homes and the abodes of comfort and happiness.

# DISTRIBUTIVE CO-OPERATIVE SOCIETIES IN INDIA

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The Co-operative Movement introduced into India early in this century has, it is well known, progressed at a fairly rapid pace under State patronage and supervision. It is equally well known however that this progress is largely confined to Co-operative Credit and Banking, the non-credit side of the movement not showing any material expansion. Agricultural Organisations on the non-credit side, for the joint purchase of seeds, manure and implements, for the joint marketing of produce such as the sale of cotton, or for the highest stage of joint cultivation, which incidentally offers a very good solution of the problem of uneconomic and fragmented holdings, are but conspicuous by their insignificance in numbers, scale of operations, and the measure of success achieved. Indeed it seems that the problems of agricultural improvement in India cannot be successfully solved without the aid of the Co-operative Movement in all the different operations of the cultivator, merely credit will not and cannot suffice. India besides has numerous cottage industries some of which show great vitality despite the handicaps of the absence of organisation and competition of machine-made goods made at home or imported from abroad. Producers' Co-operation has indeed a vast scope in India and yet we have just but touched upon merely the fringe of co-operative production. Above all, India has a huge population and while every one is not an industrial producer, and while every one is not an agriculturist, every one is certainly a consumer of numerous articles produced by others. The chain of middlemen between the producer and the consumer has grown up here as is inevitable under modern conditions, the cry is often raised against profiteering; the people are poor and yet the millions of consumers are unorganised; Co-operative Distribution has not been undertaken earnestly, the isolated and spasmodic efforts made during the last few years having resulted in failures.

Co-operative distribution seems to me to be a very important department of co-ordinated co-operative effort. The possibilities are great, though the achievements hitherto have been insignificant. The Stores Societies in this Presidency are languishing and gradually disappearing by liquidation and cancellation, and other provinces do not reveal any very more heartening picture. It would be therefore useful to analyse why this Consumers' Movement has failed to progress and to get firmly established in the land where one would expect it to take root and grow.

The failures of several societies have not been without value. They have brought home several valuable points, taught many useful lessons, and have been the means of our gaining very instructive experience. It is true that these failures teach us negative lessons of what not to do, but these nega-

tive lessons suggest the positive counterpart of what to do.

Co-operators know well the famous Rochdale principles of working Store Societies, and try to act upon them, as far as possible. There are the sales at market rates, there are sales on strictly cash terms; there is the annual dividend on purchase, there is the fixed maximum rate of interest to be allowed on share capital. There is little or no advertisement, no window-dressing, no attracting of customers, the theory being that loyalty of members automatically secures custom and spares the expense of advertisement, window-dressing and the like. Faithful to the Rochdale principles, they wait for several retail stores to come into existence and struggle into childhood to take up seriously the starting and building up of a wholesale Society. When therefore the retail stores fail, co-operators wonder and when they analyse the situation, it is customary now to attribute the failure to the absence of loyalty on the part of the members.

The absence of loyalty is doubtless the prime reason for the stores not succeeding in the great majority of cases. But merely deploring this common phenomenon will not take us far. Preaching the need of loyalty on the part of members and regretting its absence will not bring custom and success to the shop. It is not after the failure of the shop that we can force loyalty from members, but it is, I feel imperative that the organisation of a Store Society should be such as to make loyalty the most natural thing in the world for the members. I would go a step further and say that when from the facts submitted by the organisers or promoters of a society there is a grave doubt about the loyalty of its members, the Registrar should make it a point not to register it at all. A Store Society without the members being loyal is a phenomenon that should not be allowed to come into existence at all from the first. To make matters clearer, it is obvious that to make a co-operative venture successful there must be a sufficiently large group of persons having one or more needs in common, and having some tie or bond in common, which may be a further incentive to harmonious and co-operative effort; they must further feel the need, to meet which they start the society, acutely enough to take some trouble and make some sacrifice, and they must be educated or experienced enough to know how to set about to achieve their object. Such a group of persons will necessarily be loyal to their store and ensure its success. Instead of finding out such groups, what is unfortunately but too commonly done is for one or a few enthusiasts to get the shares subscribed by their friends and acquaintances, who from its very inception, have no idea whatsoever of obtaining their requirements from or through the shop but who consent to take a few shares to oblige the organisers or to help a good cause. To ensure loyalty, the members must be largely from one locality, so that convenience and facility may be added to sentiment as a spur to loyalty. In a place like Bombay, for instance, it is no use starting a shop near the Girgaum Portuguese Church,

a good centre in itself, and have your members scattered all over Bombay. It is no use starting a Book Store for College students at Kalbadevi near its junction with the Princess Street, even though that may be a good centre in the vicinity of large bookselling firms. The members must be a group—homogeneous group, residing in the same locality or coming together at least at some place because of common occupation. If other ties exist in addition to these, all the better. Thus, if members of the same caste were to be found staying in the same locality, the chances of success of the society would be firmly strengthened. Loyalty of members to the society is, I firmly believe, largely a matter of organisation of the society and societies must not therefore in general be registered unless this primary consideration is carefully kept in mind.

Premising that loyalty is thus secured more or less, the next consideration that should, I feel, be emphasized is that it must never be forgotten that the store is a business concern aiming at the economic improvement of its members. The aim is primarily, not to cultivate the moral virtues which, though highly important and desirable in themselves, are but the by-products of Co-operation, but to buy at wholesale and therefore cheaper rates and to retail to members at nearly those rates. Of course, instead of selling at practically the wholesale rates or at rates lower than those obtaining in the retail market, the society may adopt the Rochdale plan of distributing bonus on purchases, and thereby promote the habit of saving and thrift. But, any way, the members must get the articles at lower rates. If they cannot, the store fails in its primary idea and deserves to lose the support of its members. The management must hence be such as to ensure them lower prices, on purchases from day to day or at the end of the year. Unfortunately it is too common to declare dividend neither on shares nor on purchases for a year or two, because of some preliminary expenditure or something or other. Most men have a very limited amount of patience, and cannot go on looking forward. In thus waiting for dividends to come, members soon lose their early enthusiasm for their common shop; the circumstances which impelled them to join the society may change and the canker of disloyalty shows itself. In the early stages, preliminary expenditure or heavy cost of establishment or want of experience, does not permit dividend to be declared; later on, the falling off of custom completes the ruin. I am of opinion that the management must somehow keep prices, a little lower than the market prices, for purchases from day to day by members so as to show them in a tangible form from the first purchase, the economic benefit which the store is going to confer, and to declare as soon as possible, at the end of the first six months or year, dividend on capital and also on purchases. If the profits are not enough for this purpose, though in a really well-managed store this cannot and should not be, a little philanthropic assistance even may be welcomed, the idea being to secure the continued confidence of

members in the desire of the stores to fulfil the expectations raised when it started. The organisation securing the loyalty and custom, the prices and dividend retaining the custom so secured, the stores will be well on the road to success.

A reason often assigned for the failure of distributive societies is that accustomed as the people here are to purchases especially of foodstuffs, for which they need not pay there and then, the enforcement of, and strict adherence to, cash sales leads to the falling off of customers. Cash sales being one of the basic ideas of the Rochdale Pioneers, co-operators here adhere to it with disastrous results. Almost all store societies, chiefly those retailing foodstuffs and even some sundries shops, have expressed a desire for permission to sell on credit; and the only concession in this matter allowed generally has been that those desiring to take advantage may open a deposit account at the store against which their subsequent purchases will be debited. This means that a person unwilling to pay for each purchase as he makes it, is asked to pay a pretty large sum in advance to cover subsequent purchases. It is no wonder that this concession is not availed of by many. In some cases, permission is granted to allow credit for a month or so to approved customers. This too means in practice credit to a few friends and acquaintances of the manager or members of the Committee—really cases where persuasion may eliminate the need for credit sales altogether. It appears to one that some way has to be found whereby those who so desire may be able to buy on credit, at a slightly higher rate of course. I think the store organisation should run in close association with a credit society or a few well managed credit societies may be affiliated or recognised by the store. In that case, a member of such a credit society may get a loan which is not paid to him in cash but for which a card is issued to him. On production of this card, the member will be allowed to make his purchases from the store to the amount sanctioned and set forth there. Monthly or quarterly recoveries could be effected, the members getting the desired facility and the stores the desired custom. In the case of a store meant for the employees of a common master, it is possible to secure this advantage even without the help of a credit society. The employer issues the cards and sets forth the limit upto which sales on credit could be made to the member and recoveries could be effected monthly from his pay. Purchases without having to pay for them on the spot have somehow such a fascination that where arrangements as outlined above have been made, almost every one takes advantage of them.

The next consideration that presents itself to us is the management of the shop. A store is after all a business concern and must be run on those lines. All facilities that are given by competing retailers must be afforded by the stores as well, such as sending, in the case of a Grain Stores in Bombay, a man round to the customers periodically to get their orders and to deliver the articles at their own homes. Scientific advertisement must also be resorted to in order to attract non-member customers and thus to extend the

beneficent influences of the stores. All this requires a competent staff which, we often find, the stores cannot afford to engage. The pity is, the stores societies are mostly in a way too large, in a way too small—too large for honorary workers and too small to be able to bear the establishment charges. They commonly adopt therefore the fatal course of employing ill-paid managers or salesman. In a business concern, unless there is someone who, either for love or money, is genuinely interested enough to take a good deal of trouble for it, the venture will not be successful. Leaving love for the institution aside, someone must have a sufficiently high stake in it, and must stand to lose pretty much if it fails. The manager must therefore be preferably a shareholder himself and his remuneration should be partly fixed and partly a percentage of the profits of the society. Anyhow competent management, paid or honorary, must be secured. I am strongly of opinion therefore that at the present stage, one should encourage on the one hand very small societies performing a specific function and having a fairly limited scope, which could easily be run on true co-operative principles, with the help of honorary workers, the heavy establishment charges being practically altogether eliminated. On the other hand a few large societies may also be encouraged with capital and scale of operations vast and varied enough to permit of a highly paid competent staff which could be expected to run the shop on business principles and ensure, as far as may be, the financial success of the undertaking. Gradually one of such big societies could well become the wholesale without which co-operative distribution cannot, I am afraid be placed on a sound and sure footing. Instead of starting a big co-operative venture, it may appear desirable, if and where possible, to buy up a successful store and convert it into a co-operative store in which case the competency of the staff and management being assured, the chances of risk are minimised.

In a large city like Bombay, then, societies performing a specific service like a co-operative hostel, a co-operative bookshop, a co-operative laundry, a co-operative restaurant, could be run with success and on the other hand, a large society run on strict commercial lines would also have chances of success. In smaller cities, a medium store might well do if properly organised and worked, and I do not despair even of having rural stores if a credit society is attached to it or works in close association with it.

The great difficulty about distributive co-operation is that it requires a higher degree of education and training on the part of its members and workers. To start and run a Credit Society is easy enough ; to organise and work a co-operative store is difficult. People have hence to be trained in the aims, ideas and methods of Consumers' Co-operation before much success can be attained. For this purpose, people could be trained up to a full-fledged stores through the intermediate educative steps of a weekly co-operative bazar for a chawl or group of chawls, a buying club or weekly purchases by one of the members by turns on behalf of all, and a store working on an

indent basis. Further as the student of to-day is the citizen of the morrow, co-operative societies, small but educative in their aims and working, may well be fostered and encouraged among them, so that the principles and lessons imbibed during those years may bear fruit later on in life. I should think therefore that efforts of co-operators towards establishing the Consumers' Movement may well be directed towards organising students societies, co-operative bazars, buying clubs and stores working on an indent basis, as potent and effective means of education and training.

The State in India has taken a very active interest in the development of the Co-operative Movement among the people ; but this active interest is yet so far largely confined to Credit Co-operation. No special honorary organisers have been appointed for co-operative production or distribution.

Compulsory and free audit of Consumers' Societies is not introduced. No special concessions have been granted in the matter of railway freights like those granted by the railway companies to societies for their own employees. In fact, enough interest has not been displayed, enough push has not been given by the State officials. Non-official workers are very few, and though organisations like the Central Co-operative Institute have come into existence in most of the provinces and are rapidly expanding and playing an ever-important part in shaping and moulding Co-operative policy in the country, there is still the cry for ever more workers. It is here that teachers and particularly teachers of economics could do a good deal. If they take active interest in the Co-operative Movement, they will not only be very useful themselves to the cause but by enlisting some of their students in the service of co-operation, they will supply the much-needed workers. If the State were to adopt a more vigorous policy and if the non-officials were to second these efforts, I have no doubt that with proper organisation securing loyalty, with efficient management, and with facilities for credit sales, the societies that may come into existence will prosper and the Consumers' Movement will take root in India as it ought to.



## THE DAWN OF ECONOMIC SCIENCE.

BY MR. C. GOPAL MENON, M.L.C., MADRAS.

The prominent position which the Science of Economics occupies is due to the work of the great minds of the Nineteenth Century, who have contributed their time and energy towards its development. Economics may almost be called a new science, and few have read or tried to understand the progress of this branch of human thought. Like other sciences it has undergone changes. Its history is interesting, its present position is worthy of our careful consideration. Without a clear grasp of the principles of the science, and a correct conception of the circumstances deduced from these principles, many of the problems of the commercial world are incomprehensible. People talk loosely of "supply and demand", "the rate of exchange", "protection", "free trade", "the bounty system", "paper money," "fall of prices", "currency", "international trade", and so on,—but they do not recognise that commerce in "special" and "general" is greatly influenced by these things. Even people engaged in commerce have no precise notions on the subject. W. Bagehot mentions that Political Economy labors under an "inherent difficulty which no other science is subject to. This difficulty is due to the circumstance that those who are 'conversant with its abstractions' are 'usually without a true contact with its facts' and those who are 'in contact with its facts' have little conception of its 'abstractions'. Theorists are not acquainted with business and businessmen do not reason out theories. It would only be a minority who could trace out the remote effects of a new tax upon a commodity. It is, however, essential that a man of business must be able to reason out the formidable problems that beset him in the ever-changing monetary facts of modern life. It shall, therefore, be our object to survey the history of the science, and to race what light it throws upon our struggles for social betterment.

In the dawning years of the development of Political Economy, the subject had been foolishly called the cold-blooded or dismal science, evidently people being incapable of reflecting on the beneficent results accruing from it. Let us, before entering into the history of the science, try to show how and when the so-called 'dismal science' arose. We find that Aristotle had something to say upon economic facts; so had Plato. Sir Thomas More touched upon various points of the social problems that confront us to-day but not until modern conditions began to prevail was the full significance of the science grasped. The *Benevolences* and *Monopolies* granted by James I for the purpose of filling the Royal Treasury, gave an impetus to the study of Economic Science, and to this period of the Stuarts may be traced the origin of the science. It was in the Seventeenth Century, that the term Political Economy was applied to the study of the special groups of facts relative to production and distribution of wealth. Montrethie de

Valteville, a Frenchman, was the first who invented the name Political Economy, and the name has been used by all other writers since. Sometime before the French Revolution broke out, Adam Smith, the Father of Political Economy, gathered up the threads of earlier social speculations, in his work the "Wealth of Nations," which ever since became the corner-stone of the science. He was not the only economist of his time, but in his book were included all the principles advocated by his contemporaries. In the words of an American Economist "the subsequent history of the science is mainly the history of attempts to broaden and deepen the foundations laid by Adam Smith, to build the superstructure higher, and render it more solid."

At the close of the 18th century, the Rev. T. R. Malthus, M.A., F.R.S., sometime Fellow of Jesus College, Cambridge, and Professor of Political Economy in the East India College, brought out an "Essay on the Principle of Population and its Effects on Human Happiness." His writings exhibit an intellectual character and he has contributed much to the progress of Economic Science. He possesses in an eminent degree the faculty of observing particular phenomena, but he is deficient in the power of analytical head and has no claim to the name of Scientist. His name is distinguished for the very important doctrine he has enunciated—a doctrine which is the foundation and centre of most important economic theories—the Malthusian doctrine, that population tends to increase faster than subsistence.

In his "History of Civilization in England," vol. III, chap. v, Buckle thus speaks of the services rendered by Malthus:—

"Scarcely had the Eighteenth Century passed away when it was decisively proved that the reward of labor depends solely on two things: namely, the magnitude of that national fund out of which all labor is paid, and the number of labourers among whom the fund is to be divided. This vast step in our knowledge is due, mainly, though not entirely, to Malthus, whose work on population, besides making an epoch in the history of speculative thought, has already produced considerable practical results, and will probably give rise to others more considerable still. It was published in 1798; so that, Adam Smith, who died in 1790, missed what to him would have been the intense pleasure of seeing how, in it, his own views were expanded rather than corrected. Indeed, it is certain that without Smith there would have been no Malthus; that is, unless Smith had laid the foundation, Malthus could not have raised the superstructure."

A few years after the publication of the "Essay on Population", Ricardo devoted his attention to Political Economy with brilliant success. He corrected the views of Smith concerning the nature and cause of rent, and furnished, in support of his statements, the Malthusian theory that "rent would increase as the necessities of increasing population forced cultivation

to less and less productive lands, or to less and less productive points on the same lands," and thus explaining the rise of rent. His important contributions are the theories of rent and value. "Rent", he says, "is the price paid for the use of the original and indestructible powers of the soil" and the differences of rent for lands are due to differences of these powers.

At the commencement of the 19th century, in the preface to Jean Baptiste Say's Treatise on Political Economy, we find the proud announcement of the achievements of the science :

"Everything announces that this beautiful, and, above all, useful science is spreading itself with increased rapidity. Since it has been perceived that it does not rest upon hypotheses, but is founded upon observation and experience, its importance has been felt."

In 1821, Mr. R. Torrens, F. R. S, in an introduction to his essay on the "Production of Wealth," said :

"With respect to Political Economy the period of controversy is passing away, and that of unanimity rapidly approaching. Twenty years hence there will scarcely exist a doubt respecting any of its fundamental principles."

But so far we have not reached the happy state predicted by this writer. In fact when we compare the views of modern economists with those of the earlier, we find that the latter argued that man's character and efficiency are to be regarded as a fixed quantity, whereas the former constantly kept in mind the fact that it is a product of the circumstances in which he has lived.

Contemporaneous with this development of Economic Science in England, the continent was not dormant, but was foremost in taking the broader view of the science. The Theorists of the Austrian School dealt with the very centre of abstract theories. Belgian economists, foremost of them being Emile de Laveleye, represented the science on the broad lines of Sociology.

Great developments commenced to take place at this period, developments that have resulted in a marvellous transformation of industrial conditions. Previously custom prevailed. Men obtained the same remuneration as their forefathers, rents and tithes were not paid in cash, but in produce of the soil ; foreign trade was insignificant, and there were no huge financial undertakings. Colonization had hardly commenced ; there were no great marts and cities. Although there was little money, there was little starvation. Subsequently when England made great advances in wealth and knowledge, some surprising things happened. In the press, on the platform and in Parliament, humanity's utterances for the social betterment were more distinct and earnest than before.

It was under the logical investigations of John Stuart Mill that the old cast iron system began to crumble away, and new movements became

visible. J. S. Mill in his "Principles of Political Economy" followed Ricardo's theories in their entirety, but he contributed no new principles to the main theory. The renown of his work is for the clear exposition and lucid style, in which the subject is treated. He proclaimed that the laws of distribution partake of the character of physical truths and declares distribution to be a matter of human institution solely. Society can subject the distribution of wealth to whatever rules it thinks best.

Profs. Cairnes and Jevons, following the threads left by Mr. Mill, dealt in detail with many of the fallacies of the existing theories. The latter set up a theory of value, which had important influence on the science, the former showed in an ingenious way that the wage fund may be large where capital is scarce, and high wages and high interest accompany each other.

The fact that the science had got into loose ways was evident in 1886. When the 9th edition of the Encyclopædia Britannica was being revised, the article on Political Economy was removed, and a history of the development of Political Economy was substituted on the ground that the science was in a state of transition. The very name Political Economy had disappeared, and the name "Economics" was substituted. The idea of a group of social laws had disappeared from economic works. Political Economy became a branch of history. The writers on this subject followed the path of Humanity's march, gathered facts concerning human activity, especially in business or making, buying and selling. As there are no laws of history, so there are no laws of society. All that the historian or economist can do is to state conditions and describe results, and that result invariably in a very unsatisfactory manner, because the opinion a man expresses depends entirely upon his point of view.

Prof. Powell says that the historian has been too much the ally of the politician. Political Economists admit that they are quasi-historians.

Coynbee says :

"The historical method has revolutionised Political Economy, not by showing its laws to be false, but by proving that they are relative for the most part to a particular stage of civilisation. This destroys their character as eternal laws, and strips them of much of their force and all their sanctity."

According to Dyer, in his Evolution of Industry, "The laws of economics therefore vary according to the circumstances of the times, and the ideals which men may have, and they do not favor one form of industrial organisation more than another, and any political economist who says so proceeds on entirely unscientific lines."

Cunningham views the situation thus :

"The so-called laws of Political Economy in so far as they are universal in form are hypothetical principles which it is convenient to use

as instruments for investigating the complicated phenomena of society; but it is absurd to treat mere instruments of investigation assumed for convenience sake as principles for *practical guidance*."

Prof. Alfred Marshall adds his weight to the historical school. Marshall, who is a recognised authority in England on Economic Science, has taken up a middle position from the views held by Ricardo and Mill. His main contribution to the Economic theory is in the development of the Ricardian principles of rent.

These are, in plain words: if a certain number of labourers work and produce a stuff to-day, they can do so to-morrow if internal and external conditions remain unaltered. As conditions shift through the will of men and on account of external physical conditions, the laws of political economy must change. History and political economy can only state *Conditions of Existence*. What great changes will take place in the future we cannot guess. Who in the beginning of the Eighteenth Century could have predicted the social and economic changes that have happened at the present time, which have been the result of the investigations of but a few men?

The tendency of the study of Economics in Great Britain at the present day is to arrive at exactitude in the theories enunciated by mathematical calculations, giving prominence to monetary aspects and thus making it a financial science.

Another great writer, who has devoted a great deal of his time to the development of Economic Science is Prof. Sidgwick. In his *Principles of Political Economy*, he states his principles are primarily founded on J. S. Mill's treatise. But he was far from leaving Mill's doctrines as he found them. His economic method was mainly analytical, and he made important contributions to the science both on its theoretical and its practical side. He severely criticised every position taken by Mill, and where necessary corrections and limitations were introduced bringing the science up to date. It is often mentioned that Prof. Sidgwick's work is difficult reading. His treatment of the science certainly requires concentrated attention; the science of economics, being in a state of transition, cannot be a simple science, the principles of which can be mastered without systematic study. There is no gainsaying that Prof. Sidgwick's work is one of the few works on Political Economy of first-rate importance published in England since the death of J. S. Mill.

It might be considered dangerous to refer to the names of Carlyle and Ruskin—the two giants of the Nineteenth Century—as masters of Economics. In the voluminous writing of Carlyle he has rambled over a vast field of economics. Political Economists with the doubtful exception of Adam Smith were cordially hated by Ruskin. Nevertheless, they have sometimes owed inspiration to him. Their general principles were never more finely

stated than by Ruskin in the *Political Economy of Art*; and in *Munera Pulveris*, *Unto This Last*, and *Fors Clavigera* he has made many of them more fully aware than before of the limitations of their study. He touches upon real flaws in their arguments as for instance in Mill's contention that demand for goods is not a demand for labour (*Unto This Last*). In *Unto This Last* he anticipates the doctrine of a living wage, if that be a merit. He says that "the final object of Political Economy is to get good method of consumption, and great quantity of consumption, in other words, to use everything, and to use it nobly". And, as he continues, "It is, therefore, the manner and issue of consumption which are the real tests of production. Production does not consist in things laboriously made, but in things serviceably consumable and the question for the nation is not how much labor it employs, but how much life it produces. For as consumption is the end and aim of production, so life is the end and aim of consumption." Here then we have the goal of Ruskin's Political Economy; "There is not Wealth but Life." All his definitions point here: capital is the material for producing happy life; value, its measurement; exchange, its method of distribution; price, its cost. Most economists will agree that the economics of Ruskin are to be read with great reservations; they may be used for examples of life and instruction of manners, but we must not apply them to establish any doctrine.

Another marked tendency in the Economic Studies at the present day, is towards Industrial and Financial history. A thorough knowledge of the *industrial revolution* is necessary for a correct understanding of the great labour movements of the 19th Century. If we turn to any classic work on Political Economy, we find chapters on wealth, capital, rents, interest, value, production, distribution, consumption and international trade; but nowhere can we find an attempt made to arrive at the evolutions of industrial problems. In Cunningham, Toynbee and Ashley's works, we find this desideratum accomplished.

The limit of this paper will not permit me to make any wide reference to the working-class or reform political economy which rests upon a scientific basis. A socialist is distinguished from other politicians by the opinions which he professes with respect to the causes of, and the remedies for, the great evil of poverty. The school of thinkers who preceded the birth of modern scientific socialism are Robert Owen, Saint Simon and Charles Fourier. From the elaborate schemes of future society which they have built up they have been called the Utopists. Of these, Owen was the only one who had the fortune, good or bad, of seeing his schemes tried by experience. Of the socialist thinkers who form a link between the Utopists and the school of the socialism of historical evolution, by far the more noteworthy is Proudhon. The teachings of these earlier socialists afterwards led to a consummation in the full development of Socialist theory, or "Scientific" Socialism in the writings of the late Dr. Karl Marx. He is considered to

be the great exponent of this theory, and the author of the most thorough criticism of the Capitalistic System of production. The most important among his works, besides *Das Kapital*, are *Die Heilige Familie* written in conjunction with his life-long friend Frederic Engels and the *Misere de la Philosophie*. Marx's Capital is an interesting historical book, but it is not, in the opinion of some, the bible which some Socialists think it is, as it has little relation to modern Socialism and less to modern Economics.

To sum up. It is within the bounds of the art of Political Economy that we have to discover how we can make the most of ourselves and the world in which we live. It consists in the application of knowledge to the ordering of the production and distribution of wealth. According to Adam Smith, "Political Economy, considered as a branch of the science of statesman or legislator, proposes two things: first, to provide a plentiful revenue or subsistence for the people or more properly to enable them to provide such a revenue or subsistence for themselves and secondly, to supply the state or commonwealth with a sufficient revenue for the public services". McCulloch tells us "The object of Political Economy is to point out the means by which the necessaries, comforts and enjoyments that constitute wealth may be most easily and cheaply produced; to ascertain the laws which regulate their distribution among the different classes of the community, and the mode in which they may be most advantageously consumed".

## THE PROBLEM OF POOR RELIEF IN INDIA.

BY MR. K. C. RAMAKRISHNAN, READER IN ECONOMICS, UNIVERSITY OF MADRAS.

Indian Economics presents a conspicuous contrast to Western in the absence of any literature on the subject of Poor Relief. It has received scant attention at the hands of the enlightened public. The State in India, wedded to the policy of religious neutrality and until recently to that of *laissez faire*, has not concerned itself with the question of relief in normal times, though it recognises its duty in times of famine.

Various reasons may be alleged for this paucity of attention. Let us begin with the reasoning of a former Government of Madras. There is said to be no such enormous inequality in the distribution of Wealth in India as in the West. J. S. Mill declared "The subject of Poor Laws would be of minor importance if diffusion of property was satisfactory, of course, accompanied by prudent and temperate habits of all classes of the population." Maclean, in the Madras Manual of Administration, compiled 30 years ago, applied this formula of Mill bodily to the case of the Madras Presidency and wrote "The diffusion of property is moderately equal among the native population and the great bulk of people are of temperate and prudent habits" and concluded that a Poor Law was not necessary in our country.

This equable distribution of wealth was said to reveal itself most remarkably in the system of land holdings. Peasant proprietors abounded here who were remarkable for their contentment, self-respect, industry, thrift and temperance. The large agricultural population of India, composed mainly of these small landholders—and a few labourers who, according to traditional duty or the universal principle of slavery, were protected through good times and bad by benevolent landlords—were well off under normal conditions and seldom subject to chronic and acute poverty, while the Government intervened to save them in times of famine. This saved India from a pressing pauper problem.

This general diffusion of wealth was really general diffusion of poverty; but there was no revolt against this state of affairs. On the other hand, the masses contentedly accepted poverty and meagre comforts. The standard of comfort was easily reached in ordinary times; for it was surprisingly low, fixed so by climatic conditions, heredity and a steady inculcation of simplicity of life by religion; and it was maintained at that level by the spirit of fatalism which had so long pervaded the Hindu mind.

There were certain communal organizations and voluntary methods of relief which obviated the necessity for State Poor Relief. In olden days, the village community provided for its own indigent and maimed population from out of the common stock. A definite portion of the harvest on the



threshing floor was to be collected and taxes on certain articles were to be levied for the purpose. There was, in many villages in South India, the system of *Samudayam* or village land assigned on a common *patta* for meeting common religious and charitable expenses. The understanding was that the sale proceeds of fruit trees on village land held in common or of fish from village tanks were to be devoted to common religious purposes and charity which generally took the shape of feeding the poor and the strangers. Inams or grants of land and revenues on specific portions of land had also been made by Hindu (and even Mohammedan) kings for the maintenance of the village almshouse as well as of the village temple. †

There were the caste and trade guilds which came to the rescue of members of their castes or trades who were afflicted and tried if possible to ret them on their feet again. W. W. Hunter wrote "caste takes the place of the Poor Law in India." This *esprit de corps* is still found in a few castes. ‡

The joint family system sheltered from public gaze the old and the diseased, the orphan and the widow and even the drones. Provision was made for the weaker members by the efforts of the abler. Family feeling was so strong that the workers were prepared to sacrifice their comforts if that could help to keep a soul from going out to beg.

But, above all, State Relief has not been seriously thought of, because of the unceasing flow of private charity. India has been to this day a land of extensive charities. Charity is enjoined as a religious duty and the country has been thickly strewn with charitable institutions of all sorts. This alone would make any State Relief superfluous.

These reasons, if they held good in the past, have lost their force in the face of the great changes that have come over the country. The changes that have already taken place and those that were impending to throw Indian society into worse confusion were set down by a writer in the *Economic Journal* of 1910 § as amounting to a revolution more radical than any in the West. There the changes had been due to causes working from within. Here they were due to influences operating from without. The transition here would be less gradual and attended with more painful incidents. India has been brought into the vortex of international commerce

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† John Matthai. "Village Government in British India".

‡ Among the pastoral Gollahs when any was reduced to indigence, others helped him by giving him each a sheep, enabling him to form a fresh flock of his own.

Among the Nattukottai Chetties, the great bankers of Southern India, 'a whip round for a caste-fellow in difficulties is readily responded to'. Their general charities are met by *Mahimi* funds collected at the rate of a pie per rupee of profit.

Among the Vysia Komati merchants, the poor of their caste are specially provided for. Maintenance of poor Komati widows is a first charge on many charitable funds.

†. H. Dodwell: 'India in Transition.'

and she must feel the effect of any universal depression in trade.

India is, again, no longer merely an agricultural country but she has set up machine industries on a large scale. In spite of her predominantly agricultural population, India ranks quite high in the world in the number of her industrial workers. She is recognised as one of the eight countries of 'chief industrial importance' by the League of Nations †

Industrial legislation is almost in its infancy in India, and there must occur a considerable number of accidents in the mines, docks, railways, arsenals and factories, for which even the Workmen's Compensation Act may not provide any or adequate compensation. Besides, there are industrial diseases, which, aided by the filthy environment in which the workers live, sap their vitality gradually and imperceptibly, and against these no satisfactory protection can be afforded by law.

Again, that unemployment is almost an inevitable accompaniment of the modern system of industry "which will not work without some unemployed margin—some reserve of labour" has been emphasised by many economic writers. India which is becoming more industrial must face this necessary evil. Those economists who advocate diversity of industry and discourage too small holdings in India, with a view to mitigate the effects of agricultural famines are not oblivious to the consequence that a series of small famines in the shape of trade depressions and breaking of banks would be inevitable under the new regime, and this would bring poor relief from year's end to year's end as a problem for the consideration of the State.

As McCulloch says, a purely agricultural country may be able to do without a poor law, agricultural employment being comparatively steady; but in a manufacturing country a poor law is indispensable on account of frequent periods of depression which leave a permanent residue of paupers.

But supposing India were only agricultural, would there be no paupers, no need for an organised system of relief?

All is not well with agriculture. The idyllic peasant proprietorship of India is an overdrawn picture. We have in fact its caricature now. We hear, on the one hand, thanks to the Indian laws of inheritance, of the excessive subdivision and fragmentation of agricultural land. Holdings are becoming far too small and uneconomic for any system of cultivation. We learn, on the other hand, from the last Madras Census Report that non-cultivating land owners and cultivating tenants have increased in number while cultivating land owners have gone down. The inference is also drawn that land is passing out of the hands of the man who farmed his own land to those of the non-cultivating money lender to whom he had mortgaged the

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† Mining, Industries and Transport employ over 20 millions equivalent to the number of such labourers in U. S. A. and France combined. There are as many Railway workers in India as there are in the United Kingdom and as many coal miners as in France. From the point of view of the number of industrial workers alone, India is overwhelmingly more important than Italy, Belgium, Japan etc. Memorandum submitted to the League of Nations by the India Office, October 1921.

land and now undertakes to cultivate the land for him as a tenant. We have in fact an accession to the ranks of the landless proletariat in the country.

The pressure of population on the means of subsistence is felt in some districts. Villages in fertile tracts are over-populated. Emigration is growing unpopular and after all it takes away only a part of the virile section of the population. The new machine industries cannot absorb all the redundant population. Add to this the decay of many of the rural industries. We have all the evils of unemployment and under-employment or excessive leisure in villages with baneful material and moral influences on the life of the peasant. They provide a soil quite congenial to the growth of pauperism.

Now, with regard to the Indian standard of comfort, contact with a richer and materialistic civilisation has raised it considerably. Increase in earnings has not kept pace with accession in the needs. Western civilisation is also individualistic and as every individual feels that he must satisfy his new higher standard, he has less to spare for others. This desire for increased comfort combined with the new ideas of personal liberty and free competition, of deserved and undeserved wealth is disrupting the joint family system. The harder struggle for existence at the present day is also responsible for the reluctance to maintain dependants. No doubt the joint family system, of all the old institutions, still retains a hold among the richer and middle classes. But let us not imagine that that can be the prop of the aged and infirm among the labouring classes.

The old village communities have practically disappeared. We do not find the vestiges of them in many villages. In some villages that retain the *Samudayam*, the proceeds are shared among the original holders after meeting the expenses of a few important festivals of the village temple. We do not find any organised public provision for the poor, who temporarily or permanently emigrate to urban centres. The feudal protecting spirit of the rich landlords has been replaced by the bargaining and litigious spirit; the caste nexus has generated a calculating attitude.

The caste system has lost its beneficial effects. Caste guilds and similar institutions are fast breaking up. Trade guilds were in old days synonymous with caste guilds but now many trades are taken up by men of various castes; and professional feeling by itself is not yet sufficiently developed to call forth any systematic effort of sectional charity.

Finally, individual private charity, charity in households to fairly well-known persons, has considerably shrunk in villages in these hard days. But charity of the more ostentatious type, doled out to crowds of people at a time and in public places in towns has swelled, as capital is flowing into fewer hands. Now, in a village, amidst a small community, begging which is merely an appeal to a neighbour may not be a bad method of seeking relief. But in larger communities, in urban centres, begging is accom-

panied by fraud and undeserved suffering. Unorganised, indiscriminate charity, besides being inherently unjust in treating all classes of paupers alike, also manufactures paupers. 'n all countries it has been "the main support and the standing temptation to vagrants". The able-bodied and professional beggars of India are to be counted by lakhs—and the misapplication of charity has a very real bearing on the thriving of this class.

The proper reorganisation of charity has attracted for a few years past the attention of some reformers in India, notably among the Parsees of Bombay. It is necessary for us to know how far the State, in the new work it may have to undertake, viz. Poor Relief, may itself get some relief and save the tax-payer's money, by the charity organisations taking up part of that great work which they can more efficiently and humanely discharge.

The State cannot much longer hold aloof from such a necessary work. As Government is becoming more democratic, it will be compelled to pay greater attention to the vital interests of the lower classes. In a country, where general poverty is so great and many are on the verge of destitution, there will grow an insistent demand for sufficient provision being made to save them from the evil day and to protect them if they fall into destitution.

Foreign Poor Laws have generally begun with the suppression of vagrant beggars. Attempts have already been made in Bombay and Bengal to put down mendicancy by legislation. The committees appointed by the local Governments to enquire into the question and formulate detailed proposals have, more than two years back, issued their reports making comprehensive recommendations. No action has been hitherto taken upon them, apparently for want of funds. But it is doubtful if Government can commit itself to carrying out the big schemes suggested, without a more detailed investigation of the several classes of beggars, of the entire cost of their relief, of the help that can be rendered by charitable institutions and the probable reaction the measures may engender. These were, perhaps, not within the scope of the enquiry of the committees. But even if a part of their schemes were carried out either by the Government or the Corporation of Bombay or Calcutta, the cases that might come under investigation of the administration concerned might afford some helpful material for guidance in other cases also. It is up to students of Indian Economics, however, to take up research work in this field, make a close study of several individual cases of paupers and of the kind and degree of relief afforded by charitable institutions. It is then only that general inferences can be drawn with regard to the causes, the immediate remedies and the ultimate cure of pauperism and the most feasible solutions offered of the poor relief problem in India.

## SUPPLY OF LABOUR TO THE MADRAS COTTON AND OTHER INDUSTRIES.

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A study of the conditions of labour supply in the industrial establishments of the Madras Presidency reveals certain features that are of such striking contrast to those of other parts of India, that it may be of interest to a conference like this, representative of the whole of India. I propose to consider the question in three of its aspects: (1) sufficiency of industrial labour, (2) character of the labour supply, (3) method of recruitment.

To take point (1), we must distinguish between two aspects of the question. There is first of all the problem voiced by some of the employers of labour that labour is very scarce and inadequate, that too high wages have to be given to get a decent supply, that even then labour does not stay on, and that emigration ought therefore to be stopped. But an altogether different problem arises with regard to the adequacy of skilled labour. Let us dispose of the latter first.

There is no doubt that there is still considerable difficulty experienced in getting suitable trained labour especially for new industries. Hence those that require a comparatively large supply of trained and efficient labour have of necessity to undertake the task themselves in their own works. From certain points of view this cannot be considered as a serious disadvantage; there is no harm but some good, if industries precede technical training. At the same time it cannot be denied that training involves considerable cost to the employers; apprentices have to be paid salaries even as they are learning; they spoil the material and sometimes even the machinery and at the top of it all, in certain cases it so happens that workers are tempted to leave the factory by an offer of slightly higher wages outside. The matter may be set right; apprentices must be asked to sign a contract binding themselves to work for a certain specified period in the factory.

The large employers of skilled labour—the Railway workshops and some among the private engineering works—have adopted a system of apprenticeship to train young men into efficient and skilled workmen. The Buckingham and Carnatic Mills have a school, now nearly 20 years old, in which technical classes are held and most of the employees of the mills have been trained therein. But the system is still not quite well organised but is rather rudimentary and irregular and in any case has not brought forth such a number of trained workmen who can be relied upon by employers starting new industries. The census figures also speak in the same direction. During the last ten years, the number of skilled workmen increased from 41,141 to only 48,412 by about 5½% although the number employed in the factories increased by over 26%.

To revert to the question of unskilled labour:—That there cannot be any real difficulty experienced with regard to the supply of labour speaking purely from the point of view of numbers is evident from the fact that our agricultural industry supports an enormous population, a good portion of which is superfluous and ready to migrate. Students of rural economics and those who have given some thought to the problems of rural life in South India have come to the conclusion that with the decay of cottage industries there has come about an excessive dependence on agriculture. There is undoubtedly a large amount of emigration from the province and the census of 1921 speaks of 1,731,000 Madrasis enumerated in other parts of India and in countries beyond India.

But the figures do not lend support to the view that emigration has increased or is increasing appreciably during recent years. It is however a fact that the rice factories of Tanjore, the tile factories of Malabar and South Kanara have experienced some difficulty in the matter of their labour. But the real reason for the shortage, if one probes into the matter, is partly their unwillingness to pay the workers sufficient wages to induce them to stay on. There are other considerations too, but that this is the most important reason will be obvious from the fact that the manager of a tile works at Feroke, when subjected by the Industrial Commission to a cross-examination on the matter, admitted that they could get enough labour by paying a higher wage but that it was not *advisable* to raise it. This indeed is the crux of the matter. The tile factories have to pay somewhat high wages because labour round about is attracted by the rubber estates. The same difficulty is experienced by the rice factories in the harvest season and in others when agricultural work is busy; but this is inevitable from the nature of their work. But much can be effected by better organisation. For most of these factories, there are slack times and busy times and it is not impossible to make the slack season of the factories correspond with the busy agricultural work and vice versa. In this way both the employers and the workers may be profited. The truth is that sufficient thought has not been given to such questions by small employers. We may therefore conclude that the supply of ordinary unskilled labour is quite adequate to satisfy the needs of the industries of the Presidency and our argument may be strengthened by the evidence of employers of textile, leather and other industries who have given expression to the fact that they have never felt any difficulty in getting enough supply. Indeed the manager of the Chrome Leather Factory went so far as to concede that the factory could be trebled and even increased further, before any shortage for labour would be felt.

(2) But while the supply of ordinary labour may be adequate from the point of view of numbers it may be extraordinarily fluctuating and hence deficient judged in another sense. The migratory habit of the Indian industrial worker has been so often reiterated that it would be presumption to question the accuracy of a statement of such universal acceptance. Still

I hope it may be pardonable on the part of a student of South Indian economics to have an open mind on the matter. A study of the labour conditions of South India has led me to be a little cautious in accepting that statement now, as applying to Madras at any rate. Now, what exactly do we mean by the migratory character of the workmen? It can have no meaning if applied to those engaged in seasonal industries like cotton ginning, groundnut decorticating and extracting firms and in certain unorganised trades, which are, in their nature, unable to afford employment to the workers for the whole year. These stand midway between the agricultural industry and the manipulative industries and employ labourers largely during the interval between the agricultural seasons. They are industries which afford supplemental earnings to the agricultural workers in their off season and situated, as some of them are, in the agricultural regions they draw the under-employed agricultural population of the Presidency and relieve their sufferings. There cannot, under the circumstances, arise any complaint regarding the workers' migratory habit.

Hence the term will have a definite meaning only when applied to workers in industries that operate throughout the year and call for the continuous employment of a definite body of industrial workers. Under such conditions, if the workers in a factory constantly change at every period or year owing to any reason whatever, it would seriously affect the question of labour supply. To what extent then is this factor present and to what extent does it affect the industrial organisation of South India. The idea that Indian factory labour was fluctuating and migratory was naturally derived from a study of the conditions of the localities which were industrially of great importance. In India, the cotton industry has its home in the Bombay Presidency; Bengal is the home of the jute industry and also of the mining industry. A study of factory labour of Bombay and Bengal was also a study of the whole of Indian labour, and therefore the results thus obtained were applied over the whole of India. Now labour in the Bombay, Bengal and even in the Punjab factories is so extraordinarily migratory, that the personnel of the workers in those mills changes almost completely in about two years or even less on the average. It is supposed that conditions in other parts of India must be the same. But we must enquire. There are 4 textile mills in the city of Madras employing about 12,000 hands. Whatever might have been the state of affairs in these mills 15 or 20 years ago, enquiries of persons competent to speak about it tend to show that here is a body of workmen that do not depend upon agriculture at all and it could almost be said that there has arisen an artisan class as such, that is entirely dependent on and supported by industry, and doing practically no agricultural work. It is true that there is a certain amount of absenteeism in these factories, but the causes thereof must be sought elsewhere. In Madura again, there are over 4,000 persons employed in the cotton mills, who again are a class of artisans

forming a factory population, as it were, and entirely dependent on the industry. In Chrompet near Pallavaram there is an industrial colony being formed which will consist of workers specially engaged in that field of work. The railway workshops of Perambur and Negapatam, for example, employ a large number of workmen and they are not partial agriculturists. Other instances may be cited to prove this point namely, that in Madras, at any rate, as an organized industry settles itself permanently, it could in the course of a few years create artisan class depending on that industry and not dependant on agricultural employments. Indeed this conclusion will not be surprising if we remember that the agricultural industry can well afford to spare quite a good percentage of its population. The temptation to go back to agriculture will be strong only in those negligible cases where the workers are owners of lands. But since almost the whole of the industrial population is a landless class and will have to work only as agricultural labourers earning lower wages, the inducement will almost be absent.

On the other hand, the conditions of labour in Bombay and Bengal are strikingly different. The Bengal jute factories import 90 p.c. of labour from outside the province. Although not quite to the same extent, Bombay also imports a considerable percentage of the labour required from other areas. It is not surprising that the labourers in jute and cotton industries of Bengal and Bombay respectively constantly go back to their homes at the end of two or three years after a sojourn in the congested industrial centres under not very congenial surroundings. This difference in the sources of labour supply between say Bombay and Madras cannot be better illustrated than by a somewhat detailed study of the conditions of labour in the cities of Bombay and Madras. In the city of Bombay, 84 p.c. of the people were persons born elsewhere; there were 16 p.c. in 1921 that were born within the city. It is but natural that with such a big immigrant population the tendency to be constantly moving about operates fairly strongly. On the other hand, we find that 67 p.c. of the people in the city of Madras were native born; and if we remember the further fact that another 12 p.c. were born in the Chingleput district divided from Madras only by an imaginary and artificial boundary and that it is a habit with Indian mothers to go to their parents' home for their confinement, we can easily conclude that the city supports a permanent population of nearly 80 p.c. The population coming from other provinces is negligible. We find the same evidence in other industrial centres as well. In the city of Madras, the people that were born outside the district were less than 18 p.c., in Negapatam it was 11 p.c., in Mangalore 5 p.c., in Coimbatore 8 p.c. and so on. It is certainly not denied that there is immigration to the city of Madras and other centres, it would be strange indeed if there were not. There are many forms of casual and temporary employments that absorb these immigrants that come and go. But labour in the chief organised industries comes to be settled down



permanently and ceases to be partly agricultural and partly industrial. There is nothing in the village life to offer much attraction to them and if notwithstanding this, a few go back to their village, it must be because they have become almost unfit to continue as industrial workers. The conditions of factory life have got a great deal to do with this and these must be improved to ensure a greater permanency among the factory workers. Ordinary absenteeism must not be confounded with the tendency of the worker to go back regularly for agricultural employments.

The supply of labour for the industries of Madras is predominantly local and comes almost entirely from the neighbourhood. In this as has already been pointed out, Madras is quite different from provinces like Bombay, Bengal, the Punjab, etc. Nearly one-third of the factory population of the Punjab comes from Sind, Rajputana, etc. The jute factories and the coal mines of Bengal get the major part of labour from Bihar and Orissa, Madras, etc. Bombay is also an immigrant province receiving far more from other provinces than what she sends out. On the other hand, it is a most remarkable fact that in Madras out of 1,20,996 ordinary unskilled workers employed in the factories, only 425 come from outside the province and only 7,812 from districts far away i.e., not contiguous to the place of employment. Madras is therefore able to supply the whole of her industrial requirements and in addition to send a large number outside. She is thus essentially an emigrant province.

8. In the matter of recruitment of labour for industries Madras again presents a remarkable contrast to other big industrial centres like Bengal and Bombay. There is no elaborate system of recruitment here, in Calcutta for instance labour is recruited by a system of contract, the factories pay the contractors or *sardars* as they are known over there on the basis of a certain quantity of labour supplied to them. This is due to the fact that for its big industries, labour is not readily available locally. The small industries however are able to draw from the neighbourhood and the supply is rendered fairly easy. Conditions in Madras are just the reverse. The organised industries are able to get the labour they require directly without any assistance from, or arrangement with, contractors. It is true that sometimes jobbers in some factories go out and look for men themselves. But this is far from being the general rule. Labour comes direct to the factories and is taken on, on the recommendation of departmental *maistries*. When vacancies occur the friends and relatives of the employees get intimation and are taken on. Sometimes a simple 'Hands Wanted' more than satisfies the purpose.

# INDIA'S REAL BALANCE OF TRADE IN 1922-23.

BY G. FINDLAY SHIRRAS, ESQ., DIRECTOR, LABOUR OFFICE, BOMBAY.

Summary Table.

		Figures in lakhs of rupees. †	
		Credit.	Debit.
<i>Exports—</i>			
1. Exports of merchandise and treasure (Visible exports) ... ..	...	342,90	...
2. Funds borrowed in England for interest charges (para 4) (Invisible exports) ... ..	...	18,12	...
<i>Imports—</i>			
1. Imports of merchandise and treasure ... ..	...	...	311,67
2. Allowance for under-valuation of Imports of merchandise and treasure excluding currency notes (5 per cent of Rs. 310,66 lakhs) ... ..	...	...	15,53
3. Visible imports of funds (Net) ... ..	...	...	2,48
4. Invisible imports:—			
i. Expenditure in interest for overseas ca- pital invested in India ... ..	...	...	26,25
ii. Expenditure for shipping services ‡ ... ..	...	...	22,15
iii. Expenditure for commissions ‡ (mainly finan- cial and insurance services) ... ..	...	...	9,00
iv. Net expenditure for other services ... ..	...	...	4,00
<i>Visible Balance of Trade (Net) ... ..</i>	...	13,22	...
<i>Invisible items (Final figure from both sides) ... ..</i>	...	...	17,13
<i>Final Balance (Visible and invisible items)... ..</i>	...	...	3,91

### Explanatory Memorandum.

1. The object of the memorandum.
2. Introductory.
3. Visible Exports and Imports.
4. Invisible Imports—Net Expenditure in interest for overseas capital invested.
5. Expenditure for Shipping Services.
6. Finance, Insurance and other Commission Charges.
7. Miscellaneous Items—Invisible Imports.
8. Conclusion.

† Rs. 1 lakh = Rs. 1,00,000 = £ 6,567 (Rs. 15 = £ 1)

‡ See end of para 5

1. *The object of the memorandum.*—The object of the table above and the detailed table appended is to estimate India's real balance of trade for the financial year ended March 1923, and to show how far India was on balance indebted to other countries or the reverse. There are three senses in which the term 'balance of trade' is used. In the first place, it is sometimes, if not frequently, used to mean the difference between exports and imports of merchandise excluding treasure. This is the sense in which the mercantilists used the term, and it is the term not infrequently used in Statistical Abstracts. Another sense of the term (and the one much more widely used) is the difference between all visible imports and exports. This second meaning of the term gives rise to the expressions favourable and unfavourable balances of trade for creditor and debtor country respectively. The third meaning (and the meaning used in this memorandum) is the balance of all visible and invisible exports and imports. In short, it is the balance of international payments. Over a long period, there can, of course, be no balance of payments due from one country to another. The balance is paid by the sale of more commodities or else one country may lend to another a sum equal to that balance. In either case the credit and the debit sides of the account balance. In this sense of the term there can, in the long run, be no favourable or unfavourable balance of trade except for a short time. It is this balance for a short time that is responsible for the fluctuations in Exchange. These fluctuations normally start forces which equalise payments on both sides and thus establish an equilibrium.

It need hardly be pointed out that payments between India and other countries can only be made in (1) goods; (2) bullion; (3) securities; and (4) services. The mere fact that India's visible exports ordinarily exceed her visible imports cannot be taken as proof that India is a creditor country. Any one who watches the constant issues of Indian securities on the London Stock Exchange is aware that a favourable balance, as in the case of Canada, Australia and the Argentine, means, among other things, an import of capital. In other words, in the philosophy of a country's balance of trade there is more than is dreamt of in the official trade statistics, and invisible exports and invisible imports have to be included in a statement of international payments. Invisible imports are met by goods exported abroad for which not a single rupee worth of goods have to be imported. They are in reality not in any sense imports but they are termed so, because the items have to be added to the import or debit side of the account when drawing up a statement of international payments. In the case of the older countries like the United Kingdom, Sweden and Denmark, an excess of invisible imports over invisible exports does not mean that the country concerned is living on its capital. Invisible exports in this case have to be taken into account. Thus on the one hand there are countries which are lending or creditor countries, and on the other hand there are countries which borrow from those countries in the former category. To this latter class India, Canada, Australia, the

Argentine and similar countries belong.

2. *Introductory.*—It is unnecessary to enter a caveat that the balance of trade of a country is never settled within any precise twelve months. A large number of liabilities on account of transactions which have taken place during the year may be carried into the account of the following year. Another caveat is that in calculations of this nature one is never able to be strictly correct, even within scores of rupees, but it is generally possible to make a rough calculation within useful limits. In other words one must not reason too finely in dealing with statistics of the balance of trade. In the trade balance statement of Great Britain, there is a difference in the final balance published by the Board of Trade in its Journal of 29th March 1923, and that published in the *Economist* of 17th February, of no less than £93 millions. The Board of Trade estimated the net income from investments at £175 millions sterling as against £100 millions in the *Economist*; and shipping earnings at £110 millions as against £9½ millions in the *Economist's* estimates. In India's balance of trade, it should be remembered that nearly all transactions are in the long run done through London. London is the world's banker and for years London has rightly asserted that the bill on herself was the currency of international trade. The supremacy of the London bill of exchange is great, not merely due to London's supremacy in financial machinery, but to the supremacy of Great Britain's world-wide trade and to her readiness to take goods from all countries. The chief and most important members of the London market are, of course, the banks, bill brokers, discount houses, accepting houses and foreign bankers together with the Bank of England. Again many of the transactions are done through the Secretary of State for India who sells Councils Drafts in London on the Government of India from time to time to meet his Home charges, and with the assistance of the Bank of England he arranges the payment of interest on certain loans as occasion demands.

3. *Visible Exports and Imports.*—The basis of the analysis is the official returns for the Sea-borne Trade of British India for the 12 months ended March 1923. The declarations in the bills of entry for imports, and in the shipping bills for exports, are made by importers and exporters but are checked by Custom House officials. The values are the wholesale market cash prices less trade discount for which goods of like kind and quality are being sold at the time and place of importation and exportation respectively. They do not necessarily represent the actual price receivable by or paid by India for the goods exported or imported. According to section 30 of the Indian Sea Customs Act (VIII of 1878) the values of goods imported or exported represent:—

- (a) the wholesale cash price, less trade discount, for which goods of the like kind and quality are sold or are capable of being sold at the time and place of importation or exportation, as the case

may be, without any abatement or deduction whatever, except (in the case of goods imported) of the amount of the duties payable on the importation thereof ; or

- (b) Where such price is not ascertainable, the cost at which goods of the like kind and quality could be delivered at such place without any abatement or deduction, except as aforesaid.

The values of treasure represent the market values at the time of import or export except in the case of Government of India rupees where the face value is shown in the returns. The practice before April 1921 in respect of the values of treasure was not uniform at all ports. On the whole the Custom authorities do not under-assess because the tariff is for revenue purposes on an *ad valorem* basis. An error, however, of under-assessment by only one per cent, in the case of imports of merchandise during the year under review and an over-estimation to the same extent in the case of exports of merchandise would result in an error of no less than Rs. 5 crores. The exports and imports refer to private trade only, and exclude Government Stores as the latter are paid for by Council Drafts sold in London on the Government of India and from loans, and the value of Government Stores exported is comparatively small. In the year 1922-23 precious stones imported by letter post have for the first time been registered in the trade returns. The trade accounts for March 1923, therefore include diamonds and other precious stones imported while those of previous years do not. As the trade in diamonds was very largely conducted by means of insured letter post imports of previous years must have been short by a considerable number of lakhs of rupees. In the imports of merchandise the value of railway materials imported direct by State Railways working under Company management has been excluded to the extent of Rs. 840 lakhs as this was not paid for in the ordinary way, but through the Secretary of State, and accordingly cannot be taken into account as this would mean their values being counted twice over. The Sea-borne Trade Statistics of non-British India, namely the French Settlements, the Portuguese Settlements, Travancore, and Kathiawar have been included in the statement. It has been exceedingly difficult to arrive at the year's figures, because in all cases returns for the 12 months were not available. The local authorities concerned, however, have been consulted by telegram, and the figures arrived at are the most accurate in the circumstances. The trade statistics of the French Settlements are the most important, because Pondicherry exports ground nuts which are of considerable importance. The Trans-Frontier trade which is carried on over approximately 6,800 miles is only 5 per cent. of the Sea-borne trade of British India. The statistics for the complete 12 months have not yet been received from some outlying portions of the Frontier and an estimate based on the latest figures for 1922-23 has been made. The visible imports and exports of funds pass through the Public Debt Office and,

therefore, their value is readily available. When these statistics of visible imports and exports are set out, the following is the result:—

*Visible exports and imports in lakhs of rupees, 1922-23.*

	<i>Merchandise. Treasure. Funds. Total.</i>			
<b>British Seaborne and land frontier</b>				
Exports ... ..	329,29	3,25	2,62	335,16
Imports ... ..	240,51	64,00	5,10	309,61
<hr/>				
Excess of exports (+) ... ..				25,55
Excess of exports of merchandise and treasure for non-British territories (Estimated) (+) ... ..				8,20
<hr/>				
Total ... ..				+ 28,75

The principal "invisible imports" are (1) the expenditure on interest for overseas capital invested in the country: from this amount it may be necessary to deduct payments made by the Secretary of State as these were affected chiefly by loans during the year under review; a further reference to this will be found in paragraph 4; (2) expenditure for shipping services; (3) expenditure for commissions, mainly, financial and insurance services; and (4) expenditure for other services. There are on the other hand a few invisible exports which are also briefly dealt with below.

4. *Invisible Imports—Net expenditure in interest for overseas capital invested.*—The degree to which India makes payments annually for overseas capital invested in this country in the form of interest has been arrived at by a detailed examination of the extent to which Great Britain has made foreign investments over a series of years. Estimates of incomes derived from British capital invested abroad are based upon income-tax statistics published by the Commissioners of Inland Revenue, and show the amount of income derived from certain classes of investments which come under the purview of the Income-tax authorities. The income which the Commissioners of Inland Revenue earmark as coming from abroad is that received from Indian, Colonial and foreign Government stocks, municipal securities, and railways, but the Commissioners of Inland Revenue do not ascertain the additional income Great Britain derives from her investments in a vast number of miscellaneous undertakings such as mining, mortgages, banking, tramways, telegraphs, telephones, jute, cotton, oil, rubber and nitrate production and industrial ventures generally. Sir George Paish in papers read before the Royal Statistical Society in 1909 and 1911 arrived at, after a laborious process, the extent of new capital investments in India and Ceylon to be as follows:—

<i>New issues of Capital investments.</i>			
Year.	India and Ceylon.	Total Overseas Investments during the year.	Percentage of Column 2 to Column 3.
	£	£	
1908	13,469,787	145,878,300	9.2
1909	15,884,681	181,881,646	8.7
1910	14,720,503	189,151,187	7.8
<b>Total ..</b>	<b>44,074,871</b>	<b>516,861,088</b>	<b>8.6</b>

He examined the reports, balance sheets and income statements of several thousand companies—in fact of all the British companies working abroad about which official information could be obtained, and (1) all conversions were carefully excluded so that there was no duplication of capital issue; (2) the amounts were calculated at the price of issue and not at the nominal value of securities; and (3) vendor's shares were omitted in order to arrive as nearly as possible at the exact amount subscribed in the aggregate. As regards the net sum subscribed by British investors, he took credit for only those international loans, including American Railway issues, that had been subscribed for in Great Britain.

With regard to other particulars of the capital provided by investors up to the end of 1907, these were arrived at by capitalising the income which actually paid income tax to the British Exchequer and by examination of reports of British Companies trading abroad. No credit was taken for money lent to defaulting States, as in these instances there was, of course, no incometax paid in respect of coupons. If no coupons were cashed there was no capital against them. The capital sum invested in foreign loans was arrived at by capitalising the coupons that had been cashed. Sir George Paish took the total of investments in other lands to be, allowing for private capital employed in a variety of ways, £3,500,000,000 in 1910. Excluding private capital he arrived at a figure of £ 3,192,000,000. For India the total capital investments up to and including 1910 but excluding private capital (i.e. capital for which no documentary evidence was readily available) were as follows :—

			(In £ millions)
Government	..	..	179
Railways	..	...	137
Tea and Coffee	...	...	20
Rubber	—	...	5
Tramways	...	—	4
Mines	—	...	4
Oil	—	—	3
Banks	—	...	3
Others (including Jute &c.)	—	—	10

a total of £ 365 millions. This total may be compared with estimates which I prepared for the Indian Industrial Commission some years ago. My estimates were £447 millions including capital raised in India, and excluding such capital approximately the same figure was arrived at by Sir George Paish. As was pointed out by the latter at the discussion before the Royal Statistical Society the percentage of purely Ceylon capital is a very small part of the total investments and is insignificant. In some ways it is an advantage to have these Ceylon investments, although small, in the total as Ceylon is within the "rupee zone". For recent years the percentage of Indian investments to the total has increased especially in 1922-23. After an examination of these flotations which were published by the Board of Trade in its Journal we are driven to the conclusion that the percentage for 1922-23 should be higher than the average of the three years 1908, 1910 and 1909, taken by Sir George Paish. If his estimated total capital investments for 1910 be taken at £365 and £3192 millions for India and all countries respectively this would give 11 per cent. If an allowance for capital that is repaid be made, the proportion may be taken at 10 per cent. The Board of Trade has estimated that for 1922 the income to Great Britain from investments abroad was £175 millions and this official figure, all things considered, may be accepted. The Board has pointed out in its Journal of 29th March 1923 that the fact that the estimates both of capital values and of income obtained "are subject to a considerable amount of uncertainty cannot be denied. As the flow of income from one source or another varies, the capital value of the investments will also vary. The general basis of capitalisation has, of course, changed since the outbreak of war, and this must be borne in mind in comparing pre-war and post-war totals. The wide range over which the investments are spread probably tends to maintain the income at a reasonably steady rate, since reductions may be offset by expansions to a considerable extent. It is significant that most of the rise in estimated income over the period examined can be accounted for by the produce of new issues placed in this country. While it is true that there are foreign participations in many of these, it is also true that there are British participations in issues made abroad. Loans between Governments during the war have not been taken into account in the foregoing calculations, and the interest payable thereon has also not been considered until payments were actually made. This happened last autumn with regard to the American loan to the United Kingdom and in the near future an annual payment exceeding £80,000,000 a year on this account will be due". The *Economist* estimates for 1922 this amount to be only £ 100 millions and in its issue of April 7, 1923, pointed out that the Board of Trade had taken too optimistic a view and did not take sufficient account of foreign capital sold during the war, apart from the official demobilisation scheme, of the investments lost in



Russia and elsewhere, and of the loss in profits received from abroad through the depression of trade. It seems, however, in the light of the data available that the official figure is, if unduly optimistic, more accurate than the pessimistic figure of £ 100 millions estimated by the *Economist*. Ten per cent. of £ 175 millions is £ 17·5 millions or Rs. 26·25 crores. During 1922 the Secretary of State paid interest on Government and other securities from loans and not from Councils. In this connexion approximately 50 per cent. of the total capital investments is Government securities and 37 per cent. railway securities. The investments in cotton mills (£14 millions) are very largely held by Indians while in jute mills (£11 millions) by Europeans. These latter figures are, however, small as compared with the total Indian investments. Ordinarily the Secretary of State would have paid interest charges out of the proceeds of Councils, and as this method was not actually adopted in the year 1922-23 to the full extent of the Secretary of State's requirements no deduction has been made in this Balance of Trade statement in respect of interest charges relating to Government securities. If these charges are eliminated the total invisible imports in respect of interest on overseas capital will stand at Rs. 18·13 crores in place of the gross figure of Rs. 26·25 crores.

5. *Payments on account of shipping.* With the possible exception of payments for capital invested in India, shipping payments are the most important in our invisible imports. The nature of the information used and the details of calculations made are in many respects defective. Nevertheless it is believed that the broad results are substantially accurate, and various authorities who have been consulted are in general agreement with this view, while reserving their opinion on details.

It was first intended, in order to estimate how much India paid carrying countries engaged in her overseas trade, to estimate the earnings of the mercantile marine (not profits) by calculating what amount would be required to cover expenses on the basis of time charter rates, adding in addition charterers' disbursements for bunker coal and port dues. In other words the mercantile shipping of the countries engaged in the Indian trade might have been regarded as being time chartered for general trade, and an aggregate of the charter money, plus charterers' disbursements for bunkers and port dues, would have been taken as the gross payments for shipping. This information, it was found, was not available. It was, therefore, necessary to devise some other method by which the information could be obtained. A special investigation was made by the Board of Trade of the logs of British ships trading in 1913 for the purpose of ascertaining the distribution of shipping on different routes. These rates were grouped in thirteen main groups of which India was one, and the distribution of British routes on each group together with the general level of freights was ascertained. The Board of Trade selected a representative freight rate for each route and the average annual earnings were obtained. India's share of the total earn-

ings of the United Kingdom shipping was 9 per cent. Taking that proportion for the year 1922, and if the Board of Trade estimate of £110 million be accepted as near the mark of earnings of the British Mercantile marine in 1922, this would give a figure of Rs. 15 crores as the gross earnings of British shipping during the year. The Board of Trade figure in 1922—£110 millions—should be compared with that of £94 millions in the pre-war year. The *Economist* for the year 1922 has taken the same figure as in the pre-war year £94 millions. During the year 1922-23 Indian trade although showing a recovery was still in volume much below normal. The volume of exports and imports—based on twelve chief exports, covering (in value) 91 per cent of the total export trade and twelve chief imports covering (in value) 66 per cent of the total import trade—showed in 1922-23 a decrease in volume of 28 per cent. as against the pre-war year, i.e., in the year under review the volume was approximately  $\frac{3}{4}$  of the pre-war year. Freight rates, however, in the same period increased by over one-third. In these circumstances and in order not to err on the side of over-statement the 1913 gross earnings (£94 millions) may be taken and 9 p. c. of this would be £8.46 millions or Rs. 12.69 crores. In 1922-23 British tonnage (clearances and entries) were 78 per cent. of the total, Japan which carries a very large portion of exports especially of raw cotton to Japan—had a share of 6 per cent. the United States 3 per cent. and other countries 13 per cent. An allowance being made for payments under this head to these countries the total shipping payments for the sea-borne carrying trade for India would be approximately £10.8 millions or Rs. 16.2 crores. It is doubtful whether sufficient allowance has been made by the Board of Trade for the Indian coasting trade in which Great Britain had in 1922-23 78.6 per cent. of the total. Foreign countries in 1922 had 11 per cent and native craft the remainder. On an average the difference between the value of imports and exports in the coasting trade is Rs. 7 crores. If 15 per cent of this is payment for finance, insurance and minor transport charges, then this amount (Rs. 1.05 crores) should be deducted from the gross payments for shipping in the coasting trade. This gives Rs. 5.95 crores. Independent enquiries show that in 1922-23 the gross earnings of this trade were about one-third of that of the foreign trade or Rs. 5.4 crores. This generally agrees with the amount of Rs. 5.95 crores computed in this memorandum. As regards the coasting trade, however, it must be noted that not all the gross receipts of the trade should be taken in computing the invisible imports. The greater portion of this is expended in India and what is transferred to England is only the profits of the trade. In this respect then the coasting trade is similar to a firm or an exchange bank doing business in India. This treatment of the coasting trade also gives rise to an interesting corollary. The expenditure in India of shipping companies like the P. & O. say, on buying provisions or for paying its Goanese stewards, must really be deducted from the company's gross receipts

when we are calculating the invisible imports under shipping charges. The total expenditure for shipping services may accordingly be taken at Rs. 22·11 crores. The expenditure for shipping services and commissions has not been included in the balance of Trade Statement in the final computation, because under section 30 of the Indian Sea Customs Act (VIII of 1878) the Indian Import Returns include freights and insurance. An allowance of 5 per cent has been allowed for under imports for the under-valuation of imports including articles consigned to India for sale and articles of which it is difficult to obtain any real wholesale market value. The question of the under-valuation of imports, it is understood, is under the consideration of the Government of India. Indian export charges for shipping are paid by the importing countries, and are, therefore, not included in the final figures.

6. *Finance insurance and other commission charges.*—Another item for which India has to pay foreign countries annually is charges in connexion with finance, insurance and similar services. Sir Robert Giffen wrote in 1882 in dealing with such charges:—"I have already drawn attention to the point that the shipowner is not the only person concerned in the cost of conveyance, of which the aggregate excess of imports in the imports and exports of the world is composed. There are other commissions and charges, of which I have suggested that the English share amounts at least to 16 million pounds; perhaps 20 million pounds would be nearer the mark. The latter sum is only 2½ per cent. on the total of our imports and exports—about 800 million pounds; and when I point out that insurance cannot be estimated at less than 15 s. per cent and bankers' commission, bill stamps, and minor charges 5 s. per cent. leaving only 1¼ per cent. for all other charges the estimate must be held to be moderate." With regard to insurance charges Giffen seems to have taken a figure that was a gross charge taking no account of underwriter's losses and some reduction will be required on this account. Careful enquiries made show that for India the percentages are for insurance charges ¼ per cent. to 1 per cent. bankers' commission and bill stamps ¼ per cent. and other minor charges ¾ per cent. The total charges in this connexion will, therefore, be from 1½ to 2 per cent. of the total value of exports and imports. The total value of sea-borne trade—exports and imports—of India during 1922-28 was approximately Rs. 611 crores. 1½ per cent. of this would be Rs. 9·3 crores and two per cent. would be Rs. 12·2 crores. In order not to over-estimate these charges, Rs. 9 crores seems, after consultation with exchange bankers and others, to be a suitable figure for the year 1922-28.

7. *Miscellaneous Items—Invisible Imports.* In addition to the three main items of invisible imports already considered, there are miscellaneous items such as the payment for management of capital invested in India to London Offices for their expenses. These expenses include the carrying on of business and auditing and legal expenses. It would cover payments to

London agents for managing loans. It also includes profits made by British merchants during the year. In connexion with mercantile profits care must be taken not to count this twice over. Some of the profits earned by Indian branches of British mercantile houses are included in the net expenditure from investments abroad and, therefore, must be allowed for only once in the statement. In this "Miscellaneous" amount would be included the remittances of officers and civil servants to pay for families in England. Another item is in regard to tourists' expenditure and it has been assumed after some investigation that tourists' expenditure in India would be offset by Indian tourists' expenditure in Europe (an invisible export) and no allowance has been made for tourists' expenditure on either side of the account. The figure under this head, it will be seen, is a net figure and an allowance has been made in this connexion for invisible exports, mainly the expenditure for missionary enterprise such as salaries, up-keep of properties etc. which is to be regarded as an invisible export. After careful enquiries it is roughly estimated that these miscellaneous invisible imports in 1922-23, a year in India of comparatively low profits etc. may possibly amount to Rs. 4 crores.

8. *Conclusions.* It will be seen that on balance, India during the year 1922-23 had a final debit balance of approximately Rs. 4 crores. It has not been considered feasible to take into consideration the balance of trade for previous years. During the war years India was unable to obtain payment for her exports in the form of bullion to the extent normally required on account of imperial interests connected with the war, and large favourable balances resulted. Nor has it been possible, in view of the exceptional years following the armistice, to take into consideration the balance of years previous to the year under review. The balance of trade is particularly difficult in the case of India because of the danger of allowing items to be counted twice over, especially those connected with the Secretary of State's transactions. As far as practicable net figures have been taken, and in future years it may be possible to improve the estimates of the items involved in this balance of international payments. Certain items have been purposely omitted to compensate for over-estimates in other items. The estimates are, of course, tentative, and subject to a fair margin of error in either direction. They confirm, however, other evidence that we are now importing a considerable amount of capital, and it is not unlikely, indeed it is probable, that with a revival of trade the import of capital for the further development of the country will considerably increase.

**India's Trade Balance for the year ended 31st March 1923.**  
**Detailed Table.**

		Figure in lakhs of	
		Rupees †	
		Credit	Debit
<b>IMPORTS.</b>			
<b>A—BRITISH INDIA (SEABORNE)</b>			
1.	Exports of Indian merchandise .. ..	298.85	
2.	Exports of foreign merchandise .. ..	15.16	
3.	Exports of gold .. ..	18	
4.	Exports of silver .. ..	2.53	
5.	Exports of currency notes of the Government of India .. ..	11	
6.	Exports of money orders and postal orders .. ..	nil	
7.	Sterling transfers on London sold in India (" Reserve Councils ") .. ..	nil	
8.	Transfers of Government securities through the Public Debt Office .. ..	2.62	
9.	Funds borrowed in England for interest charges (Invisible exports) .. ..	13.12	
<b>B—NON-BRITISH INDIA (SEABORNE)</b>			
(French and Portuguese Possessions, Travancore and Kathiawar)			
10.	Exports of merchandise and treasure .. ..	10.36	
<b>C—LAND FRONTIER TRADE</b>			
11.	Exports of merchandise .. ..	15.28	
12.	Exports of treasure .. ..	48	
<b>IMPORTS.</b>			
<b>A—BRITISH INDIA (SEABORNE).</b>			
13.	Imports of foreign merchandise .. ..		224.19
14.	Imports of gold .. ..		41.22
15.	Imports of silver .. ..		20.56
16.	Imports of currency notes of the Government of India .. ..		1.01

† Rs. 1 lakh = Rs. 1,00,000 = £ 6,667 (Rs. 15 = £1).

## Detailed Table—Continued.

Figures in lakhs of  
Rupees †  
Credit                      Debit

**IMPORTS.****A—BRITISH INDIA (SEABORNE)—Contd.**

17. Imports of money orders and postal orders ...		1,00
18. Council drafts—bills and telegraphic transfers on the Government of India and paid in India . . . . .		3,75
19. Transfers of Government securities through the Public Debt Office . . . . .		—
20. Interest drafts on India in respect of Govern- ment of India securities . . . . .		35

**B—NON-BRITISH INDIA (SEABORNE).**

(French and Portuguese Possessions,  
Travancore and Kathiawar)

21. Imports of merchandise and treasure . . . . .		7,16
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**C—LAND FRONTIER TRADE.**

22. Imports of merchandise . . . . .		46,32
23. Imports of treasure . . . . .		1,21
24. Allowance for under-valuation of imports of merchandise and treasure excluding cur- rency notes (5 per cent of Rs. 310,66 lakhs)		25,53

**INVISIBLE IMPORTS.**

25. Expenditure in interest for overseas capital invested in India . . . . .		26,25
26. Expenditure for financial and insurance services † . . . . .		9,00
27. Expenditure for shipping services † . . . . .		22,15
28. Net expenditure for other services . . . . .		4,00

**VISIBLE BALANCE OF TRADE (Net) . . . . .** 13,22

**INVISIBLE ITEMS (Final figure from both sides)** 17,13

**FINAL BALANCE OF TRADE (visible and  
invisible items)** 3,91

†. Rs. 1 lakh = Rs. 1,00,000 = £ 6,667 (Rs. 15 = £ 1).

‡ See end of para 5.

# A COMPARATIVE STUDY OF THE GOLD EXCHANGE STANDARD DURING AND AFTER THE WAR.

BY PROF. B. R. CHATTERJEE, KHALSA COLLEGE, AMRITSAR.

In this short paper I shall outline the history of the Gold Exchange Standard in India and elsewhere during and after the war. The future of the Indian currency system is yet obscure. Neither the Government nor the expert opinion of the country seem to be clear as to the goal of our monetary policy. Eminent Indian Economists believe that the Gold Exchange Standard has proved a failure during and after the War and should be replaced as soon as possible by a full-fledged Gold Standard. A discussion of the questions, whether the Gold Exchange Standard has collapsed hopelessly and whether the Gold Standard has fared better, would not, I hope therefore, be considered irrelevant.

Our currency troubles began when our exports showed too great an excess over our imports. The currency and exchange mechanism could not cope with the extremely one-sided trade that occurred in the recent years. During the War and just after the Armistice the Indian price-level lagged behind the world price-level. There were only two alternatives—either prices in India had to rise to the full extent of the rise abroad or Indian Exchange had to move upwards above the par of normal times. Scarcity of silver and the danger of the paper currency becoming inconvertible stood in the way of a very rapid expansion of the Indian currency. The rise in exchange of the rupee was thus inevitable.

A Gold Standard country like Sweden had to face the same dilemma. India experienced one of the alternatives of a changed ratio between the price-level at home and outside. It was a rise in exchange above the legal par. Sweden experienced the other alternative—too rapid a rise of prices. She ran such a risk of being choked with gold that the free coinage of gold had to be suspended. Thus her Gold Standard collapsed. And we must remember that she was not a belligerent country. The strain of the War was severer on India than on Sweden.

Returning to the history of the Indian exchange—we find more dramatic changes after the War than during the War. After the Armistice, the demand for India's raw materials was stronger than ever as there was a boom of manufacturing activity in England and America. Silver, which was controlled during the War, was decontrolled early in 1919. The price of silver soared higher and higher and after it went the rupee. I believe greater attention has been paid, in explaining India's currency difficulties, to the high price of silver than to the more fundamental cause of the abrupt changes in the ratio between the price-levels at home and abroad which brought about extremely abnormal conditions of foreign trade. This will be clearer as we see the later events.

By an irony of fate the Babington Smith Currency Committee submitted its report when the rising wave of the post-war boom had nearly reached its crest and when a downward movement was imminent. The Committee's decision to push the rupee up in exchange to 2s. gold was probably justified in the light of the circumstances at that time. But its warning, that in case of an abrupt fall in the world price-level this decision was to be reconsidered, was strangely ignored. And this contingency did come about. The boom which was raising prices and cost of production in a vicious circle came to a sudden halt on account of the inability of the consumers to pay higher and higher prices. War-devastated Europe could not stand the strain and an acute trade depression set in. Prices in India however did not come down as quickly as the falling prices brought about by the slump abroad. The balance of trade which was so strong in India's favour now swung violently round the other way. Under such circumstances a high exchange policy was manifestly impossible. It was persisted in however and a heavy loss was incurred by the sale of Reverse Councils at rates much higher than the market conditions justified. Just as the rupee rose in exchange in spite of all attempts to keep it down when the Indian price-level did not rise as rapidly as prices outside, similarly it fell in exchange in spite of all attempts to keep it up when prices in India did not fall *pari passu* with the fall in the world price-level. In the latter part of 1920 exchange was left severely alone by the Government and the rupee sank very soon even below the pre-war level. For some time it seemed as if the rupee, which had become unlinked from gold on account of the collapse of the Reverse Councils machinery, had been linked again with silver from which it had been divorced in 1893. But if the rupee fell in exchange, the gold price of its silver contents soon fell still lower. The fall in the price of silver was as dramatic as its rise and was mainly due to the demand of the East for the precious metals being satisfied by heavy imports of gold which was now available from the U. S. A. In 1922 the decline of the Indian export trade and of the exchange value of the rupee reached the lowest depths. The acute industrial depression had become world-wide and harvests in India had disastrously failed. Exchange slumped to 1s. 3d. sterling in May 1921. Had the import trade also not been severely depressed the fall in exchange would have been much heavier. Towards the latter part of 1922 with the removal of the embargo on the export of food grains, the rupee seemed to rally at last at the par of 1s. 4d. During 1923, with a slow return towards normalcy, exchange also has shown more firmness. The sale of Council Bills which was suspended since January 1921 was resumed exactly three years afterwards. But as only a limited quantity is sold, these sales cannot stop the appreciation of the rupee. Government has not yet made up its mind to maintain exchange at a fixed point. The object of these limited sales of Council Bills is only to remit part of the Home charges. At present exchange is showing great steadiness at 1s. 5d.



But before we sum up our conclusions as regards India let us have a glance at conditions outside.

Let us first see how those countries have fared which have adopted the Gold Exchange Standard not, as it were, unconsciously but deliberately and under the law of the land. During our last summer vacation I visited Siam, the Straits Settlements, etc. partly in the role of a pilgrim to Buddhist lands and partly with the object of studying on the spot the history of the currency and exchange of these countries in the last five years. A detailed account of these currency studies will soon be published. Here I shall only give very brief sketches of the changes during and after the War.

Siam an independent Buddhist kingdom, has become modernised within the last 20 years and the history of its Gold Exchange Standard, introduced in 1908, is extremely interesting. The pre-war exchange value of the silver *tical* was 13 *ticals* to the pound sterling i.e. 1 *tical* = 1s. 6½d. a rate which remained stable for more than 12 years—1906 to 1919. It was in 1919 that currency troubles began in Siam. Her export trade, especially in rice, was extremely brisk. *Ticals* were required at Bangkok, the capital of Siam, in larger and larger quantities to finance the rice exports, a considerable portion of which went to Europe. But silver had been decontrolled in that year and its price was soaring higher and higher. The silver *ticals* began to disappear rapidly from circulation because they were now worth more as bullion than as currency. The Siamese Government hesitated at first to raise the rate of exchange. The fineness of the subsidiary silver currency (quarter *ticals*, half *ticals*, etc.) was considerably reduced. No new *ticals* were minted. But these measures did not suffice.

The strong demand for *ticals* and the rising price of silver made it necessary to raise the rate of exchange in September 1919. By the end of the year exchange mounted up to quite a high figure compared with the normal sterling parity. But the *tical* was never raised by more than 2d. at a time. It was also thought that the higher value of the *tical* was somewhat effective in reducing the price-level in Siam.

Meanwhile the Siamese paper currency too underwent considerable modifications. To meet the balance of trade, which was so strongly in favour of Siam, notes were required very urgently especially as silver *ticals* were no longer minted. The invested portion of the Paper Currency Reserve was gradually increased at the expense of the specie portion. One *tical* notes were issued. At last the paper money was devalued temporarily inconvertible. The inconvertibility did not prove such a rude shock to public confidence as was feared at first.

The outward rush of rice and the consequent heavy demand for Siamese currency, which now took the form of a demand for notes, continued well on into the spring of 1920. A disastrous failure of the rice crop however completely reversed the position in the summer of 1920. The demand for

Siamese currency died away. As the balance of trade now swung violently round against Siam, there was a strong demand for sterling to meet the requirements of importers.

The *tical* portion of the Gold Standard Fund, which exists to maintain the parity of the *tical*, had to bear a very severe strain as long as there was the unprecedented excess of exports over imports. Exchange Banks during this period were paying foreign currency abroad and were demanding *ticals* in Siam. The Government had to lend the Gold Standard Fund *ticals* out of the Treasury. Since the latter half of 1920 the sterling portion of the Fund had to bear the brunt. The banks now paid *ticals* in Bangkok and demanded sterling abroad. However with the aid of the Treasury which eked out the sterling resources of the Gold Standard Fund—exchange was maintained at the high level to which it had risen by the end of 1919.

With the stoppage of rice exports there took place a great contraction in the note issue. In 1922 the coin reserve in Siam against the note issue was forty four per cent of the value of the notes outstanding. If we include money kept on current account and fixed deposit to be credit of the Siamese paper currency reserves in banks in London and Paris—we reach the very respectable figure of 72 per cent of the total note issue. Convertibility could easily be restored. But as the Siamese Government is waiting for a return to normal conditions to introduce some important changes in the whole currency system, the period of inconvertibility has been extended to January 1925.

Another outstanding event of 1923 was the lowering of the exchange value of the *tical* by order of the Government in January. It had been kept steady for over three years at the high rate reached at the end of 1919. But a high exchange was felt as a serious drawback by Siamese exporters, especially on account of the depressed condition of Europe. The present rate however is yet higher than the pre-war par. Prices are also coming down from the dangerous heights reached just after the War.

To sum up I may quote what H. H. Prince Bidya told me in the Ministry of Commerce, Bangkok: "Our currency policy has been a fairly successful one. We have passed through critical times and have fared better than most other countries."

I may also add here that it is to the kindness of H. H. the Prince Bidya and Hon'ble Mr. Lyle, the British Consul-General in Siam, that I owe my information on Siamese currency and exchange.

Now let us pass under review the recent experience of the currency system of the Straits Settlements. In 1906 a Gold Exchange Standard was established and the exchange value of the Straits dollar was fixed at 2s. 6d. The dollar is also the standard coin of the Federated Malay States through which I had to pass in my train journey from Singapore to Bangkok. The Straits Settlements, with its great rubber industry, soon felt the effects of the

European War. Here also there was a prodigious demand for local currency to meet the requirements of trade and industry. The paper currency was declared temporarily inconvertible in 1917 and in 1918 new subsidiary coins of reduced finances were issued. A large number of very small denomination notes (of 10 cents and of 25 cents) also came into circulation at this time. As regards the subsequent history of the Straits currency I shall give here a brief account of my conversation at Singapore with Mr. Talma, the Deputy Treasurer of the Straits Settlements.

In response to the demands of trade and industry the quantity of money in circulation was nearly doubled in the period 1914 to 1918. Then in the year 1919, owing to the great rubber boom, there was such an abnormal expansion that by the end of that year the net circulation of currency was nearly double the net circulation in 1918. The expansion consisted wholly of paper currency. It is my personal belief that such violent fluctuations in the quantity of money in circulation were due to the fact that exchange was kept stable and was prevented from rising when the favourable balance of trade of the Straits Settlements was becoming too favourable. The demand for currency came mostly from American and Japanese business men who were investing heavily in rubber. Such was the intensity of the rubber craze that food crops all over the Malay Peninsula were entirely neglected—almost all available land being given over to rubber plantations. Prices rose very fast with the abnormal expansion of currency but in 1920 rubber slumped down and by 1921 the net circulation of currency had dropped down to 50 per cent. of that in 1919. A drastic change in the price-level followed. This is another example of unstable prices at home when exchange is kept stable though conditions abroad are unstable. The American and Japanese business men are fast leaving country as the rubber industry is for the time practically ruined.

In May 1920 the silver dollar, the monetary unit of the Straits Settlements, had to be reduced in fineness and weight. Also the paper money was declared inconvertible during the period 1917 to 1921. Now that convertibility is restored there is very little demand for silver dollars. I saw only one silver dollar during my stay in the Straits Settlements.

But in spite of all these currency difficulties, exchange was kept stable throughout and the Government takes great pride in the fact. Probably this stability was maintained at the cost of great fluctuations in the price-level. But the Straits Government are firm supporters of a steady exchange and have successfully resisted all proposals to tamper with it.

In this connection it must be noted however that the Straits currency is now on a sterling basis—not on a gold basis. Had the Colonial authorities struck to the gold par of 2s. 4d the dollar would have mounted in 1919 and 1920 to £4 sterling. But the authorities followed sterling and dropped flirting with gold. The currency ordinance which came into force on 1st October 1928 has now legalised this sterling basis.

Now let us turn to the Dutch East Indies as Java is so close to Singapore. I could not go to Java as the time at my disposal was too short but through the courtesy of P. R. Boger Esq., the Dutch Consul-General at Singapore, I managed to get up-to-date information about the currency system of the Dutch East Indies. It must be remembered that the Gold Exchange Standard was first established as a practical monetary system in Java by the Dutch Government as early as 1877. Thus it is the oldest Gold Exchange Standard country and I am glad to say that the vitality of its currency system has not been impaired by the World War.

There was not much fluctuation in exchange during the War between Holland and Java. Only very recently the Java guilder has gone down just a little in terms of the Dutch florin. Though the paper money had to be declared inconvertible yet gold for making payment abroad could be had from the banks. No currency changes are pending as the system has stood the test of the War fairly well.

As regards the Phillipine Islands, I intended to go there to study on the spot how Kemmerer's great experiment had fared. But as I had to come back from Bangkok, I have to depend on information supplied to me by Mr. Abbrecht—the American Consul-General in the capital of Siam. It is a very interesting history but I can only say here that the authorities made a muddle of everything by ignoring the main principles laid down by Kemmerer. The large reserves were invested in long-time capital loans which could not be recovered when cash was required to meet exchange difficulties. Also an amalgamation of the Paper Currency Reserve and of the Gold Standard Reserve weakened the whole system. The new Currency Act of 1923 attempts to re-establish currency legislation as it stood before the unfortunate changes were made in Kemmerer's system. It is interesting to note that the Phillipine Exchange did not collapse on account of the appreciation of the *peso* during or just after the War. It was the depreciation of the *peso* in 1920 and 1921 which caused the break-down. The Phillipine paper currency however has remained convertible throughout,

Now let us have a hurried survey of other currency systems which are not professedly on the Gold Exchange Standard basis. You all know that in recent years Australia and South Africa have virtually abandoned the gold standard. The currencies of both these gold-producing countries (and we must remember that South Africa is the most important gold-producing country in the world) consist now of paper money. Exchange is maintained with England by means of bank reserves in the Dominions and in the mother country. This is really the Exchange Standard plan. To quote the Editor of the *Economist*:—"The interests of gold producers plainly lie in the earliest possible restoration of gold standards throughout the world. But the fact remains that the idea of an independent return to the gold standard is not so much as mentioned in Australia, while in South Africa it found small support and was deliberately rejected in 1920."

Egypt too has ceased to have a gold currency in circulation. In 1913 Keynes wrote of Egypt as the only country with a Gold Standard where gold currency was not economised by the extensive use of paper money or of bank deposits. The notes of the Egyptian National Bank issued against British Treasury Bills form at present the sole currency of that country and Egyptian exchange with Britain has remained very stable in recent years.

Let us now turn to Europe. During the War gold currency ceased to circulate in all the belligerent countries and found its way into Government Reserves. The old mint pars disappeared and purely conventional pars were established where Governments could arrange to get credit abroad. Certainly all this was a close approximation towards the Gold Exchange Standard.

After the War the same statement holds good of nearly every currency in the world which has not collapsed hopelessly. An attempted transition from an inconvertible paper regime to a real Gold Standard is sure to break down as the international competition to get gold would send up the price of gold too high. We must remember that the world's production of gold in recent years has been considerably below the pre-war output. Gold has to be economised and this can be done by the Gold Exchange Standard. Such is the opinion of the Financial Commission of the Genoa Conference of 1922.

Again a gold standard is no safeguard against an unstable price-level. The Gold Exchange Standard lends itself much better to a scheme like Professor Fisher's for stabilising prices. Prof. Copland in his tract on the Australian currency has made this point quite clear.

After this review of the Gold Exchange Standard in the world let us turn back to the problems facing us at home. Should exchange be stabilised at a fixed point? We seem to have had enough of a fluctuating rate of exchange with its blighting effects on foreign trade. Public opinion of late apparently favoured stabilisation at the old par of 1s. 4d. Currency experts like Professor Jevons and Sir James Wilson also endorsed the same view. But the rupee is already 1s. 5d. and shows remarkable steadiness at that point. Reverting to 1s. 4d. would mean considerable inflation. Then we must remember that the world-wide trade depression has not yet come to an end. It is said by competent authorities that in 1920 the mistake was committed on fixing exchange at the time of a prodigious boom—should we now take the risk of stabilising exchange during a trade slump of unexampled intensity? The English price-level has fallen more rapidly in the last three years than Indian prices. In England a substantial rebound is expected to occur as a reaction after the sudden drop. We should therefore wait and see a little longer till at least England and some of the other countries, which were not hit so badly by the War, recover from the depression. I believe after another year we shall be in a better position to discuss the new par of

exchange. Probably it would be higher than 1s. 4d. The 2s. rate is of course impossibly high.

We have seen that the Gold Exchange Standard has not been such a failure as some are apt to think. It bids fair to oust the gold standard in many important countries. I believe that a gold standard in India would be really only a limping standard which would be decidedly a retrograde step. It would destroy the prestige of the rupee without strengthening our exchange. The prestige of the rupee extends beyond the borders of India in many parts of Central Asia. When we visited Western Tibet on our pilgrimage to Manas Sarowar in 1922, we found to our great surprise that even in the Forbidden Land the Indian rupee was much preferred to the Tibetan silver currency.

We can however perfect our Gold Exchange Standard. We depend here too much on the price of silver. The issue of paper money covered by bills of exchange has already been a success. I think that the quantity of currency notes issued against India Government securities should be replaced by paper money issued against Commercial bills. The "created securities" should go once for all. They are a blot on our currency system. The Gold Standard Reserves should be kept partly in India not only to disarm criticism but to supplement the rupees in the Treasury Balances when Council Bills have to be cashed on a large scale. Lastly the rate of exchange once fixed should not be considered so sacrosanct as not to admit of any change. But no considerable change should be made abruptly. Slowly and tentatively the rate should be accommodated to change in the world outside. The history of the Siamese currency and exchange is a good illustration of this point.

## THE GOVERNMENT OF INDIA AND ITS CURRENCY POLICY.

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Speaking at the meeting of the Associated Chambers of Commerce which held a Conference early in December 1923 at Bombay, Sir Basil Blackett undertook what one may regard as an elaborate apology of the currency policy of the Government of India. It is now increasingly recognised by economic thought of all shades that rightly or wrongly our modern economic life has been so intimately interwoven with currency and monetary institutions that every phase of the economic life and the very welfare of society from the point of view of its material needs depend upon the proper working of a currency policy and upon the proper organization of banking and credit. But whilst the West has thus awakened to the need for a sound currency as vital to economic welfare, Indian public opinion seems to be more or less indifferent to the problem, and views with seeming unconcern the reckless experiments with the currency of the country carried on by our foreign rulers, experiments which if they were carried on without a definite policy behind them lay the Government open to the charge of culpable neglect of its duties, and if carried on with such a definite policy imply a deliberate sacrifice of Indian interests of which the Government is the professed guardian.

The policy of the Government of India ever since the first closing of the mints to the free coinage of silver in 1893 has been based upon the fundamentally wrong assumption that the primary want of this country in the matter of currency is the fixity of exchange between the silver rupee made sole legal tender by the East India Company in the early part of the nineteenth century, and the gold pound in which she had and has to settle her foreign commercial transactions. The Chamberlain Commission emphatically asserted that the cardinal feature of the currency policy of the Government of India is "absolute security for the convertibility into sterling of so much of the internal currency as may at any moment be required for the settlement of India's external obligations." Fixity of foreign exchanges was thus regarded as the be-all and end-all of a sound monetary system. Mr. Keynes in his "Indian Currency and Finance" endorses this view: "The currency problem of each country is to secure that they shall run no risk of being unable to put their hands on international currency when they need it, and to waste as small a proportion of their resources on holdings of actual gold as is compatible with this." The only principle that should guide and determine the organisation of a sound monetary system is thus stated to be the possession of adequate quantities of gold to meet an unfavourable balance of trade.

It is this view that receives a fresh official sanction in the speech of Sir Basil Blackett before the Conference of Associated Chambers: "It

follows that before any attempt is made to stabilise exchange we must be very sure that we command the resources which are necessary to make certain that the attempt will be attended with success. I therefore ask myself whether the reserves available to the Government of India in case of need for maintaining the external value of the rupee at sixteen pence are adequate or not. The London *Times* echoes the same opinion in criticising the demand of the Indian Merchants' Chamber of a fixity of exchange, "A rate of exchange between the countries must in the long run react to, and depend upon, variations in their respective price levels. A demand that the rupee shall by official agency be stabilised in sterling or gold necessarily implies that Indian prices shall somehow be made to rise or fall *pari passu* with sterling or gold prices as the case may be. Nothing can be gained by pretending that the problem is any smaller than that. It is conceivable that the forces which have been operating to cause the sterling value of the rupee to rise may, after sundry ups and downs, carry it as far as 1s. 4d. gold or even higher. It is possible that India in due course may achieve stability at that or other level earlier than less fortunate countries. But to make any premature attempt at stabilisation is to invite failure." It is not a little surprising to observe the parallelism between this line of argument and the official defence of the Government of India by Sir Basil Blackett on the question of the currency policy. "The sole object of a sound currency for India is assumed to be stabilisation of foreign exchange and the readiness of Indian prices to respond to changes in sterling prices—not the Indian prices as determined by a genuine silver rupee with free coinage and open mints, but Indian prices adjusted to an artificial rupee coined by a Government endowed with the power of regulating the issue and liable to the temptation of over-issue."

In short the whole history of the Indian Currency measures since 1893 has been founded upon the assumption that the soundness of the monetary system in the country is to be judged by the relative stability of a par of exchange between the rupee and the sovereign, a par fixed by legislation at 1s.—4d when the market rate was 1s 1d. and abandoned by legislation in favour of 2s. by considerations not entirely determined by the genuine desire to bring the legal ratio into a parity with the market ratio. But any one who is familiar with the elementary principles of currency knows that a sound system of currency—fulfils certain indispensable objects and satisfies a few basic needs of economic life. It supplies a standard measure of values, and offers a universally accepted medium of exchange; it also offers a standard for deferred payments and serves as a store of values. All these objects can be summarised in the statement that a sound system of currency secures relative stability in the level of prices, or what is the same thing relative stability in the purchasing power of the monetary unit. The history of the currency policy in the West during the last few centuries has been the history



of a series of attempts to secure relative stability of purchasing power by the alternate use of gold and silver as standard units and by isolated experiments at bimetalism. Great Britain adopted a gold standard as early as the first quarter of the 19th century and by the end of the 19th century the rest of the world with the exception of China became converts to a gold standard, reducing the silver coins to tokens or at any rate restricting silver coinage by closing the mints. Then followed the war with its serious consequences; the cost of the war could only be met by the issue of paper money which in a large number of countries has now become inconvertible; America has absorbed enormous quantities of gold which she is not willing to part with; and the best minds of Europe to-day are occupied with the task of evolving a temporary solution which would enable these countries to tide over this crisis to happier times when they could return to the gold standard pure and simple.

The experience gained by the past in the world as a whole endorses a verdict in favour of gold as the only substance to be used for money,—and the abandonment of silver for standard coins. It seems almost surprising to find in a recent handbook on Money (D. H. Robertson in the Cambridge Economic Handbooks) an argument against the use of gold as standard money based on the consideration that its use has not secured absolute stability of purchasing power. Nobody ever seriously suggests that such absolute stability is practicable, however desirable; and one can only understand the drift of the argument when he realises the practical bankruptcy of the Western countries and the frantic demand for gold which has practically disappeared. But this apart, economic thought and economic practice as illustrated by the monetary systems of all civilised countries before the outbreak of war alike recognised the principle that the only satisfactory system of currency is one that rests on a gold basis—in other words an effective gold standard. Such a system involves in the first place that all values are to be measured in terms of a standard unit of gold defined by law, and that all other media of exchange which are simultaneously employed in the shape of token coins, paper money, cheques, bills of exchange and the rest, are ultimately convertible into the standard coin; convertibility of all substitutes into the standard coins, requires free and open mints and a reserve of gold readily available for converting paper into the standard currency for internal purposes and for shipment abroad in case of external liabilities. A gold standard system does not necessarily involve only the use of gold coins for commercial transactions—the use of token coins and commercial paper money has long been familiar, and they have been known to circulate at their face value under wise limitations as to issue. An organised system of banking economises the use of gold for the purposes of internal currency even to a greater extent than token coins and paper money.

Thus after centuries the civilised world has evolved a system of currency resting on ultimate and immediate convertibility of all media of exchange into gold as the only instrument of securing relative stability of values. Thus Mr. Harold Cox writing in the *Edinburgh Review* in 1923 with regard to England observes: "What we aim at is some measure of value which the whole world accepts and which is free from the dangers of political chicanery. Such a measure is provided by gold. In the first place the intrinsic merits of this wonderful metal are appreciated by practically the whole world; in the second place the amount of it available for use cannot be rapidly varied as to alter to any serious extent the world's estimate of its value. The important consideration is that the value of gold can only change very slowly because of the great volume available for use and because of the multitude of varying uses to which gold can be put. Consequently prices measured in gold can only vary slightly over a considerable period of years. This means that for most purposes of business gold prices are effectively stable". So also J. M. Keynes writing in the *Manchester Guardian* Reconstruction number in April 1922 observes. "The foreign exchanges compare in the value the money of one country with that of others. Thus their fluctuations necessarily affect merchants who buy in one place and sell elsewhere. To ensure invariability is the problem of stabilisation. Hitherto only one good solution has been found, a world-wide gold standard. [see no other solution of stabilisation practicable now, except this traditional solution namely a gold standard in as many countries as possible". Even under the abnormal conditions created by the war with an absolute scarcity of gold for the purposes of internal currency, when economists urge the desirability of gold exchange standard with inconvertible paper for internal purposes, such a proposal is regarded as a temporary expedient to tide over a critical period. Thus "a metallic standard can afford no guarantee of the preservation of a fixed monetary unit. The variation known as the Gold Exchange system, useful inasmuch as it diminishes the volume of gold in current use, is even less able than the unmodified standard to guarantee the constancy of the monetary unit". (S. A. V. Stuart—*Economic Journal*, 1923, p. 149). So also another of our authorities: "Whatever may be said from a theoretical point of view against gold as a standard of value it seems pretty sure that most countries look forward to the restoration of a gold standard and the resumption of gold payments as the real rescue from the hopeless muddle of the present monetary system. We must reckon with this desire as a matter of fact" (*The World's Monetary Problem*, p. 78, Gustav Cassel). To quote the Cunliffe Committee, "we have found nothing in the experiences of the war to falsify the lessons of previous experience that the adoption of a currency not convertible at will into gold or other exportable coin is likely in practice to lead to over-issue and so to destroy the measure exchangeable value and cause a general rise in all prices and an adverse movement in the foreign exchanges."

In the light of these general principles let us now survey the currency policy of the Government of India. The linking together of the constituent units of the world by ties of international trade has forced upon every country a recognition of the fact that stability of the price-level depends not merely upon the purchasing power of the monetary unit within the country but also upon the rates of exchange between the monetary unit of one country and the units of other countries with which it has commercial relations. India had a gold standard and a gold currency in the past, which was replaced by a silver standard and currency by the East India Company in the first half of the nineteenth century. The violent fluctuations which followed in the purchasing power of silver in the second half of the century led the Government of India in 1898 to close the mints to the free coinage of silver, with the distinct understanding that this was to be temporary measure with a view to finally adopting a gold standard. When after five years in 1898 the exchange rose to 1s-4d as contemplated in 1893, on the recommendations of the Flower Committee the sovereign was made legal tender in India, with the depreciated silver coins in circulation as unlimited legal tender; the Government of India undertook to pay rupees in exchange for gold, but not gold in exchange for rupees. The gold which the country got was exchanged for silver, and the Government taking advantage of the situation began the recoinage of the depreciated silver practically inconvertible fiat money, the profits being accumulated in gold in London as the gold standard reserve. The only logical outcome of the recommendations of the Herschell and Fowler Commissions should have been the utilisation of the gold in India for the building up of a good reserve in the country with a free and open mint for the coinage of sovereigns. The primary function of a sound monetary system is to secure stability in the purchasing power of the monetary unit; silver was abandoned in 1893 with a view to the ultimate introduction of a gold standard. The gold standard requires a mint for the free coinage of gold. Instead of this the Government of India sought and succeeded in introducing an artificial monetary unit whose face value was greater than its intrinsic value, thus reducing at a single stroke the savings of the masses by 40 p. c. and a measure which was intended to secure stability in price-level in reality brought about a violent disturbance in the price-level till it gradually adjusted itself to new conditions after a number of years. The Gold Exchange Standard thus introduced after 1899 was specially intended to secure stability in the rate of exchange. To defend the Government of India policy on any other ground is to admit that the interests of India were intended to be sacrificed to the interests of British merchants and capitalists. But if one fact stands out more saliently than any other in the history of the currency experiments in India it is this that the rate of exchange cannot be stabilised by Government regulations and manipulations.

The only reasonable method of securing relative stability in foreign exchanges is the introduction of a sound monetary unit defined by law,

with an ample reserve of metallic money or bullion to secure convertibility for internal purposes and the flow of metal to and fro in settlement of international obligations. In no other country in the civilised world to-day do we find a deliberate attempt by Government to interfere by legislation and executive measures with the free movement of the precious metals.

Stability in the rate of exchange could have been more easily secured by the introduction of a gold currency leaving banks and financing institutions to look after the settlement of international obligations. Instead of this, the Government of India finding itself in a position to make huge profits on the coinage of silver went on coining huge amounts of a depreciated coin, and building up a gold reserve which it kept in England for the ostensible purpose of stabilising exchange but in reality for building up credit for English enterprise and commercial development. For the last thirty years practically the gold that should have come to India in settlement of the international claims has been artificially prevented from flowing through its channel of trade by the Secretary of State's sale of Council Bills over and above his normal requirements, thus compelling the people of India to accept payment in a depreciated currency.

Two courses were conceivable in 1893 when the Government of India entered upon its currency Policy. India might have retained her silver currency with a fluctuating exchange rate left to itself; this might have meant some disturbances in the purchasing power of the monetary unit and some restriction in the expansion of her foreign trade; but it would have secured an honest currency and as her exports were and are more or less indispensable to the industrialised Western Nations she would have continued to receive in her own honest currency with a low rate of exchange amounts indefinitely larger than she did receive with an artificially propped high rate of exchange. The other and the better alternative was the substitution of a gold standard with a gold mint making the silver coin a token coin and leaving her foreign exchanges to themselves to be settled by banking and finance. The Gold Exchange Standard has created an inconvertible token coin forced into currency by the law, with the temptation to over-issue—and this temptation has been too great to be resisted; the resulting profits instead of being kept in gold in India have been kept in London to finance British commerce and immense sums have been disastrously frittered away by being locked up in securities that depreciate. The war violently shook all calculation of financiers; the solemnly fixed ratio of 1s 4d, intended to be a guarantee of Government intentions to give a stable measure of international values, was altered to 2 shillings; if this measure could exercise any influence on the price level it could have meant only a violent disturbance of that level—the very thing that Government professed to avoid by its currency policy. And now on the top of this all we have the recent transfer of the gold in the Paper Currency Reserve from India to London; at a time when every country in the world is

clamouring for gold, India is the only country which is to be forced to part with its gold, because she is supposed to have no use for it and because the foreign rulers have a use for it.

It is this policy in its entirety that Sir Basil Blackett endeavours to defend in the name of sound economic principles. Sir Basil professes to be a whole-hearted admirer of "The Gold Exchange Standard" and contends that India's currency policy is in a line with that which the Western countries are adopting in view of the scarcity of gold. He observes. "The goal towards which we are all working is of course a gold standard. England is doing the same. A gold standard does not by any means necessarily mean a gold currency." This is an exceedingly misleading statement. If all that is meant by this statement is that in countries with a gold standard gold in actual currency should be economised by the use of paper money and cheque and other substitutes, undoubtedly it is true. But India is as far away from it to-day as she was in 1893. But if it is intended to convey that a country can have a gold standard and yet find its internal currency inconvertible, than no economist will ever accept such a system as a gold standard, you might as well call it a copper or a paper standard. The one test of a gold standard is the convertibility of all substitutes into gold; and Sir Basil Blackett himself acknowledges this by calling his system a Gold Exchange Standard. Sir Basil supports his defence of this system by three authorities. The first is that of Plato who in his ideal city is content to have currency notes stamped on leather for internal purposes. The second authority is that of Keynes who also fights against a phantom of his own creation when he suggests that we mean by a gold standard one in which gold is "the important medium of exchange." "The currency problem of each country" says Mr. Keynes is "to insure that they shall run no risk of being unable to put their hands on international currency when they need it, and waste as small a proportion of their resources on holding and actual gold as is compatible with this."

It is evident we are not all of us ideal citizens living under an ideal government; our Rulers we know to have imbibed the traditions of shopkeepers; and we can freely accept a piece of paper only when we are confident of its immediate convertibility into gold. Our rupee is a token coin which we cannot convert into gold; and when the Government coins rupees it is forcing inconvertible paper into circulation. But even assuming Mr. Keynes' contention to be valid, we have two considerations to urge. In the first place, as we have already observed, the Gold Exchange Standard is only a temporary measure to which the European countries are forced to resort after the war to meet an abnormal situation. The Western countries need gold for purchase of raw materials and food; and they may well be forced to justify their inconvertible paper money as a scientific system of currency with a view to using the little gold they possess for settlement of international indebtedness. But why should

a policy which is professedly a temporary measure for starving countries be preached as an ideal for India which on account of its favourable and advantageous position can always compel foreigners to pay her in gold? From year to year India possesses a favourable, balance the industrialised West needs her food stuff and her raw materials; India can insist on being paid in gold under power of self-determination. She can, if she is not prevented by her rulers, have not only gold enough to be solvent in international relations in case of an adverse balance but gold enough for all her internal requirements, with a gold standard and immediate convertibility. A policy avowedly forced upon a reluctant Europe as a *pis aller* is lauded as a scientific system worth imitating for India! But even assuming Mr. Keynes' contention to be correct, are we in India under the present Gold Exchange Standard sure that we are able to put our hands on international currency when we need it? The only way in which this could be effected is to leave the movement of the precious metal alone, or if Government is to help, the only method is to offer gold through the Treasury Offices or the banks for shipment when it is wanted. Instead of this, the gold to which India is entitled by her favourable balance is diverted to London, invested in sterling securities or kept as cash balance to strengthen the gold reserve which ultimately finances English industries and English commerce to the sacrifice of Indian industries.

Sir Basil quotes in his support the resolutions of the Currency Committee of the Genoa Conference. The Gold Standard for the European nations in the immediate future cannot indeed be the gold standard of earlier days.

The European nations have not gold to finance their internal needs; enormous issues of paper money have brought about depreciation of currencies in terms of gold, and even of gold in terms of commodities; fluctuations in foreign exchanges have hampered trade, and a return to the gold standard of old seems out of question for some time to come. If by concerted action on the part of all the nations including the enemies and the dependencies of the Allies as well as of America who is holding aloof the world's stock of gold could be distributed according to the requirements of each country, or an international loan arranged for financing the produce, India could rightly be asked to share in an equitable arrangement of this kind; but when America will not part with her gold, when the enemy countries are strangled to death in the foolish desire to exact reparations, when even the Allies are jealous of one another's aims, to call on India to accede to an arrangement by which her gold could be utilised for English interests and to call this a system which the genius of English Finance Members invented to light the European World out of its present economic muddle is to add insult to injury so far as India is concerned.

There is nothing so tragic in the entire history of British Rule in India as the light-hearted and reckless manner in which her currency system has been dabbled with by her foreign rulers since 1893. The linking up of India

with foreign countries by ties of commerce undoubtedly laid the level of prices in India before 1893 open to changes to which the rate of exchange was an index. These changes were due to the violent fluctuations in the gold price of silver which was the monetary unit of India; and the only statesmanlike remedy was to bring India into a line with the rest of the civilised world by giving her a Gold Standard. The closing of the mints in 1893 was intended to be the first step towards the adoption of the gold standard; the Act of 1899 declared the sovereign legal tender in India; the Fowler Commission recommended the throwing open of Indian mints to the unrestricted coinage of gold. Fresh rupees were not to be coined until the proportion of gold in the currency was found to exceed the requirements of the public, and profit on the coinage of rupees was to be kept in gold as a special reserve. All these recommendations remained on paper; the proposal to coin sovereigns in India was shelved; the gold reserve arising out of the profits of silver coinage instead of being kept in India to meet the external demands was transferred to London; the gold to which India was entitled year to year in settlement of her export trade was prevented from flowing to India; it was urged that from time immemorial India has continually absorbed the precious metals. If India was entitled to the gold she had every right to do with it what she liked. Nobody disputes the right of any self-governing country to do what it likes with its own precious metals. But the difference between America to-day and India is that the one is independent and able to carry out her national policy, the other is dependent and at the mercy of her British rulers. If the sovereign does not circulate but disappears in India under the British rule it is an index to the fear that it will not be available for use when people part with it in normal exchange. The fact that India will absorb the gold that might otherwise be available for use in London has dictated the currency policy of the British rulers.

There has not been a single instance in the history of the relations between an Imperial Government and her subject dependencies to match with the currency policy of the British rulers of India in which the interests of the dependency have been so deliberately and hopelessly subordinated to the interests of the rulers.

The whole policy of the British rulers in India is, as we have already indicated, based on the assumption that the sole purpose of a currency is to secure stability of foreign exchanges. The immense resources in the shape of gold that India possesses to-day—both in the Gold Standard Reserve and the Paper Currency Reserve—are to be used not for securing the internal convertibility of the rupee in gold, but for stabilising the exchange value of the rupee. Nowhere have we seen it asserted as we do in India by our finance experts that we are to have gold as a standard without an open mint, that our token money is to be inconvertible, and yet unlimited legal tender that Government is to be free to issue as much of this token money as it pleases because it is unlimited legal tender and that a depreciation of this token money for the purposes of internal

commerce is not vital to the well-being of the country, and yet this is just what we are repeatedly told in India. Sir, Basil Blackett throws the statement into our face when he tells us that "the reserve of international currency held by the Government of India and banking reserves as well as currency reserves; that is, they are intended to be a guarantee of solvency in the face of any conceivable balance of indebtedness against us, even if at the same time we had to face an internal banking crisis as well."

It is difficult to realise what economists would have to say if it was proposed that in Great Britain the shilling should be unlimited legal tender, if there was no mint for the coinage of the gold pound, if the reserves of gold instead of being kept in London were kept in Paris or New York, and if such a system was sanctified as an excellent measure intended to stabilise the gold price of the silver shilling and to secure the solvency of Great Britain in the international market! And yet this would be only half as absurd as the present defence of the currency policy of our rulers intended to guarantee the solvency of a country which normally claims gold from year to year from the rest of the world in return for the food and the raw materials that she supplies.

Sir Basil Blackett in a lofty strain urges in defence of the currency policy that "in matters of currency there can be no irreconcilable conflict of interests between nations. The advantage of the whole must also be to advantage of every part. I cannot admit for example that the questions which we have been discussing to-day can be viewed either from an Indian or from an English stand point." All this sounds very philosophic. But when the world's stock of gold is limited, and every country desires to appropriate as great a portion of it as possible, how can one country gain except by another country's loss? If England and India were equal parties in a large federation of nations aiming that an equitable distribution of the world's gold resources, such platitudes as Sir Basil indulged in might be obviously true; but if India is entitled to a claim on the world's stock of gold of which she is indirectly deprived by being given substitutes in the shape of depreciated coins and paper money, it is ridiculous to suggest that there is no conflict of interests between India and her foreign rulers who profit by such manipulations.

Throughout these thirty years the currency policy of the Government of India has been determined by the single idea that the sole object of a sound currency is to secure the stability of the exchange value of the rupee an assumption fundamentally wrong and misleading. Prof. Nicholson rightly raises the question: "Does it follow because the stability of the gold price of the rupee has been established for the purposes of foreign exchange that therefore it may be taken for granted that all other functions of good money are fulfilled by the rupee as so 'managed'?" It might be truly said that in the ardent desire to stabilise foreign exchange the Government of India ignored completely the fundamental object of every sound system of currency namely that of securing stability of the purchasing power of the monetary



unit. Nay it might be even suggested that the country was subjected to violent fluctuations in the internal level of prices as a consequence of this attempt at stabilising the rupee. And with regard to this one object of stabilising the rupee that governed the policy of our rulers in matters of currency, we have already seen how disastrously it has been believed by the erratic course of foreign exchange during critical periods when alone its strength could be put to the test.

And whilst this currency policy after a trial of nearly thirty years has failed to secure the main object for which it was brought into operation, we are further told that this very object stability of foreign exchanges "As an important facility rather than an essential condition" (Babington Smith Committee's Report), even the ardent apologist of the gold exchange standard now concedes this point. Mr. Keynes in March 1928 in reviewing Jevons' "Future of Indian Exchange" observes: "Prof. Jevons over-estimates the advantage of stability in exchange as against stability in internal price level in the case of such a country as India. Stability in the internal price level is so superlatively desirable in such a country as India that the fact of having got through the recent cycle with so small fluctuations of internal prices is a great deal to be set against the inconvenience to merchants engaged in foreign trade from the fluctuations in exchanges."

If Keynes is right, and stability in the interval level of prices is superlatively desirable the only way to secure this stability is to have a gold standard with silver as a token coin, freely convertible into gold. If Sir Basil Blackett is prepared to swear by Keynes, it is surprising that he should at the same time defend a Gold Exchange Standard whose one merit is to secure stability of foreign exchanges.

What is still more surprising is to find an economist of the type of Keynes seriously urging that the internal price level of a country like India, linked to foreign countries by commercialities, should be unaffected by fluctuations in foreign exchanges which are an index of fluctuations in world prices. We can only account for this as a result of a psychological obsession inhibited by the desire to justify the Gold Exchange Standard and the currency manipulations of the Government of India.

The defence of the currency policy of the Government by Sir Basil Blackett plainly indicates that the Government of India has now made up its mind to adhere to the Gold Exchange Standard. Sir Basil observes: "Our aim is to reach a Gold Standard for the rupee, just as England's aim is to restore the old purity of sterling with gold." When Sir Basil Blackett speaks of this as a step towards a "gold currency", he is either unaware of the meaning of the expression that he employs, or he deliberately misleads the Indian public by an ambiguous phrase. Behind this defence, we are afraid, the Government of India may have the object of stabilising the rupee at a higher rate than *1s. 4d.*

Mr. Keynes' acrobatics in the *Economic Journal* where he criticises Prof. Jevons are evidently intended to defend a policy of watching the foreign

exchanges till a favourably opportunity occurs to stabilise the rupee at a rate more favourable to the importers. Recently the old plea that a higher rate of exchange is favourable to India has been strutted forth in official circles—it is a shadow cast before of coming events. The unwillingness of the Government of India to alter the legal ratio which no one takes seriously also points to the same object of manipulating the currency with a view to stabilising at a higher rate. When finally Sir Basil speaks of reaching “a gold standard for the rupee” he is either using a meaningless phrase and talks in the air—for the rupee is linked to gold ever since 1899 and has already reached 1s. 4d. which was the pre-war legal ratio, and which according to Sir Basil’s own calculations the present reserves are more than sufficient to maintain or he has the clear intention of “reaching” in the near future “gold standards” at a higher rate and maintaining it at that level with all the resources which Government command. And these resources of Government are adequate enough for the purpose—with a favourable balance any rate of exchange can be reached by a Government that can limit the circulation of internal currency and expand it at its own sweet will. We only desire to draw attention to the fact that what is feasible to-day may become impossible of realisation to-morrow; and if the economic welfare of India demands a gold standard with an open mint with a subsidiary silver coin, the present favourable balance, the present price of silver and the world demand for India’s food produce and raw materials and the strength of her various reserves make up a combination of forces which will never recur in the future for realising the objects of a sound monetary system.

But the events of the last few weeks point distinctly to the determination of Government to adhere to their Policy of a “managed” currency and as they succeeded in the period between 1893 and 1899 in pushing up the rate of exchange from 1s 1d which was the natural or market rate of exchange to 1s 4d by limiting the supply of currency, so they now seem determined to push up the exchange value of the rupee still further to 1s 6d or 1s 8d or even 2 shillings by managing the supply of currency. Not that we suggest or advocate a return to the pre-war rate of 1s 4d; what we protest against is a system of artificial and managed currency such as the Government of India has adopted since 1899. The intentions of the Government are evidenced in the first place in the measure recently adopted in connection with the transfer of gold from the Paper Currency Reserve in India to London. At a time when with a favourable balance of trade India should be receiving gold from month to month the country is being denuded of the gold at its disposal, because Government considers it superfluous. Thus the transfer of gold from India serves indirectly to raise the exchange rate. In the second place the old practice of selling Council Bills over and above the requirements of the Secretary of State and investing the proceeds in British securities—the Secretary of State has added in this manner within the period of a fortnight securities worth 6 crores of Rupees—has been resumed with the return of favourable conditions. The sale of Council Bills means a

diminution of the resources of Government to that extent in India which lie with the Imperial Bank and the consequent stringency in the money market—a stringency evidenced by an abnormally high bank rate. Thus at a time when with a favourable balance India ought to overflow with the precious metals, thus helping a credit superstructure to finance trade and industry, we find an actual contraction of credit with all its depressing effects on trade and commerce. We had an Industrial Commission for suggesting measures for the development of Indian industries and a Fiscal Commission to foster and protect nascent Indian enterprise; and a Tariff Board gravely discussing the extent of the protection to be given to key industries; and on the top of it all we have currency manipulations which can only have one effect that of making all industrial development difficult by the contraction of credit. Even in a country with a large credit superstructure the raising of the bank rate by one per cent created a clamour in economic circles; what shall we say about the prospects of industry in a country like India with a banking organisation far behind that of England if amongst other things the currency measures of the Government can within a few weeks compel the banks to raise the bank rate from 4 to 7 p. c. Thus the transfer of gold and the sale of Council Bills are clear indications of a deliberate attempt at persisting in the policy of the past thirty years, which aims at giving the rupee an artificial exchange value, and which has resulted in depriving India of millions of worth of gold which might have flowed into the country, diffusing prosperity and stimulating her industries. A right or wrong policy in matter of currency and exchange vitally affects the entire economic life of a country; and whilst public opinion is concentrated on the question whether the rate of exchange should be 1s 4d or 2 shillings the main issue is apt to be lost sight of. The primary need of India is the adoption of a sound monetary system; this need can be easily met owing to the advantageous position of India in the international market, our rulers instead of meeting this in a statesman like manner have experimented with our currency to the sacrifice of our interest and this experiment is now to be continued in the same reckless manner as in the past and is to be defended in the name of "sound economics". The only way out of this muddle is the adoption of a gold standard and gold currency.

# THE GOLD EXCHANGE STANDARD OF INDIA;

(*Pre-war period*).

BY MR. T. J. KUMARASWAMI.

The term gold exchange standard denotes a standard of currency based upon gold, but composed of substitutes for gold coins for internal circulation both being unlimited legal tender and mutually exchangeable at a rate permanently fixed as gold value of the substitute. Mutual exchangeability and ready convertibility from one to the other are highly indispensable to the successful working of this system. A system providing only for the issue of substitutes for gold but not for that of gold for substitutes provides for no exchange between the two, but only for a transfer of tokens for gold.

The issue of substitutes and their convertibility into gold should be free and easy else there will not be that automatic response on the part of supply to the demand for currency. If the substitute is manufactured from another precious metal which is occasionally subjected to violent fluctuations in value the issue as well as the convertibility of the substitutes will be rendered difficult. Even under ordinary circumstances convertibility will be rendered difficult not only by the usual loss in value that may result by selling the coin as bullion but also by a sudden fall in the price of the metal itself which is likely to occur if a large quantity of it is suddenly thrown upon the market. Inconvertibility during crises means chaos and national bankruptcy. It is highly disastrous to the industrial prosperity of the country.

In a period of rapid industrial progress though the evil effects of inconvertibility may be negated to a good extent by the favourable balance of trade yet it is liable to bring about inflation as the issue of substitute is not regulated by a free mint but by governmental agencies which in busy seasons could increase the tokens but could not provide an outlet for them in slack seasons.

Necessity is the mother of invention. A gold exchange standard was thought of by Ricardo at a time when gold was at a premium. It was not given effect to in England itself as gold became abundant soon after due to the fresh discoveries of gold mines and increased production of that metal.

Countries having large stocks of silver in their currencies and not having a very favourable balance of trade have adopted the standard as a transitional measure as a link between silver mono-metallism and gold mono-metallism, or between bi-metallism and monometallism. A precious metal different from the standard cannot serve as an unlimited legal tender permanently as a substitute for reasons given above. Many of these countries which adopted a gold exchange standard adopted a costly substitute in the form of silver coins. Many of them except India provided for a mutual exchangeability between gold and the substitutes. Mexico when adopting the Standard got the sanction of her legislature to a provision to adopt the pure gold standard itself in case of a rise in the gold price of silver as it was

thought that any other measure as an alteration of the ratios of exchange between the gold coins and the substitutes would result in an exchange debacle and a financial crisis of the worst magnitude.

It is a misnomer to call the Indian standard of the post 1893-98 period as a gold exchange standard. It did not provide for the mutual exchangeability between the standard and the substitutes, i.e. gold and rupees. Rupees were printed on silver and paper. The paper rupees were convertible into silver rupees which curiously enough were continued to be minted on a tola of silver eleven-twelfths fine even though the rupee was made to signify a gold coin representing one-fifteenth of the pure gold contents of a sovereign, i.e. 7.53844 pure grains of gold, according to the Indian coinage and paper currency act of 1899. The Rupees were not convertible into gold. Thus it will be seen that the substitutes printed on paper and silver were inconvertible into the standard money. The so-called convertibility of the paper currency was no convertibility at all. The paper money was like the silver certificates and the rupees printed on silver, were like the silver dollars of U. S. A. in the 19th century, legally on a parity with gold as a legal tender but not convertible into gold. These silver dollars and silver certificates were at a small premium as compared with silver bullion but at a great discount compared with the gold dollars due to the faith of the people in their government and to the fear they entertained about the full redemption of those substitutes in gold. The faith gave the premium and the fear brought about the discount. That was so even in such a civilised country as U. S. A.

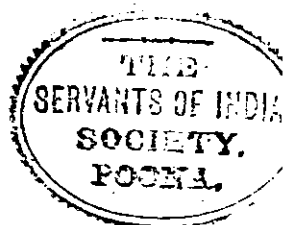
The only point of resemblance between a gold exchange standard and that which went by that name in our country is that substitutes were provided for gold coins. Our system differs fundamentally from the one contemplated by a gold exchange standard as ours does not provide for the mutual exchangeability and for an easy and ready issue and convertibility of the substitutes. Moreover, our substitutes besides being costly are printed on a metal which we have got in such a quantity in our country that any sudden attempt to throw them on the country as bullion is likely to bring down its price seriously.

Another serious defect is that the issue of currency has been left to the Secretary of State who by his sales of Council Bills in busy seasons went on adding to the stock of currency without providing an outlet for it in the slack seasons. The Government revenue is being collected in the busy seasons and it adds to the stringency in the money market, and to the additional demand for currency in those seasons. The Government increases the stock in the slack season by disbursing the rupees during that season. Mr. M. De P. Webb in his book on 'Advance India' states, "without an open mint the manufacture of money depends upon the judgment or upon the idiosyncrasy of some individual or individuals holding office under government and with the result that instead of being automatic in response to the general demands of the public the manufacture, or delay in manufacturing, or the

non-manufacture of money is liable to be inspired by the private or class requirements of a few influential merchants or big money dealers. Thus the foreign exchanges, the current rate of interest and the general level of prices may all be influenced by withholding money when it is badly wanted or issuing it in excessive amounts when there is no real widespread demand for it. The defects and grave abuses inseparable from state management have been so widely recognised that closed state-managed mints have been everywhere abandoned long ago". The state-managed currency has resulted in an inflation even in the pre-war period as may be illustrated by the index numbers of prices ruling for India and other countries in 1912 as compared with the quinquennium 1890-94.

INDEX NUMBERS OF PRICES: BASE 1890-94.

	1912.	
India	...	147
England	...	124
France	...	120
Australia	...	120
Tariff ridden } U. S. A.	...	128
Canada	..	130



During this period the business in the country improved by 369 p. c. (Page 446 Shirras on Indian Currency). Thus it will be seen (1) that the magnitude of the rise in prices is far greater in India than in any other country, (2) that the currency has been increased by such an amount as to not only counteract a fall in prices of 73 p. c. which would have happened with an increase in business by 369 p. c. but also to bring about an inflation of prices by 47 p. c. The cumulative effect of the yearly additions to currency is bound to tell upon the industrial prosperity of the country in spite of such a rapid increase in the business of the country. Our proverbial favourable balances could not prevent the crisis in 1907 and 1908 which were greatly due to such an inflation. And the inflation in the post 1908 period would have also made itself felt but for the conditions brought about by the War which increased the demand for the Indian commodities by leaps and bounds.

Another fact about our system is the ignorance of many about the true significance of the rupee. That a post 1899 rupee represented one-fifteenth of the pure contents of gold in the sovereign, i.e. 7.53344 grains of pure gold has not been understood by many. They took it, to the same old silver coin of 180 grains eleven-twelfths fine. i.e. they confused it with the rupee of pre-1893 days, the days of the free mint for silver. The Government and many of the members who served on the Babington Smith Committee committed the same blunder when they said that they were not in favour of depreciating the silver contents in the rupee, but that they were for raising the gold value of it. Raising the gold value of a standard coin means that a coin has no stability in value and as such cannot pretend to serve as a standard.

for deferred payments and that the measure of value is no longer the same. Just as an army cannot be defined as Khaki coats and shorts our rupee of the post 1893-98 period can under no circumstances be taken to mean a silver coin though printed on silver. The fact that silver has no bearing upon our currency question except that it serves as a costly pro-note signifying so many grains of gold has not been properly understood as may be seen by the Secretary of State's raising the gold value of the rupee when silver prices went up. He wanted that rupees should be kept as tokens. He did not consider that the rupees were gold coins.

The alterations in the ratios of exchange during the War and in the post-war years has been detrimental to the industrial progress of this country. The raising of the value of the rupee from 1s 4d. gold to 2s gold is the same thing as levying an export duty of fifty per cent on commodities and giving a premium of 37½% to foreign goods. During the war years the Indian exports did not show any appreciable decline because of the abnormal rise in prices all round. The fall in the value of the rupee during the recent years is due to the fall in the exports from this country and to an increase in our imports brought about by that change in the standard of value. It would not have been possible for any Government to alter the ratios of exchange in countries where pure mono-metallism reigned without also changing the standard of value. Here there has been a change from 1s 4d. gold to 2s. gold. But this is not obvious to many as the gold coin is printed on silver,

Could such a system be the ideal of Ricardo ?

Our salvation lies in the adoption of a pure gold standard without any further Mendalian experiments in the standards of value. First, we must judiciously dispose of the silver (to-day silver sells 12½d. a tola 17-12-23) Secondly we must go back to the old ratio of 1s. 4d. gold. Thirdly, we must restrict the unlimited legal tender value of the rupee. We must limit it. It should not be a legal tender for more than two sovereigns. Lastly, we must not be carried away by the disturbances in the sterling rupee exchanges, to raise the gold value of the rupee. The gold value once fixed must be permanent. We must introduce gold coins by purchasing gold from the proceeds of the sales of silver coins and from the gold standard reserves. And if left to herself, India will get her gold through her rapid progress in her industries. By adopting such measures India will not only tide over the present crisis but also become a potent factor in the money markets of the world, as potent as England or America of modern days. A stable currency will stimulate the growth of industries and under such circumstances no one need fear that gold will not be put to its proper use.

## EXCISE POLICY IN SOUTH INDIA.

BY DR. JOHN MATTHAI, MADRAS.

The excise policy of the Government of Madras has come in for a great deal of criticism in recent years, mainly on the ground that the revenue derived from liquor has shown a very large increase and is now nearly a third of the total revenues of the presidency. In 1910-11 the total excise revenue was 26.80 lakhs of rupees while in 1920-21 it stood as high as 548.57 lakhs. Advocates of temperance have pointed to this increase as an indication that the drink habit has increased under the present excise policy. Since the introduction of the Reform Scheme of Government, Excise has become a transferred subject and public opinion in consequence is demanding a change of policy with a view to a stricter enforcement of temperance among the population.

In view of the exaggerated and misleading statements which have been made by the more ardent advocates of temperance, it is necessary to point out that the figures while showing a very large increase in revenue do not show any perceptible increase in consumption. With regard to the two chief kinds of drink resorted to in the Madras Presidency, viz., arrack and toddy, the figures of consumption show that the aggregate quantity consumed has remained almost stationary since 1910. The quantity of arrack consumed in 1910-11 was roughly 1.5 million proof gallons while in 1920-21 it was 1.7. If these aggregates are averaged among the total population, the consumption per 100 of population in 1910 will be found to have been 4.0 proof gallons while in 1920-21 it was 4.2. Compared therefore with the increase in revenue there has hardly been any increase in consumption. With regard to toddy there, are no figures available which offer direct indication of the amount consumed but the figures with regard to the number of trees tapped, which give a rough indication of consumption, also point to a somewhat stationary consumption. The number of trees tapped in 1910-11 was 2.1 million while in 1920-21 it was 2.2. Since the revenue derived from arrack and toddy constitute practically the whole of the excise revenue of the presidency, it is safe to assume that the statement usually made that the increase of revenue is based on a corresponding increase of consumption is thoroughly misleading. On the other hand, what the figures do show is that the present excise policy has prevented not merely an increase of the drinking habit but also that increase of consumption which would have taken place in consequence of the normal increase of population and the increased purchasing power of considerable sections of the community.

§ 4 The real charge against the excise policy of the Government is not that it has increased consumption but that it has failed to reduce consumption. The declared policy of the Government with regard to excise is that of maximum revenue and minimum consumption. The actual results, however, show that while the revenue, has pursued an ever increasing maximum, the



consumption has stood at a steady and unchanging minimum. In view of the increasing demand for temperance measures in other countries and the strong and insistent demand which is now made by public opinion in this country in the same direction it is worth while considering whether a change is not called for with regard to the attitude of Government towards the liquor traffic.

The present system of liquor control in the Madras Presidency is what is known as the licensing method. Under the licensing system the chief instruments for controlling the consumption of liquor are (1) the imposition of a sufficiently high rate of taxation, and (2) the enforcement of restrictive regulations with regard to the conditions under which liquor is sold such as the reduction of shops and the regulation of the hours of sale. The taxation which is imposed under the Madras licensing system consists partly of a fixed duty and partly of a variable duty in the shape of fees for the sale of licences. In the case of arrack or country spirit, the fixed duty is levied on each gallon of spirit issued from the distillery while the variable duty is realised by the sale of retail licences by annual auction. With regard to toddy the fixed duty is levied in the shape of a tax upon every tree tapped, while the variable duty, as in the case of arrack, is derived from the sale of retail licences by auction.

It may be noted that the licensing method is also the method which obtains in the United Kingdom. The two chief differences between the licensing method as employed in England and in the Madras Presidency may be stated to be these:—first, in England the fees levied for the right of retail sale are fixed and are not determined by auction as in Madras, and secondly, in England the greater part of the shops for retail sale are under the ownership and control of the manufacturing interests under what is known as the Tied House system, whereas in Madras, a complete separation between retail interests and manufacturing and wholesale interests is insisted upon as an essential part of the Government policy of control.

The auction method which is the characteristic feature of the Madras system has been objected to on various grounds among which may be mentioned the following:—(1) that the speculative bids which are inevitable under the auction method drive licensees to push their sales to the utmost possible extent and at the same time to practise illicit methods of manufacture and sale, (2) that the annual reshuffling of licenses is apt to place the liquor trade in the hands of irresponsible persons over whom effective control would be difficult to exercise, (3) that the only way of avoiding the above evils is to vest large powers of control in the hands of subordinate Government officials, and (4) that the interest of the State in the liquor revenue is likely to be the greater because of the larger share which the State receives of the profits of the liquor business under the auction system.

As against these, it has been often urged: (1) that the rise in retail prices which often accompanies increased bids at successive auctions acts as a deterrent in regard to consumption, (2) that a system of annual auctions

prevents that growth of private vested interests which has placed such enormous difficulties in the path of temperance reform in the United Kingdom, (3) that by leaving the selection of licensees to be determined by auction it takes out of the hands of Government officials a discretion which might easily be abused, and (4) that the increase of profits which under a system of fixed fees might go into the pockets of private dealers is under the auction method largely diverted into the coffers of the State.

From all the controversy which has taken place over this question of *auctions against fixed fees*, two considerations stand out. The first is that under a system of fixed fees there is no necessary influence, apart from direct Government control, which operates to check consumption. The second is that under the auction method while a steadily increasing price might act as a deterrent, the increased interest of the dealer in pushing his sales is apt to operate in the opposite direction.

As possible compromises which would avoid the recognised evils of the two systems have been suggested what are known as the surcharge method and the rationing method. The surcharge method which obtains chiefly in Bengal works on the following lines: Vendors of liquor are selected not by auction but by the district authorities on the advice of Excise Department; the scale of licence fees is fixed every month on the principle that fees are increased if the sales of the previous month show an increase. The seller is allowed a fixed normal profit on the business. What is left over is divided between the Government and the shop-keeper in such a way that the Government share increases with increasing consumption while the vendor's decreases.

There is no doubt that this method will help to eliminate the speculative element from the sale of liquor while at the same time giving a maximum revenue to Government. But it does not avoid two of the recognised evils of the fixed fee method, viz. the selection of sellers at the discretion of Government officials and the possible creation of vested interests. Besides, it is likely to be attended by a serious practical difficulty. Whether Government will get an increasing share of the profits will depend very largely on the extent to which it would be possible to enforce a fixed selling price. The whole principle of the method, viz. that with increasing consumption Government gets an increasing share and the seller a decreasing share of the profits depends necessarily on how far the selling price arranged between the Government and the vendor may be enforced. This enforcement under the conditions of the liquor business in this country is bound to present considerable difficulties.

The rationing method which has been tried in Bombay may be described as follows: The amount of spirit issued to each shop from the distilleries every month is limited to a fixed maximum quantity. The quantity issued is based on the issue of the corresponding month in a selected previous year. A deduction of a fixed percentage is made in the current year on the corresponding month of the previous year. The system aims at a direct

reduction by Government of the quantity consumed instead of leaving the reduction of consumption to the operation of high prices as in the auction method. The chief objection which has been urged against this method—and the objection is one which deserves serious consideration—is that the quantity issued in the corresponding month of the previous year offers no reliable guidance at all with regard to probable consumption during the given month in the current year. The consumption of liquor depends upon various uncertain factors especially in a country exposed to the fluctuations of the seasons and the accidents of epidemics. If there happens therefore to be a greater demand in the current year during the particular month, the supply issued gets exhausted before the month is out and people either resort to illicit practices or in large cities to the purchase of cheap foreign spirits.

One remedy which has been proposed for this particular objection is the adoption of the system of rationing known as the Bratt system in Sweden under which a limit is set to the quantity issued to each person and not merely to the quantity issued to each shop. Every person receives an order book through which he may purchase each month a limited quantity of liquor so that a record is kept as to (1) the persons to whom liquors are sold, (2) how much is sold, and (3) how often sales are made to any one person. The system sounds well in theory; but from all accounts it has hardly been recognised as a success in Sweden since under this system there is nothing to prevent people who are not in the habit of drinking from obtaining cards for the benefit of others who desire to drink more than the allotted maximum.

From the foregoing discussion of the licensing method as practised in Madras and modifications of it which have been tried in other provinces it is fairly clear that if any substantial reduction of consumption is to be achieved it is necessary to consider the employment of other methods. There are three methods besides the licensing method which have been tried in other countries, (1) Monopoly, (2) Prohibition and (3) Local Option.

(1) *Monopoly*. The essence of the monopoly method is that the manufacture and sale of liquor are vested as a monopoly in the hands either of a governmental authority or of an *ad hoc* public body or a philanthropic association. The case of the Vodka monopoly in Russia is an example of the first kind of monopoly. The Carlisle experiment in England during the War by which the Central Control Board assumed the monopoly of the liquor trade in specified areas is an example of the second kind of monopoly. The third is represented by the well-known Gothenburg system in Norway and Sweden. It is doubtful whether any of these forms of monopoly are likely to succeed in India. The closer identification of the State with the liquor business and the possibility of the Government acquiring a vested interest in the profits of the business in a country where new sources of revenue are so difficult to find are serious objections to the adoption of a system of Government monopoly. Besides, a liquor business owned and managed by the State is certain to present enormous opportunities for corruption to the subordinate employees of Government and is not therefore

to be thought of in a country where there has always been peculiar temptation for such corruption. As for a monopoly held by a philanthropic association, the difficulty is the practical one of finding or organizing an association which would combine the necessary public zeal and business aptitude. The suggestion may however be made that it is worth while making an experiment in some provinces of handing over the sale of liquor to one or two co-operative societies of proved efficiency. The story of the Bengal Ganja Co-operative Society would seem to show some possibility of success in this direction.

(2). *Prohibition.* Prohibition is not out of the question at the present stage. The social damage done in India by drink, though increasing, cannot be held to be so great as to call for so drastic a remedy. Criminal offences which are traceable to drink are inconsiderable compared with offences springing from lust and acquisitiveness. Moreover, a non-industrial civilisation does not apparently induce the same appetite for drink or make the same demand for moderation in the use of liquor. The enormous staff that would be required for the enforcement of a prohibition law in a country where, as has been pointed out, "every man can (so to speak) have his own beer tap in his own back garden" and the large and sudden dislocation of public finance which would follow the enforcement of a policy of general prohibition are other considerations which put prohibition for the present out of the range of practical politics.

There is yet another circumstance to be remembered. In a country like the United States of America the introduction of a national prohibition law has been justified by the most authoritative opinion in the country on the ground that it is only by the Government expressing itself in no uncertain terms in favour of prohibition that a sufficiently strong public opinion can be created against the drink habit. In India on the other hand both religious sanction and social usage have regarded the drink habit with strong disfavour, especially among Brahmans and Muhammadans, the two classes whose influence counts for most in the country. It is doubtful if a further strengthening of public opinion by means of State action is required.

(3) *Local Option.* We are thus driven to local option as perhaps the least unsuitable of the remedies open to us. The main arguments for local option are, first, that unlike the licensing method it aims at applying a direct check to consumption and secondly that unlike prohibition it aims at bringing about not a sudden but a gradual elimination of the drink evil. The application of local option is bound to present difficulties in India the main difficulty being with regard to the creation of suitable electorates for the exercise of the option. Two conditions may be regarded as necessary for the effective introduction of local option; first a sufficient degree of intelligence and understanding among the electorate and secondly the inclusion in the electorate not necessarily of every adult individual in the area but of every important class and interest in it. These two conditions are far from being present in the great majority of the urban and rural areas in the

Madras Presidency. But a beginning may be made in some of the larger and more important urban localities where the conditions are likely to be satisfied. Even here however there will be difficulty in enforcing a local verdict once arrived at, with a public opinion which seldom recognises the necessity of assisting positively in the enforcement of its own decisions and with a Government department which is not likely to be over-sympathetic with an experiment the success of which will spell reduced revenues. But these difficulties must be faced because the failure of local option would mean the impossibility of applying any effective remedy for the problem of drink. Put briefly, the case for local option is this. The licensing method has failed to bring about a perceptible reduction in the consumption of alcohol; the more drastic remedies such as prohibition are obviously impracticable; and therefore if success can be achieved, it is to local option that we must look for it.

## SOME ASPECTS OF INDIGENOUS BANKING IN THE MADRAS PRESIDENCY.

BY MR. T. K. DURAISWAMI AIYAR.

The indigenous Banker fulfils an important role by way of bringing credit facilities within the reach of the people of the Presidency. Besides the Imperial Bank and the Exchange Banks the only Indian joint stock banks functioning on western lines are the Indian Bank and the Central Bank of India. The Imperial Bank has at present 32 branches in the Madras Presidency at important centres and the Indian Bank has only two branches while the Central Bank recently took over the branch of the Tata Bank which was started a few years back in Madras.

The Exchange banks are concerned only with the financing of foreign sea-borne trade and consequently the indigenous banker has to play a large part in financing agriculture, industry, and internal trade.

The Chamberlain Commission tried to find the answer to the question of the relation between the European money market in India and the indigenous money market. It may be said that western or modern methods of banking are making headway in the Presidency though the rate of progress is far from satisfactory. The connection therefore between the indigenous banker and the modern joint stock bank in the Presidency is becoming more and more intimate.

According to English Banking tradition the term banker cannot be applied in the strict sense of the term to the indigenous banker. It was a former Governor of the Bank of England who said that the first thing a banker should know is the distinction between a note and a mortgage, and anybody who lent funds on mortgage is not a banker. Banking on the continent of Europe has not followed the rigid lines of distinction between commercial banking and other kinds of banking business. We need not therefore make any apology for calling the indigenous banker as such, who does much business which a commercial bank will not touch. He finances agriculture as well as trade and commerce. The demand for credit on the part of the peasant arises in connection with the growing of crops, the digging of wells, the buying of cattle, the paying of kist and the performing of ceremonies. The wholesale and the retail traders have to be financed and the movement of produce over the country requires funds. Besides the Marwaris who have their establishments in the big towns of the Madras Presidency and whose *methods* of conducting their business are the same as those their castemen follow in other parts of India, there is a class called the Nattukottai Chetties who are indigenous to the Madras Presidency.

They belong to the Madura and Ramanad districts of the Madras Presidency and they are a very enterprising class. The benefits of settled administration in the Madras Presidency contributed much to their well-being and with the opening up of Burma which constitutes a magnificent field for

their exploitation their prosperity advanced rapidly. As a class they are very pious and they have spent considerable sums in renovating and repairing many a temple in Southern India. They have not yet taken to the joint stock method of banking and there is a prevalent feeling among them that their methods are very profitable and most satisfactory.

Individual fortunes of the magnitude that is the feature of Bombay or Calcutta are conspicuous by their absence in the Madras Presidency which is predominantly agricultural. Let us see what the resources are of a normal Nattukottai banker. Firstly that which is of greatest importance is his own capital. What marks off primarily such a banker from a joint stock bank is the high proportion of his own capital to the total resources which he employs in his business. Second in importance to his capital are the deposits that the banker takes from the public. The public can open current accounts with him. On an examination of the balance sheet of some of the bankers it was found that the deposits in most cases were nearly equal to the capital. The proportion of the deposits to the capital however depends on the standing of the Chetti firm and even in the best of cases the proportion is nothing like that of a joint stock bank. It is the professional classes mainly lawyers, retired officials, and some land-holders who happen to have spare money that keep such deposits. Besides, there are many belonging to the Chetti community, especially women, who have in many cases large funds and who are not in a position to do banking business themselves, and who therefore keep their money with a Chetti firm on current account or on deposit subject to notice. The community whose traditional pursuit is banking does not look with favour on agricultural investment and thus no inconsiderable sums of money belonging to members of the community especially ladies are on deposit with those of them doing banking business.

Thirdly, a large part of the working capital consists of the overdrafts allowed by the joint stock banks primarily the Imperial Bank. With the enlarged resources which the Imperial Bank now has at its disposal this source of working capital has come to be of increasing importance for the Chetti. He discounts Hundis of merchants and traders and these Hundis are rediscounted at the Imperial Bank and thus the Chetti puts himself in possession of funds. In effect the Chetti is a middleman between the joint stock bank and the multitude of small traders and merchants.

A fourth source for the Chetti in Madras is the short loans he raises from some Multani bankers who have settled down in what is called the Mint Street in the city of Madras. The report in Madras is that these Multani bankers have connections all over India unlike the Nattukottai Chetties and they come into possession of large funds which reach them mainly from the Bombay side. It is only as a last resort that it is said that the Chetti resorts to the Marwari. His standing with the joint stock banks which grants him overdrafts will be prejudicially affected if it is known that he resorts to the Marwaris in addition to utilising the overdrafts at the banks.

It is however a very common event for the Chetti to borrow from the

other Chettis doing banking business. The loans are taken only for short periods and the rate of interest charged is the 'rate current' which will be described below. A Chetti doing banking business will borrow only at the risk of his reputation from a brother Chetti at a rate higher than the 'rate current.'

Having described the way in which the Chetti comes by his working capital, let us see how he employs his funds. The Chetti firms doing banking business are to be found in most of the towns of the Madras Presidency and one of the causes of the success of the Chetti is that he is prepared to open a branch even in a small locality with a population of 6,000 or 7,000 inhabitants provided business of a sort is available. He is in close touch with the agriculturist and since he is prepared to advance money on pronotes without subjecting the borrower to much formality his firm is resorted to in spite of the rate of interest being fairly high. The rate of interest depends on the standing of the borrower and the urgency of his needs. The elasticity of Chetti business forms at once its strength and its weakness. There is not much of formality, no elaborate filling up of forms and not much of publicity; he is prepared to advance loans for short period or a long period, and he takes the risk of advancing money to people of doubtful repaying capacity charging however a very high rate of interest, as much as 36 p. c. in some cases. A Chetti banker if he is a rich and enterprising person has branches in different parts of the Presidency. The accounts are kept in Tamil and the method of keeping accounts is scientific. The success of the class is due to the fact that they are excellent businessmen and that they inspire confidence. The rates that they charge in discounting Hundis and the rates that they pay on current account are determined with reference to what is called the 'rate current.' The 'rate current' as it is called is fixed for each Tamil month on the 16th of that month and is expressed in terms of so many annas 10 annas or 11 annas or 12 annas per Rs. 100 per month as the case may be. The rates current for 1920-21, 1921-22, and 1922-23 are given below:—

			1920-21			1921-22			1922-23.			
			R.	A.	P.	R.	A.	P.	R.	A.	P.	
April	15th to May	15	..	1	0	0	0	15	0	1	0	0
May	„ June	„	...	1	0	0	0	12	6	0	15	0
June	„ July	„	...	0	15	9	0	10	3	0	13	3
July	„ August	„	..	0	12	6	0	8	6	0	11	3
August	„ September	„	...	0	13	6	0	8	3	0	10	3
September	„ October	„	..	0	13	6	0	9	6	0	10	0
October	„ November	„	...	0	14	0	0	9	6	0	9	6
November	„ December	„	...	0	13	6	0	10	6	0	10	6
December	„ January	„	..	0	15	6	0	13	6	0	12	6
January	„ February	„	...	1	0	0	0	15	6	0	15	6
February	„ March	„	...	1	0	0	1	0	0	1	0	0
March	„ April	„	..	1	0	0	1	0	0	1	0	0



Those who keep money on current account are paid 1 anna, or 1 anna 6 pies, or two annas less than the rate current per month on their deposits. The amount of deduction from the 'rate current' depends on the customer, the extent of his deposits and the intimacy of the relations between the customer and the banker. Anybody keeping money on current account will be paid the amount when he wants to withdraw it, and the reputation of a Chetti will disappear if he places obstacles in the way of the depositor. Hundis will be discounted by the Chetties at the rate current or half anna above the rate or one anna above it as the case may be according to the standing of the Hundi. When loans are made to approved borrowers for short terms interest is charged at 2 annas or 4 annas or 6 annas per month more than the 'rate current' for the month. There is considerable variety in the terms on which loans are made to borrowers. Retail traders, rice-mill owners, and owners of cotton ginning presses, are frequent borrowers from Chetties. When agriculturists borrow for short terms or a long term, loans are made at rates varying from 15 p. c. to 24 p. c. or 30 p. c. per annum. Chetties of late have been complaining that their business has ceased to be profitable in the Madras Presidency at present. They ascribe the cause to the decreasing sense of honour and probity of the borrowers. Though it must be confessed that modern conditions in the absence of a widespread and sound system of elementary education have worked havoc in the moral realm in the villages, it must be said that the main cause of the unprofitableness of Chetti banking in various places in the Madras Presidency nowadays is due to the influence of the co-operative societies in having brought down the rate of interest. The bulk of the funds of the Chetties are employed therefore in Burma, Straits Settlements, and Ceylon. Those are the blessed regions of a very high rate of interest. Important Chetti firms have branches in Rangoon, Madras, and other places in the Madras Presidency and Burma. Singapore, that great entrepot of the East contains a number of branches of Chetti firms. In financing the rice trade of Burma, Chetti firms play an important part. From December to May the rate of interest that rules in Madras is very high. That is the period during which the crops have to be moved. The important crops of the Madras Presidency in moving which much funds are employed are rice, groundnut, and cotton. These crops come on the market in January, February, March, and April. The importance of these crops will be realised when it is seen that in 1919-20 11.5 million acres were sown with paddy, 1.1 million acres were under groundnut and 2.8 million acres under cotton. The value involved respectively according to the computation of Dr. Slater was 10.7 crores of rupees, 13.5 crores, and 8.7 crores. It is during the above mentioned months that the land revenue has to be paid in. Madras being much more agricultural than Bombay, Bihar and Orissa, and Bengal, the pressure on the money market during the period is felt more severely. The owners of rice mills of which there are very large number in the districts of Kistna, Guntur, and Tanjore, buy up paddy in the

beginning of the season and store it. The Nattukottai Chettis' funds are employed in financing these purchases. As has already been pointed out the Chetties form in most cases the middlemen between the Imperial Bank and the traders employed in moving the crops. The Imperial Bank directly also makes large loans to these rice mill-owners. The "rate current" of the Chetties often reaches in February, March, and April Re. 1 per month. In this connection it may be mentioned that the Madras Chetti firms have agreed that the fluctuations in their rate current or in other words the "bazar rate" should not go beyond Re. 1 a month or below 8 as. a month. It will thus be seen that the Madras Presidency suffers with the rest of India in that the trade of the country in the busy season is subjected to a handicap of a very high bazar rate. The relation between the bazar rate and the bank rate is a very interesting theme of discussion. Mr. Keynes in his book on Indian Finance and Currency refers to the divergence that sometimes exists between the two rates. Though the divergence is becoming less and less, still it exists occasionally. It is due to the fact that the banking system of the country is not yet well articulated and the various limbs of the money market have not been co-ordinated as, for example, in England. The joint stock banks and especially the Imperial Bank will have to show considerably more enterprise and more branches will have to be opened in the mofussil before the Imperial Bank which is the Bankers' bank in India, can dominate the money market in the sense that it fixes the rate of discount for the whole money market. Besides since the Government deposits form a large proportion of the total deposits of the Imperial Bank any pressure like famine or frontier disturbance that induces the Government to withdraw deposits from the Imperial Bank may lead to the putting up of the bank rate when the conditions in the bazar do not justify a high bank rate.

What seems to stand in the way of banking development in the country more than any other factor is the absence of a good system of communications between the villages and the towns and universal instruction in the 3 Rs. These conditions will help forward the development of modern banking and it is only then that the agriculturist and the industrialist in India will be in a position to borrow at cheap rates of interest for productive purposes. The Nattukottai Chetties are in the main money-lenders and that vital characteristic of a commercial bank—the attracting of savings in the shape of deposits is not a conspicuous feature of Chetti banking. It cannot be denied that branches of powerful banks preferably the Imperial Bank working in the centre of a group of villages and manned by a sympathetic staff will be the means of drawing the savings of the peasants, and developing the habits of saving among those who have thus far been strangers to it. The evidence of Sir Bernard Hunter before the Industrial Commission was to the effect that the Madras Presidency Bank was unable to start more branches on account of lack of adequate resources. Such a complaint will no longer exist if the Imperial Bank is in a position to start branch banking

on an adventurous scale. It is often said that branches are very costly to maintain. The argument that is advanced in favour of infant industries being protected holds good in the case of branch banking in India. In course of time deposits will come when the working of branches will be profitable. And more than that, means will be found to finance agriculture, industry and commerce at as low a rate of interest as obtains in the advanced countries of the world. Besides establishment charges will have to be reduced and suitable Indians on a large scale will have to be trained for work in banks. Tears shed over the large import of gold and silver into India will be of no avail unless the leaders of public opinion and the Government co-operate in the matter of creating conditions in which banking development will be a success.

The Nattukottai Chetties are excellent businessmen and are noted for their probity and power of organization. But they have not taken kindly to modern education largely on account of the justifiable feeling that it does not help them to make money which is nearest their heart. It is the experience in other parts of India that partly on account of lack of business habits and a sense of responsibility on the part of directors many banks have failed. If Nattukottai Chetties take the lead in the matters of joint stock banking their business habits and sense of honesty will be an asset by way of making banking development a success. They are great believers in the traditional methods of carrying on business. Those in charge of modern commercial education will be placing the country under a great obligation if they succeed in inducing the boys of the Nattukottai community to take advantage of that education.

Chetti business as has been already pointed out takes on a variety of forms. There is a particular kind of business called 'adathi' which may be illustrated as follows :— X has a firm in Rangoon. Y has one at Singapore. X and Y enter into an agreement under which X should finance Y's firm at Singapore up to a limit. Y is entitled to repay the amount he draws from X at any time he chooses. Y pays X either a commission ranging from 1 to 2 annas on every Rs. 100 of the sum drawn from X or a fixed remuneration exclusive of the interest at the rate current. This is one system of 'adathi'. There is another system under which Y may not have any firm at any place. But he may invest a certain sum in X's firm at Rangoon and ask X to carry on money-lending business in his name at Rangoon. X thus acts as an agent of Y and gets from Y a commission ranging from 2 pies to 6 pies on every rupee of interest accrued according to the scale of the transactions. The 'adathi' firm should furnish monthly accounts to the principal who issues directions to the 'adathi' firm as to the persons to whom loans might be made. The principal may hold the 'adathi' firm responsible for any loss arising from transactions.

Banking evolution in India will perhaps pass through the stages which it has undergone in other advanced countries. Private banking on account

of the lack of publicity which it involves will find its sphere progressively reduced in the competition with joint stock banking. Students of banking are placed under a disadvantage in the matter of collecting banking statistics where private banking flourishes since private bankers are very particular in not disclosing the figures relating to their transactions. It is this absence of publicity on the part of private banks that will ultimately lead to the triumph of joint stock banking.

# NEW METHODS IN THE TEACHING OF ECONOMICS AND STIMULATING ECONOMIC RESEARCH.

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## THE EDUCATIONAL PROCESS.

Psychologically, education is the attention-association-action process. Teaching and research in economics is no exception. We choose a particular field of attention, and produce certain associations or general ways of looking at that field, and try to induce certain actions.

## PRESENT CONDITION.

Now, the field at present attended to by the economic student, is mainly the written book or spoken lecture, the associations evoked are directed to build up, by arguments, consistent theories about the statements in the books and lectures, and the action usually induced, is storing these in memory for delivery at the examination and often a-forgetting thereafter.

## PROPOSED CHANGES.

The new method which is here proposed for adoption, aims at including not only or primarily books and lectures in the field of attention, but rather the actual economic phenomena going on around the student, the economics of his house, the economics of his hostel, the economics of his street, the economics of his college. For *association*, I propose that the common repetitive elements and sequences be established in the minds of students for these phenomena actually observable and observed. The feeling I would like to impart to the student, is that Economics is not a finished science but one yet in the process of formation\*, and that in fact all sciences are living and growing bodies of knowledge. That economics deals with man working to satisfy his wants, and in his working alone or together he often wastes his energies by not adopting the best available methods of working alone or together, by failing to refuse his wants, by failing to learn and impart simple ways of enhancing satisfaction. The most important thing, therefore, is to study the economic process for the constant detection and elimination of avoidable waste, which comparative observation reveals everywhere, in various forms. The *feeling* that Economics is a science for the understanding and improvement of the material and service institutions of man is the feeling I would impart. The *action* that I would like to induce is the active transformation of these material and service institutions and methods for the better, so far as it is possible by intelligent individual and collective effort. The passing of examination is only an institutional *ad interim* goal, the real goal being the improvement of human material and service institutions. The educational programme should therefore include a direct observational basis and a practical suggestion basis induced from each student. How is this to be done ?

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\* See Mukerji's Comparative Economics ; Edie's Principles of New Economics ; Boueke's Critique of Economics.

### WASTEFUL WAYS.

We often forget the fundamental truth that all learning leaps up from life, from its needs seeking satisfaction from the available surroundings. Life is thus the perpetual seed bed of learning both for its generation and correction. Therefore learning divorced from life, leaving out the appropriate stimulus in the immediate surroundings of the student, is rather a deadweight than a chart or compass. There is, as I have shown, and should be, no mystery about the fundamental quest of Economics. In its essential production and consumption aspects, as against the price and profit aspects so much stressed, it is really the science of study and reduction of the ratio between human effort and human satisfactions, and these efforts and satisfactions, go on in the life of the student and all around. There is the economics of study, the economics of physical exercise, economic aspect of all things, *i.e.*, fruitful and wasteful ways of doing those things. Similarly there are fruitful and wasteful ways of getting food, clothing and shelter and other satisfactions. The realization that there are such comparatively more fruitful and wasteful ways in all lines of human endeavour is the bedrock of economics. Unless such a realisation is imparted to the student, he has not been started on a living growing science, but on a dead and decaying verbalism and sophistry.

### WIDE RANGE OF MODIFIABILITY.

Among the B.A.s in Economics that we get in the Sociology class I have not found the presence of this fundamental realization. It appears to me from what I have seen and heard, that at present we impart information on economic topics, but fail to stimulate investigation, interpretation and inventive suggestiveness for improvement of economic phenomena around us. Our teaching appears to be guided by tradition and memoritar methods rather than by fresh and forward thinking stimulated by our surroundings. Learning with us rises from books and leads to degrees, instead of rising from life and trying ever to improve the conditions and quality of life; We stress too much perhaps the invariability of natural and social phenomena but not the wide range of modifiability of social phenomena specially by wise and well directed intervention. We forget the great law enunciated by Comte, that in the Social sciences, though our powers of prevision are very much circumscribed by the variable nature of all life, our powers of modification are by the self same law greatly enhanced. Approximate prevision and wise and varied modification should therefore be our goal in Economics. And the constant detection, location, elimination of wasteful ways of doing things, and the discovery of more fruitful ways of guiding individual and combining collective effort, should be our method.

### INFORMATION AND ENTERPRISE.

To bring about improvement in the material and service institutions around us, what must we do? We must fulfil the conditions of successful improvement. The improvement of the world, as I have written elsewhere,

depends on exact information and courageous enterprise. The ways of finding out exact information and rendering it available for ready reference, are thus immensely useful to humanity. A multiplication of libraries, under expert and scholarly librarians, who will card-index all the available literature on economic topics chapter by chapter and topic by topic would thus be found highly helpful. For it is only when we lay our plans on the basis of exact information and courageously carry them out that our intervention becomes successful. The degree of success attained in converting efforts into desirable results measures our efficiency, in any line. If then we can march from our present large efforts and small results to small efforts and large results, we shall have increased our economic efficiency, which should be the goal of our economic thought and endeavour.

#### METHOD AND MANAGEMENT.

What shall we do to get the exact information we require in all our intervention? Pursue the scientific method of investigation, is the answer. How shall we attain the reasonably attainable maximum of result from our efforts? Make use of the dicta of Scientific Management or Efficiency as it is briefly called. Scientific Method and Scientific Management, are then the two approaches towards improvement, whether it be in personal, domestic neighbourhood, municipal, provincial or national or even international economics.

#### THE SCIENTIFIC SPIRIT.

It therefore appears to me to be highly necessary that all our students in Economics, as well as other Social sciences be given a working familiarity with the few fundamental principles of Scientific Method and Scientific Management. Now what is the Scientific Method that is to be used for getting the exact information we want for every enterprise? It is the method set out by Bacon in his *Novum Organum*, the method suggested by Descartes in his "Discourse on Method", the method so notably expounded and used by Comte in his *Positive Philosophy* and *Positive Polity*, called by him the *Positive Method*. In the words of Minto, "The mandate issued to the age of Plato and Aristotle was *Bring your beliefs into harmony with one another*. The mandate of the medieval spirit was, *Bring your beliefs into harmony with dogma*. Then a new spirit was aroused the mandate of which was, *Bring your beliefs into harmony with facts*." This is the spirit of the Scientific Method which I would like to see the students familiarised with, for the impression that has gained on me is that our universities and our students as well as the institutions around us still manifest the medieval spirit of squaring our beliefs with written dogma, instead of with the facts open to our observations around us.

#### BACON'S PRESENTMENT.

What, in the briefest manner, may we put down as Bacon's presentment of the Scientific Method? Spiller, in his "New System of Scientific Procedure" (p. 42) summarises Bacon's teaching as follows: Bacon bids us turn to facts, and cease drawing conclusions from propositions, which have not been esta-

lished inductively. He insists that all interpretation of nature commences with the senses, and leads from a perception of the senses by a straight, regular and guarded path, to the perception of the understanding. Observation should be virtually exhaustive in regard to variety, so far as classes of relevant facts are concerned we are to observe, we are to move step by step, and not to aim directly at distant conclusions; we are to watch for the presence of a quality (*e. g.* in the example which he takes to illustrate his method "Instances agreeing in the nature of heat") or its absence under certain circumstances (Instances in proximity where the nature of heat is absent); we are to examine the degree of the presence of a quality ("The table of degrees or comparison in heat.") We are systematically to exclude from the three preceding collections what is immaterial to the issue ("Exclusion or rejection of natures from the form of heat") and finally we are to formulate a double conclusion, theoretical and practical (First and second vintage). The purpose of science on the theoretical side, Bacon defines to be "the knowledge of causes, and secret motions of things" (*New Atlantis*); or as he expresses this in another place: the true and lawful "goal of the sciences is none other than this: that human life be endowed with new discoveries and powers" (*Novum Organum*, bk. 81.) The method is as we have seen to collect positive, negative and graded instances, and then draw theoretical and practical conclusions from such relevant material. This involves a comprehensive and cautious survey of facts, and a systematic elimination of everything that is irrelevant to the matter in hand, a procedure quite the opposite of the all too common practice of cursory observation, chance generalisation, and casual verification.

#### DESCARTE'S RULES.

Let us now take note of Descarte's rules given in his *Discourse on Method* and see how similar they are to the above. He writes that for arriving at the truth "I believed that I would find the following four rules sufficient, provided that I made a firm and constant resolve not once to omit to observe them.

"The first was never to accept anything as true, when I did not recognise it clearly to be so, that is to say, to carefully avoid precipitation and prejudice, and to include in my opinion nothing beyond that which should present itself so clearly and so distinctly to my mind that I might have no occasion to doubt it.

"The second was, to divide each of the difficulties, which I should examine, into as many portions as possible, and as should be required for its better solution.

"The third was to conduct my thoughts in order, by beginning with simple objects, and those most easy to know, so as to mount little by little, as if by steps to the most complex knowledge, and assuming an order among those which do not precede one another.

"And the last was to make everywhere enumerations so complete and surveys so wide, that I should be sure of omitting nothing." *Discourse on*



Method in Scott Library, p. 22.)

#### COMTE'S CONTRIBUTION.

What in briefest summary is the Positive method of Comte? It is the employment of the different methods of investigation developed by the exact sciences. Thus the Positive or Scientific method is statistical, axiomatic, deductive, and resorts to indirect measurement of magnitudes as in Mathematics. The Positive method is observational as in Astronomy. It is experimental as in Physics. It resorts to exact nomenclature and notation as in Chemistry. It is comparative and classificatory as in Biology and Psychology. It is historical and evolutionary as in Sociology. It is telic, purposive, and has promotion of human welfare in view as in Ethics. The seven characteristics of all positive ideas are, that they are real, useful, certain, exact, organic, relative, sympathetic. The Positive method further requires that helpful and legitimate use be made of the ascertained laws of all the above seven sciences for each science. Thus Mathematics should expand and be regenerated by Astronomy, Physics, Chemistry, Biology, Psychology, human history, and the ethical attitude of being useful to man and his surroundings. Similarly Economics should take the aid of Mathematics, Physics, Chemistry, Biology, Psychology, and Sociology, its general science, and must be guided by the ethical motive and have a purposive human welfare outlook. It should thus utilise not only the methods, but the ascertained generalisations of the sciences preceding and succeeding it in the above encyclopedic scale.

#### SCIENTIFIC MANAGEMENT.

Investigation, or collection of exact information, should therefore proceed according to the scientific or positive method as outlined by Bacon, Descartes, Comte. Enterprise to be effective must likewise make use of the principles of Scientific Management or Efficiency. My study of Comte has shown me that he was a pioneer in enunciating the principles of Scientific Management too, though unfortunately he did not live to write his great work the organization of human industry, where he would doubtless have developed these principles in detail. We have however a good first statement of his principles in his essay on scientific works required for the regeneration of society. Fredrick Winslow Taylor, the modern apostle of Scientific Management, has given us a statement of Principles of scientific management, in his work bearing that title. Harrington Emerson has given us an amplified statement of these in his work known as Twelve Principles of Efficiency.

I must content myself with a bare statement of the principles of efficiency enunciated by these great minds, and hope that the earnest enquirer will study first hand in detail the writing of these pioneers in the application for scientific principles in the management of human effort,

#### COMTE ON REGENERATION.

Comte, bent on regenerating human society, enunciated the scientific operations necessary for that purpose, which, to my mind, constitute a first statement of the principles of scientific management or Efficiency. Thus

he emphasises the efficiency principle of "planning" as being necessary for better performance. As stated by him "Each complete human operation, from the simplest to the most complicated, whether executed by an individual or a multitude is unavoidably composed of two portions; in other words give rise to two kinds of consideration; one theoretical, another practical; one concerning the conception, another the execution. The former necessarily precedes the latter which it is destined to guide. In other words all action presupposes antecedent speculation."

"In the earliest infancy of the human mind, theoretical and practical labours are executed by the same person for all operations; yet this circumstance while rendering the distinction less evident, does not affect its reality. Soon however these two classes of operations begin to disengage themselves, as demanding different, and in some respects, contrasted capacities and training. As the collective and individual intelligence of the human race begins to develop itself, this separation becomes more and more pronounced and general, and constitutes the source of new advances. The degree of a nation's civilization philosophically considered, may be really measured by the extent to which Theory and Practice have been separated and harmonised. For the grand instrument of civilization consists in the Division of Labour and the Combination of Efforts." (Comte's Early Essays, Harison, p. 115.)

The further hints that can be gathered from the same chapter for the effective organisation of human effort are, first the ascertainment of the active aim of a Social system; secondly, finding out the social elements and forces best fitted for carrying out that aim; and thirdly, the necessary redistribution of authority and reform of institutions. Finally he says three series of works are required for the reorganisation of society. "The first series aims at forming a system of historical observations upon the general progress of the human intellect, destined to become the positive basis of politics, thus wholly freeing it from a theological and metaphysical character, and impressing on it a scientific character." (Compare the efficiency principle of Record).

"The second series seeks to establish a complete system of Positive Education, adapted to a regenerated society constituted with a view to action upon Nature; in other words it aims at perfecting such action, so far as it depends on the faculties of the agent." (Compare the efficiency principle of Training.)

"Lastly, the third series embraces a general exposition of the Collective Action which civilised men in the present state of their knowledge, can exercise upon Nature, so as to modify it for their own advantage, directing their entire forces to this end, and regarding social combinations only as means of attaining it." (Compare the efficiency principle of Co-operation). As will be seen by comparing these with the principles of Scientific Management as laid down by Taylor, or the Efficiency principles of Emerson, these run parallel to their principles, and thus Comte anticipates the modern

Efficiency movement by fully eight decades.

**TAYLOR'S PRINCIPLES.**

The four great principles of Scientific Management as stated by F. W. Taylor are :—(1) The development of a true science of each and every work or operation. (2) The scientific selection of the workman. (3) His scientific education and development. (4) Intimate and friendly co-operation between management and men.

“As contrasted with the prevailing in methods of doing things managers under the scientific management take new duties on themselves.

1stly. “They develop a science for each element of a man's work which replaces the old rule of the thumb method. The person actually doing a piece of work, the common labourer does not know the laws that govern the production of the best results from his efforts. He is equally unable to know the science of what he is doing. So the management help him by finding the best, easiest, and quickest, ways of doing the particular thing.

2ndly. “They scientifically select and then teach and train the workman, whereas in the past he chose his own work, and trained himself as best he could.” There is a great deal of waste on account of misfits. The idea seems to be that one man is as good as another in the world of labour, just as that out of the ordinary methods of doing a work, one method is just as good as another. This is a fallacy. We find different capacities, and aptitudes, different qualifications in different men, and we select the best man for the work, i.e., the man best fitted to do the work, looking to his physical constitution and mental make-up. Then we are to train him in the best method of doing that work.

3rdly. “They heartily co-operate with the men so as to ensure all the works being done in accordance with the principles of the science which has been developed.” The management has to provide not only the right sort of training but the right kind of tools, and the right sort of conditions for getting the best results,

4thly. “There is an equal division of works responsibility between the management and workmen. The management take over all the work for which they are better fitted than the worker, while in the past the workman had all the responsibility. All this requires the kindly co-operation of the management and involves a much more elaborate organisation and system than the old fashioned gang system. The organization consist of one set of men, who are engaged in the development of science of labouring through time study, another set of men mostly skilled labourers, who act as teachers and help and guide men in their work; and a third set of tool men who provide the workman with proper implements and keep them in perfect order. Another set who plan the work well in advance, move men with the least loss of time from one place to another, and properly record each man's working.”

“The co-operation aimed at in this type, aims at helping each man individually, studying his needs and short-comings, teaching him better and

quicker methods, and seeing that all workmen help and co-operate with him, by doing their part of the work right and fast."

#### EMERSON'S ANALYSIS.

Now, how have the principles of efficiency been stated by another great exponent of efficiency, who has done such remarkable work in popularising this master message? I refer to Harrington Emerson the author of "Home Course in Personal Efficiency". He defines Efficiency, as the mental and physical ability to find and take the best, easiest, and quickest way to the desirable things in life. He has divided his efficiency principles into practical and ethical ones. According to him the practical principles of Efficiency require, that in order to find out and take the best, easiest and quickest way to the desirable things in life, or doing any work, it is necessary that 1. We must make use of immediate, reliable, adequate, and permanent records. 2. We must make a definite plan for all we desire and want to do. 3. We must make schedules based upon standards for employment of our time, materials, equipment and energy. 4. We must make a habit of despatching all operations. 5. We must make a rule to standardise the best known conditions. 6. We must make time and motion studies and standardise all operations. 7. We must study and follow written standard practice instructions.

The ethical principles of Efficiency according to Emerson are, that in order to find and take the best, easiest and quickest ways to the desirable things of life, 8. We must have clear and definite ideals of what those things are. 9. We must measure and test every means used for attaining, achieving or acquiring them, by the standards of common sense. 10. We must seek and follow competent counsel. 11. We must discipline ourselves into active harmony with the principles, laws and rules governing these things. 12. We must demand the fair deal. 13. We must eagerly desire, earnestly seek, and insistently demand for ourselves, our efficiency reward.

Analysing these principles further, we find the practical principles of efficiency really require us to "Plan our work, and work our plan." Without a plan man is not able to do his best and utmost work; similarly an institution or a group working without planning or planning and not carrying out the plan, is sure to remain backward. But the plan must be based on accurate investigation of facts, an adequate and reliable records. The plan must be itemised or detailed, else it will not be workable.

The ethical and psychological principles of efficiency require that the ideal or goal must be defined, must be eagerly desired, and that in achieving it, we must be fair to ourselves and others, make the best use of our wits and get help from other people, and then regulate our conduct in conformity with our ideals.

#### FIRST PROPOSAL.

In the reform of Economic teaching and research my first important and specific proposal, therefore, is that every student be given a working familiarity with fundamental principles of Scientific Methods of investigation,

and Scientific Management of human effort, as tentatively outlined by me, above.

### SECOND PROPOSAL.

My second specific proposal is that every student be trained in all the three distinctly developed branches of inductive investigation namely 1 what is variously known as Monographic, Individual or Case method of investigation, 2 the survey or group method of investigation, 3 the statistical or mass method of investigation. My experience leads me to believe that our students have only a slight acquaintance with the statistical method, and that most of us, leave apart the students, have a faint and far-off notion of the technique of the Case method as employed by doctors, as stressed by Mary Richmond in her "Social Diagnosis," the monographic method of Leplay, the individual method as set forth by Healy in his excellent study of "The Individual Delinquent." We are also I am afraid little acquainted with the available literature on the technique of Social survey, as set forth in such books as Aronovici's Social Survey, or Elmer's Technique of Social Survey or the Four orders of Survey so much stressed by Prof. Geddes and his special technique of correlation and co-ordination of categories in social investigations, as set forth by him in such books as Coming Polity, or The essentials of Sociology in relation to Economics." It may perhaps be news to some of us that these contrasted and now well developed methods of investigation do much to mutually define the appropriate portions of the field where each of these can be usefully employed and to correct the conclusions arrived at by using only one of them. In such important branches of Social study such as religion and penology these methods of investigation have led to opposing or complementary conclusions. Compare for instance such a book as James's Varieties of Religious Experience, which employs the individual method of investigation with that of Durkheim who in his study of religion employs the intensive survey method, with that again of Spencer who in his study employs the extensive survey method, with that again of Starbuck who in his Religious Psychology makes such use of the statistical method and realize how different portions of the same field are illuminated by these different modes of approach, and how the weaknesses of each method are often corrected or brought to light by the employment of the contrasted form of investigation. Or again in Penology, Dr. Healy has shown the pitfalls of the statistical mode approach, or the classification of crime being made to do duty for classification of criminal, or again, even a classification of criminals itself being misleading as long as along with the mental and physical defects of the criminal we do not take into consideration the environmental differences in each case. It will appear from this how the concurrent use of the individual, monographic or case method, the intensive and extensive survey methods, and the statistical method, mutually correct and confine each within its proper field of applica-

tion. I therefore propose that every student be given a working familiarity with all these three methods of investigation, all of them important and specific developments of the inductive or rather their scientific method.

### THIRD PROPOSAL.

My third and final proposal is that practical work should be insisted on in Economics as in every other science, and that the graduating student be made to keep note book of practical or field work embodying his own investigations, interpretation, and suggestions for improvement, with regard to the phenomena investigated. Thus the practicals should include such exercises as the filling up of a few urban and rural family budgets, cost analysis of a complete industrial or business operation or unit, observation, and suggestions on the economic life of an institution, the economic life of one's own street, village, and city. What is needed is to link economic teaching to life, and rendering it readily available for the service of the ordinary situations which the student will frequently meet with as well as the significance of the larger country-wide problems of currency, finance, trade, transport and tariff.

### MY METHOD.

Towards this investigative, interpretative, and inventively suggestive mode of field study I believe the following orderly line of approach will be found helpful. The student begins with immediate inspection or Economoscopy of the parts or processes he intends to study. He names them by their popular name, and indicates the time and place and other significant setting of the distinguishable parts and processes he is out to study. From this direct free observation he proceeds to Economometry or measuring and mapping of the parts and processes, as far as they can be measured and mapped. He next compares, classifies, describes and defines the distinguishable parts and processes, and gives a graphic and descriptive report of his survey. This step may be called Economography. The immediate inspection and direct description, will very likely reveal to him vestiges of a persistent past and tendencies indicatives of a future trend. This must naturally lead him to a genetic and teleological study of the parts and processes before him. The investigation of the vestiges, pushes his studies into the past of the phenomena under survey, so that he begins to trace their antecedents in the past and transformations through time as far as he can do so, through present indications and recorded observations of the past. This step may be called Economogenetics. Combining his studies of the past with those of the present, he may now essay to form a forecast of the future, probable and possible. This effort may be called Economotelesis. Next he may exercise his mind as to how to bring about the best possible future for the phenomena under inspection, investigation, and interpretation, and lay down the lines of useful intervention. This step may be called Economotechnics. That completes the natural educational series starting with systematic observation leading on to measurement as far as practicable, and graphic and descriptive report, thence to a peep in its past history, and an effort to foresee its future, and a

thoughtful plan for improving the future. We thus proceed from survey of the present to a study of the past, to a subjective synthesis of the whole towards foreseeing the future and finally plan again in the living present suggesting activity towards making the better future. Training along these lines will show to the student that all his surveys, studies, and interpretations are fruitful only as they lead to a better future, and that effort short of that is very often only wasted effort. This will impress on him the fact, that learning should be continually regenerated from life and should in its turn serve and regenerate life.

## INDIAN ECONOMICS.

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Laws of economics are statements of tendencies which are in constant operation but the direct effects of which may be overpowered or modified by other tendencies simultaneously operating. These modifying forces are not necessarily economic. Ordinarily economics studies man as he is placed in modern societies. Hence the assumptions which are made by modern societies in general also form the assumptions of economics. Of these the two most important assumptions are private property and competition. The idea of property involves the right that each man in a modern society has complete and absolute power to do whatever he likes with what is possessed by him so long as he does not interfere with similar rights of others. It is apparent that economic laws deduced from such a society will be modified in their effects if they are applied to a society where no private property is allowed.

A similar and, from the point of view of economics, probably more important assumption is that of free competition. As this assumption is very important we shall consider it in some detail in order to avoid any misunderstanding. Competition in economics seeks to give free scope to the economic self-interest of individuals without any checks. These checks are usually considered to be (1) custom which is always so important in the life of man; (2) combination by which producers or sellers or any other members of an economic group may join together in order better to fight with other groups; and (3) legislative interference with free competition.

With private property free competition involves freedom of contract and therefore enforcement of contracts when voluntarily entered into. This competition is a biological essential which can be seen in all spheres of life, vegetable and animal. It is seen in what is called struggle for existence or survival of the fittest. In a sense it includes co-operation. Co-operation is consciously working together for a common end. Its object is none other than that of competition. Both seek self-interest, one individually and the other collectively. If the self-interest of the individual be contradictory to that of the group it cannot be the interest of either the individual or the group to retain such co-operation. Co-operation, therefore, is really group-competition; and in this, groups may combine into bigger and bigger groups. Thus one State is a unit as against other States; the individual members of which combine for certain purposes, although sub-groups may have partially antagonistic interests. Nor does this competition necessarily imply anything sordid just as competition in biological evolution does not do so.

Because laws of economics normally presume that private property and free competition operate in their working; therefore to the extent that



this does not hold in a community or country, to that extent laws of economics must be modified in their operation in the light of existing facts. Hence it is necessary to ascertain to what extent economic laws as they have been developed and formulated in the west are applicable to India, and along what lines this modification of their operation is to be seen.

The need of such study as also the difficulty consists in the fact that during the last one hundred years the conditions of Indian life have been changing, rapidly in some cases, slowly in others, but changing all the same, by the impact not, as usually imagined, of the western system merely, but more of what we may call "modernism". The railways, posts, telegraphs, etc. have worked more towards this end than the culture of the west, the effect of which is not so direct nor so strong upon the masses of the people. These changes in social life require to be specially studied in order to discover the results of the operation of economic laws upon the old and the new system in India.

A great difficulty in the way of the scientific student is in the paucity of sufficient and reliable data about the facts of Indian life, especially in the villages where more than ninety per cent. of the population live. This is so in spite of the wonderful mass of statistical information collated by Government. This difficulty is further enhanced by the fact that social changes vary in various parts of the country as a result of the difference in temperament, social customs and traditions, and the stage of development of the people. Also the forces of modern applied science have differently affected different areas.

In applying economic laws to India we find that most of the modifications of their operation are the result of want of the same degree of competition as prevails in the west and upon the assumption for which general economic laws have been built up. For example, in social life caste rules prevent mobility of labour both from trade to trade and from place to place. Similarly variation in wages does not always follow variation in the demand and supply of labour but on customary wages which limit competition.

Some people allege that Indian society is based on an entirely different principle from what obtains in the west, this principle being co-operation as contrasted with competition. As already pointed out this view is wrong inasmuch as competition does not exclude co-operation. Competition assumes the operation of the individual's economic self-interest, and co-operation, when voluntary, is only an instrument to further the same. Such co-operation as is found in India is based upon the lines of the community, village, occupation, and nationality. But the principle is the same as in competition, viz., to foster the self-interest of the groups, and the co-operation obtained from individuals must, in normal course, follow the lines of joint and separate interests of individuals. If there be any conflict between the two kinds of the individual's self-interest he adheres to or gives up co-operation according as the total benefit which he derives for himself is or is not greater than his benefit without such co-operation. Thus in essence there is little

difference between competition and co-operation in economics. If by co-operation be meant compulsory association in economic activity against the self-interest of the component individuals as judged by themselves, that is not at all desirable. If that exist in any part of India it is economic tyranny and should not be tolerated.

Such want of competition which acts as a drag on economic development may be born of social customs, religious prejudices, and various other factors. Thus land in India is subdivided into too small fragments which cannot be economically cultivated. This is due to the law of inheritance which prevails among both the Hindus and the Mussalmans. Also love for every plot of ancestral lands generates the desire of having a share in each plot by the descendants, with the result that each person often holds several plots which obviously cannot be economically used whether in the matter of time wasted in going from one plot to another or of wells for irrigation or of fencing and watching or sowing and reaping. Similarly labour is not so mobile because of the limitation of competition by caste rules, love for home, ignorance, and social prejudices.

The above illustrations will make clear the line along which the economist in India must work in attacking its economic problems. This attitude frankly condemns those who are supposed to have inaugurated a new school of Indian Economics instead of a new phase of study only. Those who seek to derive new laws applicable to India alone or to reject economic laws in their operation in India because there are other conditions and different factors toil in vain in their effort to construct a science of Indian Economics as distinct from economic science in general.

## THE TREND OF INDIAN THOUGHT IN ECONOMICS.

By B. G. BHATNAGAR, LECTURER IN ECONOMICS, UNIVERSITY  
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Last year Dr. Radhakamal Mukerjee read a paper on "The New Economics and the Eastern Outlook" before a gathering of the members of the Indian Economic Association. In that paper he emphasised the point that India had a contribution to make to the world's Economic Thought. The discussion that was provoked by his paper left an impression upon my mind that even Indian Economists of repute did not believe that India had her part to play in the evolution of Economic Thought. For example, Professor V. G. Kale of the Fergusson College, Poona, who may rightly be looked upon as one of the leading living Indian economists, remarked to me in all seriousness, "Do you also believe with Radhakamal that India has her contribution?" I said "yes", and it is in support of that "yes" that I am writing these lines for the consideration of fellow students.

Although we find discussions of such economic topics as currency, taxation, weights, and measures, in such old texts as Artha-Shastra of Kautilya, or Sukara Niti, English translations of which have been recently published, or in many books relating to the period of Muslim domination in India, most important of which is the Ain-i-Akbari, yet we can say, without any prejudice to the greatness of India's genius in other departments of life, that the science of Economics, as it is understood to-day, is distinctly an offspring of Western Europe, as it has been since the middle of the 17th Century and till the beginning of the Great War. As a social science it could not help being influenced by the Socio-political conditions of those days. And what were the most dominating notes of this era! (i) Production, and an ever increasing effort to increase production with no thought to its influence on the well-being of Man; and (ii) development of the spirit of Individualism, expressing itself in such things as (a) the assertion of the rights of an individual against other individuals, and as against the state or any other social group, (b) the assertion of the rights of individual social groups as against each other, and as against the state, and (c) the assertion of the rights of state as against the rights of the individual and the corporation, and (d) in this conflict of individual rights each oblivious of the interests of the whole.

And these have been the principal notes of the science of economics; (i) Individualism, with its corollary of free and unfettered competition, in a market where every one is acting for himself, (ii) Volume after volume written on Production, Distribution and Exchange—the last two being nothing but further processes to carry the modern system of production to its logical end, and (iii) in this clash for further production and free competition a comparative neglect of Consumption and its ultimate laws—ultimate in more than one sense: ultimate because it is ultimately on them that the so-called laws of Exchange and Distribution very largely depend, and further ultimate in the sense that it is on a thorough and correct understanding of these laws that Production, Distribution and

Exchange will seek their true level not only in the text books of Economics, but also in the din and dust of every-day life, where production means production of finished commodities, and not a discussion of certain theoretical concepts. Now one thing that India has to do and has begun doing it in her own way, is to make people realise that production is only a means towards an end—Human consumption—and not an end in itself as most of us take it to be. Over and over again, since the beginning of the Industrial Revolution in England, and even before that, this aspect of the relation of production to man has been emphasised, and as often man has refused to listen to it. It was the burden of that beautiful song which Lord Krishna gave to humankind in the battlefield of Kurukshetra many a thousand years ago, it was the same which Lord Christ preached in his own days, and which many a prelate has been preaching after him. It was on this that social thinkers of the 19th Century like Ruskin, and Morris, wrote and talked so much, and it is on this again that M. K. Gandhi has been writing and speaking in India in our own days. Then what are the implications of this way of looking at things, and the method of production adopted to produce them? Even so great that a whole chapter could be written on them but we shall confine ourselves here with a few remarks to put intelligent people on the track. Looked at from the point of view of the individual, the individual enterprizer must henceforth realise that production which so far has been to him but a means for selfish gain, is but a means for social well-being and this conscientiously and seriously, and therefore he should judge every movement of his in that direction from its likely results not only on his profits, but also on (i) the health and happiness of his men as man, and not only as an instrument of production, and (ii) on the health and happiness of the world at large. Looked at from the point of view of society the social effort must not be directed in a head-long way to increase production, hailing with unrestrained enthusiasm every single improvement or invention, whether in machinery, or in the processes of production, or in the methods of business organisation, without waiting for a moment to think on its influence on the well-being of Man. The unqualified social sanction that now exists for all additions to National Wealth whether in the quantity of goods of existing variety to satisfy existing wants, or of new varieties of wealth to satisfy new wants, must give place to a qualified sanction of the same where it will be recognised that an increase of wealth in the possession of an individual or for the matter of that in the possession of a social group does not necessarily lead to a *pari passu* increase of welfare. It may or may not.

Although some writers on Economics have been feeling their way towards this point yet one can safely say that even Pigou, whose statement on the relation of increase of wealth or national dividend and the resulting welfare is the latest, does not state it as clearly and in that peculiar form in which we would like to put it.

It was Jevons, the Senior, who probably after being influenced by the writings of Carlyle and Ruskin, first gave serious thought to the study of utility (consumption) and analysed those factors of which utility of a commodity to a man during a period of consumption, is a function. This analysis was carried further by Pantaleoni in his Pure Economics, wherein

he remarks "The usefulness of a *direct commodity to the consumer is a function not only of its own quantity but also that of all other commodities he consumes together with it*, of those he has consumed previously, and even of a part at least, of those he expects to consume later. Indeed the utility of a commodity depends further on the order in which other commodities have been consumed previously. Thus for instance the gratification of a loaf of bread depends not only upon its size and on the appetite of the eater, but also on the other viands, if any he partakes with it, on the fact of his having quenched his thirst or possessing the means of doing so, of his feeling cold or warm; tired or fresh, sad or gay. The order in which dishes are served heightens or detracts from the hedonic effect of a dinner. "And this we may take as the second step in the building up of that argument which we mean to put forward later on in this paper. The third great step has been taken by Pigo in his book *The Economics of Welfare*, part I, chapter IV, page 48, where he after laying down a general proposition in these terms, "Any cause which, without the exercise of compulsion or pressure upon people to make them work more than their wishes and interests dictate, increases productive efficiency and therewith the average volume of the national dividend provided that it neither injures the distribution nor augments the variability of the country's consumable income, will in general, increase economic welfare," goes on to observe that "this proposition, it will be observed, is purely qualitative in form, and states nothing about the quantitative relation between an expansion of the national dividend and addition to economic welfare. To remedy this deficiency completely is, of course, impossible. It is not impossible, however, to throw some further light on the matter. *To this end we may begin by leaving out of account the reactions that may be produced by the fact of consumption upon capacity for deriving enjoyment from consumption.* When this is done, the familiar law of "Diminishing Utility" instructs us that a given expansion of the national dividend is likely to be accompanied by a less than a proportionate increase in economic welfare."

This is the nearest approach to that statement which the writer of this paper first made, of course in a crude form, in a paper entitled "The Standard of Living or Life in India" in the year 1919, and which he now wishes to re-state in a more mature form. There would have been no necessity of doing so had Pigo worked out the point to its logical limit. He mentions it but with that important provision which is italicised in the above quotation. And one implication of that italicised portion may be that every addition of fresh wants, and of new commodities made to satisfy those wants, reacts upon the capacity of deriving enjoyment of an individual, and helps him to derive enjoyment from further new wants and new commodities. The fact of reaction is not denied. Reaction there is, and more so in a dynamic society, but I may be permitted to submit that it may take one of the two following forms. Either it may increase the capacity of deriving enjoyment, or it may decrease it. To hold the position that it always increases it is as untenable and as unsupported by facts, as would be the position of those who may say that it will always decrease. What seems to be reasonable is that under certain circumstances it will increase, while under others it would decrease the capacity for deriving enjoyment;

Take it for granted that further additions to wealth in the possession of an individual react upon his capacity for deriving pleasure, and always make it greater, even then the question remains. At what rate this increase in capacity takes place? Whether at a proportionate, or more than proportionate or less than proportionate rate? General discussions on this topic have evaded this question so far; but the underlying assumption seems to be that it increases either at a proportionate rate or at an increasing rate. Unless we assume one of these rates, we will have to come to the position that, sooner or later the reaction must take the second form, that is, decrease the power of deriving enjoyment. Now is this assumption of increase at a proportionate, or at an increasing rate justified? By no means yes. And why? because there is not an iota of statistical or any other inductive data of any sort to support it, beyond a vague feeling of self-interest that persuades people to think that it must be so, otherwise how can they support their demand of an ever-rising standard of living and ever-rising emoluments to maintain the same. And if the proportionate or increasing rate cannot continue for ever, the diminishing rate must begin to act after some point, and ultimately lead to a point where further additions to wealth, in the possession of a man will cause diminution in his capacity for deriving enjoyment. What are my reasons for holding this view? Here as there we have no statistical data to support our statement. But there is this difference that the first assumption is in direct conflict with the full life history of the Law of Diminishing Returns, or the Law of Diminishing Utility as it is called in consumption, and as we find it working in the case of individual commodities; while the second is in full accord with the same. A man A begins by giving to another man B, unit after unit of a commodity X. Now it is recognised by almost all that if the Units of the Commodity X be very small, of course relatively to the capacity of consumption of the individual concerned, then the first few Units will have very little utility for B, in certain cases they may actually have disutility, but as more and more units of X come to B, the utility of Units already in his possession will also rise, and each successive unit will have an increasing utility for him. Not only that each successive unit will go on reacting upon the utility of previous units, and will increase it. But this process will continue only up to a certain point. If however, A continues to give units of X to B, a point will reach after which each successive unit will have a decreasing utility for B, and if the process is continued further, then not only the utility of fresh additions will go on diminishing at a rapid rate, but it will also react upon the utility of the units of X already in the possession of B. This latter point has not been so far well recognised in the discussions of economic theory on utility; although a little reflection would show that it is this assumption which underlies the famous Law of Indifference, which means that in a market one price is paid for all the units of the same commodity. This gives us the full Life History of the Curve of Consumption of a particular individual commodity. What I wish to submit is that probably the same curve is also true in the case of commodities taken collectively. Thus in a society of a very primitive character, where people hardly get bare necessities of life, further additions of new commodities satisfying new wants, would cause a favourable reaction on the capacity for deriving.

enjoyments from consumption, with the result that not only each fresh addition of wealth will have an increasing utility but it will also increase the capacity for giving enjoyment of commodities that were already in the use of that society. However when this society will have sufficiently developed, and secured to itself a pretty large number of commodities satisfying its necessities, comforts, and luxuries, then further addition of new commodities satisfying new wants would result in having a diminishing utility for that society, and their reaction will be of the opposite kind. On the capacity to derive enjoyment from consumption would be of the opposite kind. It does not seem to be either logical or fair to assume that in this case there is only one kind of reaction, and that which heightens the capacity of deriving pleasure. This way of reasoning from the general to the particular may seem fantastic to some of my friends, but I may be permitted to add that it is one of the well recognised methods of reasoning in psychology as in physical sciences like chemistry where properties of many an element were successfully prophesied long before the discovery was actually made.

Then again it fits in very well with that view-point which spiritual teachers, socialists, and social thinkers have been asking us to adopt towards material effects of life. All agree that Happiness is the end of Life or Human effort. If reaction of fresh additions to wealth on the capacity of man to derive enjoyment always result in an increase of that capacity, then certainly every man, or for the matter of that every nation should always strive to increase wants, and the number of commodities to satisfy those wants, because in that way you would go on adding indefinitely to the Happiness of Man—the *Summum Bonum* of Human Life. And this is the view of the average man, and the present science of Economics. Either this must be true, and the attitude of the average man towards his worldly possessions correct, or that must be true and the attitude towards worldly possessions that has been off and on recommended to us by spiritual teachers must be correct. Both cannot be true.

I for one believe that the truth lies in the view which is based on the applicability of the Law of Diminishing Utility not only to individual commodities, but also to commodities taken collectively. And this, not only because it fits in so well with the teachings of spiritualists, but also because the fate of individuals, and nations that ran head-long after production and accumulation of wealth in bygone days, as well as in our own, teaches us the same valuable lesson that, after all wealth is not an end in itself.

We may now say that it is time for students of Economics to realise that the tendency to Diminishing Returns, in satisfaction or welfare (which is otherwise called Diminishing Utility in consumption) is found not only in the case of individual commodities consumed or possessed by a man but is also true of commodities taken in a mass whether in the possession of an individual or that of a society. Just as in the case of an individual commodity, when being consumed by an individual during a given period of time, it is quite possible, and this possibility increases as the units of consumption go on getting smaller and smaller, that the resulting utility for each successive unit may begin by rising at first, i.e., by increasing at a more than proportionate rate

but ultimately, if consumption is continued it must end in increasing at a less than proportionate rate. Similarly in the case of total wealth in the possession of an individual or in that of a society it could be said that fresh additions to his or its wealth will increase the total welfare but at a diminishing rate. Of course, all those limitations, which we have discussed in the case of the Law of Diminishing Utility when applied to individual commodities, will be understood to be applicable here.

And this broader application of the Law to the total stock of wealth may be interpreted in two ways; in one of which it is easy to see the working of the Law; while in the other it is not, and it is there that I press for its recognition. Increase in the stock of commodities in the possession of an individual, and for the sake of convenience of reference we may suppose that stock to consist of 6 x, 8 y and 10 z, may take the form of an increase of each individual commodity to 10 x, 12 y, and 15z; and here it is not difficult to see that if the utility of the previous stock to him was 100 then the utility of this new will be something more than 100 but not exactly in proportion to the increase in the stock, because of the fact that the total stock consists of increases in the stocks of each individual components of the group, each of which is subject to the Law of Diminishing Utility. But the increase in stock may take a different form and result in 6x, 8y, 10z, 8w, and 8p, i. e. there may come into existence quite new commodities satisfying new wants. In this case general opinion seems to be that further additions of new commodities satisfying new wants, result in augmentation of the national welfare. But I press for the applicability of the Law of Diminishing Utility even to this case, and have given my reasons for it.

If this way of interpreting the Law of Diminishing Utility be correct, then we shall have got an economic Law supporting the statement (that an increase of wealth in the possession of an individual or in the possession of a social group does not necessarily always lead to a *pari-passu* increase of welfare) that has been so far made by spiritual thinkers and social reformers.

This recognition will further lead to a modification of our ideas about the significance of Standard of Living in Economic life. And this we may have to do on very much the same lines as I have done in the paper mentioned above. There I have defined the Standard of Living in that narrow and generally accepted sense where it is used as a collective name for all the necessaries, comforts and luxuries of life to which a man or a group of men is accustomed and have pointed out "That the underlying assumption in the discussions, of the English and American economists, on this topic that greater the number of wants of a man, or the higher his Standard of Living, the more efficient (or happy) would he be, and the more civilized does he become, is not correct, and that based on this the equally dogmatic claim of some dominant classes to have increasing augmentation of their income to maintain their ever rising Standard of Living is equally untrue."

This is one thing that may be India's contribution to the evolution of Economic thought. Not that this method of approach, and its corollaries are a monopoly of the Indian school of thought in Economics, because war and the aftermath of war have succeeded after all in ringing afresh to the fore-front this point of view in the minds of some



western writers also, but because this peculiar way of approaching towards material possessions is in perfect harmony with the age old Indian ideals and aspirations of spiritual as well as mundane life. It is only the Indian genius, at least so it seems to me, that can, and should insist in the way that this point requires insistence for its acceptance by the world. Hence its place in the Indian outlook on Economics.

But this is not the only point that the Indian School of Economic Thought has to keep as an important item in its programme. We have as yet only one more, and that is a far more subtle and far more difficult idea to be easily accepted by the modern world steeped as it is in Individualism. It consists in that attitude with which an individual approaches his productive or consumptive effort in life. The present socio-economic organisation in the west, (and also, of late, in India due to new methods of production etc.), and science of Economics, which itself is very largely expressed in terms of the former, have been emphasising the Individualistic point of view. The man looks upon everything from the point of view of his own advantage or disadvantage. The same is true of social groups or production groups. The result is that sometimes we have over-production, sometimes under-production, and such other evils as monopolies, trusts, *kartels* and labour strikes on one side, and offensive trade unions, distributive stores, ill-fed and ill-clad labourers with aggressive syndicalism on the other. And all this is due to what? To the want of that social spirit or better still if we call social outlook, which under the name of communalism Dr. Radhakamal Mukerjee of the Lucknow University has sought to inculcate in his book the Principles of Comparative Economics, and which was the characteristic outlook of all economic organisation during the medieval period in Europe, where every one within a manor (which constituted the Economic unit of those days) from the lord down to the meanest artizan and the hardy yeoman, looked upon himself as a part of one indivisible whole, and therefore guided his personal efforts at production, and consumption not from the point of view of his personal advantage but from the point of view of the advantage of the group to which he belonged. And this used to be, and is even now to a certain extent, the characteristic outlook of the individual members of an Indian village community towards each other. Here the individual lives and works for the family, the family for the village, and the village for the state. Or again the individual lives for the family, the family for the caste, the caste for the community, and that in its turn for the state. Each lives and works as they do under individualism but, with this difference that each unit lives and works for the good of something greater than itself.

Perhaps it is this which has led Radhakamal, enthusiastic as he is about the retention of this social outlook, to advocate the retention of the system of caste itself in spite of its so many drawbacks made more noxious than they used to be by the changed conditions and circumstances of life and labour in this land. Whether one may agree with him or not (I for one do not) as to the desirability or the feasibility of maintaining the system of castes in India, it is not possible to differ from him when he advocates the maintenance of that social spirit which animated the production and consumption efforts of one group towards another group in the Indian village organisation, or the maintenance of that spirit

which permeated amongst the members of a caste in their dealings towards each other, or the members of one caste towards the members of other caste in their individual or collective capacity. There are people who honestly believe that it is still possible to maintain and infuse that social spirit which characterised the old socio-economic organisation in India and elsewhere, and which is found to exist in a modified and less dominant way even to-day in India, and some other countries of the East. This is not all, some of us believe that ultimately the world must come to adopt this social spirit as its guiding note, if half of the present troubles of the troubled Humanity are to be got rid off. And here I may add that although this social outlook has not been a monopoly of the Indian people or even of the people of the East, and did once animate the whole socio-economic organisation of the West, and therefore we cannot claim it as an exclusive contribution of the Indian school of thought in Economics, yet we can claim it in so far as it is in the East and specially in India with its organisation of caste existing up to this day, when West and a greater part of the rest of the world is permeated with the spirit of Individualism, that this spirit is somewhat maintained, and in so far as it is in the writings of a set of Indians that it is seeking its fresh expression to counteract the dominant Individualism of the West.

These are some of the peculiar lines of thought that are struggling their way through the expressed and implied thought of the new school of economic thought in India, and as has been in the past with every new expression of thought it is meeting its share of ridicule and unbelief at the hand of people who are confirmed believers in the doctrine and practice of the dominant thought. Given time and opportunities of further development and fuller expression it is bound to gain ground and make itself felt, and it is to that end that some of us, so far in an un-co-ordinated way, are converging our efforts, of course, with full hope of success in the end.

## NON-CREDIT AGRICULTURAL CO-OPERATION IN INDIA

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For more than one reason the progress made by Non-Credit Agricultural Co-operation in India has been very slow. The main object of the movement in this country when it was first started was to free the agriculturist from the money-lender by supplying him with the capital required for agricultural purposes at reasonable rates. The first Act of 1904 confined the operations of co-operative societies to credit. It was only in 1912 when the Act was amended that societies for non-credit purposes were also registered under the Act. Besides, it is always much simpler to run a credit society than to organise and carry on the more complicated work of such non-credit societies as those of Co-operative Purchase and Sale. In rural areas where the population is very backward and good business managers are not usually available, it was natural that non-credit operations even when introduced should make very slow progress, and yet it must be said that co-operative credit alone cannot be as advantageous to the rural classes as it should be, until the non-credit movement has made much better progress than it has done so far. If co-operation is to do real good to the cultivator, it must help him in increasing his production and in securing for him the greatest possible income for his produce. Supply of capital at reasonable rate would do this to some extent by saving to him the difference between such rate and the rate and the other charges which he would otherwise have to pay to the *Sowcar*. Much greater benefit would accrue to him if he were to be in a position to purchase all his requirements at reasonable rates and be sure of the quality and the quantity of the purchases, and also if he were to obtain the highest possible price for the produce of his land. Hence the necessity for societies for Co-operative Sale. In Europe, the development has accordingly been carried on the lines both of supplying credit as well as of Co-operative Purchase and Sale. In Denmark, for instance, co-operation has built up societies embracing almost every branch of agricultural work including the supply of credit. In France, Co-operative Purchase has made very large strides while in America, the Co-operative Marketing of produce is being done on a very large scale. Owing to the absence of any rapid development of non-credit work, the agriculturist in this country has only derived a small part of the advantages which can accrue to him from the movement. It might also be stated that progress of the non-credit work will greatly strengthen the credit part of the movement. Facile credit is not without risk. The formation of non-credit societies secures better control over the proper utilisation and

recovery of loans while on the other hand schemes of land improvement will require funds which can be supplied at least partly by Credit Societies and Central Banks.

Non-Credit societies can help the agriculturist mainly in increasing his production through agricultural and land improvement, in increasing his net profits by co-operative purchase of his requisites and by co-operative sale of his produce. It would perhaps not be irrelevant to describe here briefly what work has been done on these lines in this Presidency and to note the drawbacks and the difficulties. Other lines on which work has also been done are the formation of Cattle-breeding and Cattle Insurance Societies but these have not so far become very important.

In this Presidency, while the number of agricultural credit societies is 2710, the number of non-credit societies is only 159. The working capital of the former amounts to over Rs. 1,70,00,000 while that of the latter is only a little over 5 lakhs. The progress made as regards co-operative purchase has been extremely slow. Most of the work done has been by the shops managed by Branches of the Provincial Bank and these are situated in tracts irrigated by canals. Last year they sold manure worth about 5 lakhs. The Bank takes no risk but only acts as agent. This arrangement has worked successfully from the business point of view, but the drawback is that though the shops are run in the interests of the members they are not under their control. On the other hand the success of the several co-operative manure societies started in other areas has been varied. Societies which purchased manure worth several thousands and were thus in a position to purchase directly from the outside wholesale markets-have on the whole been successful. Smaller societies, however, which buy locally can usually offer no very great advantage and often tend to become mere credit societies, giving credit in manure instead of in cash. Small co-operative societies for purchase cannot be expected to run successfully, unless at least, they are joined together into some central organisation which can make the purchases for them in common. The same remark applies to Implement Societies.

In dry tracts where the only manure used is generally farmyard manure, the loans usually taken from the credit societies are for seed, bullocks and maintenance. Several seed societies have been started and some are doing good work by purchasing good seed at harvest time and distributing it amongst members when required. But the real work in this connection has been done by Cotton Sale Societies which themselves provide for the supply of good cotton seed to their members.

Societies for the co-operative sale of agricultural produce are one of the most powerful means of securing to the cultivator a fair share of profit. At present the interest of the cultivator suffers as his produce passes through the hands of several middlemen. While it would be impracticable in most

cases to eliminate all middlemen and bring the producer directly in touch with the consumer, it is quite possible by co-operation to reduce the number of such middlemen and thereby increase the share of the profit which goes to the cultivator. For him mere increase in production is not enough, he must also get the best possible price for his article. Co-operative marketing will help him to obtain it, but it must also be remembered that it is also perhaps the most difficult branch of agricultural co-operation, especially in this country where the cultivator is illiterate and suspicious and business managers efficient and above board are not always to be found.

We have at present 38 sale societies out of which 18 are for cotton sale. Only about 20 of these societies can, however, be said to be doing really good work. The cotton sale societies did business to the extent of over 28 lakhs last year. The largest turnover was in the case of the Gadag Cotton Sale Society which sold cotton worth 9½ lakhs. This, however, represented only 11 per cent of the cotton brought into the market. In other cases the percentage was still smaller. The societies in the Southern Division sell unginced cotton. Each cultivator's cotton is sold separately. One great advantage which these societies have at present and which is also one of the main reasons of their success is that the cotton brought to the societies for sale is graded by officers of the Agricultural Department.

The other class of sale societies has been formed in Gujarat. Both here and in the Southern Division sale societies undertake the distribution of good seed, but in Gujarat the societies deal with cotton lint. Members' produce is collected together and ginned by the society. The produce of the members grown from the same class of seed is pooled together and a uniform price based on realisations during the year paid at the end of the season. Members are, if necessary, paid a certain percentage of the probable price as an advance at the time they bring in their produce. Under this system the societies are able to sell their produce by sample and get into direct touch with the market in Bombay.

Besides cotton, sale societies have dealt with molasses, areca and groundnut, chillies and miscellaneous agricultural produce. The shops connected with the branches of the Provincial Bank sold molasses worth nearly 8 lakhs on commission. The total sale by all the co-operative sale societies amounted to nearly 35 lakhs.

The experience in this Presidency confirms the lessons already learnt in other countries regarding co-operative marketing. They may be briefly summarised as follows :—

1. The society should be for the commodity and not for the area ; and wherever possible a central organisation for dealing with the same commodity should be started. The bigger the organisation the greater are the chances of success.

2. The society should be able to command a considerable percentage of the commodity brought into the market. For this purchase in some countries societies enter into a contract with their members binding the latter to bring their produce to the society for sale and the societies have legally the right to get the contract enforced through Courts, or if that be not possible they can secure damages. The time is not ripe in India to get such legislation passed, but several of the credit societies in this Presidency have made a rule making it compulsory for members who are given a loan for cultivation of say cotton, to take the produce to the local sale society. Such a rule, however, is not always enforceable in practice.

3. Arrangements must be made for the adequate financing of the producers. If the members are financed by an ordinary money-lender, it is usually likely that the borrower will take his produce to him for sale, as often the moneylender is also the dealer in that commodity. Sale societies can, however, advance only on the security of the goods brought to it for sale. Financing prior to the production of such goods should be done by the local credit societies. It is very risky for sale societies to undertake such finance.

4. It is very desirable to get the produce inspected and graded by a competent staff.

5. They should have sound business management which will naturally have to be well paid.

Another important direction in which non-credit work can be developed is by the establishment of societies for carrying out work of agricultural and land improvement. Three kinds of societies which have been or are about to be started in this Presidency may be mentioned. We have registered four societies for fencing against the ravages of wild pigs. These have proved successful and are not only advantageous for land already being cultivated but also for bringing back under cultivation land which had been abandoned on account of damage done by wild animals. Two Joint Cultivation Societies have been registered, one of these in a tract liable to famine, where an oil engine has been set up to irrigate part of the land taken up by the society. The third class of societies for which proposals are now being considered are irrigation societies in which oil engines are to be set up on big wells or tanks, to irrigate the land under their command. Besides this there are bigger projects, like dams across *nalas*, series of embankments in certain villages, which are to be carried out on a co-operative basis. These naturally require being inquired into by an expert. The local Government has recently sanctioned the appointment of an Agricultural Engineer who will examine these schemes and it is hoped that after this appointment more rapid progress will be effected. It is obvious that in the case of societies

for agricultural and land improvement the advice and guidance of officers of the Agricultural Department is very desirable and necessary. The question of financing such works has to a great extent been solved by the fact that the local Government have for the last two years been placing a grant out of its tagavi grant at the disposal of the co-operative movement for long term loans for land improvements.

For the further development of the non-credit movement, intensive propaganda work is necessary in selected tracts and it is desirable that such propaganda work should generally be undertaken in areas where credit operations have already been successful and the ordinary principles of co-operation have been understood. It is also necessary to have a paid staff to carry on the work of propaganda, organisation and supervision. Honorary workers will help but as the work is difficult and requires continual attention and technical knowledge for guiding, a paid agency is necessary. It is also essential to have close co-ordination between the two departments of Co-operation and Agriculture. In this Presidency such co-ordination has been secured to a great extent by the formation of the Joint Board of the Registrar and the Director of Agriculture, with Divisional Boards under them formed of officials of both the departments and non-officials taking interest in co-operation and agriculture. The starting of Taluka Associations with a Government subsidy for the spread of agricultural improvements through co-operative societies has also the same end in view. The successful working of these associations will, it is hoped, give a great stimulus to the development of non-credit work in this Presidency.

## THE POPULATION PROBLEM IN INDIA.

BY PROF. C. J. HAMILTON, M.A., PATNA.

In a great country such as India, inhabited by people of widely different stages of civilisation, who speak many different languages, profess a number of religions that have little in common, and observe social and ethical rules so various that there is hardly any conduct that is not at once condemned by some section while approved by another, there is presented a series of problems of profound interest to the student of social evolution all of which are in one aspect problems of population. For even in a country so conservative as India, where travel is often almost impossible for very large sections of the people and where the different social and ethnological groups are hedged about by laws and customs that tend to preserve each in a water-tight compartment there is still at work the process of competition and social selection that slowly modifies the structure of society and leads to the extinction, the modification or the survival of different types.

But it is not as a student of ethnology or of comparative religion that I propose here to consider the problem of population. The problem of chief importance to the economist is that which has earned the name of the "Population Problem," namely the relation of the population to the means of subsistence. In the light of such information as is available from the Census of 1921, I want to attempt an answer to the question "Is India Overpopulated?"

Whether modern states are in danger of overpopulation and, if so, under what conditions, is a question that has been fiercely discussed by a large number of publicists in many countries. At the present time the destruction of capital and breakdown of economic organisation resulting from the war has brought much suffering in its train. It has served to bring into renewed prominence the question whether numbers are not pressing too heavily upon the means of subsistence. "The most interesting question in the world" says Mr. J. M. Keynes, "(of those at least to which time will bring us an answer) is whether, after a short interval of recovery, material progress will be resumed, or whether, on the other hand, the magnificent episode of the nineteenth century is over." (Introduction to "Population", by Harold Wright) To this query, Sir William Beveridge has recently replied in the following words: "Such examination as I have been able to make of economic tendencies before the war yields no ground for alarm as to the immediate future of mankind, no justification for Malthusian panic." (Presidential address to the Economic Section of the British Association 1923). And yet even Sir William Beveridge appears to admit that in some sense a "population problem" remains, for he says in the same address,



"Nothing that I have said discredit the fundamental principle of Malthus, reinforced as it can be by the teachings of modern science." It would seem, therefore, that the problem of population can be stated in at least two ways and that the answer to the problem will depend on the way in which it is stated. It will, in fact, be found that the controversy on the subject has often turned on a failure to agree as to the nature of the issue at stake. It is important to make this issue clear at the outset.

#### THE DEFINITION OF OVERPOPULATION.

The essential distinction consists in differentiating between overpopulation as a state and overpopulation as a tendency. But overpopulation regarded as a state may be conceived in two ways. The first may be defined as final overpopulation or saturation. It would exist in complete degree supposing that the material resources necessary for man's economic well-being, the cultivable land, the coal, the metallic ores and so forth, had been so far exhausted that they everywhere yielded a diminishing return to man's labour. The food supplies are here of primary importance, for whatever may be the resources in other directions they will not eventually make up for a defect in food materials. It is to this aspect of the case that Sir William Beveridge has chiefly addressed himself and to which he has declined to give a pessimistic answer. He believes that statistics show an increasing return to man's labour and that there are large undeveloped resources which give promise of a continued increase. He asks that his view may be confirmed by an investigation into the potential agricultural resources of the world. Mr. Keynes, on the other hand, is not so confident and thinks that statistical evidence suggests that even before the war the effects of the laws of diminishing returns had begun to make themselves generally felt.

Overpopulation defined as a state may, however, be conceived as relative rather than final. At any given moment there is a certain volume of capital available for productive use, there is a certain stage of scientific knowledge applied to production, there is a certain degree of human efficiency dependent on education and social organisation. It may not be denied that in time these limitations may be overcome and that the result will bring an increasing return to man's labour. But relative to existing economic circumstances the numbers of the people may be such as to press upon the means of subsistence and so may be said to result in overpopulation.

NOTE.—The phrase "pressing upon the means of subsistence" is capable of varying interpretations. It certainly does not connote "death from starvation" in the bald sense. It does not even imply that considerable sections of the people are living at the lowest possible standard of consumption that is compatible with existence. But it does imply that the death-rate, particularly the infantile death-rate is directly swollen by reason of poverty and that this poverty is due to excess of numbers. Sometimes the state of relative overpopulation is defined as relative to an optimum population. At any given time relative to the existing resources of produc-

tion and the methods of economic organization there will be a certain number of the people which will give the highest return in respect of income per head. This is the optimum number and overpopulation may be said to exist when this number is exceeded, just as underpopulation exists when this number is not reached. This mode of conceiving the question of overpopulation is prominent among recent writers. Referring to the question whether India is or is not at present overpopulated, Mr. Carr-Saunders says: "What we want to know in the case of India is whether the real income per head is increasing or not with the increase of population." (The Population Problem, page 275).

In my opinion this method of formulating the issue is not satisfactory. I do not deny that it is in itself a very important question; possibly the most important question relative to population. But there is another question of at least very great importance. It is whether population is being actually restrained from a more rapid increase by the effects of poverty rather than as the result of a rational limitation of numbers. Poverty may be an effective determinant of the death-rate while the average income per head is rising. It would be sufficient to bring this about if the consumption of conventional necessities were increasing while the effective check upon the growth of numbers continued to be a deficiency in the consumption of necessities. This suggests another mode of defining overpopulation.

In contrast with the two ways of regarding the subject just explained there is another way of conceiving it. The primary fact may be thought of as the existence of a tendency on the part of human beings to reproduce their kind at a rate faster than the rate at which they are increasing the material means of subsistence. If this tendency is in *effective* operation the results must follow. It can only be a matter of time before the state of final overpopulation comes about. But, much more immediately important, the state of relative overpopulation must be present, probably exhibited in the oscillatory form suggested by Malthus. The important issue is thus shifted. It is not so much a question of examining the existing undeveloped resources, or of ascertaining whether the law of diminishing returns is actively at work, as of investigating the nature of the checks upon the tendency to human increase. It is presumably of overpopulation regarded as a tendency that Sir William Beveridge was thinking when he said that the fundamental principle of Malthus remained undiscredited. This is the aspect of the subject that appears to me by far the most important and requires to be put in the front place rather than, as is customary, to be concerned mainly with the question of the existence of surplus land and reserves of minerals.

We may formulate the problem of overpopulation, therefore, under two main heads:

- (a) Is the existence of the tendency towards overpopulation a potent fact and what is the nature of checks which keep the tendency to increase of numbers within bounds?
- (b) Has the tendency now produced in India an economic condition that may be fairly described as one of relative overpopulation?

To this latter question one recent writer at least has given a tentative answer: "In India the population has been increasing with disquieting rapidity owing to the removal by British rule of many of the checks to population which formerly prevailed; and it is probable that the recurrence of famines in that country is partly attributable to this increase." (Population, by Harold Wright, page 66.) I should like to point out that this passage seems to me to indicate a misconception of the real character of the problem. As a step on the way towards final overpopulation the large increase in the Indian population may indeed be described as disquieting. This, however, is a distant prospect at present. Apart from this, what does the large increase imply? Merely that the economic resources of India have been largely increased making possible the expression of the tendency to overpopulation in a growth of numbers. For the time the checks have been less severe. There is nothing to suggest that the standard of living of the people has been lowered as a result. In fact the increase really leaves the problem where it was before, for it does not in itself afford any indication of the nature of the checks by which the Indian population was restrained before the advent of British rule or now. This, however, is the essential problem.

#### THE MALTHUSIAN DOCTRINE AND POPULAR THEORY.

I have distinguished the conceptions of overpopulation defined as a fact and as a tendency. Before considering how far overpopulation regarded from either of these standpoints may be predicated of India it may be worth while briefly to refer to certain popular refutations of the so-called "Malthusian bogey". The Malthusian doctrine, stated in its essential form and put in such a way as to avoid the inaccuracy of the "arithmetico-geometrical law," depends on the following propositions:—

- (a) The fecundity of the human race is such that the people, unless subject to certain checks, will multiply in number at a rapid rate.
- (b) The means of subsistence cannot be increased at nearly such a rapid rate.
- (c) Therefore, unless the people restrain their procreative instincts, the population will multiply up to a point at which the death-rate arising from certain positive checks will prevent further increase. These positive checks were chiefly the forces of disease and a high death-rate due to poverty.
- (d) The only alternative to the operation of this positive check on the growth of population, a check which, in the words of Malthus, made itself felt through the forces of misery and vice, was to substitute the preventive check of self-restraint.

As Mr. Carr-Saunders has remarked "the whole theory is one of the comparative (potential) rapidity of the increase of population and of the (potential) increase of food." (The Population Problem, page 198.)

Undoubtedly the practical significance of Malthus' discussion lay in the fact that he was unable to offer any hope that the majority of the people would exercise self-restraint. Hence it appeared inevitable that a large section of the people should be condemned to what economists have more recently described as a state of primary poverty. "This natural inequality of the two powers of population, and of production in the earth, and that great law of our nature which must constantly keep their effects equal, form the great difficulty that to me appears insurmountable in the way to perfectibility of society." (Essay on Population, 1st edition, Chapter I.) Malthus indeed defended himself from the charge of teaching that poverty was inevitable. He pointed out that the preventive check of prudence was actually operative. "A foresight of the difficulties attending the rearing of a family acts as a preventive check." "The preventive check appears to operate in some degree through all the ranks of society in England." But he believed that this preventive check of prudence was not resorted to with sufficient generality to prevent the pressure of population on the bounds of subsistence. "The positive check to population, by which I mean, the check which represses an increase which is already begun, is confined chiefly, though perhaps not solely to the lowest order of society." Unless these orders could also be made amenable to the dictate of prudence there remained no escape from their poverty. There is a further point to notice in the Malthusian theory. Abstention from marriage was commonly found to lead to the vice of prostitution. Hence he coupled the misery of poverty with vice as the two evils arising from the tendency to overpopulation. Mere prudence therefore was not a complete remedy. The only effective remedy according to Malthus lay in the practice of "moral restraint."

It is clear that the Malthusian theory is primarily an insistence upon a tendency rather than the predication of a fact. This, at least, is so if we accept the form of his theory as expressed in the later editions of his work. He spoke in the first edition of the difficulty presented by the disparate rates of increase of population and food as "insurmountable". In the later edition he emphasised the possibility of escape by means of the preventive check. It follows from his theory, however, that unless the preventive check is operative through large sections of society the state of overpopulation can only be a matter of time. Even if we suppose the utmost scope given to economic discovery and full use of all the unoccupied spaces of the earth it is yet true, as Mr. Harold Cox has recently put it, that "As any growing thing increases in size its rate of growth must decline; for otherwise an impossible figure would quickly be reached." (The Problem of Popula-

tion, Harold Cox, page 31). As an illustration of the actual possibilities he shows that if the population of the United Kingdom continued to increase at its present rate for the comparatively short space of 360 years not a long time in the history of a nation it would far exceed the present population of the whole world. Such is the potentiality even in a country with a low birth-rate such as prevails in the United Kingdom. What would be the case if human fecundity were given anything like full play. Some idea of the maximum birth-rate may be reached by such a calculation as the following:—

Suppose that the women of child-bearing age in a community are one-fifth of the population. That is approximately the number in all countries. If all the women were healthy, married and produced a child once every two years, it would lead to a birth-rate of 100 per mille or more than four times the rate for England and Wales at the present time. In the light of these facts there is no possibility of criticism regarding the Malthusian theory to be found in questioning the potential fecundity of the human race.

While it is true that the Malthusian theory is primarily a statement of tendency it is none the less true that Malthus believed it to be the explanation of a fact, the fact of poverty. The check upon the potential growth of numbers has always to be effective and since he saw no sign of the preventive check becoming effective he saw no immediate escape from the fact of poverty as a positive check. It will be found that in considerable sections of the people in every state and in the vast proportion of the people in many states the preventive check is to-day inoperative. It is probable, if the Malthusian theory is true, that poverty is to-day largely the result of excessive numbers and that relative overpopulation is a fact.

We may now briefly consider the chief popular objections levelled against the Malthusian teaching.

Those who have attacked Malthus have usually taken the course of denying his conclusion by denying the truth of his second premise, namely that the produce of land cannot be made to increase as fast as population increases. Or, they have remained content with such arguments as that overpopulation is impossible so long as there is spare uncultivated land of good quality. They then point to the existence of such land in proof that overpopulation does not exist. Or, again, they assert that there cannot be overpopulation since population is increasing at the same time that the general level of the standard of comfort is rising. Another line of argument is not, properly speaking, a refutation of the Malthusian theory although it is often advanced as if it were. It denies the inevitability of poverty by maintaining that when the people are freed from the condition of poverty they will maintain their higher standard of comfort by the exercise of the restraints necessary for the limitation of numbers. Thus it is argued that the condition which brings about the unrestrained reproduction of children

is the state of poverty and the sufficient cure is the relief of poverty. Hence this belief merely resolves itself into a theory of the manner in which the preventive check can be brought into operation.

In discussing these objections to the Malthusian doctrine a word may be said as to the effect of the distribution of wealth on overpopulation. Even though the law of diminishing returns were everywhere in operation and even supposing that there were no preventive check upon the growth of numbers it would not follow that population would have reached saturation point and that a country could not be made to hold any more people without death from starvation resulting. In every country the system of the distribution of wealth enables considerable sections of the people to live above the condition of poverty without the exercise of the preventive check. The two great agencies whereby the more prosperous sections of society are maintained are the ownership of property and the division of income according to efficiency. If this latter principle is observed it follows that, however close to the minimum income the lowest grade of workers may be, if the needs of industry give scope for the exercise of efficiency, then those with double the efficiency will earn double the minimum income. If in consequence of the relaxation of pressure among the better paid workers they multiply beyond the requirements of the more difficult branches of work the level of their efficiency wages will fall but it will not be likely to fall to the level of the lowest grade of workers since that wage is likely to be less than sufficient to give a standard of living compatible with the higher level of efficiency. Rather there is likely to be a constant overflow from the higher levels of population into the lower. The application of this distributional effect in preventing the appearance of general poverty is likely to be greater in industrial than in agricultural countries. Not only is there much more scope in the former for the employment of differential ability in the higher spheres of organisation, but in the ranks of the workers the same principle holds good. It is to this cause that much of the seemingly greater prosperity of industrial countries is to be traced. Yet the depths of poverty are probably nowhere greater than in sections of the population of great industrial centres.

Not only will the existence of the tendency to overpopulation imply no necessary saturation, but it will not even necessarily imply that the effective check upon numbers is a high death-rate resulting from poverty. It is conceivable that ignorance of the laws of health and the presence of unhealthy conditions may so increase the death-rate that it permanently holds the birth-rate in check even in a community where the level of wealth is far above the minimum. This is, however, a very unlikely condition, if we regard a country as a whole, wherever the practices of the people have risen above a very low level of civilisation. Migration will take

place to healthier regions and the power of nature to give immunity from disease to which the body is constantly subjected diminishes its effects. Where, therefore, the tendency to overpopulation exists there is likely in an old settled country to be primary poverty over a large class of society. Even in a new country it is likely to be present in some degree.

It is necessary to say a word as to the meaning of overpopulation regarded as an existing fact. In the more usual meaning of the term it implies that in certain sections of the community numbers are positively checked by a death-rate which is in part at least due to poverty. It implies the presence of the tendency to overpopulation and at the same time the existence of a barrier in the way of access to new means of subsistence. These barriers may not be felt everywhere in the community. Overpopulation may be local rather than universal. Where they are present there will be primary poverty. But the term overpopulation may be applied so as not necessarily to connote a death-rate due to poverty. It may be regarded as relative to a given standard of comfort. Thus, numbers may have reached a point at which it is impossible to maintain a given standard of comfort even though they do not entail such a pressure upon subsistence as to cause primary poverty. Finally, it is important to avoid the error of supposing that all death from poverty is due to overpopulation. There will always be the waste products of society, the unfortunate, the maimed, the decadent who will be unable of their own effort to obtain the means of subsistence. In the absence of any adequate system of provision for those who fall within this category there will be extreme poverty due to individual failing rather than to excess of numbers. It is not always very easy to determine which of these two causes of poverty is the real one. They are generally present together. Speaking of the positive check Malthus remarks: "This check is not so obvious to common view as the other I have mentioned." "The different modes which nature takes to prevent or redress a redundant population, do not appear, indeed, to us so certain and regular; but though we cannot always predict the mode, we may with certainty predict the fact."

We come now to the chief objection that has been advanced to the Malthusian theory: the virtual denial of the law of diminishing returns. This law was not formulated when Malthus wrote. It was brought into prominence by Ricardo very shortly after. But it is implied in the arithmetico-geometrical law. Professor Cannan has criticised Malthus by arguing that "when it was seen that this principle of arithmetic increase did not strictly hold good of agricultural produce, 'The Essay on the Principle of Population' falls to the ground as an argument, and remains only a chaos of facts collected to illustrate the effect of laws which do not exist. Beyond the arithmetical ratio theory there is nothing whatever in the Essay to show why subsistence

for man should not increase as fast as an 'unchecked population.' This is caustic, but it is unfair to Malthus. The formal accuracy of his argument may have failed, but its substantial accuracy was founded in long experience of agricultural life. No subsequent experience has seriously invalidated the practical application of the law. "With every mouth" says Oannan, "God sends a pair of hands, so why should not the larger population be able to maintain itself as well as the former." (Theories of Production and Distribution, Chapter V.) The answer is that experience affords no ground for thinking that improvements in agriculture will enable produce to be increased at as fast a rate as population can increase. Under any form of cultivation hitherto practised it is an established commonplace that the point is soon reached when it does not pay to increase the capital and labour working on the land. It is true that in many countries the productive power of the land is far below what it should be as the result of poor cultivation. This is abundantly true of India. But if good methods were everywhere applied and the yield of the land increased threefold, while allowing of a great increase in the standard of comfort supposing that population remained the same, the point would then be reached when, unless fresh discoveries in scientific agriculture were made, it would not be possible to employ more people on the land without lowering the standard of comfort.

The denial of the law of diminishing returns sometimes takes the form of admitting its application in agriculture while pointing to the operation of increasing returns in manufacture. The latter, it is suggested, will balance the former. This, I think, is the argument of Ranade in his essay, "Twenty years' review of the Census statistics." Having examined the statistics of population in the Presidency of Bombay he came to the conclusion that the density was such in the majority of areas and the uncultivated land so scanty that there was little room for expansion of the people in agriculture. "The only escape from this danger lies in the direction of the gradual transformation of the means of subsistence of our livelihood, and the growth of an urban and industrial population, in other words the rise of towns and cities." It does not seem to have occurred to him to ask whether, the tendency to overpopulation remaining, this would indeed provide an escape. The recent Fiscal Commission also emphasised the advantages of industrial development as a means of relieving the land of its surplus population. From what, we may ask, did Mr. Ranade suppose that a growth of industries would provide an escape? It might enable India to increase its total population. It might enable some of those in the overpopulated agricultural districts to get a better living in manufacture. It might enable India to increase its wealth per head by increasing the opportunities for differential employment. But so long as the tendency of population to outrun the means of subsistence continues there will be no escape from the central fact of the poverty of the mass of the Indian people. Ranade's argument



suffers from the essential defect in the reasoning of those who think of the population problem as a momentary fact rather than as a persisting tendency. The law of increasing returns in manufacture means no more than this. Man wants more than food alone. He divides his time between growing his food and making his clothes. If he can reduce the time taken in making his clothes he can give more to growing his food. But, in the first place, the amount of time now spent in making his clothes, if we take the Indian agriculturist as the typical man, is so small that he can hope for very little economy in this direction. In the second place so long as the preventive check to the increase of population is not operative this relief will at best be only temporary. The only manner in which the increasing returns of manufacture might solve the problem of overpopulation would be if the temporary improvement of economic condition led to an enhanced standard of comfort among the people which in turn caused the practice of the preventive check as a means to protect the enhanced comfort.

An escape from the law of diminishing returns is sometimes found in reliance upon future discoveries and improvements. Scientists sometimes delight us with calculations as to the marvellous results that may some day be derived from the fixation of atmospheric nitrogen or from the application of electricity to the growth of crops. It is within the bounds of possibility that the world will be able to hold a much larger population than at present as the result of such discoveries. But until they are brought within the bounds of realised achievement it would be idle to make them the basis of our economic conduct. For the present the law of diminishing returns is an important fact.

As Mr. Venn has remarked : "While there was in the past unanimity in regard to the prevalence of this law, latterly certain economists have pinned their faith to the belief that 'science' if it cannot already do so, will in the near future be able to surmount these difficulties, or in other words that the chemist will evolve some process by which at a relatively small outlay the soil will be forced to give almost uniform returns. If such were ever accomplished, then indeed the law would be a thing to ignore, but the last sixty years, although prolific in discovery, have given no indication of the birth of any revolution in agricultural practice." (Foundations of Agricultural Economics, Vonn, page 377.)

Another refutation of the fact of overpopulation is commonly advanced in the form of pointing to unoccupied fertile land. Risley in his report on the Census for 1901 remarks that nearly two-thirds of the people of India occupy only a quarter of the whole area of India, while the remaining third is scattered over three-quarters of the area which is still sparsely populated. The implication is that there is still plenty of room for the expansion of the

population. This argument from density is, by itself, almost meaningless. A desert may be unpopulated but it does not afford scope for the growth of population. And yet the argument from density is often popularly accepted as a sufficient disproof of overpopulation. Those who take delight in trying to show that the poverty of India is due to the selfish or wicked administration of the East India Company, or of the British Government, are naturally anxious to prove that the poverty of India is not due to overpopulation. Thus Digby in his "Prosperous British India" examines the question whether the people of India are suffering because of overpopulation. He contents himself with quoting the words of an American missionary Sunderland, who had written: "A very little study of India shows that the population is not so dense as in a number of the states of Europe which are prosperous, have no difficulty in supporting their people, and in which famines are never heard of." He goes on to make a positive misstatement, for he continues, "Nor is the birth-rate high in India." But we need not insist on such obvious marks of ignorance. It is a sufficient condemnation that he relies on a mere comparison of densities. It might be said that Mr. Sunderland's sole qualifications for writing on the subject appears to be his "little study of the facts". And yet this passage from Sunderland is accepted by others besides the irresponsible Digby. It is relied on for the same purpose by Mr. Lajpat Rai in his book "England's Debt to India." It is to be hoped that public opinion is sufficiently instructed to value such arguments and the writings of those who use them at their proper worth.

But is there no significance attaching to the demonstration that there is spare land that will repay cultivation? To this question the answer is simple. Its significance is that it proves that there is a temporary safety valve which may be made use of. It does not in the least disprove the existence of overpopulation as a tendency, nor does it disprove its existence as a fact. For there may be cultivable land that is lying waste and at the same time there may be many districts in which the people have less than economic holdings and where the population is only kept down by the high death-rate due directly or indirectly to poverty. It must be remembered that excess population cannot flow to vacant land as water flows to a lower level. Not only is there the inertia due to ignorance, or love of native locality, but there are the real economic barriers in the shape of the capital investment to be made or the waiting to be endured before the vacant land can yield a return. Where the people are very poor and where there is no capitalist willing to develop the land this may effectively prevent its cultivation. In any case where a population is accustomed to a minimum standard of living they may be willing to continue in that state rather than put forth any special exertion in order to improve it. The existence of spare land is no disproof either of overpopulation defined as a tendency, or of the fact of overpopulation as a present cause of poverty.

Reference has been made to another criticism of the classical doctrine of population; namely, the theory that poverty is the cause of overpopulation. This doctrine, which holds a prominent place in socialistic literature, teaches that if, for example, by a better distribution of wealth, the poverty of the poor is relieved the necessary habits of restraint, the operation of the preventive check, will be generally developed, so that the higher standard of comfort may be perpetuated. It appears to me to be a very imperfect generalisation from a particular and limited experience. Undoubtedly the poor are improvident. And, undoubtedly growth in the standard of comfort among the working classes of England and countries similarly situated has led to the adoption of habits which have greatly reduced the birth-rate. It is very far from following that removal of primary poverty will drive out improvidence or cause a universal recourse to the use of preventive checks. Much depends on the manner in which the relief from poverty comes about. Nevertheless this much may be admitted that the theory referred to contains an important element of truth even if it in no way invalidates the ordinary theory of population.

With this somewhat long introductory reference to the theory of the subject, I will turn to the more immediate question: To what extent is India now suffering from overpopulation? This problem involves two enquiries: To what extent is the tendency to overpopulation present in India? To what extent is overpopulation an existing fact? I shall largely confine my attention to the first of these questions.

#### POPULATION AND THE MARRIAGE RATE.

The answer to the first question leads to an examination of the marriage-rate, the birth-rate and the checks upon it, and of the death-rate and the causes to which it is due. Specially important is the direction in which these rates are tending.

The outstanding fact with regard to marriage in India is the very high proportion of the population that enter the married state. The following table shows that while there is considerable provincial variation the marriage-rate is in all cases very high:—

PROPORTION OF MARRIED PERSONS PER 1,000 OF EACH SEX.

PROVINCE.	AGE	MALES.			FEMALES.		
		1921	1911	1901	1921	1911	1901
Bengal ..	{ 15—19	228	274	..	881	896	...
	{ 20—39	795	817	...	784	792	...
Bihar and Orissa	{ 15—19	450	479	...	792	828	...
	{ 20—39	807	830	...	824	841	...

PROVINCE	AGE	MALES.			FEMALES.		
		1921	1914	1901	1921	1911	1901
Punjab ...	15—19	283	275	290	753	773	755
	20—39	660	661	695	890	882	896
United Provinces:	15—19	459	475	495	870	886	878
	20—39	743	758	775	862	868	862
Bombay ...	15—19	328	349	348	831	851	796
	20—39	746	770	764	819	840	818

These figures reveal important provincial variation in respect of very youthful marriages among boys. Bengal and the Punjab having about half as many married lads under twenty years of age as Bihar and the United Provinces. The variation in the case of girls is also important. Thus Bihar and Orissa and the Punjab have a considerably smaller proportion of married girls under twenty than either Bengal or the United Provinces. That this is not explained by the difference in the number of widows is shown by the following table giving the number of unmarried females in the respective provinces :—

UNMARRIED FEMALES PER 1,000 FEMALES, 1921.						
AGE.		Bengal.	Bihar.	United Provinces.	Punjab.	Bombay.
10—15	— — —	459	535	488	744	486
15—20	— — —	55	162	95	227	125

It is not easy to account for this variation, but it may be due in the case of Bihar and Orissa in part to the presence of a large aboriginal population and in part to the greater prevalence of the custom of women working in the fields which induces their parents to keep them unmarried for the sake of the economic value which they may contribute.

It is still true that the very large proportion of the population at the reproductive ages of life is married. The contrast of the state of things in India and in England is suggested by the following comparison :—

UNMARRIED PERSONS PER MILE.		BENGAL, 1921.		ENGLAND AND WALES, 1911.	
AGE.		Males.	Females.	Males.	Females.
15—20	... ..	766	55	998	988
20—25	— — —	410	20	857	757

At 25 more than three-quarters of the girls in England are still unmarried. In Bengal they are less than two per cent. The potential effect of this great disparity in the marriage rate upon the relative growth of the population in the two countries is obvious.

A further fact that is apparent from the foregoing tables is the gradual rise that is taking place in the age at marriage.

The following tables brings out this fact clearly for the combined provinces of Bengal, Bihar and Orissa :—

YEAR.	Number unmarried per mille, males aged—		Number unmarried per mille, females aged—	
	10—15	15—20	5—10	10—15
1921	868	665	891	494
1911	842	626	851	422
1901	837	608	836	402
1891	826	594	827	372
1881	809	572	—	313

The recent tendency for the postponement of marriage among young girls in Bengal is very marked. In the age group 10—15 there were 459 per mille unmarried in 1921 as against 377 in 1911. There is a marked tendency to postpone marriage, but there is also to be seen a similar tendency at the earlier productive ages and it is a combined result of education and reaction to economic circumstance.

From the point of view of a study of population the high Indian marriage rate is complicated by the uncertain significance to be attached to marriage.

It is well-known that in India marriage in the full sense usually implies three stages : the civil marriage, known by different terms such as *nikah*, *shadi*, or *biyah*; the home coming of the bride to the bridegroom, known as *ruksat*, or *vida*, or *muklawa*; and the actual consummation of the marriage. It is the latter alone that is significant. It is a problem of importance to discover how far this last step is postponed on account of economic circumstance. The obligation to marriage in Indian society, more especially in the case of the girl, is so strong that postponement beyond the age of puberty is only practised with the greatest reluctance. Every economic resource will be taken advantage of rather than put off the duty of marrying a female at the recognised age. But the social obligation refers to the civil marriage and, according to the Punjab Census Report, the consummation may not take place until many years later (Report, page 250). There are certain ceremonial rules which govern the practices of cohabitation that have some effect in reducing the rate of procreation. In Bihar these rules are said virtually to prevent women in the educated classes from having children oftener than once in three years. But

It appears to be true that in the vast majority of marriages, more particularly among the labouring classes, the consummation takes place at the time of puberty. By the age of fifteen a very large proportion of the girls have been married. In Bengal the average age at marriage is stated to be  $12\frac{1}{2}$  years. Thus it is abundantly clear that very little restraint upon the increase of population is effected through the practice of abstaining from marriage. Marriage is well nigh universal and economic condition only appears to affect it, except in a very small degree, in the shape of short period fluctuations. Good harvest leads to a boom in marriages, just as marriage usually takes place at that season of the year when the cost of entertainment is cheap. Over a period of years there is only a very gradual tendency towards the reduction of the marriage rate.

We may now turn to examine the birth-rate as expressive of a tendency towards overpopulation.

#### POPULATION AND THE BIRTH RATE.

The fact of primary importance which has to be established with regard to the birth-rate is whether there is evidence of general practice of controlling the procreation of children within the limits of economic means of support, or whether procreation goes on substantially unchecked, leading to the post-natal check of a high death-rate.

It is well-known that among primitive races there are two practices which have an important bearing on the actual fertility of their women. These are pre-puberty intercourse and prolonged lactation. The former reduces child-bearing capacity by the injuries which it inflicts, or the disease which it engenders, among women. The latter appears to have a double effect. It in some measure reduces the conceptivity rate among women and it is accompanied by the practice of abstention from intercourse to a greater or smaller degree during lactation.

In India pre-puberty intercourse is not very common although it is far from unknown, but cohabitation at or soon after, puberty has similar effects if in less degree. It tends to reduce population partly by lowering the fertility of the women and partly by increasing the death-rate of young wives. In Bihar the proportion of females to males at the age period 10—15 falls below the ratio 850 per 1000 in the north of the province where child-marriage is most prevalent and this is attributed "to the fact that immature girl wives amongst whom the death-rate is high are included in this period." (Census Report, 1921, page 170.)

It has been shown in an earlier table that the marriage age is younger in Bengal than in Bihar in the case of girls and that this leads to an excessive death-rate among young wives is suggested by the fact that the excess of the female death-rate over the male death-rate between the ages 17 to 20 is more marked in Bengal than in Bihar. It is true that the conclusions from

the age statistics of the Indian census must be received with caution. "The very great drop in the proportion of females in the ages 10 to 15 is due to the understatement of the age of unmarried girls and the overstatement of their ages as soon as they have reached puberty." (Census Report for Bengal, 1921, page 251.)

This is, however, not the sole cause and the variation in the defect in the different parts of Bihar and Orissa, closely agreeing with the known variation in respect of early marriage, corroborates the view that the defect is largely due to the relatively high death-rate of girls at that age period. The study of the variation of the number of children per family in the Punjab according to the age of the wife at marriage admits the "conclusion that the marriages in which the woman is below 15 or above 30 are relatively infertile." (Punjab Census Report, 1921, page 253.) The Census Superintendent for Baroda for 1901 remarked that numbers of child wives "march from the nuptial bed to the funeral pile. Nervous debility, consumption and uterine diseases create havoc among them."

It cannot be doubted that the practice of very early marriage, so injurious to the health and happiness of young women in India, will gradually give way to higher conceptions of right conduct, but such a change will increase rather than diminish the tendency towards an excessive birth-rate and will emphasise the need for restraint.

The two-fold effect of lactation in restricting the birth-rate has been referred to. In India it is the rule for women to suckle their children for two years or even longer. If the result was to prevent the birth of children more frequently than once in three years it would obviously reduce the fertility of women. Enquiry in the Punjab suggests that during the earlier years of married life a child is born every third year and that then the rate gradually declines (Census Report for the Punjab, 1921, page 256). According to the same enquiry the normal size of the family in the Punjab shows that for every "completed" marriage there were 3.99 children alive and that 5.68 children have been born.

An enquiry into fertility in Bengal suggests that fecundity is but little affected during the first twenty years of married life in the case of completed marriages among the middle classes and that in the case of families where both parents are still alive 24 children are produced annually by every 100 married couples. That the duration of lactation has an effect in limiting the birth-rate among the aboriginal tribes of Chota Nagpur is suggested by the fact that, as I am informed, if a woman finds herself an expectant mother within two years of the birth of her last child she is apt to procure an abortion for fear lest she is suspected of adultery. The conclusion seems to be clear that in India the combined effects of youthful marriage and of prolonged lactation are to reduce the birth-rate to a considerable extent. There seems no evidence that abortion has an important influence in lowering the birth-

rate. Although practised to some extent, as, it is alleged among the widows of Orissa, it is so far, exceptional as to be excluded from the important factors controlling the increase of population.

A brief discussion is now necessary of the question how far acute poverty itself acts as a powerful factor in limiting the birth-rate. In the Census of India Report for 1901 it is said: "The relation between the rise and fall of prices and the fluctuations of the birth-rate is known to be very regular and intimate, and there are physiological reasons for believing that the reproductive functions are first to be affected by any marked reduction or deterioration of diet."

It is perhaps hardly necessary to insist upon the merely statistical difficulties that stand in the way of accurate deduction from vital statistics in India. The crude birth-rate is calculated upon a fixed population for a period of ten years, namely, the census population. In a time of famine the deaths of potential mothers will increase and this will have the effect to some extent of reducing the published birth-rate quite apart from any effect of poverty on reproductive functions. Again, it is well-known that the reporting agency for vital occurrences, at all times defective, is likely to be more than usually so at time of famine. This also will give the appearance of a reduced birth-rate at such times. There is a further important factor in birth-rate fluctuations that is very commonly disregarded in the Indian Census Report, namely, the variation in the age constitution of the population. An exceptional death-rate among children, occurring at a given time, will reduce the women of marriageable age after the lapse of twelve or thirteen years to an extent sufficient to affect the birth appreciably. It is thus difficult to argue confidently from the facts of the published crude birth-rate. It is, nevertheless, commonly held that these statistics point to a marked decline of fertility at a time of severe economic depression. Sir Charles Elliott declares in the Report on the Census of 1911: "When scarcity begins to threaten conception diminishes, the birth-rate of the famine years is consequently lower than the normal, though not so much lower as the birth-rate of the year succeeding the famine is." This would of course follow from the greatest reduction in the conceptivity rate occurring when the famine was at the highest and leading to a low birth-rate some nine months later. In the Census Report for 1901 there is recorded a special investigation which supports Sir Charles Elliott's contention. "During the Madras Famine of 1897 a medical officer examined about 15,000 women of child-bearing age in the famine camps and relief works of the Nellore district and found that only 2.5 per cent. or one-ninth of the normal number were pregnant." But such an investigation is not conclusive. It may be explained as due to the separation of husbands and wives since it is well-known that prior to entry on famine relief works the men are apt to wander away from their families in search of work.



The subject of poverty in relation to conceptivity was touched upon in a discussion before the Statistical Society recently when Sir Bernard Mallet explained a decline in the birth-rate in Germany during the war as partly due to famine. But Dr. Brownlee pointed out that the physiology of the matter was not simple and, in his opinion, malnutrition could not necessarily be adduced as a cause of lower birth-rate in Germany. An extended application of the theory that conceptivity is reduced by poverty is made by Dr. Bentley, the Director of Public Health in Bengal, in his Annual Report for 1921. Finding a marked seasonal variation in the birth-rate in Bengal he explains it by the fact that the points of low conceptivity coincide with periods of the year just before the *kharij* harvest in November, reach high level after the *kharij* harvest in January, and attain their maximum in June after the *rabi* harvest is gathered. (Fifty-fourth Annual Report, page 6.)

His theory is that when food is scarce just before the harvest conceptivity is reduced. But he does not apparently take into account the fact that there are well-known marriage seasons when the vast proportion of marriages take place. In Bengal and Bihar the great majority of marriages among the well-to-do occur in January and February while those of the poorer classes occur about June. This would also have the effect which Dr. Bentley attributes to poverty, if we assume that in a sufficient number of cases marriage season coincides with the commencement of co-habitation. Lieut.-Colonel Ross, the Director of Public Health for Bihar and Orissa, in his report for 1922, remarks that in his province the maximum birth-rate occurs in the three months, August, September, October, which would give maximum conceptivity in November, December, January. "This" he declares, "is a reflex of climatic conditions." In other words conceptivity, in his opinion, varies according to the greater or less invigorating season of the year. There is clearly an important field for investigation in this direction, but for my own part I am not yet convinced that the pressure of poverty actually checks conceptivity in the close manner that is suggested by Dr. Bentley. Yet that there is a causal relation between economic condition and the birth-rate there is no doubt. The corrected birth-rate is not so constant as unchecked procreation and a constant conceptivity would give. A comparison between the movement of the birth-rate and of prices in the province of Bombay for the last thirty years shows a definite low inverse correlation. (Bombay Census Report, 1921, Appendix X). It may be remarked that this seems to show an opposite tendency to that in Bengal. Dr. Bentley says: "In Bengal there is a very marked correlation between prices and mortality; but contrary to what is generally believed this correlation is a negative and not a positive one. Thus high prices of food-grains are associated with low death-rates and low prices with a high death-rate" (Report on Public Health for Bengal, 1921, page 14.). While, therefore, high prices seem to argue a rise of prosperity on

the whole in Bengal, they appear to produce a fall of prosperity in Bombay. To some extent the seeming contradiction in these statistical results may be explained by the different economic position of the people in the two provinces. It is well-known that among cultivators producing for the market a rise of price may give increased prosperity provided that there is a fair harvest. For landless labourers or those with very little saleable surplus the reverse would be the case. An important consideration is the fact that practically all cultivating holders of land are in debt and a rise of prices is good for debtors.

There is one further very important influence at work bearing upon the infant birth-rate to which attention must be called. It is accepted that malaria affects in special degree woman at the reproductive ages and it appears that in districts specially liable to malaria the birth-rate is below the average. Thus in Purnea in Bihar which is malarious the highest birth-rate of the last decade was 36·95 per mille whereas in the healthier part of the province the birth-rate frequently rises to 46 per mille and even higher.

The general conclusions that may be drawn from the brief consideration of the birth-rate that I have been able here to give seem to be that while there are important involuntary forces which reduce the rate below the maximum, of which the effects of disease, early marriage, extreme poverty, and prolonged lactation are the chief, and while there are the forces of convention, such as the rules of purification, which govern cohabitation, and the custom of hypergamy which also tend to reduce the birth-rate, yet there is comparatively little evidence that voluntary measures are taken by any but a small section of the people to restrict the birth-rate so as to improve economic condition or to preserve economic equilibrium. The outstanding feature of the Indian birth-rate is its height despite the involuntary forces referred to which make for its restraint. Allowing for defective recording it would seem that the normal birth-rate is at least 45 per mille and it often rises above this level under favourable circumstances to rates of over 60 per mille. Moreover the birth-rate is on the whole remarkably constant showing that it is on the main the result of a force unrestrained by varying economic condition. There is nothing comparable to the reduction which has brought down the birth-rate in England and Wales from 35·4 per thousand in 1880 to 25·4 per thousand in 1920. In India there seems to be no tendency for the birth-rate to fall, except among such small section of the community that no appreciable effect results upon the population as a whole. The conclusion is inevitable that the tendency towards overpopulation in India is powerfully at work and that it is only kept in check by the force of poverty and disease. Moreover there is much effort directed towards a reduction in the strength of the checks upon the birth-rate. There is the movement in favour of the remarriage of widows. Female infanticide will continue to grow less. Medical science is striving to overcome the effects of disease. Administrative effort is reducing the dangers of famine. All these influences favour

an increase of the birth-rate. Are these greatly needed reforms merely to result in increasing pressure upon the means of subsistence? Are they to lead to a higher infantile death-rate from other causes. Or can the present universal desire for early marriage coupled with the unrestrained procreation of children be made compatible with a rising standard of comfort by means of improved cultivation and more rapid industrial development? Can the condition of the poor in India be permanently bettered by a reduction of the land revenue, or of other taxation, or by a wholesale wiping out of indebtedness by such drastic measures as have been recently suggested by Mr. Shah in his "Sixty Years of Indian Finance," or would these measures merely create a vacuum to be rapidly filled up by the high birth-rate temporarily unchecked by the high death-rate? To my mind it is an elementary truth that whatever improvement may be wrought in the economic welfare of India by better methods of cultivation, by irrigation, by relief from indebtedness, by improved transport, or by industrial expansion a large proportion of the people will be condemned to a state of poverty so long as the tendency for the population to expand at the present rate continues. This is very far from equivalent to an assertion that the several economic reforms that I have mentioned would be worthless. On the contrary they would greatly benefit the country, but they would not serve to remove the fact of widespread primary poverty. At present the tendency to excess in numbers is held in check by poverty and disease. These checks will remain unless the tendency to increase is itself diminished.

#### THE INDIAN DEATH-RATE.

It is a well-known fact that despite the high birth-rate the population of India has in recent times grown at a comparatively slow rate. Allowing for alterations in the area under enumeration and for improvements in enumeration the rate of growth of the Indian population during the successive census periods has been as follows. The rate of increase in the case of England and Wales is given for comparison:—

	PERIOD				
	1872-81.	1881-91.	1891-01.	1901-11.	1911-21.
India .. .. .	1.5 p.c.	9.6 p.c.	1.4 p.c.	6.4 p.c.	1.2 p.c.
England and Wales ..	14.4 p.c.	11.6 p.c.	12.2 p.c.	10.9 p.c.	4.9 p.c.

Thus with a much higher birth-rate the increase in India has been much slower than in England by reason of her high death-rate. It would be a mistake to suppose however that in India the high death-rate is always due to poverty. The same thing may be expressed in a different way by saying that population in India is not everywhere pressing upon the bounds of subsistence. There are, broadly, four kinds of district in India: There is the healthy district with a fairly reliable rainfall; the unhealthy district with a reliable rainfall; and the healthy and unhealthy districts with an unreliable rainfall. The density of population in the

main varies accordingly. In many districts there is comparatively little or even no pressure of population on the land where the numbers are kept down by disease. But in areas where conditions are healthy and the rainfall is satisfactory the pressure upon the cultivable land is so great that in almost all cases sub division of holdings has resulted in many cultivators having less than economic holdings upon which they can only eke out an impoverished existence by means of supplementary earnings on the part of relatives in the coal-mines or the mills or by themselves devoting part of their time to labouring for other cultivators. The unwillingness of the Indian people to move to a locality which is known to be unhealthy is well established so that in close proximity one may find places densely populated up to the margin and others where the population is comparatively scanty. Even in the healthy areas it is, of course, far from true that the high death-rate is directly due to poverty. The high infantile mortality is largely attributable to the evil customs that prevail at child-birth. "After delivery the mother is given various nauseous messes, which are often selected mainly for their supposed efficacy in scaring demons; she is kept confined for days in a dark, ill-ventilated room in which a fire is kept smouldering and incense is sometimes burnt and she gets no proper nursing and no special nourishment." (Census Report for 1911). This manner of treating the mother often reacts on the health of the child. In Bengal in 1921 it is estimated that some "30,000 infants perished from tetanus, the result of the filthy methods adopted of treating the umbilical cord." (Report of the Director of Public Health, page 10.)

It is pertinent to ask whether, if by means of education in the care of mothers and infants a large reduction in infantile mortality from these causes was secured, the result would be to increase mortality in some other direction so as to keep population at the same level relative to the means of subsistence. To this question Sir Frederick Whyte is recently reported in the press to have replied that there was no such danger since India was not overpopulated. There seems to me to be no warrant for such a statement if the saving of life resulting proved considerable. It is true that there is often an unsatisfied demand for labour in coal-mines and elsewhere but the unsatisfied demand for labour is not large and any great reduction in the infantile mortality rate would cause an increase in population which would with difficulty be absorbed without presupposing a much greater mobility than at present exists. The conclusion seems to be that probably other causes of death would tend to maintain the proportion between birth and death-rates. This, however, is not a valid argument against every effort to abolish insanitary habits. Partly it is true that the very educative means chosen for this end will tend to bring about in the long run the greater prudence which will lead to a reduction in the birth-rate, while it is partly true that better sanitation will increase the productivity of the people.

The suggestion is sometimes put forward that the fact that India is not overpopulated is shown by the increase in numbers which takes place in the absence of severe epidemics of disease. For example it is calculated that if the Census in Bihar and Orissa had been taken in March 1918 the population would have been a million and a half more than it was in 1921. The very small increase shown in the decade was due to the influenza epidemic of 1918. Although the influenza scourge had no direct relation with poverty or overpopulation it should be borne in mind that the very heavy toll of life-taken was itself in no small degree the result of the low resisting power of the people which in turn was due to poor physique consequent upon the low standard of life prevailing. It is not denied that in favourable years there is a margin for expansion and the fact that rapid expansion occurs at such times is a proof that population multiplies up to the limit set by a very low standard of economic comfort. This low standard is, given the present modes of economic life and production, imposed by stress of numbers from which it follows that bad harvests or unhealthy seasons quickly lead to a sharp advance in the death-rates. It thus comes about that while the birth rates are on the whole stable from year to year, the chief variations being due to imperfect methods of calculating the crude rate, the death-rates show wide fluctuations as between healthy or unhealthy years and as between good and bad agricultural seasons. The excess of population is shown by the rapid reaction of the death-rate upon unfavourable circumstance.

I will sum up my conclusion to which, as it seems to me, the study of the facts inevitably leads. The question of overpopulation may be studied as a fact of the moment or as a tendency arising from the birth-rate being so high that normal economic growth cannot provide for the increase which, in consequence, leads to a high death rate and a short expectation of life. If the state of overpopulation exists in the latter sense there can be no escape from extreme poverty on the part of large numbers of the people mitigated by the fact of exceptionally high death-rate due to disease. The lesson seems to me to be simple. India can only look forward to an advance to a state of reasonable comfort among her people as the result of a drastic change in her marriage customs and in the unchecked procreation of children which at present prevail. To achieve this reform no rapidly acting panacea is available, but the first step must be a general education of the people. For without this foundation no change of social custom or economic habit appears possible. There are many modifications in the economic life of the country which would help towards the desired end but it can be no part of this paper to discuss them. The one paramount consideration is to lead Indian opinion to realise the dangers of the existing tendency of population and to endeavour to shape economic policy in the light of this outstanding fact.

## DISCUSSIONS ON THE PAPERS.

*Tuesday, 22nd January 1924.*

The Conference reassembled after lunch at 2-30 p. m., when the different papers that were submitted were considered and discussed. The papers, not having been previously circulated among the members, could not be taken as read. The writers were accordingly requested by the President to present a summary of their papers, giving the main points they wished to make, so as to make proper discussion possible.

### 1. British Imperial Economic Relations

(PAGES 1-8).

By PROF. A. J. SAUNDERS OF MADURA

MR. J. A. WADIA of Bombay:—Prof. Saunders has given us in a few words what his paper is meant to convey, namely *Imperial Preference*.

Before we can talk of Imperial Preference, we must have *fiscal freedom*. Unless we can get fiscal freedom no other question as to the brotherhood of nations and all belonging to the same Empire matters. To the Indians it is a question which cannot be considered because though we belong to the Empire, the Empire does not belong to us (laughter). England had her protection and I do not think there is anything like free trade in India. I do not think for my part England too ever had free trade. She found one-fifth of humanity under her thumb and she compelled them to trade on her terms. That is not free trade. It is false trade (continued cheers). In spite of coal, in spite of industry, we in India have not progressed as rapidly as we ought to have done because the chief partner compelled us to trade on his own terms. In the last speech I read of the Prime Minister, Mr. Baldwin, he says "we must go in for protection for the simple reason that India is going for protection". We get no sympathy, no support. Before we can talk of Imperial Preference we must have therefore fiscal freedom. I can understand my friend as an Englishman. I am not at all here to consider Imperial Preference. In the guise of protection for others England wants to protect herself. The one thing we want is fiscal freedom, free from the restraining influence of England. I admit that England has done well by India in many ways. I am a great believer in British rule in India but I do not like cant.

MR. KANUNGO of Indore:—I have one observation to make. According to this paper India would get preference in articles in which she does not want preference, and she does not get preference for the very articles in which she does want it. In encouraging the export of raw materials and in encouraging

the imports of manufactures we do not advance industrial progress. What we want is to discourage such exports. We would much prefer a sort of tax which will discourage exports of raw materials and not try Prof. Saunders' proposition. We do not want jute and cotton given preference. What we want is to put a sort of handicap to this preference. I do not think the policy of Imperial Preference can do any good to India ; on the contrary it is likely to do harm.

**SIR IBRAHIM RAHIMTULLA:**—This is a question which has been discussed at considerable length elsewhere too and I think I will make only a few remarks. There is one aspect of the question of Imperial Preference which India has to consider very carefully before she proceeds any further. The Dominions are the children of the mother country. In 1908, when I was in England I was present at a pageant where the members of the family of John Bull were giving reception to Madam France with whom an entente had been recently concluded. There were present: Miss England, Miss Scotland, Miss Ireland, and Miss Wales. The sons of England had also migrated there. Mr. Canada, Mr. Australia, Mr. South Africa and Mr. New Zealand were there engaged in watching the development of other nations. But there was no place for India in this reception. That illustrates the position of India in regard to Imperial Preference. If you examine it from the historical point of view the position was that after their emigration the sons of England had attained their majority and had been given full domestic freedom. It was only after they had acquired full dominion status that the Dominions responded to the appeal of the mother country by granting her Imperial Preference. India has only just been started on the road to political freedom and unless India reaches the stage of full dominion status there can be no question of Imperial Preference on the same analogy as that of the Dominions. Some of the members of the Fiscal Commission in pointing this out said they were prepared to recommend recognition of the principle of Imperial Preference on the distinct understanding that non-official members of the Imperial Legislative Assembly should have the power, unrestricted and uncontrolled, of initiating, granting, varying and withdrawing preference. This power was vested in the Dominions and ought to be vested in the non-official members of the Imperial Legislature. Except on that basis, no question of Imperial Preference can possibly be considered by India. The very fundamental basis of preference ought to be mutual, reciprocal and beneficial exchange of trade. One of the witnesses, a very able representative of the Bombay commercial community, the late Sir Vithaldas Thackersey, in giving his evidence before the Fiscal Commission said, he was in favour of the principle of Imperial Preference, preference which can be given [and received on the basis] of mutual and reciprocal gain. He was against any question of Imperial Preference if it meant that in the political conditions now prevailing in India, England would shake the very important

position of Indians. If that be the preference we would have none of it. But it must be as is done in the Dominions, that the non-official representatives of the people of India must be satisfied that a particular sort of preferential trade is in the interest of India as well as of England. On that basis I do not think there will be any differences of opinion. But the question of Imperial Preference presupposed those for which Mr. Wadia fought. Imperial preference is practically out of question till India obtains fiscal freedom and is able to regulate her fiscal matters uncontrolled at the instance and on the initiative of her own representatives. If you put India on the same basis even in the present political condition of the country with the power of initiating, granting, increasing or withdrawing preference vested in the representatives of the people of this country, then and then alone, I hold, the question of Imperial Preference can become a matter of practical politics.

**DR. JOHN MATTHAI** of Madras:—Is it possible for us by adopting some kind of Imperial [Preference scheme to replace to some extent the markets we have lost on the Continent by developing new markets within the Empire. That is why I urge a reconsideration of the problem, in view of the fact that India has lost many of her markets in the Continent of Europe on account of the great war and that they have to be recaptured or replaced.

**MR. C. S. DEOLE** of Bombay:—We have listened to a new point of view from the last speaker. First of all we must understand Imperial Preference as demanded by the reader of the paper. His point of view is quite different. He says that England following free trade alone cannot stand against the competition of the world. Why does it want Imperial Preference? Why does it want to follow an Imperial protectionist policy? Not because India has lost her markets as the last speaker has tried to make out, but because England now cannot stand this protectionist world. England must protect her industries against foreign competition. So this paper advocates a policy of protection for the Empire. The point, therefore, that is made by the last speaker is quite different from the point that has been made out in the paper. Sufficient replies have been given so far as its advocacy is concerned. Though this is an economic conference still the question of preference is more a political issue than an economic issue. When we consider this problem we always bear in mind politics. If we bear in mind the political point of view, we shall find that so far as our trade policy is concerned we have more trade clearly with England than with other countries. If this fact is borne in mind once for all, I think it is clear that the talk of preference is futile. Our representative, I mean the representative who represented the Government of India at the last Imperial Conference, said that the Government of India still held the view which she held in 1919, that India had nothing to gain but everything to lose by the policy of Imperial Preference. So far as



the question is placed by our friend here, well I think the question is not before us. The reader of the paper has not suggested whether we have now to raise another question and consider whether for the sake of India and for the supply of markets we should have a policy of Imperial Preference. I see there is not much in that point either. I doubt very much whether the policy of preference will find such markets for Indian products as suggested by Dr. Matthai.

MR. K. SUBRAMANI IYER:—It is necessary to develop industries of the country and in that way to create home markets. We should develop our industries by a policy of taxation and when our industries are sufficiently protected, we would be able to create new markets abroad and regain the lost ones.

PROF. R. M. JOSHI:—Dr. Matthai has raised the point that it would be worth our while to consider whether, in view of her loss of the continental markets, India might not herself benefit by the adoption of Imperial Preference which might open out to her more widely the markets within the Empire. Now let us briefly see how far that is possible. Our principal exports are still the same as they were before the War, viz, raw materials and food stuffs. Most of these are admitted free of duty by all countries whether within or without the Empire, so that the question of granting us preference does not arise. Let us take one or two instances to see what has got to be done to widen the markets for our goods. Our cotton was purchased on the Continent in large quantities before the War. If the English market is to take the place of those lost to us, it cannot happen with the kind of cotton we put up for sale, viz. 7/8ths of an inch staple. We must improve the staple to, say, 1½th inches. When we do that, we won't have to be; for preference by granting preference ourselves to English goods. Purchasers will run after us as they now run after the American staple. Besides our own mills will buy as much more cotton of the improved staple as we can produce, for the market for the yarn and cloth they can make out of it lies in the country itself.

Take another instance, that of hides. Our hides are not cared for much in England because they are smaller in size and weight, are carelessly rent and torn in flaying and therefore compare unfavourably with the American hides. If the quality of our hides improves, we won't have to ask anybody for preference to get them sold. But, by the way, are we so anxious to get the hides sold in the raw state? Won't we prefer to tan them ourselves and sell the leather? Won't we still more prefer to make the leather goods ourselves which at present we import? Our jute and rice need no preference, nor does our tea. In short, Imperial Preference can help us precious little to make up the loss of our continental

markets. The war has not changed the nature of our problem in this respect as Dr. Matthai seems to think. That is why Sir Charles Innes (then Mr Innes) representing the Government of India at the Imperial Economic Conference last year said that the conclusion which the Government had arrived at on the subject in 1903 was equally applicable to the conditions of to-day viz. that from the economic point of view India had little to gain by a policy of Imperial Preference and a good deal to lose or risk.

REPLY BY MR. SAUNDERS :—I think there was good discussion. In my paper I have discussed the question from the economic point of view. As far as I can see, fiscal autonomy for India is a foregone conclusion and in a short time we shall have full fiscal autonomy. Now the question is, will India be prepared to adopt a policy of Imperial Preference just as the other Dominions of the Empire are showing willingness to do to-day? It seems to me that we have a splendid opportunity to get together and work together economically and we can have a well-defined economic policy just as well as we can have a well-defined political policy, and adopt Imperial Preference for mutual benefit.

## 2. The Tariff Board and Indian States

(PAGES 8-11).

BY SIRDAR M. V. KIBE OF INDORE

In the absence of the Sirdar, the paper was presented for discussion by Prof. H. L. Kaji of Bombay.

PROF. IYENGAR :—What I have to point out is that Indian States have at present to pay a double tax. The goods that pass to the Indian States are only in transit and they obviously should have a right to ask for a refund of the duties charged at the port.

MR. C. S. DEOLE :—We have not got information enough to say anything on this question. It is a question of duties between different Native States and the Government of India.

The Native States claim, one of the speakers said, that they are independent countries and that they should be treated as foreign countries and that they can certainly claim a share in the customs duties and other revenues. But, as a matter of fact, though in theory they may be independent countries, they are not independent countries; they are treated as subordinate countries.

If India were to be brought under one rule, the Native States would occupy the position of provinces not that of independent countries. If this is the position, no Indian State can claim a share of the profits in the revenue derived from the customs duties. I can quote instances, however, to

show that these States were treated as foreign territories. Take the question of Viramgam. Duties were levied. A hue and cry was raised by the people against these duties. It was really a terrible thing and several of us saw the hardships and iniquitousness of the whole thing. Next year the Ahmeabad Congress was held and a resolution was brought forward, which I had the honour to second, that the tariff should be abolished. Of course, though not only as a consequence of the resolution moved, an agitation was going on for a good many years till the customs barrier at Viramgam was removed. There is no doubt that the question raised by Sirdar Kibe deserved careful consideration.

MR. J. A. WADIA maintained that the Native States could not bring forward any plea for a share in the customs revenue of the Government of India. They did not share in the expenses for the army and the navy and could not share in the receipts from customs.

The Conference then adjourned to 11-30 a.m. on Wednesday the 23rd January.

A visit to welfare institutions was arranged in the evening and a party of about fifty went to the Fazulbhoy Mills at DeLisle Road, Parel. They were shown round the various departments of the Mill as also the *creche* where the babies of the women operatives were taken care of by a competent staff of nurses. They then visited the Sir Currimbhoy Ebrahim Workmen's Institute where the Superintendent, Mr. S. B. Kulkarni, gave a clear idea of the welfare work done for the Currimbhoy group of Mills, through the Social Service League. The party was then taken to the Bombay Workingmen's Institute where Mr. N. M. Joshi, M.L.A., of the Social Service League, explained the very useful purpose served by the numerous activities undertaken by the League for the welfare of the workingmen of Industrial Bombay.

*Wednesday, the 23rd January 1924.*

The Conference met again on Wednesday at 11-30 a.m. in the University Convocation Hall, Sir M. Visvesvaraya presiding.

The morning session was taken up in considering currency questions and the papers thereon were presented by the writers. The discussion that ensued was interesting and took up also part of the afternoon.

**3. The Government of India and its Currency Policy**  
(PAGES 90-102).

BY PROFS. P. A. WADIA AND G. N. JOSHI OF BOMBAY.

**4 The Gold Exchange Standard during and after the War**  
(PAGES 82-89).

BY PROF. B. R. CHATTERJI OF AMRITSAR.

**5. The Gold Exchange Standard of India (Pre-war Period)**  
(PAGES 103-106).

BY MR. T. J. KUMARASWAMI OF MADRAS.

MR. J. A. WADIA :--Of all the papers read, I prefer the first which was more or less sound and I have come to one conclusion and it is : Let us go back to our silver standard. In this view I am supported by the report of the Babington Smith Committee. The silver standard is a capital standard. It served all our purposes and prevented fluctuation in prices. I think if you wish to have a gold standard, then you must have a gold currency also. If you cannot have a gold standard without a gold currency, then the sooner you go back to the silver standard the better.

PROF. HAMILTON :—I plead for a gold exchange standard. It is sometimes urged that India ought to have gold standard because India is a creditor country. I submit that India is not a creditor country. The essential condition of a creditor country is that it must have a balance of claims on other countries in excess of the claims which the other countries might have upon it. I maintain that India does not fulfil that condition. In my opinion, India is a debtor country. I should point out that the views of bankers and economists in England during the last year or so had been increasingly tending to the conclusion that it would be a fundamental mistake for England at the present moment to rush back to the gold standard. She has not a gold standard at the present time. She has a gold exchange standard and her present policy is to watch and wait. It seems to me that the arguments in favour of a gold exchange standard are increasingly accepted by statesmen, bankers and economists in the whole world. I submit that it is not right to say that the gold standard is the only perfect system. This was the view held by Baron Rothschild thirty years ago; but it is not held by the bankers of to-day.

**MR. R. F. MADON:**—The policy of Government for the last five years has been that it is highly desirable to manipulate exchange in order to alleviate the hardships caused by fluctuation in prices. There the whole trouble came in. But I think Government should leave exchange alone at the rate which had been deliberately adopted thirty years ago, that is 1s. 4d. What we aim at is to see that the ratio of 7.53 grains of gold to our unit is restored and that Government allows gold to come in. If we could go back to these sound lines, then I personally consider that the gold exchange standard would be a sounder standard to be dealt with than the gold standard.

**PRINCIPAL M. L. TANNAN:**—I am not going to detain you with the various arguments which can be advanced in support of a gold standard. I may say that I am willing to accept that in theory the gold exchange standard is perhaps better than the gold standard. In practice, I say that the gold standard is better than the gold exchange standard, more so for a country like India. The gold exchange standard may be good for a country like England where people are literate, where people know that gold is in the Central Bank, and that whenever they want it for making ornaments or for other purposes it will be available. Then with regard to the experience of small countries referred to by Prof. Chatterji, I wish to say that in the first place, these experiences do not point out clearly that the gold exchange standard is really better than the gold standard. For instance, in order to maintain the gold exchange standard, the Government of the Straits Settlements had to increase the currency by nearly a hundred per cent in one year and another year to reduce it considerably. Thus it led to a very rapid rise in the price level in one year and a very rapid fall of the price level in the following year. Moreover, I want to mention the fact that whatever may be found good for a small country like Siam may not be good for a large country like India. I do not take it that whatever is good for one country is bound to be good for another country. Prof. Hamilton said, Bombay in particular wants the gold standard because with the people of Bombay it is a matter of pride. It is not for that purpose. We know our economic condition which suffers in the absence of a gold standard. I ask Prof. Hamilton, the champion of the gold exchange standard, if there is any other country in the world where the bank rate jumps up 75 per cent in the course of three to four weeks every year as it does in India. Even with a very high bank rate, the money market is very tight, whereas at the same time the bank rate in other countries remains as low as five per cent. The reason as far as I can see is that the money which is available in other countries does not flow into this country because the capitalists are not sure about the exchange at which it will be withdrawn. Therefore, they are not prepared to take the risk of sending money to this market, although the bank rate here goes up to 8 or 9 per cent when in the other countries

it remains as low as 4 or 5 per cent. Prof. Hamilton also said that London and New York have become the financial centres of the world for various reasons. One of these reasons as far as I can see is that England was the first country to adopt the gold standard (applause). It has become the centre of international finance. Of course, there are other factors also. Prof. Hamilton said that England was not a worshipper of the gold standard. Well, as far as the expressed views of British bankers and others are concerned, most of them point out that England does want to go back to the gold standard. I do not deny that there may be individual economists who hold that it is not necessary for England to go back to the gold standard. One of the chief arguments usually advanced against the adoption of the gold standard by this country is that India would not be able to get gold for export purposes; but I would point out that during the years 1920-21 she exported a fairly large amount of gold. If India could find gold for export purposes when she had no gold currency, I see no reason why India should not find gold for that purpose when she has a gold standard.

PROF. B. K. THAKORE :—The classical theories, the classical formulæ and the classical labels on the subject are losing ground. It is being realised more and more clearly that facts are far more complex than the classical economists had thought. Especially from the middle of the 19th century onwards, as the volume of international exchanges has grown and more and more distant countries have come into close economic contact with one another, the economic organisation in every country is becoming more and more sensitive to events and influences from every part of the world however distant. Production, transport, trade, banking, currency and finance are thus acting and reacting on one another more rapidly and to a greater extent than ever before, and this sensitive interaction is increasing by leaps and bounds.

Price statistics, trade statistics, production statistics, bank statistics, bullion and mint statistics and paper currency and finance statistics are being noted more and more carefully everywhere; and these figures are becoming available for the student from all the principal centres all over the world to an extent not possible even twenty years ago.

The period 1914 to 1921 is a period during which almost every country resorted to unheard of and desperate currency measures, all of which are recorded along with all the circumstances preceding and following them: thus we have a vast mass of authentic material to investigate and analyse, and the currency theory that scientific study would gradually evolve from it would, for the first time in economic history, be such as to square with the bulk of the recorded evidence.

When such a theory emerges and gains the day, every country will have to modify its currency in the light of it.

Moreover, politics and currency and finance are intimately connected

and if we succeed in evolving an international authority like the League of Nations as an arbitrator between individual nations, it is conceivable that we may also have a single international currency for international trade, and each political and economic unit will have in addition and correlated with it, a local currency issued by itself and for internal use only.

This however does not appear to be possible in the immediate future. And what every state and community really want is light on the present day and on the immediate future: a poor and struggling country like India wants this much more than other countries who are, comparatively speaking, better off.

From this more limited point of view of immediate utility the practical economist may say—

- (i) Violent changes must be avoided at all costs.
- (ii) We must gradually slide into a system involving far less interference and manipulation than to-day. In fact *ceterus paribus* that system is the best which involves the least possible interference and manipulation by the State.
- (iii) As steps towards this goal, may be most urgently recommended for adoption at the earliest opportunity—
  - (a)—A free market in gold.
  - (b)—A free mint for gold coinage.
  - (c)—A system of paper currency in which the currency note of the highest denomination only is a promise to pay on demand—not so many rupees—but so many of the gold coins that the mint of India coins.

If these three features are substantially secured, the resulting currency system may be called a gold standard or a gold exchange standard system, or by any other name the experts prefer to apply to it. The label officially or popularly to be attached to the system is a matter of no consequence whatsoever.

PROF. R. M. JOSHI:—In your opening address, Mr. President, you showed in how many respects India was behind the rest of the civilised world; but from the remarks of some gentlemen on the papers under discussion, it appears that there is at least one subject in which India is ahead of the rest of the world, nay, has always been for the last twenty-five years, *viz.* the currency system. The gold exchange standard which India adopted in 1899; is, we are told, the system which eminent economists of Europe like Mr. J. M. Keynes have declared to be the ideal currency system, which nations of Europe and America are going to adopt because they want an alternative to the gold standard which has failed to stabilise prices. Now, sir, abnormal growth in one part is as bad for a nation as for an individual. India is admittedly half a century behind the world in

many matters like agriculture, industry, commerce, politics and social reform; but in currency she anticipated the latest developments of scientific theory twenty-five years ago. What we must do in this respect, therefore, in order to ensure harmonious growth of all parts of the body politic is to go back to the good old gold standard as it was understood in England for a full hundred years before the war. In the meantime, let the Keyneses and Fishers and Gustav Cassels establish the scientifically superior gold exchange standard in Europe and America; and thirty years hence when that system is recognised as the best in the civilised world, backward India will gladly adopt it. Let us not try to jump when we can hardly limp.

On reassembling after lunch at 2-30 p.m., the discussion on the currency policy was resumed.

DR. BALKRISHNA :—Are we going to sacrifice the stabilisation of prices in India for the sake of stabilisation of the foreign exchange which I do not want? This is the first argument against having gold exchange standard. The second thing is, as was pointed out, that in Bombay and in other commercial cities the working of the cheque system is very much developed. But we should know that only 3 per cent of the population lives in cities like Bombay and Calcutta. In the villages where more than 95 per cent of the population of India is to be found, the credit system has not been well developed. What I feel is that the gold exchange standard can only work in a country where the credit system is highly developed. A learned writer once calculated the ratio of credit to cash. In England, if I remember aright, only  $\frac{1}{2}$  per cent is being done by cash, while 99.5 per cent of the whole business of the country is being done by credit. What about the thing here? In India mainly we carry on our business transactions in cash; in such a case we require currency which must be substantial. The greatest point which has to be emphasised is that our currency here has been inter-amalgamated. We want an automatic currency. Is it because it is a foreign Government that its interests are being sacrificed? Leaving that point altogether out of consideration, and only guided by economic considerations, I feel that we require an automatic currency and that comes only when we have a gold standard with a gold currency. Why is it only New York and London that have these stores of gold and why not any other country, say, India? India represents  $\frac{1}{5}$ th of the population of the world while England and America contain 50 millions and 30 millions. Why should we also not have some stores of gold? I think with our population, with our rising prosperity, when we are being told that we are prosperous,



we require gold being stored in our country. We need not trust New York and others. There is another chief practical argument. When we have to depend upon one or two markets the variations will be many, the oscillations will be more and more. Then for stability of money markets, gold should come to India as one of the store house like London and New York. Prof. Hamilton said it did not make much difference if we used brass or copper or a spoon of gold. He is right but only when we know that the spoon of gold is with us, and that is the question. There is danger when the gold is not with us but with others. The whole history points out that gold is not with us and that therefore people are suspicious. People cannot see that tangible thing. We want the gold spoon because that is a tangible, a visible thing, on which the people of the backward classes wholly depend in villages. In the villages people do not accept currency notes; those people have no faith in currency notes. They want something tangible and that is gold.

PROF. MYLES :—In spite of the most enthusiastic reception that the advocacy of a gold standard has received here, I must admit that I am not still convinced. I must agree with Prof. Hamilton when he said that it seemed to him that the advantages of the gold standard had been exaggerated. We have heard a very great deal about automatic currency and automatic system. Now if you think for one moment I think you will practically acknowledge that even before the war there was only one free market in the world for gold and that country was England. I was in America some time before the war. I know the greatest difficulty was put in the way of any one who wanted gold in America. With silver dollars in circulation, with difficulty put in the way of obtaining gold for internal or external purposes it was very far from the position that exists in India. Prof. Tannan said in his remarks that it was largely due to the gold standard. It is partly so, in the case of London. In the case of America, it is not so. One other point that does not seem to have been specially brought out is: Why was it that England was in a position to maintain a free market? I maintain that it is largely because of England's position in the international markets, England's position as far as trade is concerned. Owing to her manipulations of bank rates, England had influence over the world supply of gold. Do you expect, the bank rate in India would exercise the same influence if she adopted the gold standard? I personally very much doubt whether India would be able to achieve that result.

MR. T. K. DURAISWAMI AYYAR :—The question has been raised as to which is the best currency. It was suggested by Mr. Wadia that we may go back to the silver basis. Other suggestions have been advanced that we must have a gold standard coupled with gold currency. Let us enquire what are the purposes of the currency. That is to secure more or less the stability of purchasing power.

Let us see whether if we had retained silver we would have obtained this stability. Most economists agree on this point that we must have gold in the background because we have not reached a state of international agreement on the basis of working by index numbers. When disarmament comes, then the world and commerce would go side by side. The idea of having a gold standard along with a gold currency circulating is not possible. As for the point raised by Mr. Tannan, they would not agree. Bring it in par with gold. Then you will see England would not go back having sovereigns in circulation as they were before the war. As for India, which is the best currency? As for the best standard, economists would agree whatever their political prejudices might be, that gold is the best standard. For all our arrangements we should have cheap material for the ready exchange provided that cheapness does not land us in disaster. So when once agreed, the question arises could you have it in India? Recent speakers pointed out that gold exchange standard should go from the country on account of the fact that the credit system has not been developed in the country. I hold quite a different opinion. The gold exchange standard has been retained in this country because the credit system has not been developed. If we have better currency then there is absolutely no need for a gold exchange standard which really disturbs our equilibrium. It is a question needing earnest consideration whether students of economics would not be well advised in calling for a great propaganda for the development of note issue on a larger scale and thus wean our people from hankering for the dead metal which only locks up capital which would otherwise be effective in developing trade and industries. Then as regards the sudden jumping of the bank rate, the previous speaker pointed out that with bank rate manipulations England is able to-day to have a free gold market. England has been able to have a free market very largely on account of its wide and varied international trade with a very sound and sensible banking system. As for India, the high bank-rate will have to go, and it will go if we have a sound banking arrangement. The whole trouble is only that public men who fill important places have not given sufficient attention to the development of a free, sound and healthy banking system all over the country. If you have that, then the extraordinary rise of the bank rate and the retention of such bank rates for 3 or 4 months which acts as an impediment to the trade, will go.

PROF. WARBURTON:—I do not know of any country in world that has the gold standard with the gold currency actually in the circulation. Eng'and had it before the war. The United States of America had not had it for a number of years. Practically we have none. The second system is a gold standard without a gold currency. One of the speakers spoke about the difficulties of getting gold. I will take it that he must have made a mistake. One can get gold if he wants it. I have seen one person having 25 gold coins during

my stay in the United States of America. We have several coins in the United State of America circulating. The third type of gold standard is what I should call and think the best, is the gold exchange standard whereby gold does not circulate in the country and the currency which does circulate is not convertible into gold within the country but is convertible, whenever wanted, outside the country. This can be done by having a gold reserve. I do not believe that I am acquainted with the gold exchange standard in India. Of what I should call the sterling exchanging standard the best example is that of the Straits. What has been pointed out is that the Straits coins relate to the sterling and not to gold. We have not had a gold standard without gold currency. Gold exchange standard means that the exchange does not vary. I firmly believe that India should have some definite currency policy. The present policy of vacillation and of not knowing what we were going to do is detrimental to the interests of the country. Now the question is what system should be adopted. I take first the gold standard with a gold currency. Gold standard convertible with gold or a gold exchange standard with the currency convertible outside the country are in fact essentially the same. But here is a point that is widely confused. Neither the gold exchange standard nor the gold standard will have the same effect upon the prices in India. Prices in India will be according to prices outside. This is a point about which people differ and into which I do not propose to go at length. The currency of the country should be arranged so as to create stabilised prices in which case you will not have a gold standard. Some are for a managed standard based on prices or something like that. Whether we should have a currency so as to have stable prices or we should have a currency in line with most of the world's currency based upon gold and gold prices, I leave for discussion.

MR. G. FINDLAY SHIBRAS :—I should like to make a few remarks purely as an economist and not as an official. The question of managed currency is one of vital importance. I have some experience of it in this country and in London I was amazed at the amount of management that existed in London with regard to their currency system. Every day the Treasury and the Governor of the Bank of England are looking very carefully into their system of currency and the huge superstructure of credit that is built up on gold. The same thing happens in the United States of America and in India. That is a point which they ought to consider when people talk of managed system of currency and they ought to remember that the system is not peculiar to the conditions prevailing in India. The last speaker spoke about the policy of vacillation but I maintain that it is anything but vacillation. With regard to the gold exchange standard, it has the defect of elasticity as pointed out by economists from time to time but that is being tackled very carefully at

the present time. Unfortunately, this Conference has taken place at a time when in India the currency position is rather difficult on account of various factors, seasonal especially, but that is passing away.

**REPLY BY PROF. P. A. WADIA :—**There are two distinct questions which we have discussed in our paper. One is the gold exchange standard on its merits; the other is the gold exchange standard as worked by the Government of India for the last 30 years. Let us in the first place take the gold exchange standard on its merits. We have been told that even as early as Plato the world was familiar with the idea of an exchange standard (laughter). If you look to the history of currency experiments, it points clearly to one great realisation. The practically acceptable standard for currency purposes which you can have is a gold standard. Not a gold standard with a gold currency. Nobody suggests that and I have not suggested it in my paper. The world has grown wiser. It has learnt to economise gold. But what we insist on is a gold standard which will secure convertibility for all purposes both internal and external. When the war came, with the absorption of gold by America, the rest of the world practically became bankrupt in the matter of gold and the gold exchange standard has been foisted upon India for the benefit of the bankrupt countries which want gold. We are now being seriously told that this is an ideal system for India—India which is a creditor country. The world is fighting for gold; there is a scramble for gold! When one country can gain in gold another country will lose; we have to face this. If we have the gold exchange standard genuine, let us have the gold in India. That is the primary condition on which we can accept even in theory a gold exchange standard. Mr. Findlay Shirras talks of managed currency. For currency, so far as internal convertibility is concerned, the policy for all purposes must be the policy of *laissez faire*. Let us keep in mind, if we are to have a managed currency, it must be a currency managed in the interests of India but not in the interests of England (applause).

The Conference then proceeded to consider the following three papers :—

#### 6. Non-credit Agricultural Co-operation in India

(PAGES 42-146).

BY MR. J. A. MADAN, REGISTRAR, C. S., BOMBAY.

In the absence of Mr. Madan this paper was presented to the Conference by Rao Sahab Gunvantrai H. Dessai, Personal Assistant to the Registrar.

#### 7. Distributive Co-operative Societies in India

(PAGES 46-51).

BY PROF. H. L. KAJI OF BOMBAY.

#### 8. Housing of the Working Classes

(PAGES 42-45).

BY RAO BAHADUR S. S. TALMAKI, HONORARY SECRETARY OF THE CENTRAL CO-OPERATIVE INSTITUTE, BOMBAY.

**DR. JOHN MATTHAI** :—I want to contrast both papers. Mr. Kaji's paper begins with a statement that the credit movement has progressed at a fairly rapid pace. I want, if I may, to challenge the assumption that the credit movement has really progressed faster than the non-credit co-operative movement. The point for the conference to consider is whether the co-operative credit side has been successful. Now there has been very little investigation in many provinces. As for the question that indebtedness has been reduced by the credit societies, one has to be very sceptical. The credit side has not I feel been able to justify herself. It seems to me quite impossible to disassociate from the credit part of the movement the non-credit side. If you really want to reduce the indebtedness of a country, you have got to increase the productive capacity of the ryot. Secondly you should be able to tempt him to secure better prices for the things he produced. In the first place you must be able to base the credit system on a foundation which will enable you to give loans of an amount that will help agriculturists to improve their land. Our credit movement is based on short-time loans, because our business is done on short deposit basis. On that basis we are not going to achieve any permanent improvement. The credit movement is closely bound up with the non-credit movement. When you look into the actual management of co-operative societies, you see the greatest difficulties lie in stimulating the loyalty of members. Loyalty of members is not an ethical question. If you are able to secure really cheaper prices for your men, then they are prepared to be loyal to your society. In parts of the country with which I am familiar, it seems to me that co-operative stores have failed because to a very large extent in our country, the gulf between the retail prices and wholesale prices is not sufficiently wide for co-operative societies to succeed. I think the advantage that the co-operative stores have in theory is that between the wholesale and retail prices there is a great difference; but the retail shop-keepers in India want very little profit; therefore they sell at fairly low prices, so that it is very difficult to stimulate the loyalty of members. In regard to articles which are not used within the country and with regard to the articles which are imported from elsewhere, it seems to me that if we are going to make a success of our co-operative stores, it would be necessary for us to begin with a sale of such articles; but there too unless we choose articles of a kind in regard to which there is a wide gulf between the retail and wholesale prices, it is difficult to make it a success. The fundamental reason that the credit movement has succeeded is the Government control. We want to a certain extent Government control, no doubt; but then this control takes away from the movement to a certain extent, its popular character.

**PROF. G. N. JOSHI** :—I am in agreement with Dr. Matthai. The co-operative movement will prove a panacea for all evils and bring about and promote moral and material prosperity under certain circumstances only. If

you want to make remunerative the toil of the population of the country, not only you must increase the productive capacity of the country but also you must seek a better market. The most important requisite is to wipe out their debt. Remove the incubus of the permanent debt of the agricultural population. Unless you eliminate that permanent debt, the co-operative movement will advance for one or two years and must afterwards stagnate or collapse.

The Government can float a loan and thus eliminate those who are creditors of the agricultural population. Government has large resources. It can start a bank and these creditors may be entered as depositors. The Government must interfere and must help the debtors. By the interference of Government 6 per cent interest will be given to the creditors. You can thus eliminate the debt of the agriculturist. Heavy indebtedness is a handicap that cannot be removed merely by the co-operative movement. The only panacea is the co-operative credit movement so arranged to promptly remove the indebtedness.

PROF. B. G. BHATNAGAR (referring to Rao Bahadur Talmaki's paper):—Let us not accuse Government; it is the Government that has taken the initiative. The cause of failure is the lack of interest among agricultural classes. People do not look upon the co-operative societies as their own. In Bombay there is perfect disregard to the hygienic element of the housing system. You provide one-room tenements. I would submit that the people of Bombay should take a wider view of things and approach the problem of housing from the point of view of comfort, hygiene and sanitation. There must be some place for children to play.

PROF. MYLES, referring to the progress of non-credit co-operation in the Punjab and particularly to the progress of the co-operative consolidation of holdings inaugurated by Mr. Calvert, said :—If lower prices were adopted, I fear opposition from the retailer. If we start the idea of giving credit, it may be fraught with danger. I personally would very much doubt the wisdom of Government or any other public body coming to the rescue, in order to enable stores to inspire confidence in their members or in the public.

PRINCIPAL T. K. SHAHANI :—I may say our stores consist of members who are employed in Government and in private services. How are we to realise the amount due if we give any credit to the such persons. Such sort of credit sales can be encouraged only if there are credit societies who can guarantee to the stores society and authorise it to give credit up to a certain amount. As for the success of credit societies, I have only one remark to make. I quote the report of His Excellency Sir Edward Maclagan when he stated that many of these credit societies, which are limited, are connoisseurs masquerading under the name of co-operative societies and do not serve any purpose in ameliorating

the condition of the masses. I can say, that many of these limited concerns give out loans to many of their members who are people of urban class and not the masses, but co-operation is not intended for these people but for the poor.

MR. KUMARSWAMI said that the condition of people who owned land was better than that of those who do not possess land.

PROF. B. R. CHATTERJEE:—In the matter of rural indebtedness, it is true that we cannot eliminate substantially the debt incurred by means of co-operative credit societies. In co-operative stores strict cash sales are impossible. Societies show rapid decline because of the system of cash sales. Some way must be found so as permit of credit sales to members with due provision for the safety of such loans in kind.

DR. BALKRISHNA :—In addition to the reasons advanced by Prof. Kaji, I may give three more reasons of the failure for the store movement in India. The first is amateur management. Those who are enthusiasts come forward, but they have no business experience and it is no wonder if they do not succeed. The second difficulty is that when we start stores we do not know where to buy at the cheapest rates. The retailer has the best information where to buy at the lowest rates. If we select a shop to buy from, it will be a third-rate shop. We are not offered the same amount of commission by wholesalers. Full information is not forthcoming to the people. The third difficulty is the charges of transportation, which generally come higher to the stores than to the other shop-keepers. Another point that the shop-keeper who has stability is able to get things on credit. He will get goods, paying the money 2 or even 6 months after.

REPLY BY PROF. KAJI :—The discussion has really, I am afraid, gone off at a tangent and related to questions which did not arise from the papers read. The success or otherwise of credit societies in relieving agrarian indebtedness was not an issue before the meeting. One paper dealt with non-credit agricultural co-operation and the other with the consumer's movement and I would have been very glad to have had views of economists and co-operators as to what they conceive are the reasons for the non-development of non-credit rural and urban co-operative movements. Regarding the question of short-time loans being ineffectual for enabling real improvement in the conditions of Indian agriculture, I do not deny that there is an element of truth in it. I may state that in Bombay at any rate, long term loans are being advanced by Government through credit organisations in approved cases at a very moderate rate of interest. Co-operative credit has its limitations, of course, but to stamp it as a failure because, it has not enabled the ryot to wipe out his old debts wholly is surely not fair. Unless investigations by economists are undertaken to discover how the co-operative credit system has

worked in improving the economic condition of the agriculturist, I do not think, one can pronounce positively on the failure or success of the movement.

However all that I want to emphasize here is that, whether failures or successes, credit societies are growing in number, working capital, and membership, not so the non-credit societies. Why? That is the purpose of my paper. Dr. Matthai feels that the margin of profit for the middlemen in India is very small and leaves no scope for the co-operative store organisation. My experience in Bombay is different. There was a good deal of profiteering during the war and even now the apparently low margin is really the result of fraudulent manipulations of weights and measures and adulteration. Prof. Myles wants to stick to cash sales. I cannot understand why he should object to credit sales if the chances of bad debts are eliminated in the ways I have indicated. A co-operative store is a business institution and cannot afford to let go customers by insisting on cash payment, merely because it is the better system. Dr. Balkrishna thinks ignorance and amateur management are at the root of the failure. He is right I fancy, and the way out seems to me that there must be one large store in the provincial capital functioning as the wholesale which would remove such obstacles from the path of small retail stores. Illiteracy of the people is a handicap in this movement undoubtedly but what is a greater handicap is the indifference of the educated classes.

The Conference then adjourned to 2-30 p.m. on Thursday the 24th January.

The Reception Committee of the Seventh Indian Economic Conference was At Home to the members and visitors of the Conference at the Sydenham College of Commerce and Economics at 5-30 p.m. the same evening. A large number of distinguished economists and businessmen were present and an enjoyable evening was spent.



*Thursday, 24th January 1924.*

The morning was devoted to the annual business meeting of the Indian Economic Association.

The Hon. Mr. Lallubhai Samaldas, C.I.E., was elected President of the Association for the next year, Professors Joshi and Kaji the Honorary Secretary and Treasurer respectively and twelve members were elected to the Managing Committee. A Hindi Technical Terms Committee and an Official Statistics Committee were also appointed. Mr. S. K. Iyengar was requested to arrange if possible for the meeting of the Eighth Conference at Hyderabad (Deccan), to be held towards the end of December.

The Conference reassembled after lunch at 2-30 p.m., when the papers on the Population Problem, Agricultural Improvements and Industrial Development were considered.

### **9. The Population Problem in India**

(PAGES 147—161.)

BY PROF. C. J. HAMILTON OF PATNA.

PROF. A. C. FERNANDEZ :—The question is what kind of population we have got. This question has not been investigated at all. We discuss what is the birth-rate, what is the death-rate etc., and we want to come to an arithmetical calculation. My submission is if you want to find out whether we have a population problem or not, we want to find out what kind of population we have got. On account of our traditional mode of living, on account of our outlook on life, our people have got sometimes stereotyped habits. Is there any equilibrium between people that are producers and the people that consume ?

PROF. WARBURTON :—There is too much prohibition of the remarriage of widows. These measures really involve co-operation by the people. They cannot be carried out simply by an official fiat. We cannot have the widow remarriage introduced unless you have this co-operation and that sort of co-operation seems to me to involve a change of habits. I think the statistics from Europe clearly bring out this point that the fall of birth-rate is largely due to a large outlook of life, and education, which is rightly emphasised. If we increase our wealth, we increase also our members. The most important problem is the lack of purchasing power on the part of the masses. That is the great economic tragedy of our civilisation.

**PROF. WADIA:**—The question is whether India is overpopulated or not? It seems to me that it can be decided by a reference to a simple fact. The question of population is primarily the question of relation between the members and the food products of a country. In Europe there were about 100 million people more than Europe could support. All this population is dependent for food upon the food products of other countries including India, so that the position is this. Nobody here suggests, I wish it was suggested, that England was overpopulated because her food production is not enough; but, India is overpopulated because she has more food than people require. It is a question of population and the distribution of production. For the purpose of distribution I want a policy of reservation for the peoples of this country. So long as the Government of India with its railway policy encourages the export of the produce of the soil, while a large number of people are starving in India, it is no use crying out about an excess of population. The suggestion that underlies the treatment of the question of population in India is the suggestion that the poverty of India is the result of overpopulation. The poverty in India is entirely due to different causes. I am not going to that question. The whole question reduces itself to this that the public suffered from over-ruralisation. The remedy for that is the only remedy of industrialisation—industrialisation on the lines on which the western countries carries it out, for making India self-sufficient.

**PROF. G. N. JOSHI:**—The whole problem has been misconceived. We approach it from a wrong direction. The principle is this. If the population is not large enough to bring all industries up to the point of fixed returns the country is under-populated; if that point is reached, it is sufficiently populated; if that point is reached and more, then it is overpopulated. In agriculture also, it is expected that there is sufficient scope for production. The implication of this paper is, because you are poor, you are overpopulated. I beg to submit that this implication cannot be proved in the light of facts existing in this country.

**PROF. BHATNAGAR:**—In India there is a tendency towards overpopulation, I will say. My study of the population of India convinces me that there is a tendency towards overpopulation. To have a tendency towards overpopulation is different from to have actually overpopulation. But as one of the speakers pointed out, to me personally the problem of the relation of members is not at all important. My study of the problem, the qualitative aspect of the problem, tells me that all this is due to a peculiar phenomenon, the lowered vitality of each successive generation and it is the one important factor that people should keep in mind. The problem that population in India is getting weaker and weaker is more important, when looked at from any point of view. Those who are interested whether in labour problems or as manufacturers of goods will do well to study the causes which have brought about the decrease of vitality in the Indian population.

**PROF. PHERWANI** :—This problem is a very intricate one, and to decide it in the off-hand manner in which it has been attempted, is, in my opinion, mere guess-work. In the American Geographical Magazine, this question was discussed from the geographical point of view. It was said that we must construct an econograph for each region to find the habitation of that region under a particular stage of civilisation, under a particular stage of technical efficiency. These can be found out by exact working. They can construct an econograph to know which region is underpopulated or overpopulated. Nobody worked this out for the different regions in India. Then the possibility of different industries have to be considered. Similarly the possibilities of the different strata of population has to be considered. So the population question involves much study and careful working out. The population in India is very great. But we have not reached and I do not think we will reach the question of overpopulation in India even in the next century.

**PROF. CHATTERJEE** :—In this connection I agree with the previous speaker that it is not perhaps so much the case of overpopulation but I think it is a very strong tendency towards overpopulation amongst the poorest classes—the class among which it is least desirable.

**PROF. R. M. JOSHI** :—Prof. Hamilton's thesis seems to be that India is poverty-stricken because the mass of the people in India multiply so recklessly and hence that the real remedy for poverty in India lies in birth-control. I am afraid this diagnosis does not explain why India is, relatively to other countries, so very much poorer, because even in countries where birth-control is exercised, the habit can hardly be said to have been cultivated among those layers of society to which the bulk of the community belongs. Irresponsibility in the matter of multiplication is a failing from which the mass of the people in all countries, or almost all, suffer. We must, therefore, look to other causes to explain the characteristic poverty of India. But that is not the subject of the present discussion. True it is, however, that in spite of all the advances of science and its application to the production of the material goods of life, the race between numbers and their material well-being is perpetual, as Malthus indicated more than a hundred years ago. In fact, the problem of human poverty cannot be finally solved unless human beings realise their responsibility in the matter of addition to the species. In other words, the heads of every family have got to be educated up to the point of realisation that unless they can afford to give their would-be children at least as good a start in life as they themselves got, they have no business to bring children into the world. And they must be the more careful if they desire not merely their own but a higher standard of life for the succeeding generation. It is not enough that only the upper strata of society should realise this truth ; it must

be realised by all the strata not merely in India but the world over. That combined with efforts increasing man's mastery over nature, may banish poverty for good and release man's energies for the pursuit of nobler ends.

REPLY BY PROF. HAMILTON :—Several speakers seem to me to have jumped to the conclusion that the population problem does not exist, because India is not overpopulated. I have made it perfectly clear in my paper that India is saturated with people. I appeal to students of economics not to accept conclusions on the ground of prejudice. Now there is the right answer and there is the wrong answer to problems of this kind, if purely regarded from the point of view of prejudice. It is I think an untenable fact that unfortunately in this country there are some views, which are Government views and some views which are regarded as popular views. Sometimes it is suggested that the poverty of India is not due to overpopulation, but to Government administration. That is an unscientific prejudice. I do firmly believe that India is overpopulated. That is an undoubted fact and I do not for a moment think that poverty can be reduced when it is overpopulated. The poverty of India is due to a hundred causes. The tendency of prices to increase is also a cause of poverty

#### 10. Agricultural Improvements in India

(PAGES 18—34).

BY PROF. P. BASU OF INDORE.

#### 11. Agricultural *versus* Industrial Development

(PAGES 35—41).

BY PROF. R. M. JOSHI OF BOMBAY.

PROF. MYLES :—There are a large number of statements made in Mr. Joshi's paper. They may be true or untrue. One statement is that India is the poorest country in the world. When compared with such countries as England, the United States of America and other advanced countries, India is poorer but not so when compared with Italy, Russia and such other countries. Let us take the Punjab. The food of the ordinary Punjabi consists of wheat flour, ghee and milk, which are commodities that many parts of Europe do not eat. They take ghee which is more nutritious than butter. So in the Punjab at any rate the scale of diet from this standpoint is extraordinarily high. The working classes of Germany do not get wheat to eat ; they have to be content with rye.

PROF. H. L. KAJI :—Mr. Basu has done well to bring up the subject of agricultural improvements and I agree largely with the remedies and means he suggests.

Mr. Joshi seems to me to have hit upon a title which does not convey what he really means to convey by his paper. The title seems to imply an antagonism between agricultural and industrial development. Does Prof. Joshi seriously mean that agriculture, the industry which at present maintains more than 75 % of the population, needs no improvement : and

that industrial development is the only thing necessary? The concluding sentences of his paper however recognises the complementary nature of these two. In his desire to emphasize the necessity for rapid industrialisation, he has made statements, I am afraid, that will not perhaps bear critical examination. With the general theme of the paper, I am heartily in agreement. A rapid industrial development is urgently needed in our country but I hold at the same time it is no use belittling the importance of improvements in agriculture.

PROF. WARBURTON drew attention to the per capita production of certain agricultural commodities in the United States of America and showed how the figures there were much higher than the corresponding figures for India.

DR. BALKRISHNA maintained that ruralisation had gone on very rapidly in India. Since 1911, 49 million people had been added to the agricultural population and the question was how to feed them. Was there more land available? In 1895, there were eight acres of cultivated land per person engaged in agriculture; in 1909 there were only six acres per head. The density of population was in the neighbourhood of 200 per square mile. It is clear therefore that greater transport facilities and rapid industrial development were very urgently necessary in India.

THE HON. SIR IBRAHIM RAHIMTULLA :—The discussion on the papers tempts me to make a few observations on the general question. A few years ago the Associated Chamber of Commerce of Great Britain and Ireland passed a resolution to the effect that the economic prosperity of a country depended on the extent to which they obtained their supplies from their own soils and from their own factories. That only means that India's economic prosperity can be reached by intensive agricultural developments and intensive industrial developments. The two should go hand in hand and the great minds of India have for more than a generation applied themselves to this problem and have been seeking remedy. They have had several commissions inquiring into the various aspects of this big question, but I think the people of India will not be satisfied till after the fullest enquiry that may be necessary for practical and effective measures to be adopted for the intensive development of agriculture and simultaneously for the intensive development of other industries, as far as possible they might obtain their supplies from their own country and from their own factories. Personally I think that it will be a move in the best direction if a commission of experts is appointed to enquire into not only industrial development, not only fiscal matters, not only agricultural development, but to co-ordinate efforts by one commission which should look and enquire into the effective and immediate measures which are necessary for raising India economically to a stage where there will be adequate food and clothing. It has been urged by some economists that Indian production of food grains is

adequate to meet the food requirements of the people of India. It is however in consequence of large exports of food grains that the people of India cannot get adequate materials for their supplies. There are various directions in which these enquiries can be made but I think the time has come when the economic problem in India outweighs all other considerations and demands insistent attention. I do not wish to go into the question of the growing population of India. But the population of India has got a vast field for its economic regeneration. India is very similar to the United States of America, which is both agricultural and industrial. It is one of the richest countries in the world. A study will have to be made of the means adopted by the United States of America for her development and of how it has managed to develop its agriculture and its industries, and of how measures found suitable for the education of the people of India can immediately be adopted. I appeal to economists to try to raise India to the height of economic prosperity.

**DR. JOHN MATTHAI:**—Canada and the United States of America have enormous scope for agriculture, but in spite of this they have developed industries. I think, that should be the ideal of this country also, and the very fact that we are backward in industrial development, should prompt us to take steps in that direction.

The President also made some observations about co-ordinating industry and agriculture and said that no country could economically become prosperous unless in both these directions, intensive efforts were made.

**PROF. R. M. JOSHI** replying to the discussion said :—My main thesis is that we in India have at present got far too many people engaged in agriculture; that in order to get the maximum produce out of the soil even according to our backward methods, so many people are not required on our land; that the people are there partially employed and partially fed, clothed and housed, simply because they have nothing else to turn to; that their lot herefore, can be improved only by diverting a large proportion of them—probably a third or more—away to industrial and commercial pursuits; that improvement in agricultural methods and implements and organisation of co-operative societies can only be subsidiary and not the main remedy for our national problem of poverty; and finally, that the sooner the Government and the people realise this fundamental fact, the better. I have seen no reason in the discussion which has taken place to alter the position which I took in my paper.

The Conference then adjourned to 11-30 a.m. on Friday the 25th January. In the evening, the members were entertained to Tea by Prof. K. T. Shah of the Bombay University in the South Wing of the University Buildings.

*Friday, 25th January 1924.*

The Conference held its last day's sitting at the University Convocation Hall on Friday, 25th January, at 11-30 a.m. with Sir M. Visvesvaraya in the chair. As the time at the disposal of the Conference was limited, Dr. J. Matthai suggested that the papers of the day be considered as read and discussion entered into forthwith. Accordingly the President called upon Mr. G. Findlay Shirras to make a few observations on his paper. Mr. Shirras' paper, which was characterised by many speakers including the President as a valuable document striking a novel path, was highly commented upon.

## 12. India's Real Balance of Trade in 1922-23

(PAGES 69-81).

BY MR. G. FINDLAY SHIRRAS, DIRECTOR, LABOUR OFFICE, BOMBAY.

Before presenting the memorandum, Mr. Shirras said that it had been prepared in 1923 at the instance of the Hon'ble Sir Basil Blackett, K.C.B., Finance Member of the Governor-General's Executive Council, in view of a request received from the Secretary-General of the League of Nations, and explained that it had lately been revised and the data brought up to date. He drew attention to the fact that the figures as printed in his paper required some alterations.

The table at page 69 should read thus:—

### *Exports—*

1. Exports of merchandise and treasure (Visible exports) .. ..	342,34	..	
2. Funds borrowed in England for interest charges (para 4) (invisible exports) ..	13,12	..	

### *Imports—*

1. Imports of merchandise and treasure .. ..	..	312,42	
2. Allowance for under-valuation of imports of merchandise and treasure (gold and silver) (5 per cent of Rs. 811,41 lakhs) .. ..	..	15,57	
3. Visible imports of funds (Net) .. ..	..	2,48	
4. Invisible imports :—			
i. Expenditure in interest for overseas capital invested in India .. ..	..	26,25	
ii. Expenditure for shipping services † .. ..	..	22,15	
iii. Expenditure for commissions ‡ (mainly finan- cial and insurance services) .. ..	..	9,00	
iv. Net expenditure for other services .. ..	..	4,00	

Visible Balance of Trade (Net) .. ..	11,87	..	
Invisible items (Final figure from both sides) .. ..	..	17,13	
<b>Final Balance (Visible and invisible items) ...</b>	<b>..</b>	<b>5,26</b>	

The table at page 73 should read thus :—

British Seaborne and land frontier							
Exports	...	...	...	328,70	3,28	2,62	334,60
Imports	...	...	...	240,30	64,96	5,10	310,36
<hr/>							
Excess of exports (+)	...	...	...	...	...	...	24,24
Excess of exports of merchandise and treasure for non-British territories (Estimated) (+) ...							
...	...	...	...	...	...	...	3,20
<hr/>							
Total							... + 27,44

In the Exports table at page 80, under C—Land Frontier Trade, the figures should read 1,469 and 51 respectively.

The Imports table at page 81 from C—Land Frontier Trade to end should read as follows :—

#### C—LAND FRONTIER TRADE.

22. Imports of merchandise	...	...	16,11
23. Imports of treasure	...	...	2,17
24. Allowance for under-valuation of imports of merchandise and treasure (gold and silver) (5 per cent of Rs. 311,41 lakhs)			15,57
INVISIBLE IMPORTS.			
25. Expenditure in interest for overseas capital invested in India	...	...	26,25
26. Expenditure for financial and insurance services †	...	...	9,00
27. Expenditure for shipping services †	...	...	22,15
28. Net expenditure for other services	...	...	4,00
<hr/>			
VISIBLE BALANCE OF TRADE (Net)	...	11,87	
INVISIBLE ITEMS (Final figure from both sides)			17,13
<hr/>			

FINAL BALANCE OF TRADE (visible and invisible items) ... 5,26

MR. K. DURAISWAMY IYER emphasized the necessity of attaching one and one meaning only to the expression, 'Balance of Trade' and said that whatever be the meaning, whether including or excluding invisible imports and exports, or whether referring to the Balance of International Payments or not, it must be stuck to, out of regard for students of economics. He further held that excluding Government stores in the preparation of



the country's balance of trade was misleading and confusing, and said that the country was not paying its way. The remittances from India did not pay the home charges and loans had to be raised to carry on day to day affairs of administration. It could not be said that India imported capital for improvement only.

Mr. B. F. MADON congratulated Mr. Shirras on his very valuable paper and said that the paper was a contribution not only to economic literature but also to the task of assessing the credit of the country. The Government of Japan attaches the highest importance to such work and full statistics are available for Japan for the last thirty years. Such investigations were not merely academic things but paid the country well. It was due to such propaganda work that Japan had been able to borrow such vast amounts in foreign countries at such low rates of interest. He dilated on the supreme national necessity of showing to the world at large a country's credit and hoped that students of economics all over India would soon be forthcoming to help Government endeavour and arrive at ever a much closer approximation of the Balance of Trade than had been reached by Mr. Shirras. The import figures did not affect the exchange till after some time, about three months; the sale of Councils and even Bill of Exchange were made in advance. If the figures of any single year were therefore considered, the balance of trade would not be accurate. A period had to be taken. They all knew Mr. Jevons' Theory of Trade Cycles. The ten-year cycle might or might not be true; but his experience told him that in India a cycle was completed in about ten years. The period then which should be taken for arriving at a correct Balance of Trade of India, was ten years. He thought that if analysed in this way perhaps India would be found to be a creditor country importing gold and silver for so many years in spite of the natural opposition of countries like England and the United States of America who use gold for currency purposes. It was not a creditor country in the sense that she had invested her money in foreign countries, like England and France. When the position of India was determined by thus working out the real Balance of Trade for a period of ten years, and made known to the world, the Indian Exchange would be benefitted thereby.

PROF. R. M. JOSHI :—I would like to call the Balance of Trade by the name of the Balance of Payments, and would urge the abolition of the elegant-looking but very unmeaning and confusing terms, namely *invisible imports* and *invisible exports*. I hold further that in getting a any document of a statistical character like Mr. Shirras' memorandum all the items which represented claims by the rest of the world against a country or *vice versa* should be taken into consideration. Government stores and railway materials cannot be excluded. The

Councils are but a method of payment and as such should not have been included.

For arriving at India's Balance of Trade, I would recommend a method akin to that detailed by Mr. C. K. Hobson in his book "Export of Capital". Mr. Hobson takes the excess of the export of merchandise and treasure over the import of merchandise and treasure, and then takes the excess of the claims by over the claims against and finally estimates the export or import of capital from or into the country by taking the difference between these two excesses. On the basis of Hobson the claims of India against other countries will be the profits and savings of Indians in foreign countries and the expenditure of the foreign travellers in India. The claims against India will be the interest on the rupee and sterling debts, sinking fund for these debts, interest on debts of Indians in foreign countries, profits of foreign business houses, shipping companies, and insurance companies, profits of the coasting trade, charges of the India Office, pensions and salaries of Indian officers, civil and military, charges for the Indian High Commissioner, savings of non-Indians sent out of India, and expenditure of Indians especially students in other countries. This is by no means an exhaustive list but it serves to indicate on what lines a Balance of Payments can be arrived at.

Mr. Madon referred to India being a creditor country, because she imports gold. But this is not true since we may be able to buy gold but we may be selling future claims against us. We may be buying gold as a commodity. I differ from Mr. Madon also about the value of such investigations as these for propaganda work. It is not such balances which are looked into and examined by financiers; these look to the Government budget. Neither do the Japanese carry on their propaganda with such Balances. They advertise their national wealth, the resources on which their Government has a claim if need be to satisfy its creditors.

PROF. MYLES found much food for thought in Mr. Shirras' paper and agreed with Mr. Madon in the necessity of further work in that direction. He congratulated the Conference in bringing out two fine statistical papers in the last two years. The importance of the importation of capital into a country depended on the fact whether or not that imported capital was used productively. It was a good thing for a country to import capital if it cannot provide capital itself; only it must be used productively.

PROF. JATHAR:—We export visible exports and import in return visible imports, service and bullion. It may or may not be advantageous for us to import bullion. I do not mean to discuss that point at present. But if I sell goods worth say Rs. 10 to you and you pay me goods worth Rs. 4, services worth Rs. 3, and gold worth Rs. 3, am I a debtor or a creditor?

REPLY BY MR. G. FINDLAY SHIRRAS:—He said that the discussion was an

eye-opener. He agreed with Mr. Iyer that at the end of the year a review of India's invisible exports and invisible imports should be undertaken on a scientific basis. He also saw much reason in Mr. Myles' remarks and said that what India needed next to education was more capital—more productive capital.

### 13. The Problem of Poor Relief in India

(PAGES 59-63).

BY MR. K. O. RAMAKRISHNAN OF MADRAS.

PROF. WARBURTON referred to the footnote on page 61 and said that mere numbers did not suffice to give an accurate picture of India's industrial workers.

PROF. R. M. JOSHI emphasized the same point and said the Indian industrial population should be compared with the industrial population of other countries with caution. Regard must be had to the size and total population also. The League of Nations would not have been as generous as it was in calling India the eighth industrial country of the world if the relative size of the industrial and general population had been considered.

PROF. MYLES said that two years ago when H. R. H. the Prince of Wales visited India, some one wrote to say that he should be shown how India had solved its poor problem. The poor problem, as found in the west, had however just begun in India. He regretted that the writer had not attempted to draw any lesson from the efforts of others nations to solve this problem.

PROF. S. N. PHERWANI referred to the efforts of the Salvation Army and urged that people should now interest themselves in the study of this subject.

### 14. Excise Policy in South India

(PAGES 107-112.)

BY DR. JOHN MATTHAI OF MADRAS.

MR. KUMARSWAMI made a few remarks about co-operative societies for the sale of liquor in India and referred to the Bengal Gunza Stores Ltd.

PROF. WARBURTON referred to a strong minority that was against prohibition in the United States of America.

The Conference reassembled after lunch at 2-30 p.m., and summaries of the following papers were presented by their writers. No discussion was possible as the time at disposal was very short :—

### 15. Indian Economics

(PAGES 131—138.)

BY PROF. P. BASU OF INDORE.

### 16. Teaching of Economics and Stimulating Economic Research

(PAGES 120-130).

BY PROF. S. N. PHERWANI OF BOMBAY.

### 17. Trend of Indian Thought in Economics

(PAGES 134-141.)

BY PROF. B. G. BHATNAGAR.

The papers on Export Duties and Protection (pp. 12-17) and the Dawn of Economic Science (pp. 52-58) could not be considered on account of the absence of the writers while the papers on the Supply of Labour to the Madras Cotton and other Industries (pp. 64-68) and Indigenous Banking in the Madras Presidency (pp. 113-119) could not be considered for want of time.

SIR M. VISVESVARAYA in his concluding remarks said he felt gratified at the way in which the discussions were carried on. He thought that an all-India body like the Indian Economic Association could easily make its deliberations felt by passing resolutions embodying their considered opinion. Perhaps one of the difficulties in doing so was the fact that many members were Government officials and if they passed resolutions contrary to the policy of the Government, the Government might find itself in an awkward position.

He then briefly reviewed all the papers that had been discussed at the Conference. The paper on Imperial Preference was a very interesting paper; but when the self-governing Dominions had not decided anything, India could not possibly accept Imperial Preference. The considered opinion of the Conference was against Imperial Preference. Referring to Sirdar Kibe's paper, he said that customs duties were being collected by the Government of India at the ports for many of the imports which were going into Indian States. The population of the Indian States was about one-fifth of that of the whole of India. It would be therefore right to set apart one-fifth of the total revenue from customs collected and distribute that among the Indian States according to their population. He also suggested that these states might send their representatives to the Central Legislature and be allowed to participate in discussions of an all-India character.

Though there was considerable amount of disagreement in the discussions about Indian currency, he was of opinion, that the practice of maintaining a token coin for internal circulation should be replaced speedily by a standard gold currency. He would not have liked to commit himself to any opinion when so much difference existed but he had already committed himself to a gold standard in his opening speech. Interchange of views with the leading statesmen of the world had confirmed his opinion that the gold standard was the only standard for currency at present. He was in favour of more private banks in every province and district and said that they should also have industrial and agricultural banks all of which should be inter-linked with a central banking organisation. He agreed with Mr. Shirras that banking was not much advanced in this country.

Turning to the papers on co-operation said that the discussion had centred on Mr. Kaji's interesting paper and on some rather irrelevant issues and regretted that the question of housing was neglected. He pointed out the importance to Bombay and such other congested city areas of a discussion on that problem and suggested that Salsette which was some thirty-five miles from Bombay could if the means of communication and transport were laid on a sound and workable basis, be converted into a colony wherein the labourers could build with a little capital small houses of their own. He had studied this subject for some time back and has prepared a scheme which was handed over to H. E. Sir George Lloyd. As regards the population problem, he said that the population was growing and that therefore there was need for education and preventive checks and related the story of a professor who told him that he could not afford to have more than a couple of children. He drew attention to the interesting discussion on agricultural and industrial development and remarked that the country's production should be half and half from agriculture and industry. Industrial development should proceed rapidly so as to yield 50 per cent.

He congratulated Mr. Shirras for his extremely able paper and hoped that many more such papers would be discussed in the future sessions of the Conference.

With regard to excise policy he was of opinion that though it was not practical politics to think of prohibition just at present it should always be kept in view, while the trend of Indian thought was in favour of prohibition. As for poor relief, he said that there were two classes who have to be looked after and they were the infants and the poor, and pointed out that for that purpose there can be Government agencies and an agency of the people. In the Government of India, he thought, there should be a nation-building department which should keep in close touch with other advancing countries like Japan, Canada, and Australia.

Finally he touched upon what appeared to him a vital question, namely, that of literacy in referring to which he appealed to the educated people to join hands with the Government in removing the proverbial illiteracy of the Indian masses.

He then made a few remarks about the Indian Economic Association and said it would be of immense value to all concerned if provincial branches were also established to educate people and help elevate the economic condition of the Indian nation.

The Conference was then declared dissolved. The members were then taken round the harbour by *S.S. Begum*. The low water at Sewri Bunder made it necessary to abandon the idea of proceeding to the Cotton Green on the Sewri-Mazagaon Reclamation. The party had a delightful cruise.