

C O N T E N T S.

1. The Living Wage in Australia. 331.2
By D.T.Sawkins. 1935. pp. 1-33.
X:752.8.N3 G3
2. A Handbook of Practical and
Written Work in Economics. 330
By E.C.Bhatty. 1930. pp. 33-119.
X GO
3. Ethics of Public Debts. By
"Politicus." 1930. 336.3
pp.120-148.
X:752.N3 G0
4. Trade Depression and the Way
Out. By R.G.Hawtrej. 1931. 338
pp.149-194.
X:742.1.N3 G1
5. The Causes of the Present
Depression and Possible
Remedies. By Winthrop W.
Aldrich. 1933. 338
pp.195-213.
X:742.1.N3 G3
6. The Course of American
Recovery. By Harold
Butler. 1934. 338
pp.214-225.
X:746.73.N3 G4
7. Theory of Economic Equili-
brium. By Attilio LA
Bagnoli. 1931. 330
pp.225-320.
X:7:(B28) G1
8. The World Economic Depres-
sion. A Plea for Co-
operation. By J.C.Coyajee.
1932. 338.5
pp.321-371.
X:742 G2

THE LIVING WAGE IN AUSTRALIA

Dhananjayrao Gadgil Library



GIPE-PUNE-010375



The Living Wage in Australia

By

D. T. SAWKINS

M.A. (Sydney), B.A. (Cambridge)

Statistician to the Industrial Commission of New South Wales; Lecturer in Statistics, Sydney University; Formerly James King of Irawang Travelling Scholar, Sydney; and Foundation Scholar, Queen's College, Cambridge

MELBOURNE :

MELBOURNE UNIVERSITY PRESS

IN ASSOCIATION WITH

OXFORD UNIVERSITY PRESS

MELBOURNE LONDON EDINBURGH NEW YORK
CAPETOWN BOMBAY TORONTO ETC.

1933

X:952.8.N3

G3

10375

PREFACE

THIS book consists of the presidential address in Section G—Economics, Statistics, and Social Science, given at the biennial meeting of the Australian and New Zealand Association for the Advancement of Science, held in Brisbane, May-June, 1930; together with an article which appeared in *The Economic Record*, November, 1930.

As requests by students and others for copies of both the address and the article continue to be made, I have sought from the respective organizations permission to reproduce them. This has been willingly granted. I have taken the opportunity to make some small additions and alterations of arrangement.

D. T. SAWKINS.

Sydney, December 16, 1932.

CONTENTS

A—THE LIVING WAGE IN AUSTRALIA

	Page
I. NINETEENTH CENTURY ATTITUDES	9
II. EARLY FINDINGS BY TRIBUNALS	12
III. WAR ADJUSTMENTS	18
IV. DEVELOPMENTS AFTER THE ARMISTICE	21
V. THE COMMONWEALTH COURT'S BASIS	31
VI. COMPARISON OF STANDARDS OF LIVING, 1907-20	33
VII. POLICIES AND RESULTS AS PRICES COLLAPSED, 1920-22	35
VIII. NEW PROSPERITY DEVELOPMENTS	40
IX. CLASSIFICATION OF DECLARATIONS	48
X. CURRENT STATISTICAL FALLACIES	52

B—THE EFFECT OF THE LIVING WAGE POLICY ON WAGES FOR SKILL

I. EARLY PRONOUNCEMENTS AND PRACTICES	54
II. WAR ADJUSTMENTS	60
III. PRACTICES AFTER THE WAR	62

A—THE LIVING WAGE IN AUSTRALIA

I

NINETEENTH CENTURY ATTITUDES

MORE than twenty years ago Mr. Justice Higgins, in his famous "Harvester" judgment of 1907, made the first Australian attempt to fit a wage to the needs of a dependent family. I propose to suggest how the trend of economic and ethical thought led to Mr. Justice Higgins' attempt: then to try to trace in the successive pronouncements of the arbitration tribunals the difficulties—partly inherent, partly of their own making—which they have encountered in trying to give effect to the principle of the living wage.

From 1901 to 1905 the Court created by the first New South Wales Industrial Arbitration Act (Wise's Act of 1901), in exercising its power to prescribe minimum rates of wages, appears to have considered only the "existing conditions of the trade and its prospects" in which the industrial dispute or other matter had arisen. "The first . . . and vital consideration is—do the conditions of the industry permit of an increase in wages?" Oversea competition is mentioned.¹ But the idea of a family living wage had been enunciated long before 1901. In 1890 Alfred Marshall, the British economist, on grounds of efficiency and prevention of waste of man-power, set out and priced a regimen of necessities for the *unskilled labourer and his family*, distinguishing "strict" and "conventional necessities."²

In the same year the Queensland Legislative Assembly read once but did not go on with a remarkable "bill to declare the natural law relating to the acquisition and ownership of property", introduced by Sir Samuel Griffith, who became twelve years later the first Chief Justice of the Federal High Court of Australia. One of the many statements of "natural law" included in this measure was as follows: "The natural and proper measure of wages is such a sum as is a fair immediate recompense for the labour for which they" (the wages) "are paid, having regard to its" (the labour's) "character and duration; but it" (the . . . measure) "can never be taken at a less sum than such as is sufficient to maintain the *labourer and his family* in a state of health and reasonable comfort."³

1. N.S.W. A.R., Vol. II, 1903, p. 10; Vol. IV, 1906, p. 222.

2. Principles of Economics, Marshall, 1890; Book II, Ch. III and IV.

3. Qld. Parl. Deb., 1890, "Elementary Property Bill", pp. 204, 1754. See also Queensland Politics During Sixty (1840-1910) Years, Barnays, Government Printer, Brisbane, p. 122.

Pope Leo XIII in 1891 urged in his encyclical on the conditions of labour that "the remuneration must be enough to support the wage-earner in reasonable and frugal comfort", and that "if a workman's wages be sufficient to maintain *himself, his wife, and his children* in reasonable comfort, he will not find it difficult . . . to put by a little property."

The claim for a living wage as a first preference charge on the produce of industry was prominent during the British coal strike of 1893. This was the middle year of six which covered one of the worst depressions of the nineteenth century. The Baring failure, bad European harvests, the worst American railway collapse, and the similar Australian failure marked this period.

The relation between wages and the cost of living became the subject of exhaustive inquiries in America. In his annual reports of the years 1890, 1891, and 1904, the United States Commissioner of Labour published most minute analyses of the cost of living of 53,000 American working men's families, representing 168,000 persons. Household expenditure was divided into six primary sections (five of which are now familiar to Australians), subdivided in great detail, and tabulated according to number of children, size of income, locality, and racial extraction. In no subsequent budget inquiry, except a similar inquiry conducted by the same organization in 1918, has such perfection of statistical analysis been attained.

Samuel Gompers, President of the American Federation of Labour, in 1898 claimed as a living wage "a wage . . . sufficient to maintain an *average-sized family* in a manner consistent with whatever the contemporary local civilization recognizes as indispensable to physical and mental health, or as required by the rational self-respect of human beings."⁴ William Smart also took an ethical view when in 1895 he wrote: "Undoubtedly the first moral charge on the national income is such a sum as is necessary *to bring up a family*, providing for health, education, efficiency of work, and the conditions generally of a moral life. . . ."⁵

The economists have considered three main determinants of the real remuneration of labour, viz., subsistence, supply and demand, and produce. Adam Smith seems to have regarded the equation of supply and demand as the prime regulator. He found no difficulty in explaining that in times of plenty and low prices of commodities the money price of labour increased, and that in times of scarcity and high prices of commodities the money price of labour diminished. But he regarded a rate "sufficient to maintain *the labourer and to enable him to bring up a family*" as the

4. *The American Federationist*, April, 1898.

5. *Studies in Economics*, 1895, p. 203 note.

"lowest rate which is consistent with common humanity". Ricardo wrote in 1817: "The natural price of labour, therefore, depends on the price of food, necessaries, and conveniences required for the support of *the labourer and his family*," and he distinguished the natural or subsistence price from the market or supply and demand price—and paid little attention to this distinction in his later works.⁶ As an example of reliance on the productivity factor, J. B. Clark, the noted American economist of the 'nineties, wrote: "We must ascertain whether evolution makes labour *more productive and therefore better paid* or less productive and therefore worse paid," and discussed some years later the difficulties of taking productivity into account in making industrial awards.⁷

6. *Principles of Political Economy and Taxation*, David Ricardo, London, 1817. (See also *Theories of Production and Distribution*, Cannan, London, 1893, etc.)

7. *The Distribution of Wealth*, 1899, p. 4; *Essentials of Economic Theory*, 1907, p. 475.

II

EARLY FINDINGS BY TRIBUNALS

Mr. Justice Heydon's Statement of Principles, 1905

ALTHOUGH Mr. Justice Higgins' "Harvester" judgment is usually regarded as the foundation of the Australian living-wage system, the first clear statement of principles by an Australian arbitration judge which includes mention of the *living wage* and the *dependent family* appears to be that made in 1905 in the sawmillers' case by Mr. Justice Heydon, the New South Wales wage-determining authority. The following extracts show how he sought to reconcile an ethical view with the theories of natural wage-levels propounded by the economists:—(1) "The duty of assisting to, if possible, so arrange the business of the country that every worker, however humble, shall receive enough to enable him to lead a human life, *to marry and bring up a family* and maintain them and himself with, at any rate, some small degree of comfort; this . . . may be shortly defined as the duty to prevent sweating . . ."; (2) "what is the real price of labour" . . . "the Court must keep the *law of supply and demand* carefully in view" . . . "as a matter of principle I can discover nothing in or out of the Act to prevent full effect being given to this in the case of all labour *above the lowest or living wage limit* . . ." (3) "*The degree of prosperity* existing in the industry . . ."

Mr. Justice Heydon obviously did not claim to guide himself *solely* by the principle of needs. Indeed, he did not disclose any method which he may have used of weighing the minimum wage he awarded for the sawmillers' employees, in order to assure himself that it would be enough to enable them "to live human lives, to marry and bring up families . . . in some small degree of comfort" such as he may have had in mind. The first pronouncement by an Australian judge in which an attempt is clearly shown to weigh a wage against needs on some stated principle is that made by Mr. Justice Higgins, President of the Commonwealth Arbitration Court, in 1907.

The "Harvester Finding" of 1907

This judgment, soon quoted as the "Harvester finding",⁸ has acquired very great importance in Australian wage regulation. The case did not arise out of a "dispute extending beyond the limits of any one State", i.e., in the ordinary jurisdiction of the

8. *N.S.W. A.R.*, Vol. 4, pp. 309-310.
9. *C.A.R.*, Vol. ii, p. 1

Commonwealth Arbitration Court. It came to that Court in a supplementary jurisdiction, designed by the Federal Parliament to extend the Commonwealth industrial zone and so utilize the Federal power to secure uniform treatment in Australia of employees' wages and conditions, and to improve them by adjustment of the customs and excise duties. The Commonwealth Government had by the Customs Tariff Act of 1906 imposed increased duties on certain classes of agricultural machinery. This was the *old* Protection. By an Excise Tariff Act of the same year it imposed on similar implements made in Australia an excise amounting to one-half the duty on the imported goods; but it provided that this excise should not be exacted if the conditions of remuneration of the labour engaged were declared by resolution of the Commonwealth Parliament to be fair and reasonable or complied with an existing award or agreement under the Commonwealth Arbitration Act, or on application to the President of the Commonwealth Arbitration Court were declared by him to be fair and reasonable (or by a State industrial authority to whom he might refer the matter). This was the *new* Protection.

To secure exemption from the excise, Mr. H. V. McKay, manufacturer of harvesters in Victoria, applied to the President for the necessary declaration. The learned judge did not take advantage of the permission in the Act to refer the matter to the State industrial authority. He dealt with it himself. He "took the unskilled labourers first". He found that the standard wage paid in Mr. McKay's factory was 6s. per day of eight hours, that there was no constancy in the labour force employed, and that it was definitely seasonal. "But," he asked, "even if the employment were constant and uninterrupted, is a wage of 36s. per week fair and reasonable, in view of the cost of living in Victoria?" He "tried to ascertain the cost of living . . . for an average labourer with normal wants and under normal conditions". He found that the usual rent paid by a labourer, as distinct from an artisan, was about 7s. per week. The budgets of nine housekeeping women which were submitted to him showed that the necessary average weekly expenditure for a *labourer's home of about five persons* for groceries, bread, meat, milk, fuel, vegetables, and fruit was about £1 5s. 5d., making, with rent, a sum of £1 12s. 5d. If the wages were £1 16s. per week, he continued, only 3s. 7d. was left to pay for light, clothes, boots, furniture, utensils, rates, life insurance, savings, accident or benefit societies, loss of employment, union pay, books and newspapers, tram and train fares, sewing machine, mangle, school requisites, amusements and holidays, intoxicating liquors, sickness and death, domestic help, or any expenditure for unusual contingencies, religion, or charity.

"The area is rather large for 3s. 7d. to cover." Clearly the learned judge was already in difficulties with his large family of about five persons, whose food and housing requirements almost exhausted the wage. He turned to the "rates ruling elsewhere", and found reputable employers paying from 6s. 6d. to 7s. 6d. per day. He finally decided to "put the minimum at 7s". and refused to declare that the conditions of remuneration of Mr. McKay's labourers were fair and reasonable.

The salient features of the "Harvester" judgment of 1907 were two. The learned judge confined his choice of a minimum wage for the unskilled labourer to the range of such actual ruling daily wage rates (viz., from 6s. to 7s. 6d. per day) as fell within his cognisance. He chose within that range a rate (viz., 7s. per day) which, assuming it to be earned uninterruptedly throughout the working week, would provide such a weekly income (viz., £2 2s.) as could be apportioned to certain heads of expenditure (viz., rent—food, groceries, and fuel—miscellaneous items) of a typical labourer's household in some sort of consistency with the budgetary evidence of nine housekeeping women of the class who had about three children each.

He did not laboriously investigate the weekly expenditure. Ruling daily rates were in even sixpences. "My hesitation has been chiefly between 7s. and 7s. 6d." In other words, having accepted about £1 12s. 5d. per week for rent, food and groceries, and fuel, he hesitated between about 9s. 7d. and about 12s. 7d. per week for miscellaneous items. He did not attempt to consider the average or the predominating size of the labourer's family, if any. He simply postulated "a labourer's home of about five persons." Broadly speaking, it may be said that Mr. Justice Higgins selected one of the ruling wage rates of the time as being "fair and reasonable", and provided for that rate a theoretical basis of needs which, in the absence of organized information as to the Australian labourer's family responsibilities and the ways he spent his wages, was necessarily impressionistic.

Mr. Justice Heydon's Finding of 1914

The next outstanding determination of a living wage was that made by Mr. Justice Heydon, of the New South Wales Arbitration Court, in February, 1914. The Excise Tariff Act under which Mr. Justice Higgins delivered his "Harvester" judgment had been declared unconstitutional by the High Court of Australia in 1908; so the "Harvester" finding did not become effective. In fact, two years later, when the cost of living was believed to have increased somewhat (there was not yet in Australia any generally accepted index of the increase or decrease in the purchasing-power

of money), a Victorian wages board made an award covering Mr. McKay's harvester factory with a minimum wage of 6s. 6d. per pay, i.e., still 6d. less than Mr. Justice Higgins' finding. But in cases which came within the Commonwealth Court's ordinary jurisdiction, Mr. Justice Higgins began to use his "Harvester" finding as the basic rate of his awards.¹⁰

In December, 1912, the Commonwealth Statistician, Mr. (afterwards Sir) G. H. Knibbs, published under the authority of the Minister for Home Affairs the first report of the recently organized Labour and Industrial Branch of his Bureau. This contained the results of his researches into the changes in the cost of living in the capital cities of Australia from 1901 to 1912, with supplementary figures going back to 1850. Using it together with the cognate monthly bulletins, interested parties were now able to calculate an up-to-date "equivalent" of the "Harvester" finding. In fact, in 1913, in the Federated Gas Employees' case in Victoria, Mr. Justice Higgins referred to the new index-numbers and foreshadowed an increase in the basic wage for New South Wales in such cases as might come within his jurisdiction.

It was in these circumstances that Mr. Justice Heydon, the controlling judge of the New South Wales State arbitration system, undertook in 1913 what he described in his judgment of February, 1914, as "the first inquiry of any extent carried out by any arbitral tribunal in order to fix a living wage of general application".¹¹ There was no statutory direction "to fix a living wage of general application", or to fix a living wage at all. The New South Wales Industrial Arbitration Acts and amending Acts from the first of 1901 to that of 1912, under which Mr. Justice Heydon operated, provided for the award of *minimum wages* by Court or board in the industry in which the dispute or other matter had arisen. There was no reference to a "living wage". Certainly the "Minimum Wage Act of 1908" had fixed an absolute minimum wage of 4s. per week, but this merely brought New South Wales into line with Victoria and South Australia in preventing the sweating of juvenile females in the clothing and whitework trades.

Examining 160 awards made by his boards between 1st October, 1912, and the middle of December, 1913, Mr. Justice Heydon found that "the bulk contained minimum (daily) wages ranging from 8s. to 8s. 6d., the 8s. group being much the largest". This, he said, pointed to a majority opinion of the chairmen of the boards (and the fact that some awards were made by consent gave this opinion greater weight) that a living wage in Sydney was about 8s per day, or £2 8s per week. On the other hand, the

10 C.A.R., Vol. 2, p. 55 (Marine Cooks); Vol. 4, p. 10 (Boat Trade).

11 N.S.W. A.R., Vol. 12, p. 22.

equivalent of the "Harvester" finding "using the (Federal) Statistician's general table, should be some £2 16s. 7d." per week. And Mr. Justice Higgins had definitely asserted the "Harvester" finding, coupled with these new index numbers in December, 1913, in the case of the builders' labourers, whom he awarded 1s. 4½d. per hour in Sydney, making £3 0s. 6d. for their 44-hour week.

The State and Federal authorities were thus in serious conflict. Mr. Justice Heydon did not shrink from strongly expressing his views. His judgment of 1914 contains successive paragraphs entitled "The Harvester Wage", "The Harvester Wage Considered", "The Harvester Wage compared with the Evidence in this Case", and "The Harvester Wage Shaken". The severity of the shaking may be measured by the following passage:—"Attacked thus by its author as being shown by Mr. Knibbs' tables to be wrong for Sydney, and contradicted by two totally disconnected sets of witnesses, my own feeling is that I cannot safely take the 'Harvester' wage as a starting point, and that the living wage must be sought by an independent inquiry. Between the *excess in the size of the family . . .* and the excess in food and groceries . . . I can see no way of amending it to make it the basis of a present-day wage."

Mr. Justice Heydon had a comparative abundance of material. At his request the State Statistician had prepared statistics relevant to the dependent family. A small collection of some 200 family budgets had been made and analysed by the Commonwealth Statistician in 1911. Statistics of the national consumption of food per head of population, of current and past prices of food and groceries and house rent were now available from the Federal Statistical Office, and, as the judge had announced that the purpose of his inquiry was to find a basis for all State awards, the parties prepared a quantity of budgetary and other evidence greatly exceeding that submitted in the very limited case of wages in a harvester factory which Mr. Justice Higgins had to decide in 1907.

The learned judge's conclusion was "that the living wage in Sydney for the average family of two parents and two dependent children is not more than £2 8s. per week". That was for what he termed the "strict living wage". But, he continued, "I think they (the manual workers) should, in good times, get more than the living wage. . . . I suggest to the boards that the minimum wage in Sydney for unskilled workers should be:—For light work, 8s. 6d. per day; for ordinary work, 8s. 9d. per day; and for heavy work, 9s. per day".

Thus he distinguished carefully his two ideas: (1) the strict living wage, or bedrock minimum according to the standard of the times, which was liable to changes of a fixed and permanent

character (long period movements), and (2) the minimum wage, which should rise above the strict living wage in years of prosperity and fall towards the strict living wage in leaner times (short period movements). It is worth noting that the strict living wage rate of 8s. per day chosen by Mr. Justice Heydon in 1914 was the exact "equivalent" (by the official tables purporting to measure the general purchasing-power of money) of the ruling rate of 6s. per day paid in Mr. McKay's harvester factory in 1907, which Mr. Justice Higgins had declined to certify as fair and reasonable.

The salient features of Mr. Justice Heydon's 1914 finding may be compared with those of the "Harvester" finding of 1907. As Mr. Justice Higgins contemplated "the unskilled labourer" in an industry, so Mr. Justice Heydon asserted that "the living wage must relate to the humblest class of worker". Both judges chose rates for their respective purposes (the former 7s. as a minimum, the latter 8s. as the strict living wage, and 8s. 9d. as the minimum for ordinary work) from the limited range of ruling wage rates. Both provided a theoretical basis of needs to justify the chosen rate. But Mr. Justice Heydon had more materials at command, and the basis which he adopted was an improvement on Mr. Justice Higgins' impressionism. Instead of the "labourer's home of about five persons" he provided a realistic statistical average family of two parents and two dependent children (neglecting fractions). He built up his allowances for food and rent more decisively and without using the "about" and "about" of the "Harvester" judgment. Only in the miscellaneous items did he, in his own words, "take refuge in the standard set by Mr. Justice Higgins".

Apart from the dependent family, the true average size and significance of which had not yet been realized, "miscellaneous items" was the weak point of his theoretical basis. Mr. Justice Higgins had added just so much for miscellaneous items to his allowance of "about £1 12s. 5d." for specified items as would make up the required wage of £2 2s. per week. The necessary 9s. 7d. was therefore a residue, or a make-wage, and could only by a euphemism be called a standard. Mr. Justice Heydon's refuge was simply this make-wage brought up to date by the tables purporting to measure the general purchasing power of money.

III WAR ADJUSTMENTS

DURING the War both State and Federal judges had to adjust their wage principles to an abnormal set of circumstances. In November, 1914, Mr. Justice Heydon, of the New South Wales Court, announced that the prosperity minima fixed in his living wage judgment of the preceding February must "fall into abeyance."¹² The "minimum wage" thus became the bedrock minimum or "living wage" of 8s. per day. Further, in their pronouncements of December, 1915 (8s. 9d. per day) and 1916 (9s. per day for current awards, and 9s. 3d. per day for new ones)¹³ the State judges sitting together gave *less than face value to the purchasing power of money tables*, supporting their decision by the Federal Statistician's published statement to the effect that the tables were invalidated in abnormal conditions caused by war, drought, or other extraordinary circumstances, because the fixed regimen on which the tables were based was changed by all sensible people and adapted to the new conditions thus arising. One may fairly comment here that: (1) the extent or amount of invalidation of the tables is to be measured by the extent of the change in, or adaptation of, the regimen by the people; (2) the rapidity with which a given amount of invalidation or error through using the tables accumulates, corresponds with the rapidity with which the people change the regimen. Thus it follows that the tables are by their very nature a potential source of, perhaps, slowly growing, or, perhaps, quickly arising, error.

The Federal judges had to meet the attack made on the "Harvester" finding by the living wage declaration of Mr. Justice Heydon and also the new conditions created by the War. But when the price level became "abnormally affected by war and drought", Mr. Justice Higgins vigorously opposed¹⁴ the theories of substitution and adaptation of regimen advanced by Mr. Knibbs, accepted by Mr. Justice Heydon of the New South Wales Court, and favoured by his own colleague, Mr. Justice Powers.¹⁵ He established, however, a practice of using the *purchasing power tables for the last calendar year* in calculating the "Harvester equivalent". He "did not think it expedient to take the figure for the latest portion of a year" and, from a different angle, though with the same effect, "I treat . . . the Statistician's tables as being only *prima facie* evidence."¹⁶ This practice had, in a time of rising prices, the same effect as a formal annual basic

12. *N.S.W. Industrial Gazette*, Vol. 7, p. 4.

15. *Idem*, p. 44.

13. *N.S.W. A.R.*, Vol. 15, pp. 68, 332.

16. *Idem*, pp. 480-484.

14. *C.A.R.*, Vol. 10, pp. 480-481.

age declaration, inasmuch as it kept the awarded "equivalent" gging similarly below the price level. This was one of the judge's ways of meeting the economic necessities of the time. Another as the Federal Court's practice of not opening awards during the period of their currency for variation in terms of the moving cost of living.¹⁷ The importance of this has only recently been measured. The Deputy Industrial Registrar of the Commonwealth Court has courteously provided a tabulation of the basic rates of Commonwealth awards current at 1st November, 1920, as an example. It appears that the basic rates in force at that date (all being "equivalents" of the "Harvester" finding) ranged from £2 11s. to £4 2s., and averaged £3 7s. 3d., or nearly 15s. less per week than the latest awarded "Harvester" equivalent.

The pressures of war and drought were probably the causes so of a noticeable tendency to indecision and doubt as regards the "Harvester" finding itself. Thus in May, 1916, Mr. Justice Higgins said: "These men are supposed to get, as a minimum, the basic family wage and no more; and that wage" (i.e., the "Harvester" wage brought up to date by the purchasing power of money tables for a selected past period) "*must . . . be kept sacrosanct.*"¹⁸ But four months later: "I treat the finding of 1907 (the 'Harvester' finding) as tentative only, as being only *prima facie* right . . ." and "The subject is too novel, too difficult, too formidable in all its consequences for the Court to make the finding of 1907 a *fundamental dogma*."¹⁹

The "Harvester" family also began to lose its rigidity, especially in the mind of the founder's colleague, Mr. Justice Powers. For example, in March, 1916: "A living wage for a man has been fixed by this Court on the basis that a man is maintaining a wife and family of *two at least or is likely to do so*," and he protested against the meagre evidence supplied by the parties, who ought, as in other cases, to have supplied budgets for a family consisting of a *wife and two children* for, say, twelve months.²⁰ But in April, 1916: "the living wage has been fixed by this Court on the basis of the cost of living for a man who has to maintain a wife and a family of *two or three children.*"²¹ A few months later Mr. Justice Higgins sought to dispel the uncertainty by a more decisive statement: "I did not attempt to lay down the average of three as being the actual average . . . I took the family of 'about five' persons as a fair type . . . I feel strongly that *our problem does not turn on the actual average number of dependent children per family—even if the average*

17. The State practice was to reopen awards to bring the basic rate up to the at declared living wage, but until 1910 not to alter marginal rates.

18. C.A.R., Vol. 16, p. 184.

19. *Idem*, p. 451.

20. C.A.R., Vol. 16, pp. 22 and 62.

21. *Idem*, p. 162.

is confined to wage-earners' families, and at the best wage-earning period."²²

Then follows one of the most illuminating of all statements made from the Bench in regard to the real, as against the family, basis of Australian wages:—"The problem is . . . to find *what sum can be most reasonably laid down, in the circumstances of the time*, as the foundation or basic wage . . . I see no sufficient reason for departing from the hypothetical case of a family of about five for the purpose of fixing the basic wage."^{22a} The "Harvester" family basis was therefore hypothetical or accidental, the amount of the wage being determined independently on grounds of sufficient reason.

Doubtless it was a growing sense of the imperfections of the formulas hitherto devised to justify basic wages determined on grounds of sufficient reason which prompted the Federal judges to ask so often for an independent inquiry into the cost of living. As early as 1916, Mr. Justice Powers complained of the lack of data, and in March, 1917, Mr. Justice Higgins presented the need as follows:—"The basic wage depends on two main factors—my finding of 7s. in 1907, and the Statistician's findings as to the subsequent depreciation in the purchasing power of money . . . The best check on the result attained by the combination of these two factors would obviously be a *direct inquiry* as to the *actual present cost of living*. I should welcome such an inquiry—an inquiry which would *disregard both my ten years' old finding and the Statistician's estimate—an inquiry which should rest on carefully selected budgets of actual expenditure* in the families of workers."²³ The attitude of the learned President seems to have been that in default of any attempt by parties "to impugn the soundness of my finding in 1907,"²⁴ he could do nothing better than retain the "Harvester" finding as the settled foundation of the Federal awards. The onus was either on the "parties" or on the Government to provide the material upon which the Court might base a fresh determination. In August and September, 1919, he was still pressing for such an inquiry, by somebody else. "There is not yet any step taken by the Government to comply with the repeated requests of my learned colleague and myself for a full inquiry."²⁵ "*I am still left without any guide as to the actual average cost of living of an average employee, other than my rough estimate made in 1907. To make such an estimate, the office of the Statistician is the best fitted; it has the machinery and the staff adapted for making the investigation on scientific lines. . . .*"²⁶

22. *Idem*, pp. 482-488.

22a. *Idem*, pp. 482-488.

23. *C.A.R.*, Vol. 11, p. 277.

24. *Idem*, p. 24.

25. *C.A.R.*, Vol. 13, p. 455.

26. *Idem*, p. 819.

IV

DEVELOPMENTS AFTER THE ARMISTICE

N.S.W. Board of Trade's Declaration of 1919

THE third outstanding living wage judgment was made in October, 1919, by the New South Wales Board of Trade.²⁷ The Board of Trade, consisting of a judge as president, deputy president, and four laymen (soon amended to eight), had been constituted under the Industrial Arbitration Amendment Act of 1918. This Act recognized the principle of the living wage introduced into the State arbitration system experimentally by Mr. Justice Heydon, by directing the Board to declare "from year to year after public inquiry as to the increase or decrease in the average cost of living, what shall be the living wages to be paid to adult male employees and to adult female employees in the State or any defined area thereof".

It was the first statutory direction to fix a "living wage". The Board, under the presidency of Mr. Justice Heydon, had made its first declaration in September, 1918, when the price level seemed to have recovered stability. It calculated for a recent period £2 18s. 6d. as the *full* purchasing power equivalent of the 1914 living wage. Adding 1s. 6d. per week "for living wage workers only";²⁸ It declared the living wage at £3 per week, or 0s. per day. Similar methods would have brought the 1914 living wage up to £3 3s., when in October, 1919, the time came for the Board, under its second president, Mr. Justice Edmunds, to make its second declaration, i.e., of course, for the case of adult males—the main living wage. At the same date the "Harvester" equivalent amounted, according to the latest Federal practice in calculating equivalence, to £3 11s. 6d. per week. The old difference of 8s. or 9s. attacked by Mr. Justice Heydon in 1914, and crushed out under pressure of war, had reappeared.

Reactions had quickly followed the cessation in 1918 of the World War. By the end of that year Mr. Justice Powers, while reiterating with renewed hope the Federal Court's request for an independent inquiry into the cost of living, found that his old doubts of the propriety of the "Harvester" family had been resolved. "The amount I am fixing as a basic wage," he said, "is for *five* persons to live on."²⁹ Optimism began to prevail. The Federal Court showed a marked tendency to compute the "Harvester" equivalent more liberally for the employee than during

27. Bulletin of N.S.W. Board of Trade: Living Wage (Adult Males), 1919.

28. This amounted to cutting the margins for skill, etc., by 1s. 6d. per week.

29. C.A.R., Vol. 12, p. 571.

war times, by taking the tables of the purchasing power of money *up to date instead of for the previous calendar year*. Thus, in August, 1919, Mr. Justice Higgins said: "If I follow my ordinary practice—taking the basic wage as 7s. per day in Melbourne in 1907, and increasing it in proportion to the increase in the cost of living as between that year and the last calendar year (1918) I should find the proper basic wage for Sydney to be 11s. 5d. per day. But if the full year—1st July, 1918, to 1st July, 1919—be taken, the basic wage for Sydney would be 11s. 11d. per day: and the deputy president has *in recent awards preferred the most recent figures available.*"²⁰

The Board of Trade could hardly have failed to observe the growing importance of the Federal Court. Although the number of wage-earners affected by the Federal operations still remained small—about one-tenth of those affected by determinations under the State authority—the actual number of awards and agreements made in the Federal jurisdiction had grown fast since 1913, and it was this plain measure of the Commonwealth Court's activity which had caught the attention of the industrial world. From 1913 to 1918 the annual number of Federal determinations which caused wage changes in New South Wales increased from 8 to 59, or sevenfold, while the corresponding number of effective State awards and agreements remained almost stationary at 132, as compared with 123.

The Board of Trade's declaration of 1919 shows that it determined to treat the problem of the living wage radically and realistically, as far as it could. But it held itself bound to make its "calculation upon the requirements of *husband and wife and the average number of dependent children in the families of the lowest paid class of workers*". The system, including the family, used by Mr. Justice Heydon in 1914, "had the force of law" when the Board of Trade was constituted. The Board visualized the average "standard of living" of the "lowest paid class of workers" and costed that standard for the domestic unit which had been thrust upon it by precedent. The resulting sum, £3 17s. per week, was the Board's declaration of the living wage in Sydney. This was far above any of the ruling rates—17s. above the last State living wage on which most current awards were based, and 5s. 6d. higher than the latest declared Federal basic rate.

While the Board departed unmistakably from the Higgins and Heydon precedents of choosing among the ruling rates, its theoretical basis of needs was even more elaborate than Mr. Justice Heydon's of 1914. Served by a statistical staff of its

²⁰ C.A.R., Vol. 13, p. 484.

own with which the Commonwealth Statistician co-operated, it elaborated Mr. Justice Heydon's estimate that the average married adult male had less than two dependent children under fourteen years of age ("perhaps about 1.6", as was approximately verified by the Census of 1921, a new question being inserted in the collection forms to secure direct information on this question). It slightly improved that authority's standards for food and groceries and for rent. But the justification for the bulk of the large increase of 14s. on what the wage would have been, viz., £3 3s., had the Board followed previous State practice, was in its treatment of the old dragnet section—"miscellaneous items". In the light of evidence before it, including the Federal Statistician's analyses of Australian manners and customs based, it must be admitted, on very limited budget inquiries, it subdivided this into three sections, viz., clothing, fuel and light, and a residue of other items, and assessed these separately. The result for its accepted family of four was a total miscellaneous regimen costing 30s., instead of the 18s. 6d. to which Mr. Justice Heydon's allowance would by this time have grown by the purchasing power of money tables, which, of course, were based exclusively on prices of food and house rent.

Child Endowment Proposed

The increase of 17s. per week in the current State living wage—an increase without parallel in the history of wage regulation in Australia—was viewed with apparent consternation by employers. The constitution of the Board of Trade provided that the Minister for Labour and Industry should be an associate member of the Board without voting power, and so enabled the Government of the day to have foreknowledge of the Board's decisions. On 1st October, 1919, a week before the declaration was made, the Government accepted a proposal made to it by the Board's statist, and the Premier (Mr. Holman) announced in the Legislative Assembly that in view of a very great increase in the living wage about to be declared by the Board of Trade, the Government was hurriedly preparing legislation to recast the whole living wage system and introduce child endowment.

The proposal was that in future the Board should declare two things—first, the cost of living based on the requirements of man and wife only; secondly, the cost of maintenance of one and further children. The first was to be the living wage. The second was to be the basis of contribution by employers to a maintenance of children fund from which mothers in wage-earning families would receive allowances for the support of such dependent children as they actually had. It had been for the first time

calculated that as about 35 per cent. of adult males were bachelors, the average number of dependent children per adult male wage-earner was neither three, nor two, but about one. Assuming that the contemplated living wage of £3 17s. based on the requirements of man, wife, and two children might be divided into £3 for man and wife and 8s. 6d. for each of the two children, it was estimated that the total disbursement by way of living wage plus endowment, together with administration costs, would therefore not exceed £3 9s. per week per adult male employee. Thus, without disturbing the current living wage of £3 per week, all dependent children of male wage-earners could be reasonably maintained at a cost of industry amounting to at least 8s. less per week per adult male employee than if the Board's flat increase of 17s. came into operation. A sliding scale was introduced to make the endowment vanish for incomes of £300 a year and over, which it was estimated on sparse data might reduce the employers' rate of contribution by about two-ninths. It was also estimated that under the proposals the price-level would rise about 10 per cent., as against 20 per cent. under the flat wage of £3 17s.

It is remarkable that neither in the debates in Parliament nor in the evidence given before the Select Committee of the Legislative Council to which the Bill was referred after passage through the Assembly, was it suggested that the Board would be likely to declare less than £3 per week on the proposed new basis. This sum, in the circumstance that it was the current living wage, seems to have been generally regarded as the smallest sum which could reasonably be laid down for man and wife. Estimates for the Select Committee were made, in fact, on two hypotheses only, viz., £3 2s. and £3.³¹

The Bill was opposed on all sides—by the Trade Unions on the ground that it was a device to “filch the increase of 17s. from the workers”. The visible sign, the large nominal increase, was more readily grasped than its inward essence, the ultimate purchasing power. The majority of employers in secondary industry and the rural interests also uncompromisingly opposed the scheme. Child maintenance on so vast a scale—it was expected to affect nearly 80 per cent. of the wage-earning classes—was in their view a revolutionary plan whose ultimate effects would outweigh the ephemeral advantages of the smaller wages cost.

Child Endowment Rejected

The Maintenance of Children Bill was passed by the Legislative Assembly of New South Wales, but was rejected on 27th

³¹. Report from Select Committee of Legislative Council on Financial Provisions of Maintenance of Children Bill: Government Printer, Sydney, 1919.

November, 1919, by the Legislative Council, after this Chamber received the report of a Select Committee of its members to which it had referred the Bill. The Board of Trade had already made its declaration of £3 17s. on 8th October, a week after the Premier's announcement of amending legislation, and by the middle of November the Court had applied the 17s. increase to many awards. This circumstance probably contributed to the rejection, as did also the realization that the economic shock of the large increase would be alleviated by the gradual passage of awards through the Court under the arbitration law as it then stood.

The course of events which followed the declaration was not such as to justify it. A year later, when the new wage had gradually crept through most of the State awards—those operating in the State within the Federal jurisdiction were not, at any rate directly, affected—prices had increased by 25 per cent. and an unemployment disturbance was showing its earlier effects; in fact, the £3 17s. wage was hardly more effective in purchasing the means of living than the £3 which it had replaced. This was a curious instance of what Mr. Justice Higgins in 1916 had trenchantly called "that dragon fallacy that so often raises its shattered head from the slime—that increases in wages do no good to the wage-earners on the ground that they raise the cost of living proportionately".²² The first attempt to lay down as a basic wage the approximate *actual cost for a family of four of living at the average basic wage standard of the times* was, in fact, a complete failure.

The Board did not repeat its experiment. In its next declaration, made in October, 1920, it, as it subsequently admitted, "for the first time adopted weighted averages for the whole State, and thus and otherwise *depressed the standards* adopted by it when making its declaration of 1919."²³ Instead of giving effect to the 25 per cent. increase in prices, it increased its 1919 declaration by 10 per cent. and declared a new living wage of £4 5s. This was tantamount to a depression of its 1919 standard by 12 per cent. While holding that "unless the evidence established a certainty, it could not base its decisions on a possible fall in prices", it was nevertheless impressed by the view that "the pinnacle of high prices had been reached".²⁴ Index-numbers available to it showed that in the United States and Great Britain the price crisis had already come. Statistics of the productive activity of Australia prepared by the Board's research staff moreover showed a marked decline in the average quantity of commodities available

22. C.A.R., Vol. 10, p. 477.

23. Declaration of N.S.W. Board of Trade, 7th Sept., 1922.

24. Declaration of N.S.W. Board of Trade, 8th Oct., 1920.

per inhabitant.³⁵ Figures prepared by the Commonwealth Statistician for the Commonwealth Arbitration Court early in September pointed to a similar conclusion. The real feeling of the Board of Trade was reflected in passages of the report by its president, Judge Beeby, of his inquiry into the reduction of standard working hours, published in the same month as the Basic Wage Commission's finding: ". . . the position is sufficiently alarming to call for the serious attention of all classes of the community. The sudden fall in prices to anything approximating pre-war rates would leave the State and Commonwealth unable to cope with their financial obligations. When and to what extent prices will fall is still a matter of speculation, but any fall must be met with an increase in production."³⁶

This statement, made by Judge Beeby in 1920, of the interdependence of wages and hours of work, prices obtainable for exportable commodities, and ability to meet external obligations, shows that at least one industrial authority in Australia saw, ten years before 1930, when the inevitable crisis came, the potential instability of our economic structure.

The Basic Wage Commission of 1920

It was in this atmosphere of fear of an economic crisis that the report of the Basic Wage Commission was laid by the Federal Government on the Table of the House of Representatives in November, 1920. This report was the next important finding which bore on the living and basic wages. Twelve days after the Maintenance of Children Bill was rejected, and the New South Wales living wage was therefore left to operate at the declared amount of £3 17s. (5s. 6d. higher than the most recently awarded Federal basic rate), the Prime Minister of the Commonwealth (Mr. W. M. Hughes) set up a Royal Commission to inquire into the cost of living. His action fulfilled an election promise made five weeks before, and formed a response to the repeated requests of the Federal Arbitration judges. The inquiring body, however, was not constituted as recommended by Mr. Justice Higgins, namely, of statisticians with the staff and machinery adapted to investigate on scientific lines carefully selected budgets of actual expenditure in the families of workers.³⁷ The Government set up a wages board of the type introduced in 1895 in South Australia, and then standardized in Victoria, New South Wales and elsewhere, the New South Wales Board of Trade established in

35. See Report of Royal Commission (Judge Beeby) of Inquiry into Reduction of Standard Working Week from 48 to 44 hours, Nov., 1920, p. 36—Appendix (Statement of D. T. Sawkins, Statistical Officer, N.S.W. Board of Trade).

36. *Idem.* p. 4.

37. *C.A.B.*, Vol. 11, p. 277.

1918 being the most recent distinguished example. Representatives of employers and employees in equal numbers were chosen to act with a well-known barrister as chairman, viz., Mr. A. B. Piddington, K.C. (afterwards Mr. Justice Piddington), who, in the important Federal post of chairman of the Interstate Commission, had carried out many inquiries into the prices of commodities since August, 1917. The matters set down for inquiry and report were:—

- (1) The actual cost of living at the present time, according to reasonable standards of comfort, including all matters comprised in the ordinary expenditure of a household, for a man with a wife and three children under fourteen years of age, and the several items and amounts which make up that cost.
- (2) The actual corresponding cost of living during each of the last five years.
- (3) How the basic wage may be automatically adjusted to the rise and fall from time to time of the purchasing power of the sovereign.

These directions were on the lines of what Mr. Justice Higgins appeared to desire, except that he had asked for an inquiry into the "*actual average* cost of living of an *average* employee"³⁸ or "*worker*".³⁹ With thirteen years' experience of the difficulties of attachment to the "Harvester" family, he probably did not approve of the assignment by Mr. Hughes of a wife and three children to the "man" of the letters patent, which ignored all but "the hypothetical case of a family of about five"⁴⁰ which the learned judge had used "for his rough estimate of 1907", and, indeed, precluded any inquiry by the Commission into the real average of the workers' dependants. The tenacity with which Mr. Justice Higgins had clung to the family of five was probably an important factor in the Prime Minister's decision. Although the learned judge had sometimes apologized for his "rough and tentative" judgment of 1907, he had in 1919 defended the family of five by quoting an assertion by Mr. Rowntree, the British philanthropist, that a living wage founded on the requirements of a smaller family would leave 80 per cent. of living-wage earners inadequately provided for.⁴¹ Again in 1919, in answer to the New South Wales Board of Trade's statistical proof, published in October of that year, that the average number of children under 14 years of age of Australian married men was less

38. C.A.R., Vol. 12, p. 819

39. C.A.R., Vol. 11, p. 277.

40. C.A.R., Vol. 10, p. 484.

41. C.A.R., Vol. 12, p. 658

than two, he had argued that the average *issue* of men aged between 30 and 45 exceeded three, probably overlooking the fact that "issue" includes the dead children of all ages, as well as the living children beyond the age of dependency.⁴² Nevertheless, Mr. Justice Higgins complained in May, 1921, that "either my brother Powers or myself should have been consulted before the language of the letters patent was adopted".⁴³

The Federal Royal Commission on the Cost of Living, afterwards called the Basic Wage Commission, was unfortunate in its costing period, which was a specific date, viz., 1st November, 1920 (a legal interpretation, perhaps, of the word "present" occurring in the letters patent), and happened to be about the peak of the price upheaval due to the War. This and "expressions used which seemed to imply that the findings as to the cost of living must necessarily become the basic wage"⁴⁴ tended to obscure the real significance of the report.

As a matter of fact, the standard found by the Commission was little more than about 8 per cent. higher than the standard which the Board of Trade in 1919 attributed to its living wage of £3 17s., declared on the requirements of man, wife, and two children. A more important fact has remained unrecognized, namely, that the *standard* found by the Basic Wage Commission was really not far from the *actual average standard* obtainable from the current wages, the average nominal rate payable at the time in the Commonwealth being about £4 5s., according to the Commonwealth Statistician's tables. That this statement is approximately true may be seen by the following reasoning. There are as many different standards of living obtainable from a given wage as there are different degrees of family responsibility among those earning it. Assuming that it is all spent, and with equal efficiency, the single man has the best standard, and the married men with no dependent children, with one child, two children, and so on, have successively lower standards. The actual average of all these standards is the average standard obtainable from the aggregate given wages by all the adult male earners and their dependants. It had been pointed out in 1919 to the Select Committee of the New South Wales Legislative Council that to a typical 100 active adult males there corresponded about 65 wives and about 100 children or, roundly, two-thirds of a wife and one child each. So the standard which £4 5s. of the current money would obtain for the average man, i.e., the man with two-thirds of a wife and one child, was the actual average standard of wage-

42 *Idem*, p. 243.

43. C.A.R., Vol. 15, p. 305.

44. Report of the Royal Commission on the Basic Wage, 1920, p. 60; see also title of report.

earners at about the time when the Basic Wage Commission completed its inquiries. Taking account of the relative requirements of men, women, and children, and of the housing and other constraints existing, and making allowance for the single man's "duty of providing out of his wage for the initial capital outlay for the home when he marries",⁴⁵ I would estimate that the cost of maintaining a man, a whole wife, and three children (the Commission's family) at that average standard was about 35 per cent. more, i.e., about £5/15/- per week. Allowance should be made for unemployment, for the average wage rate of £4 5s. was not earned uninterruptedly. On the other hand, there are grounds for believing that the actual wage rates being paid were on an average somewhat higher than the award rates on which the official average is calculated. On the whole, it may, I think, be fairly inferred that the finding of the Basic Wage Commission of 1920 was very approximately the average standard of wage-earners of the times costed for a family of five.

There is nothing astonishing in this result. Seven intelligent Australians, given a free hand, might have been expected after a year's detailed inquiry, to form a fairly good estimate of the *current average standard* of living, and they were expressly required to cost their conception of this current standard in terms of a man, wife, and three children. The new New South Wales Board of Trade, with not so free a hand, for they were hampered by the duty of declaring a living wage, had tried, nevertheless, to conceive the actual average *living-wage standard* in a realistic way, as Mr. Justice Higgins had so often recommended, and had a year previously arrived at a standard about 8 per cent. lower. They costed it in terms of the family of four which had been handed down to them from the preceding authority, and, although the sum so found was 28 per cent. more than the current State living wage, they took the risk of declaring it.

Considering the circumstances of the time, the imminent price-crisis, the experience which followed the Board's realistic declaration for a family of four, and its month-old refusal to bring that declaration fully up to date, it is not to be wondered at that the *cost of living for a family of five*, viz., £5 16s., averaged for the capital cities, was deemed *utterly impracticable* as a basic wage. This view was advanced by Mr. Piddington himself in a supplementary memorandum dated three days later than the report, and signed by him personally, "not as chairman" of the Commission. "If," he wrote, "the whole of the additional £93,000,000 labour cost", which he estimated would result from the adoption of £5 16s. as the basic wage, "were passed on to the

⁴⁵ N.S.W. I.A.R., Vol. 26, p. 217.

community, the increase in prices would altogether outstrip the purchasing power of employees having a basic wage of £5 16s." Another believer in the "dragon fallacy"! "The increase in the prices *even of* the products of our primary industries would, before long, be a formidable drawback to their development and possibly to their continuance." The statistical authority, Mr. G. H. Knibbs, when consulted by the Federal Government, submitted similar opinions.

Child Endowment Again Proposed and Rejected

But Mr. Piddington claimed in his memorandum that the finding could be made effective by a plan which, except that the sliding scale and income limit were omitted, was identical with that which had passed the Legislative Assembly of New South Wales the year before. Mr. Piddington proposed that the basic wage should be declared for man and wife only at £4 per week (nearabout the latest declared "Harvester equivalent" for the Commonwealth), and that 12s. per week should be paid for each actual dependent child of the employee. The funds for the children were to be raised as under the New South Wales plan, by a tax on each employer per head of his employees, and "the total obligations of the employer would be £4 10s. 9d. (wage and tax) per week". Compared with an obligation of £5 16s. if the Commission's finding of the reasonable cost of living for a man, wife and *three* children were adopted as the flat basic wage, the endowment proposal "meant a saving for industry of £65,000,000".

The savings argument when used by Mr. Piddington was not so strong as when used the year before in New South Wales, for the alternative to endowment then was the flat wage declared by the *statutory authority*, and even then this argument was not strong enough. In spite of all the unfavourable circumstances, Mr. Piddington had a measure of success. In awards for the Commonwealth Public Service Mr. Justice Powers had already in 1916 distinguished between married and single men, and in 1918 had strongly recommended that the Government should make an allowance of 5s. per week for each child exceeding three in a family. The Federal Government chose its Public Service as a suitable field for experiment with Mr. Piddington's proposals in a modified form. It accepted the suggested basic rate of £4 per week, but reduced the allowance for each child from the proposed 12s. to 5s per week, and made this payable only so long as the aggregate of salary and allowances for children did not exceed £400 per annum.⁴⁶ This scheme has operated since 1st November, 1920.

⁴⁶ Labour Report, 1926 (Commonwealth Bureau of Statistics), p. 89; Commonwealth Public Service Regulations—Statutory Rules, 1923, No. 93, section 86.

V

THE COMMONWEALTH COURT'S BASIS

MR. JUSTICE HIGGINS had stated in 1917 that the basic wage as awarded from time to time by the Federal Court was the product of two factors—(1) the “Harvester” finding of 1907, and (2) the Statistician’s tables showing the changes in the purchasing power of money.⁴⁷ These factors were more or less artificial. The Basic Wage Commission of 1920, on the other hand, derived its finding as a product of two real factors: (1) The standard of living adopted—so many loaves of bread, suits of clothes, etc., in a given period per man, and corresponding quantities per woman and per child; and (2) the family specified in the letters patent. Had the Commission adopted a lower standard, the finding for the specified family would have been lower. Had the Government specified a smaller family, the finding at the adopted standard would have been lower. After his first inquiry in 1907, Mr. Justice Higgins did not again subject his basic wage to any process of analysis. The “Harvester” family tradition probably impeded him. The real significance of the Basic Wage Commission’s finding is that it exposed the absurdity of the family of five.

Criticizing the Commission’s finding in 1921, Mr. Justice Powers pointed out that “there were at present” (but the figures were really for the year 1911) “65,000 houses of one room, 44,000 houses of two rooms, 70,000 houses of three rooms, 205,000 houses of four rooms, and 190,000 houses of five rooms, making 574,000 families (in houses of five rooms and less), and that it was clearly impossible for them all to live in 190,000 five-roomed houses.”⁴⁸ This was really a powerful criticism of the “Harvester” family itself, which might have been levelled at any time since the year 1907, when that famous judgment was delivered. Mr. Justice Powers might with even greater force have quoted the number of bachelors, the number of married men with no children, with one child, with two children, three children, and so on, and have pointed out that it was absurd to pretend to give every adult male a basic wage for a family of about five when amongst the round million of wage-earning men in Australia only 75,000, or one in thirteen, had families of that size, and not so many as one in six had families of that size or greater.

The Census figures show us how the community as a whole adapts its housing accommodation to its needs. We find that

47. C.A.R., 1917, Vol. xi, p. 277.

48. C.A.R., Vol. 15, p. 261.

in the five-roomed houses there are on an average 4.7 persons, in the four-roomed houses 4.2 persons, in those of three rooms 3.5 persons, and so on. More detailed examination shows a considerable proportion of apparent misfitting, but the general adequacy of the solution found by the community as a whole is as astonishing as is the crudity of the "Harvester" hypothesis of the family of five universalized by means of a basic wage theoretically calculated on that basis.

However, in all determinations of living wages it was the wage, not the hypothesis, that mattered. The wage had to be within the bounds of reason whatever its theoretical basis. "*The problem is to find what sum can be most reasonably laid down in the circumstances of the time as the foundation or basic wage.*" It was, of course, possible hypothetically to appoint every man to the headship of a family of five persons. Thus the learned judge hypothetically magnified the total Australian population of adult male wage-earners and their dependents by nearly 90 per cent. But he kept his finding within bounds. It is now realized that his magnified family was counteracted by a cramped standard or series of *quantities per head*.

Mr. Justice Higgins was the first Australian explorer of an uncharted ocean. It was not till six years after his "Harvester" judgment that the Commonwealth Statistician found that the 7s therein allowed for house-rent was the average rent in Melbourne in 1907 of houses having one, two, and three rooms, i.e., houses accommodating, on the Census average, families of rather less than three persons instead of the "Harvester" family of five; and it was not until the Basic Wage Commission published, as required by its letters patent, a fully itemized family budget, that there was complete confirmation of the learned judge's original suspicion that his celebrated residue for "miscellaneous items" was out of proportion. By 1917 the Federal judges themselves had become clear on this point, for they had begun to press most urgently for an independent inquiry which should discard both the "Harvester" wage and the index-number apparatus used for bringing it up to date. The New South Wales Board of Trade's finding of 1919, in which the results of the Commonwealth Statistician's budget inquiries were quoted, reformed the proportions. But it was necessary that a complete itemization should be prepared and published in order that the truth of the matter might be clenched. Thereafter, the impracticability of costing any average standard of living for a family of five and declaring the resultant sum as the basic wage was probably recognized by all parties.

VI

COMPARISON OF STANDARDS OF LIVING, 1907-20

IT seems worth while to compare the average standard, i.e., the average quantities per head actually provided in 1907 by the McKay factory wage of 36s. per week, which, like Topsy, had just grown, without any hypothetical family adhesions, with the standard adopted by the Basic Wage Commission of 1920. The cost for a family of five of the average standard obtained by the wage-earners from 36s. per week was about 35 per cent. more than that sum. Using the food, groceries, and rent purchasing-power tables until November, 1914, and the new total household expenditure tables from that date onwards, we find that 36 shillings' worth in 1907 cost about 78s. of the depreciated money of 1st November, 1920, the Basic Wage Commission's costing date. To provide for its family of five the actual average standard obtainable in 1907 from the McKay factory basic wage, the Commission should therefore have allowed 78s. plus 35 per cent., i.e., £5 5s. It follows similarly that the cost for the family of five on 1st November, 1920, of the average standard obtainable in 1907 from the "Harvester" wage of 42s. per week was about £6 3s. Thus it appears that the "concrete standard" of living (i.e., series of quantities per head) laid down by the Basic Wage Commission of 1920—approximately the average current standard of all wage-earners and their dependants—was somewhat superior to the average standard obtainable in 1907 from the McKay factory wage, but not so good as the average standard then obtainable from the "Harvester" wage.

A more direct comparison may be made. It has already been pointed out that in New South Wales, for example, the average basic wage current in the third quarter of 1920 within the State industrial jurisdiction was less than £3 17s., and within the Commonwealth industrial jurisdiction £3 7s. But the purchasing power equivalent of the McKay factory wage of 36s. was £3 18s., and of the "Harvester" wage of 42s. about £4 11s., if the calculations be made by using, as far as possible, the index-numbers of the prices of all items of household expenditure. Thus it is clear that after thirteen years the "Harvester" finding remained unestablished. The whole of the elaborate family construction of the basic wage, whether on a foundation of three or of two children besides the whole wife, had gone for less than nothing.

Further statistical illustration of the foregoing history is afforded by a table of the course of "effective average wages" in

34 THE LIVING WAGE IN AUSTRALIA

New South Wales from the end of 1907 to the end of 1920, derived from the Commonwealth Statistician's Labour Reports.

*Estimated Effective Average Wage Index Numbers,
Allowing for Unemployment*

(Base 100 for Commonwealth in Year 1911)

End of Year	New South Wales	Commonwealth
1907	97	99
1908	92	93
1909	94	96
1910	96	97
1911	97	100
1912	91	95
1913	92	97
1914	85	91
1915	83	81
1916	85	85
1917	86	91
1918	89	92
1919	94	89
1920	96	89

The real basic wage of 1907 was the McKay factory wage of 36s. per week. The "Harvester" judgment was delivered towards the end of 1907, and, as has been pointed out, had no currency in the "Harvester" factory, as the Act under which it was delivered was declared unconstitutional by the High Court. It was not till 1908 and 1909, in the Marine Cooks and Boot Trade cases, which came within his ordinary jurisdiction, that Mr. Justice Higgins began to apply his "Harvester" finding. The figures suggest that even before the War, average wages diminished in "effectiveness"—except in one year, 1911, the third of three successive years of very great productive activity—concurrently with the persistent efforts to associate a hypothetical family with the basic wage. Except in this highly productive year, the "effective average wage" never reached again during this period of rising prices the level at which it stood in 1907. Thus not only the basic wage, but also the average wage, remained at the end of 1920 below their 1907 levels.

VII

POLICIES AND RESULTS AS PRICES COLLAPSED, 1920-22

IT remains to trace the course of events and the policies of the determining authorities in the period of falling prices which began towards the end of 1920, and the following period of comparative price-stability.

The State Government in power towards the end of 1920 in New South Wales ventured upon an innovation in the application of the State living wage. Hitherto the declaration of the Board of Trade only became current as the Court took account of it by varying the awards industry by industry on application, and the statistics of average wages show that it took a year for the increase of 17s., declared in 1919, to come into force throughout the State awards. On Christmas Eve, 1920, this Government supplemented a regulation issued on 20th October in respect of the Metropolitan area. The new living wage of £4 5s., declared on 8th October, 1920, which was 8s. more than the preceding living wage, thereby became applicable immediately as a minimum throughout the State industrial zone with certain exceptions and, of course, excluding rural occupations for which so far no living wage had been declared. The reaction was swift. Between the fourth quarter of 1920 and the first of 1921 the New South Wales unemployment percentage rose from 7 per cent. to 14 per cent., while the corresponding figures for the other States of the Commonwealth showed but slight increases. The effect of the regulation was to precipitate tendencies to unemployment already existing. The unemployment of 1921 was far more severe in New South Wales (13 per cent.) and Queensland (16 per cent.) than in Victoria (9 per cent.), Western Australia (9 per cent.), and South Australia (8 per cent.). It was in New South Wales and Queensland that the greatest efforts had been made to raise the basic wage, the Queensland determining authority falling into line with that of New South Wales by declaring £4 5s. in 1921.

In the rapidly-increasing unemployment the Basic Wage Commission became a convenient scapegoat. Six months after its finding was published, and just before his retirement from the Federal Arbitration Bench, Mr. Justice Higgins advised "all parties—unions and employers"—to press for another inquiry by "statisticians on cool, scientific lines . . . rather than . . . for payment of this so-called 'basic wage' of the Commission, which is not a true basic wage, but a will-o'-the-wisp that will lead them into the ditch . . . There seems to be a storm coming

up, with widespread scarcity of employment; and it is wise to keep to the moorings which we have until we make certain of better."⁴⁹ The storm had already arrived, and was at its worst at the moment the learned judge spoke. The trade-union percentage of unionists unemployed in Australia had doubled and reached its maximum of 12.5 per cent. It would be as near to the truth to say that the original and veritable will-o'-the-wisp which had led them into the ditch was not the Commission's finding, for this had never operated, but the *five-membered* "Harvester" family which the Federal Court had followed more or less closely for fourteen years, and was seemingly loth to lose sight of.

Succeeding Mr. Justice Higgins as the President of the Commonwealth Court, Mr. Justice Powers lost no time in adjusting his view of the "Harvester" finding to meet the obvious necessity that wages should fall in order that unemployment might be relieved. In August, 1921, he is "not sure that 'sacrosanct' is the proper word to use about a living wage", and on consulting his dictionary he quotes the meanings "pre-eminently sacred" and "inviolable". He continues: "Parliament and the Court have, however, also regarded as sacrosanct the right of employees to live and work for any wages they think fit to work for. The Court's living wage was not made to prevent men working for nine-tenths of what the Court thinks a living wage, if they wish to do so" He therefore refused to force on the Wallaroo and Moonta Mining Company a "Harvester" equivalent, which it could not afford to pay, while the men were willing to take less in order to keep their employment.⁵⁰ In a similar strain he observed in September, 1921: "The Court has no right to fix wages at a higher rate than the employees of any employer think fit to work for"; and "the Court cannot, by any order, secure to the workers more than the industries can pay"⁵¹

Moreover, he asserted the Court's freedom to fix the basic wage on the cost of living for any period it chose—"the cost of living at the moment, or for the last three months, or six months, or twelve months, or for the last calendar year"—and it could include in its award, if it so chose, a provision for automatic adjustment of the award during its term according to the tables of the purchasing power of money. "The Court has not laid down any method of fixing the basic wage as 'sacrosanct'; on the contrary, it has always fixed it on the basis that seemed to it fairest at the time"⁵²

49. *C.A.R.*, Vol. 15, p. 305.

50. *Idem*, p. 714.

51. *Idem*, pp. 841, 848.

52. *C.A.R.*, Vol. 15, p. 715.

By thus claiming freedom to award as the basic wage any arbitrary "equivalent" of the "Harvester" finding which should be within the industries' capacity to pay, Mr. Justice Powers really jettisoned the "Harvester" family and its theoretical needs. During the period of rising prices which ended in 1920, Mr. Justice Higgins had found it inexpedient to give the "equivalent" for "the latest period", say, the last quarter, because it was too big to be "most reasonably laid down". He used instead the last calendar year, or the last full year, or the last half-year, as giving a smaller and "most reasonable sum", and, moreover, made a practice of not varying during the term of its currency the award so calculated. Now, in the period of falling prices Mr. Justice Powers found that the "equivalents" for the past periods were beyond capacity to pay, would increase unemployment, and were not the fairest at the time, and that expediency now dictated the use of the very latest "equivalent", and perhaps the inclusion also of an adjustment provision which should ensure that the basic wage would automatically continue to fall if prices continued to fall during the term of the award.

The idea of automatic adjustment of the basic wage in terms of the varying price-level of commodities had been in the air for some time. The Basic Wage Commission of 1920 had been asked to report the best method of ensuring proper automatic adjustment.⁶³ The Federal Government thus affirmed the traditional Australian theory of basic wage fixation, viz., that if prices increased the basic wage should be increased correspondingly. The time had not yet come to pause in the ascent of the ever-rising spiral; Mr. Hughes "dangled the carrot" till the last minute.

When the price collapse began, industry quickly satisfied itself that the automatic method was best in the new circumstances, and took the lead in introducing it. Mr. Justice Powers accepted the lead in the following words:—"I think the method lately introduced into consent awards and agreements between registered unions and employers during the last twelve months will be found to be fair, namely, to fix a rate for the time of an award subject to adjustment each quarter on the Statistician's figures."⁶⁴ Adjustment by the quarterly index (of the price of food, groceries and rent combined) as it was published, became the practice of the Federal Court in September, 1921. It has held till the present time, subject to the modification introduced by Mr. Justice Powers in December, 1921, of adding an arbitrary 3s. to the result of the quarterly adjustment. When this modification was introduced prices were still falling. The learned judge did not explain his

63. See (2) of Letters Patent, *supra*, p. 27.

64. C.A.B., Vol. 15, p. 716.

reasoning at the time, but defended the addition in October, 1922, on the ground that when prices are rising it tends to meet the defect consequent on the adjusted wage being, during its currency, always between one and two quarters behind the times; and that when prices are falling it "helps to operate as a set-off against past losses by the workers".⁵⁵

The "past losses of the workers" was explained by Mr. Justice Powers to mean the difference between the sum total of the basic wages which the workers actually received from 1907 onwards, and the sum total which they would have received had it been possible to establish the "Harvester" wage in 1907, and to give them a true purchasing-power equivalent of that wage throughout the fifteen following years. History shows how difficult it was even to approach the "Harvester" ideal. A few months earlier the learned judge was seeking the wage that would be "fairest at the time, that the industries could now pay", just as Mr. Justice Higgins during his long presidency had claimed to seek the "sum that could most reasonably be laid down in the circumstances of the time". The amount of the "past losses of the workers" was therefore the defect of the actual maximum practicable in fifteen years of real life from the ideal which had proved unattainable.

The New South Wales Board of Trade and the other State authorities also adapted their living and basic wages to meet the economic crisis of 1921 and the concurrent unemployment. The New South Wales Board reduced its living wage from £4 5s. to £4 2s. in October, 1921, and to £3 18s. in May, 1922. A typical Victorian wages board's basic rate (Railway Classification Board) in 1922 was 13s. 6d. per day. In April, 1922, the South Australian Board of Industry reduced its living wage to 12s. 11d. per day, and the Queensland Arbitration Court's living wage became, in the same year, £4 per week. Thus it may be said that by the middle of 1922, when the price collapse had come to an end, the post-war level of Australian basic wages had been definitely set in the neighbourhood of £4 per week. The wage in every State was an adaptation to present necessities of the preceding wage whatever its family history (in Queensland the Legislature had actually prescribed the five-membered family), and all had converged to this common level.

From 1922 to 1925 the Commonwealth Court's basic wage (adjusted quarterly) ran almost parallel with that declared by the New South Wales Board of Trade; the former was the greater by amounts varying from 1s. to 5s. and averaging about 3s., the amount of the arbitrary addition introduced by the President, Mr. Justice Powers, and confirmed by the Full Common-

55. *C.A.B.*, Vol. 16, p. 829

wealth Bench in 1922. In 1926 the current living wages declared by the various State authorities, all following the gradual upward trend of prices since 1922, were still practically equal:—New South Wales, £4 4s.; Queensland (declared directly by Parliament), £4 5s.; Western Australia, £4 5s.; South Australia, 14s. 3d. per day; and the Victorian wages boards, inasmuch as they were using the methods of the Commonwealth Court generally without the addition of the arbitrary 3s., were on the common State level.

Effective Wages.

The productive activity which followed the price collapse secured a measurable advantage for the workers in secondary industry. The percentage of unemployment derived from the trade union secretaries' returns, averaged for Australia, remained in 1922 at the high level of over 9 per cent. as compared with the pre-war percentage of 5 or 6 per cent. From 1923 to 1926 the annual figures oscillated between 7 and 9 per cent. But even if this apparently higher level of unemployment be accepted, it can be said that in 1922 the "Harvester" wage became effective. The estimates of *average wages* (which, of course, include all skilled rates) made by the Commonwealth Statistician suggest that the new effective level of average wages in Australia, taking account of unemployment, was in 1922, after the price collapse, about 9 per cent. higher than the effective level in 1907, but that this advantage had fallen to 6 per cent. by 1926 as wages and prices again gradually increased.

VIII

NEW PROSPERITY DEVELOPMENTS

The Industrial Commission of 1926

THE next outstanding declaration of a living wage was made by the Industrial Commission in December, 1926.⁵⁶ The Board of Trade's last declaration (£4 4s.) was made in 1925; the Board was abolished by the Industrial Arbitration Act of 1926 and replaced by an Industrial Commission, Mr. Piddington, K.C. (afterwards Mr. Justice Piddington), being appointed Industrial Commissioner. The living wage provisions of this Act were different from those of the previous Act. The Commission was now directed to proceed to its declaration of living wages by two steps, the first being to determine a standard of living and the second to declare the living wages based upon such standard for adult male and adult female employees in the State. The family was not specified.

As it was not practicable to determine a standard otherwise than in terms of some specific family, the "parties" accepted the suggestion of the Commission that for the purpose of inquiry the Basic Wage Commission's finding of 1920 be used as a working basis for determination of a standard of living, on the understanding that the five-membered family for which that finding was costed would not necessarily be adopted by the Commission when it came to declare the living wage for adult males.

The Industrial Commission found by judgment of the Industrial Commissioner, the members representing employers and employees failing to agree, a standard of living which "for a hypothetical domestic unit of five persons" cost £5 6s. in the metropolitan area of New South Wales during the half-year ended 30th September, 1926.⁵⁷ This was slightly higher than the standard laid down by the Basic Wage Commission of 1920, the cost of that standard for the same family unit, when brought up to date for the same area, being £5 2s. approximately. It was rather less, however, than the cost for the family of five of the current average standard of living-wage earners, viz., about £5 13s., by the method of estimation already used.

It is clear, on perusing the judgment, that a flat living wage declaration of £5 6s. (or of £5 4s., which was about the equivalent for the State, excluding the rural areas, of the Metropolitan finding) was regarded as economically impossible. The Commissioner

56. *N.S.W. I.A.R.*, Vol. 25, pp. 301-354.

57. *Idem*, p. 325.

held that under existing law "it is impossible so to base the living wage on the determined standard of living as to secure that determined standard for all. . . . The only thing to be done, therefore, is to regard the present position as transitional and to declare the living wage now at its present figure, £4 4s., which will, as it happens, provide the standard of living for a man, wife, and one child (the approximate average of children per adult male), and to couple this with a recorded decision that early legislation by the State Parliament is imperative to secure family allowances."^{57a}

This refusal of the Commissioner to declare as the living wage for adult males his finding for the family of five was a final acceptance of the view that if the current average standard of living of living-wage earners, or a standard near to that current average standard, be costed for an arbitrary family, the resulting sum *cannot reasonably be laid down as the living wage*. The principle which Mr. Justice Higgins enunciated in 1916, "What sum can be most reasonably laid down in the circumstances of the time is the foundation or basic wage", again prevailed, and at the same time the "Harvester" family of five persons was unmistakably discarded. So also was the Board of Trade's family of four, for the Commissioner stated that the current living wage of £4 4s. sufficed only to provide his determined standard for man, wife, and one child. It was, of course, by the adoption of this domestic unit, however transitionally, that the Commissioner based his declared living wage of £4 4s. on his determined standard, as required by the Statute.

An assessment by the Commissioner of 10s. or 11s. per child was thus implied: 10s., if the current wage of £4 4s., which was based on the average cost of living in the Metropolis and towns combined, be compared with the equivalent for the same area of the Commission's finding for man, wife, and *three* children, viz., £5 4s.; and 11s. if the comparison be confined to the Metropolitan area, for which the Commission found £5 6s.

Child Endowment Established in New South Wales

The New South Wales Government adopted the Industrial Commissioner's recommendation by introducing Child Endowment in 1927. By an Industrial Arbitration Amendment Act the Commission was directed to fix the living wage for adult male employees on the requirements of man and wife only, and a Family Endowment Act—to operate simultaneously with the declaration of the living wage on this new basis—provided allowances for children at the weekly rate of 5s. per child, subject to the limitation that the average weekly income received during the

^{57a} *Idem*, p. 326.

year preceding a claim, plus the weekly allowances payable during the ensuing year, should not exceed the living wage declared on the requirements of man and wife together with 5s. for each dependent child.

New Living Wage Basis—Man and Wife

The next important declaration of the living wage was made by the Industrial Commission in June, 1927, as a result of this legislation.⁵⁸ It was the first occasion when the New South Wales determining authority had to declare the living wage on the requirements of a specific family unit prescribed by Statute. The Commissioner held that "while it is not imperative to act upon the standard of living determined in December, 1926, it is open for the Commission to reaffirm that determination, and then, in conformity with the man and wife unit, to declare the living wage at £3 13s."⁵⁹ This sum was the remainder after subtracting 11s. as the implied average cost of a child from the £4 4s. which was in December stated as sufficient to provide a man, wife, and one child with the standard then determined.⁶⁰

But the Commissioner did not adopt again his standard of December, 1926. He held that "the term '*living wage*' implies *current human standards*", and "the human standard now current for such an employee (having a wife but not children) is the standard which the law of New South Wales has created and maintained for him over a long period of time. Since August, 1925, and up to the present, it has been a standard the cost of which has been £4 4s. a week. Before August, 1925, it had been the same standard practically, though its money measurement had slightly varied." The Commissioner accepted the *standard of living obtainable after August, 1925, for man and wife by means of an expenditure of £4 4s.*, brought the cost of that standard up to June, 1927, in terms of the slight increase in prices, and declared that the living wage based on the requirements of man and wife should be £4 5s. per week.⁶¹

The problem was one of extreme difficulty. The suggestion was that the current rate should be reduced by some sum not exceeding 11s. Experience showed that large upward departures from the ruling rate, either when gradually applied (e.g., the New South Wales Board of Trade's increase of 17s. in 1919), or when instantaneously applied (e.g., the same Board's 8s. increase under the 29th October and Christmas Eve Regulations

58. *N.S.W. I.A.R.*, Vol. 26, pp. 165-229.

59. *Idem.*, p. 174.

60. The cost for man, wife, and three children had then been determined at £5 6s. in the Metropolitan area.

61. *N.S.W. I.A.R.*, Vol. 26, pp. 175-7, 181.

of 1920) had been accompanied by economic reactions which stultified the findings of the wage-fixing authority. Only two reductions of the living wage had previously been made in New South Wales, and these had amounted to no more than 3s. and 4s. respectively, and had followed the rapid price falls in the critical times of 1921. At the present time, June, 1927, the household price-level, on the contrary, was almost stable. There were no economic clouds plainly visible to all. Indeed, the estimates of production prepared by the official statisticians, both Federal and State, showed apparent prosperity. Any reduction now would be incorporated, under Section 20 of the amending Arbitration Act of 1926, in all the awards almost at once, and in any case retrospectively to the date of the declaration. However strong the arguments might have been for a gradual deflation of costs and prices in order to maintain our exports in the face of the fall in world prices which was forecasted, it was regarded as unproven that such a deflation should begin precipitately with a drop of even 4s. in the State living wage, involving an *almost immediate* diminution in the purchasing power of wage earners within the Commission's jurisdiction amounting to something like £3,000,000, and an inevitable consequent disturbance first of the retail markets and then of manufactures and employment. Against this loss of purchasing power there might, of course, be put the potential gain of purchasing power by those among whom the receipts from the Family Endowment Tax, expected to be about £4,000,000, would be distributed. But, in view of half the employees being subject to the higher Federal basic wage of £4 10s. 6d., the number eligible for endowment was extremely uncertain; only actual working of the scheme could determine the total purchasing power which would thus be distributed. Moreover, any reduction of the living wage at the inception of the Endowment Scheme would automatically reduce the amount of endowment payable, for the Family Endowment Act provided that this should be determined by comparison of the preceding year's income with the living wage now to be declared.

It was incidentally argued that, as regards industries within the industrial jurisdiction of the Commission, the total burden of a living wage of £4 5s., together with the 3 per cent. tax laid on the total wage and salary bill by the Family Endowment Finance Act, would not exceed the burden of a flat living wage of £4 8s. per week (for 3 per cent. of the Commonwealth Statistician's published general average wage rate was 3s. per week), whereas the current Federal basic wage for New South Wales, including the "Powers 3s.", was £4 10s. 6d. The exclusion in this argument of taxation of salaries, fees, etc., which might not be affected

by an increase in the flat living wage only slightly invalidated it, but a real complication was that the wage bills of industries within the Federal industrial jurisdiction were by the same Act taxable at the rate of 2·7 per cent., for this was equivalent to raising the Federal basic wage also by almost 3s. Here, indeed, lies the most disturbing condition of the whole problem, the existence of rival industrial jurisdictions in New South Wales, and likewise in every State of the Commonwealth.

To the commentator it appears that the Industrial Commissioner in June, 1927, solved his difficulties by choosing among the ruling basic rates, just as Mr. Justice Higgins in 1907 and Mr. Justice Heydon in 1914 had chosen among the ruling minimum rates of their times. The Queensland determining authority throughout, with a statutory family of five prescribed since 1916, and the Western Australian authority in 1926 with a family of four chosen by itself, and other State authorities, had likewise assimilated their findings with those ruling in New South Wales and other States. All were able to contemplate standards which when costed for the prescribed or chosen family unit produced rates which could reasonably be laid down.

As an example, which I have not hitherto quoted, of the common attitude, Mr. Justice McCawley, giving the opinion of the Full Bench of the Queensland Arbitration Court in 1921, said: "Although this Court . . . is not subject to direct control by other wage-fixing authorities, it is always influenced by the wage standard adopted by the Federal Court and in New South Wales and Victoria. . . . We have come to the conclusion that it would be inimical to Queensland's industries and to employers and employees alike if we were now to adopt a higher minimum wage for the average industry than that adopted as the basic wage in New South Wales, viz., £4 5s. per week."⁶² Similarly, in 1920 Mr. President Jethro Brown, of the South Australian Court of Industrial Arbitration, held that the normal and reasonable needs of the average employee . . . cannot be interpreted without reference to national income and national output, and the Board of Industry of which he was president maintained this attitude in 1921 and 1922.⁶³ It has already been noticed that the New South Wales Board of Trade also had claimed and exercised discretion to vary the standard in terms of economic circumstances. In 1919, in its second declaration under the Act which constituted it, it raised its standard by 22 per cent., and in the following year it depressed this new standard by 12 per cent.

The Commissioner's decision did not, however, give universal

⁶² *Queensland Industrial Gazette*, March, 1921, pp. 137, 140.

⁶³ *S.A.I.R.*, Vol. 7, p. 194 *passim*; p. 206 *passim*.

satisfaction. Although freedom to vary the standard in terms of changes in economic circumstances was conceded, it was argued that such freedom could only be exercised with due regard thereto. The Legislature had in 1927 specified the new unit of man and wife with full cognisance of and in consideration of the standard laid down by the Industrial Commission a few months before. The discretion of the Commission was, therefore, it was argued, limited to such variation of the standard then laid down as might be justified by such changes in the economic circumstances as had occurred in the meantime. A Royal Commission, consisting of a former Justice of the Arbitration Court, a District Court Judge, and an eminent King's Counsel, appointed to inquire into the legality of the decision, reported in October, 1927, its majority opinion that the Industrial Commission in June, 1927, had "acted upon a wrong principle and exceeded the powers conferred upon it . . ."⁶⁴

Living Wage Basis Modified to Man, Wife, and One Child

A change of Government presently occurred, and an amending Arbitration Act was passed in 1928 which reconstituted the Industrial Commission. While being retained on the boards or conciliation committees, the representatives of employers and employees were removed from the supreme body, which now consisted of three members, each having, in membership, the status of a Supreme Court Judge. Moved by "parties" to the living wage inquiries, the new Commission by majority in September, 1928, upheld the finding of the Royal Commission of Inquiry that the declaration of June, 1927, was incorrect, and after protracted public inquiry into the whole question of living wages delivered final judgment in October, 1929.⁶⁵

The Commission by majority found that the living wage proper to be declared for non-rural industries on the basis of the requirements of man and wife was £3 12s. 6d. per week. Quoting a statement in the Industrial Commissioner's judgment of June, 1927, that "a standard once ascertained and determined should not lightly be departed from", they thought "it proper to adopt as a living wage standard substantially the standard of living determined by the Industrial Commission in December, 1926. . ."⁶⁶ "With regard to the contention that reduction of the living wage would reduce the amount of child endowment payable to a family, they held that the law directed the Commission "to disregard any

⁶⁴. Report of Royal Commission on Allegations concerning the Industrial Commissioner, Mr. Fiddington, K.C., 1927, p. 12 [Government Printer, Sydney, "32216/3-A"].

⁶⁵. N.S.W., I.A.R., Vol. 22, pp. 375-444.

⁶⁶. *Ibid.*, p. 426, 440.

claims based on the requirements of children when considering the amount of the living wage," and therefore that the Commission could not include in the living wage any "amount referable to failure on the part of the Legislature to make complete and adequate provision for these children".⁶⁷

Coming to the question of economic circumstances, they said: "Considering, as we do, that Parliament has not, in respect of this reduction, permitted us to take into account the economic consequences of the same, we have in our findings given no weight to such considerations, though it is obvious that the situation must be reviewed from that standpoint." And in view of the possible "far reaching" and "serious" effects of a reduction in the living wage from £4 5s. to £3 12s. 6d. under the law as it stood, they announced their decision to withhold the declaration for fourteen days in order "that Parliament should have the opportunity of considering the present state of the law on this subject and the possible economic results flowing from the application of that law."⁶⁸

The New South Wales Government promptly responded to this invitation to consider the law by inducing the Parliament to pass a brief Act suspending the power of the Commission to declare any living wages until it had decided what to do. After some weeks' consideration, the Government introduced an amending Bill providing that in future the living wage should be based on the requirements of man, wife, and one child, and that for its first declaration the Commission should forthwith use the materials already available to it to determine the cost for the added child, and add the same to its recent finding of £3 12s. 6d. for man and wife only. The Bill passed, and shortly afterwards the Commission found 10s. per week in respect of the added child and declared the living wage at £4 2s. 6d. per week.

A consequential amendment of the Family Endowment Act was also made, which excluded from endowment one child in each family, inasmuch as one child would be provided for in the living wage based on the new unit, and a further amendment at the same time remedied the defective section of the Family Endowment Act under which endowments would increase if the living wage increased, and decrease if the living wage decreased, by providing that payments of endowment should in future be determined by comparing the income during a past period with the living wage current during that same period, instead of the living wage which might be declared subsequently.

⁶⁷ *Idem*, p. 428.

⁶⁸ *Idem*, p. 441.

When examined for general principles of living wage fixation, the judgments of the Industrial Commission of December, 1926, and June, 1927, and that of the Industrial Commission of October, 1929, seem to give equal weight to the consideration of economic consequences. The former regarded a declaration which involved a marked departure from the current living-wage rate, whether up to £5 6s. or down to £3 13s., as economically impracticable. The Commission of three were equally apprehensive of the serious and far-reaching results which, they were convinced, would follow such a departure. The difference between the two judgments was a difference of legal procedure rather than of living-wage principles. In the former it appears to have been held that interpretation of the relevant Statutes was governed by the economic considerations; in the latter that what the majority of the Commission regarded as the plain meaning of the Statutes must be pursued to its logical conclusion and stated together with the economic considerations for the information of Parliament. The Commission of three refused, however, to take the responsibility of declaring that conclusion forthwith as the living wage. They intimated instead that they would declare it in a fortnight's time if Parliament did not intervene. Thus they put on Parliament the responsibility of taking account of or ignoring the economic consequences. Parliament in its wisdom did intervene, and prescribed as the future basis the requirements of man, wife, and one child, the unit which had been held by the Industrial Commissioner in his judgment of December, 1926, to be the proper unit for the purpose of fixing the living wage if the flat rate system were continued. It may be recalled that this unit had been put forward ten years earlier as the nearest practical approximation to the average domestic or family responsibility of the adult male employee.

IX

CLASSIFICATION OF DECLARATIONS

THREE classes of originating declarations of living and basic wages in Australia may be distinguished. The feature of the first class is the adoption of a particular family or domestic unit in conjunction with a particular standard, instead of the average standard being enjoyed at the time by living-wage earners. The "Harvester" finding of 1907 is such an instance. The standard then used by Mr. Justice Higgins was the particular standard obtained by a family of about five from one of the current rates; that is to say, a much lower standard than was being obtained on an average from that rate, viz., by a man with a wife in about 65 per cent. of cases, and on an average only one child. Similarly, the standard adopted by Mr. Justice Heydon, of New South Wales, in 1914, when he used the family unit of man, wife, and two children, was the particular standard then being obtained by a man, wife, and two children from the most frequent minimum rate then current, viz., 8s. per day. Similarly, Mr. President Jethro Brown of South Australia, Mr. Justice McCawley of Queensland, and Mr. Justice Dwyer of West Australia adopted particular standards approximating to those actually being enjoyed by a man, wife, and three or two children, respectively. Again, in June, 1927, the Industrial Commissioner, with a domestic or family unit of man and wife prescribed by the Legislature, adopted the particular standard then being obtained by a man and wife from the current living-wage rate. In all the declarations in this class the resulting living wage arrived at by the authority necessarily did not depart to a very marked degree from the current rate.

The distinguishing feature of the second class of declaration is the assessment of the requirements of a particular family unit at the average standard being enjoyed at the time by living-wage earners, or by wage earners generally. The New South Wales Board of Trade's living wage of 1919 is an instance. The current living wage was £3 a week. Adopting as its standard approximately the average standard being obtained from this wage, the Board assessed the cost of the requirements of the particular family unit adopted by it, viz., man, wife, and two children, at £3 17s. This sum was declared as the new living wage. A second instance is the finding of the Commonwealth Basic Wage Commission in 1920. The average in the Commonwealth of all wage rates was then about £4 5s. Adopting as its standard the average standard being obtained by wage earners generally, i.e., from

wages averaging £4 5s., the Commission assessed the cost of that standard for the particular family unit prescribed for it, viz., man, wife, and three children, at £5 16s. This finding did not become the basic wage.

A third instance is the finding of the New South Wales Industrial Commission of December, 1926. This Commission chose a standard which was slightly lower than the average standard then obtainable from the current living wage of £4 4s. It costed the requirements of a hypothetical family unit of man, wife, and three children at this adopted standard, and found a sum of £5 6s. This it refused to declare as the living wage.

A fourth instance is the finding of the reconstructed Industrial Commission of New South Wales, announced in October, 1929. This Commission substantially adopted the standard determined by the Industrial Commission in December, 1926, i.e., a standard which differed but slightly from the average standard then and still obtained by living-wage earners. It costed the adopted standard in terms of man and wife—the unit prescribed by Parliament early in 1927—and found a sum of £3 12s. 6d. This the Commission refused to take the responsibility of declaring *forthwith*, and Parliament intervened to prevent it from being declared at all.

These four findings possess the common characteristics that the standard adopted was in all cases near to the average standard being enjoyed by the living-wage earners, and that a family or domestic unit was adopted either actually or hypothetically which differed either upwards or downwards from the true average domestic unit. Only in the first case, the Board of Trade's finding of 1919, was the finding declared as the living wage, and this declaration proved futile. It was found to aggravate existing economic difficulties; it was accompanied by further inflation and further depreciation of the value of money. As regards the second example, the chairman of the Basic Wage Commission pointed out that £5 16s. could not be adopted as the basic wage. It was not within the domain of practical economics. As regards the last two examples, both the authorities who made the assessments refused to declare them as living wages. They feared the economic consequences. Each of these four assessments involved a marked departure either upwards or downwards from the current living wage. The departure was in each case nearly proportionate to the excess or defect of the particular family unit adopted as compared with the true average family unit, i.e., approximately a man, wife, and one child.

In the third of the three classes into which I am putting the original findings of living wages, the distinguishing feature

is the assessment of the cost of the requirements of approximately the true average family or domestic unit at the average standard being enjoyed by living-wage earners.

The first instance is the alternative finding of the New South Wales Industrial Commission in December, 1926. As indicated already, the standard adopted was not far from the average standard then obtainable by living-wage earners from the current living wage, and the unit adopted was man, wife, and one child, which is not far from the true average family responsibility of the adult male. The assessment was £4 4s., and this sum, identical with the current living wage, was declared.

The second instance is the finding of the reconstituted Industrial Commission of New South Wales, declared in December, 1929. As already noted, this Commission had substantially adopted what was nearly the current average standard of living-wage earners, and the Parliament, after intervening to prevent the declaration of £3 12s. 6d. which was projected in October, had prescribed the new unit of man, wife, and one child. The Commission assessed the cost of the requirements of this new unit at £4 2s. 6d., and declared this sum as the living wage. It was in the neighbourhood of the current rate of £4 5s.

Advantages of Man, Wife, and One Child as Basis

I think that the history outlined leads to the conclusion that it is at least questionable whether any useful purpose can in future be served by adopting as the basis for the living wage any family unit which differs from the true average family or domestic responsibility of the adult male employee. The nearest practical approximation to this is a man, wife, and one child. A wage authority choosing any other unit must adopt a standard approximating to that which is being enjoyed by families of the particular size chosen. For if the authority does contemplate the average current standard of the living-wage earners, and attempts to cost the requirements of its domestic unit at that standard, it is bound to reach a result which departs markedly from the current living wage. The wage-fixing authorities throughout, almost without exception, have refused to originate a living wage differing in any marked degree from the current ruling rates. The one exception was the Board of Trade declaration of 1919, and it seems unlikely that any authority would wish to repeat that experiment. The risk of disturbing by large impulses the nominal purchasing power of the vast masses of the community whose living depends on wages is too formidable. The economic consequences of either large inflationist or large deflationist measures are too incalculable.

One great advantage might be expected to come from the

THE LIVING WAGE IN AUSTRALIA 51

general adoption of approximately the true average family unit. Authorities who are at present loaded, either by tradition or by Statute, with, say, a man, wife, and three children really cannot risk an inquiry into the current average or general standard of living of living-wage earners; for the determination of that standard will surely produce an impracticable result if applied to the excessive unit adopted. But if approximately the true average unit be adopted, the current average standard of living-wage earners can be examined in detail, item by item, without fear of an absurd result. Real inquiry into the current standards and their trends could then be undertaken with a view to adding to our knowledge of this fundamental problem.

X

CURRENT STATISTICAL FALLACIES

Current Fallacies

IT may be worth while here to consider some of the current fallacies as to the necessity to provide for two or three dependent children in order to prevent race suicide. If "a thousand years are but as a day" in the sight of the Supreme Being, then, during the nineteenth century and after, the world has passed through three hours of the most intensely rapid multiplication of population in recorded history. Taking the case of Great Britain, the population increased from ten and a half millions in 1801 to thirty-seven millions in 1901, so the average rate of increase was $1\frac{1}{4}$ per cent. per annum. Let us calculate what would have happened if this had gone on for two such celestial days, which is about the interval between the time of Julius Cæsar's landing at Dover and the year 1930. Guessing the early population of Great Britain to have been only a quarter of a million—most guessers, I think, put down a bigger figure—the present population, if the rate of increase characteristic of the nineteenth century had prevailed throughout, would by 1930 have been such that only about five square inches of the whole surface of the earth, including all the water surfaces and the arctic and antarctic regions, would have been available for each person. The rate of increase of $1\frac{1}{4}$ per cent. per annum is hardly, to use Mr. Justice Higgins' words, either "sacrosanct" or a "fundamental dogma". By concentrating our reason on the nineteenth century, and refusing to look before and after, we are, of course, able to look upon rates between 1 per cent. and 2 per cent. per annum as those which are pre-ordained. It may be noted that if an average of even two children under the age of fourteen per living married male be postulated, a natural increase of 2 per cent. per annum is implied under vital conditions existing in Australia.

We may examine this matter a little further. The latest Australian life-tables prepared by Mr. C. H. Wickens, I.S.O., F.I.A., F.S.S., etc., as Commonwealth Statistician, show that if the Australian birth-rate fell to seventeen per thousand the population, apart from migration, would continue to increase for a great many years, and would ultimately become stationary if no further advances were made in the prevention of infant mortality, and if there were no further increase in the expectations of life of persons surviving infancy. By the time the stationary condition was reached, when, of course, the death-rate

would gradually have increased from its present rate to seventeen per thousand as the proportion of persons at the younger ages gradually fell, the average number of children under the age of fourteen per married male in the population, assuming that the present proportion, about two-thirds, of the adult males were married, would be about one. Thus it is clear that the Australian population would not decrease if the married males in the community at any moment had on an average only one dependent child under the age of fourteen years, and this average would still permit two-thirds of the men living at any moment to have enjoyed or be enjoying the bonds of matrimony.

B—THE EFFECT OF THE LIVING WAGE POLICY ON WAGES FOR SKILL

I

EARLY PRONOUNCEMENTS AND PRACTICES

THE idea that the living wage should be a foundation wage was not accepted by the State judges in the early days of wage regulation in New South Wales. In 1905, in the first important statement of principles which should guide the Court, including the principle of the living wage, Mr. Justice Heydon expressed the view that the "real price of labour" and the "law of supply and demand" should have "full effect . . . in the case of all labour above the lowest or the living-wage limit".¹

Judge Scholes, of the same Court, in 1911 explicitly rejected the idea of building up from the living wage: "There is a generally prevailing idea, and it has been stated in this case, that the man who is being paid the living wage is the lowest grade of workman, and that each workman of a better class must be graded upwards from him according to the comparative value of his work. This, in my opinion, is an error. The living wage is not necessarily the value of the man's work; it may be more than that value. Several grades of labour of different values may be together awarded the living wage—not as the value of the work, but as the living wage. The man who asks for more than the living wage must show, not merely that he is above the lowest grade of workman; he must also show that the value of his work is greater than the living wage."²

Both these judges appear to have held that prescribed wages should generally represent the real value of the work done, subject to the limitation that the prescribed wage should not be less than a living wage, i.e., a wage based on needs. The living wage might therefore contain a margin above the real value of the work done by the living-wage earner, and up to this point skill should reap no monetary reward.

Judge Scholes in the judgment cited above also rejected the proposition that all rates of wages in an award should be raised with the increase in the cost of living: "I may say at once that I reject that statement as being economically unsound. If that were so, then every man who is in receipt of pay, no matter how high, would require his pay raised if the cost of living rose. But

1. *N.S.W. A.R.*, Vol. 4, pp. 209-10.

2. *N.S.W. A.R.*, Vol. 10, p. 641.

I do admit and accept the argument so far as it relates to the man who is merely receiving what is called the living wage, that it may rise and, be it understood, may also fall as the cost of living shall rise or fall."³

Mr. Justice Higgins, of the Commonwealth Court, on the other hand, seems at first to have regarded the wage for the unskilled labourer as a basic or foundation wage on which secondary wages should be built in proper *ratios*. In his "Harvester" judgment, 1907, he says: "The *ratio* of wages paid by an employer is a tolerably safe guide as to the relative merits of the two classes" (unskilled and skilled), "although the *absolute amounts* may be too low."⁴ If, after making an award, he had held to this principle, he would have been bound in varying the award to raise or lower the secondary wages in the same *ratio* as he raised or lowered the basic wage. That is to say, the percentage of increase or decrease applied to the foundation wage would also have been applicable to the extra wages or margins for skill, unpleasantness, etc.

But in the Marine Cooks case, 1908, the first after the "Harvester" finding which came within his ordinary jurisdiction, he quoted past rates showing that differences in wages which corresponded to differences in skill, etc., had for ten years remained constant while the wages fluctuated. Thus, between 1889 and 1908 the wages of cooks showed a fluctuation of £2 per month, but the difference between wages paid to chief and second cooks was £5 throughout. Similarly, as between A.B.'s and firemen, there was a constant difference of £2 in favour of the firemen, although the wages of both showed a fluctuation of £2 during the period.⁵ His award preserved the existing arithmetical differences and not the ratios, each rate being increased by an addition of £1 10s.

Mr. Justice Higgins thus withdrew the principle of ratios adumbrated in his "Harvester" judgment. A further modification of principles appears in his treatment of the Broken Hill Miners' case in 1909. Metal prices had fallen; the world's production of silver, for example, of which New South Wales produced about one-sixteenth, increased from an average of 183 million oz. in 1905-1907 to 213 million oz. in 1908, and to 227 million oz. in 1909, and the price per oz. fell from 28½d. in 1907 to 23½d. in 1909; and the Broken Hill mines were becoming less profitable. Treatment of tailings and refractory ores, although passing out of the experimental stage, had not definitely been established. The

3. N.S.W. A.R., Vol. 10, p. 641.

4. C.A.R., Vol. 2, p. 16. (Italics mine in this and following quotations).

5. C.A.R., Vol. 2, p. 67.

number of men employed in silver mines in New South Wales had decreased from 10,000 in 1907 to 7,600 in 1908 and 6,200 in 1909. Mr. Justice Higgins considered the restrictions imposed by the apparent economic condition of the industry, and pronounced as follows:—"Unless great multitudes of people are to be irretrievably injured in themselves and in their families, unless society is to be perpetually in industrial unrest, it is *necessary to keep this living wage as a thing sacrosanct*, beyond the reach of bargaining. But *when the skilled worker had once been secured a living wage*, he has attained *nearly to a fair contractual level with the employer*, and, with caution, bargaining may be allowed to operate."⁶

Mr. Justice O'Connor, in the same jurisdiction, had said in 1906 "that competition . . . may under certain conditions produce a market rate of wage which literally is *not enough to keep body and soul together*. Market value, therefore, cannot be the only test; but *market value* must always be *the most important element* in any test which is to be applied."⁷ The President of the New South Wales Court had in 1905 expressed a similar view, introducing the living wage limitation with greater clearness, and now in 1909 Mr. Justice Higgins appears to have adopted a like attitude.

The period 1901-1911, within which these pronouncements were made, was shown by subsequent researches into prices made by the Commonwealth Statistician, and published in 1912, and into food consumption made by the New South Wales Government Statistician, to be a period of considerable fluctuation both in prices and in consumption of food and groceries. For example, in 1902, 1903 and 1908, prices of these goods combined in *fixed quantities* were higher than in 1911. On the other hand, the estimated annual consumption of meat rose from 240 lb. in 1901 to 270 lb. in 1911; similar increases were estimated in the consumption of butter, milk, fish and oatmeal, and decreases in many carbohydrate foods—flour, potatoes, sugar and rice. House rents, however, had been gradually and persistently rising, partly no doubt because of improved quality of houses, and partly also because the community was too busy with production other than house-building. Thus in 1911 rents were about 33 per cent. higher on an average in the capital cities of the Commonwealth than in 1901.⁸

6. C.A.R., Vol. 2, p. 22.

7. C.A.R., Vol. 1, p. 27.

8. No generally accepted official measurements of price movements had been available before 1912. Indeed a preliminary investigation for Melbourne, made in 1910 by Mr. Laughton, F.I.A., Government Statist of Victoria, had been rejected by Mr. Justice Higgins. See C.A.R., Vol. 5, p. 18.

This period was indeed one of most rapid expansion of production. The Commonwealth Statistician's tables show that in 1901 the value at the place of production of the principal commodities produced—the value of buildings not being included—was £30 per head of the Australian population, and in 1911 a little more than £41 per head. This increase of 37 per cent. was not a mere matter of money inflation, for the index of wholesale prices of commodities, excluding rents, of course, was only 3 per cent. higher in 1911 than in 1901. The increase during this decade in the average consumption of animal foods by a population of North European extraction is evidence of general prosperity, and this state of prosperity was favourable for the humanitarian living-wage experiment.

The N.S.W. Industrial Disputes Act, 1908, empowered the Court to vary an award during its currency, this question having caused much discussion when "it was laid down very strongly by the Supreme Court . . . that awards could not be varied, that they must run their course."⁹ Judge Scholes in 1911 exercised this power in a limited way by varying an award which had nearly a year to run to the extent of increasing the living wage rate to the 7s. 6d. per day recently found by the Court, *but leaving the higher rates untouched.*¹⁰ And in February, 1914, Mr. Justice Heydon, after an elaborate inquiry into the cost of living, declared 8s. per day to be "the strict living wage," recommended the Boards to add thereto certain prosperity allowances, and suggested to them that existing awards should be reopened to bring rates *below the new living wage up to that level, but not to alter other rates.*

These Boards had been established under the N.S.W. Industrial Disputes Act, 1908, as tribunals subordinate to the Court. It is impossible to say whether the Boards in making an initial award, or a new award to replace one which had expired, followed consistently any set of principles. Doubtless they were influenced by Mr. Justice Heydon's tripod statement, enunciated in 1905, of the needs of a family, the supply of and demand for labour, and the prosperity of the industry; and as regards the actual amount of the living wage by Mr. Justice Higgins' "Harvester" finding of 1907. The current ruling rates in kindred industries for the various grades of labour were certainly important in guiding them to an award for a new industry. It seems most likely that the Boards by and large reproduced the arithmetical differences between the lower and higher rates as they stood in the labour market after a considerable period during which the upward movement in prices had been very gradual. There is no

9. N.S.W. A.R., Vol. 11, p. 172.

10. N.S.W. A.R., Vol. 12, p. 642.

evidence of any tendency after the unusual price increase of 1912 to accept the ratio principle suggested by Mr. Justice Higgins in 1907, and rejected by Judge Scholes in 1911. The unusual character of this increase is measured by the fact that in the last quarter of the year 1912 a *regimen* of fixed quantities of food and groceries cost about 16 per cent. more on an average in the capital cities than in the year 1911, and house rents increased by a further 8 per cent.; so already in 1912 there was a foretaste of the *rapid* price movement which characterized the war period.¹¹

Thus it seems that before the war the policy of the State Courts and Boards in making new awards was to arrive at "fair market rates" for skilled men, and to take into consideration the more or less generally accepted living wage basis 7s. per day from 1908 to 1911, 7s. 6d. from 1911 to 1914, and 8s. in 1914. The effect of this from 1901 onwards was that the earlier differences between the lowest rates and the skilled rates were not more than maintained in nominal value, and that already before the war there was a gradual falling tendency in the purchasing power of the differences or margins for skill as the cost of living gradually increased and the living wage policy became more potent. This tendency was somewhat accentuated from 1911 onwards when the Court, faced with the large price increase of 1912, refused to do more in awards whose term had not expired than bring the lower rates up to the latest living wage level.

In the sphere of the Federal Court, the development and acceptance by the Court of the Commonwealth Statistician's index numbers of prices (of a *regimen* of food and groceries and shelter *fixed in quantity*) brought about an increase of the Federal basic wage from the "Harvester" basis of 7s. per day, first applied in 1908, to 8s. 6d. per day in 1913. Mr. Justice Higgins' idea of ratios subsisting among the various rates was never adopted. The practice was usually to add the same increase to all rates alike, unless a change in the duties of a classification necessitated a modification of the rate corresponding, and provided "the capacity of the industry to pay"¹² what the Court should adjudge as fair rates throughout the log was not in question, as it was, for example, in the Barrier Miners' case of 1909.

This general practice had the effect of maintaining the differences or margins at the pre-existing nominal values. For example, in varying in 1911 his Marine Cooks Award of 1908, Mr. Justice Higgins said:—" . . . it will be seen that the difference of £2 per month in favour of the firemen has always been consistently main-

11. See Commonwealth Bureau of Statistics' *Labour and Industrial Branch Report No. 9* (1918), pp. 29-31 (graphs).

12. *C.A.R.*, Vol. 5, p. 164.

tained. The A.B. is now to get not less than £8 per month, so the fireman, to preserve his relative position, should get £10 per month."¹⁸ The maintaining of the pre-existing nominal value of margins when awarding higher wages of course involved relative depression of the skilled worker's wages.

II WAR ADJUSTMENTS.

DURING the war the Commonwealth Court as a general rule continued this practice of maintaining existing nominal margins. On the other hand, the Court did not reopen awards during their currency. The large effect of this practice has only recently been demonstrated. From a tabulation¹⁴ of the basic rates of all Commonwealth awards current at 1st November, 1920, it appears that the basic rates then in force (all being "equivalents" of the Harvester finding) ranged from £2 11s. to £4 2s., and averaged £3 7s. 3d., or nearly 15s. per week less than the latest awarded "Harvester" "equivalent." This retardation of the wage-level entailed less relative depression of the higher rates than if all rates had been kept abreast of the rising "Harvester" equivalent and the same nominal margins had been retained.

The principle of ratios, which implied real or effective margins, was never wholly abandoned by Mr. Justice Higgins. It was still one of his principles in 1916. But he said:—" . . . in a time of violent disturbances in prices . . . I do not think it is advisable, in framing an award for three or five years to come, to *push principles to an extreme* . . . If we should hereafter reach the haven of settled times, their claims will have to be further considered."¹⁵ In 1918 this principle still remains:—"The (Public Service) Commissioner argues that in the present financial position of the country, I should diminish the . . . margin attributable to skill; he is not satisfied with the *moderation* of the Court in refusing to increase the secondary wage because of the increased cost of living; he insists that the secondary wage should be actually reduced. . . ."¹⁶ In this instance, however, he agreed to reduce the margins somewhat, on the ground that the men had compensatory advantages in the service. And in the service generally, margins were reduced in nominal value by Mr. Justice Powers on account of the war, cost of living increases not being granted to those above certain income limits.¹⁷

The New South Wales Court was more concerned with the advancing price-level from 1912 onwards and throughout the war years than was the Federal Court. Not only did it confine its

14. Courteously provided by the Deputy Industrial Registrar of the Commonwealth Court.

15. *C.A.R.*, Vol. 10, p. 226 (Merchant Services Guild).

16. *C.A.R.*, Vol. 12, p. 478 (Postal Electricians).

17. *C.A.R.*, Vol. 15, p. 898.

variations of awards during their currency to the living wage limit, but in August, 1916, it declared one living wage, viz., £2 14s., for use in varying awards still current, and a different living wage; viz., £2 15s. 6d., for application in fresh awards. And in November of the same year it propounded a plan of "diminishing margins" for application when the Boards were making new awards for "industries that had not benefited by the war." Under this plan, the increase in the living wage pronounced by the Court was no longer to be applied uniformly throughout the old award, in order to derive a new award which should maintain the pre-existing nominal margins, but decreasingly as the old rates increased, and so as to vanish at a margin of about 30s. above the old living wage.

The Court's policy was maintained in the first declaration of the newly created Board of Trade under the presidency of Mr. Justice Heydon, when, in 1918, it declared one living wage, viz., £3, "for living-wage workers only," and another sum, viz., £2 18s. 6d., as the living-wage basis to which existing margins should be added to get the higher rates. Broadly speaking, these complicated and ingenious devices, while involving much litigation and great business for the Court, were of no great importance. As the increase in the living-wage basis was 3s. during the two years (November, 1916-18) in which the diminishing margin rule operated, the reduction which this elaborate rule caused in the average margin for skill was even less than that caused by the reservation of 1s. 6d. "for living-wage workers only" in the 1918 declaration.

III

PRACTICES AFTER THE WAR

UNDER the amended law of 1918 the New South Wales Court consisted of three judges who controlled all industrial awards, while the function of declaring the living wage was performed by the Board of Trade. Although the Court in September, 1919, laid down as a "*prima facie*" . . . "not a rigid rule," that the diminishing margin plan would not be applied in future awards, it apparently had not finally decided the question of varying awards generally in terms of a newly-declared living wage, when in October, 1919, the Board of Trade declared its startling increase of 17s. In applying this increase during the following months, the Court varied some current awards only by increasing the lower rates up to the new living wage of £3 17s., and others, where the parties had taken the precaution of asking for a reservation in case a new living wage should be declared, by adding 17s. throughout.¹⁸ Thus the variations in wages of skilled workers were being determined by the technical foresight and smartness of advocates rather than as sums which could reasonably be laid down. Impatient of the "inconveniences and incongruities"¹⁹ arising out of the diminishing margin rule, the N.S.W. Railway Commissioners consented to a variation of their awards, allowing the full increase of 17s. to all grades.

An amending act assented to in December, 1919, provided that after any new declaration of living wages, any party to an award might apply to the Court for variation of the "*wage provisions contained in the award.*" While this was not mandatory, the Court interpreted it as giving greater powers than the Act of 1908, and presently allowed an application for variation of all rates.²⁰ But it was not till June, 1920, that the State Court settled into a general practice of varying awards on application by adding the new living-wage increase throughout the award.²¹

The judgments of this Court were not completely harmonious in the following years. In an award for painters in 1925, Mr. Justice Edmunds said: "You cannot get an award simply because employers have agreed to an increase in wages. This Court *will not take into account what is the effect of the law of supply and demand upon wages.* If, as appears in this case, the increase to which they have consented has been necessitated by the operation

18. *N.S.W. Industrial Gazette*, Vol. 16, p. 655 (Nov., 1919).

19. *N.S.W. A.R.*, Vol. 19, p. 23 (Monumental Masons).

20. *Idem*, p. 31.

21. *Idem*, p. 102.

of the law of *supply and demand*, it is *something into which the Court will not inquire*. Consequently, the only way in which you can get an increase is exactly the same as the way in which the employers can get it reduced, and it would be that the margin which has been allowed is not a fair and reasonable one . . ."²²

The implication that the Court had some superior method of determining what were *fair and reasonable* margins was, however, denied by Judge Curlewis a few months later in an award for plumbers. Although counsel for the employers quoted Mr. Justice Edmunds as above, Judge Curlewis said:—" . . . the Court could no longer hold, except as a fiction, that the said rates . . . are, in fact, equal to the minimum value of the services. . . . *The facts are:* First, that the employers . . . consent to the increase. Second, that in kindred trades the employees have received from the Federal Court the increase sought here. . . . Third, that in other States plumbers are receiving the rate asked for here." And he allowed the employees' claims.²³ He had, however, in 1920 been very critical of the importance placed by Mr. Justice Edmunds on conditions existing in fact in allied industries, which might be "dangerous and misleading guides."²⁴

Thus, after twenty years, the State Court appears to have returned to the view of the earlier judges, that above the lowest or living-wage limit, the rates generally obtaining in the same or kindred industries, or the fair market values, are the best guide to fair and reasonable assessment of the value of skilled work.

In 1920 representatives of the skilled men brought the ratio principle again to the front by claiming before the Commonwealth Court that the pre-war margins should be effectively restored. But Mr. Justice Starke, while admitting that the relative standard of living had been affected, said:—"I can see neither justice nor expediency in the contention. . . . The *value of the work* of the skilled tradesman ought . . . to be the guiding principle. . . . It is hardly a satisfactory solution of the problem to commence with the base wage fixed on humanitarian principles, and then add the marginal differences which existed between skilled and unskilled workmen when economic causes had full effect."²⁵ Although in 1921 (the last year of his presidency) Mr. Justice Higgins in the Amalgamated Engineers case applied the index numbers to the fitters' margin of 3s. awarded in the "Harvester" judgment, increasing it to 6s.,²⁶ and so asserted the principle of ratios or true pre-

22. N.S.W. A.R., Vol. 24, p. 10.

23. *Ibid.*, p. 120.

24. N.S.W. A.R., Vol. 19, p. 21.

25. C.A.R., Vol. 1, p. 562.

26. C.A.R., Vol. 12, p. 206.

war, as distinct from nominal, margins, the general drift of the Court's opinion was against this principle. Next year Mr. Justice Powers, the new President, reviewed this award, and reduced the fitters' margin to 4s. He remarked:—"It must, however, be recognized that *for seven years before the war the margins were not increased in proportion to the increased cost of living in this or any other country, but only according to the proved value of the skill necessary at the time the award was made.*"²⁷ Already, in 1921, Mr. Justice Powers had said that the principal reason against fixing margins in 1921 on the plan of doubling the margins of 1907, because the purchasing power index numbers had doubled, was that the labour of employees had been greatly lightened since 1907 by improved conditions, improved machinery and appliances, and shorter hours.²⁸

Dealing bluntly with the question in 1924, Mr. Justice Quick declared:—"I consider that what took place prior to the decision of Mr. Justice Powers in 1921 can only be regarded as a matter of historical interest. All antecedent awards must be regarded as *res judicata*, and cannot be opened up in this case. I can only deal with the industry before me according to the circumstances and conditions at the present time."²⁹

This appears to have become the settled attitude of the Commonwealth Court. The Court seems to have tried to settle skilled rates by bargaining between the parties,³⁰ and, in doing so, it has reverted to the attitude of the earlier judges. "Market value must always be the most important element," Mr. Justice O'Connor had said in 1906. Above the lowest or living-wage limit, Mr. Justice Heydon had held in 1905, supply and demand should have full effect. "When the skilled worker has once been secured a living wage, he has attained nearly to a fair contractual level with his employer," had been the view of Mr. Justice Higgins in 1909.

27. *C.A.R.*, Vol. 16, p. 268.

28. *C.A.R.*, Vol. 15, p. 896.

29. *C.A.R.*, Vol. 19, p. 639.

30. *C.A.R.*, Vol. 22, p. 250.

A
HANDBOOK OF PRACTICAL AND
WRITTEN WORK IN ECONOMICS

②

BY

E. C. BHATTY, M.A.,

Fellow of the Royal Economic Society, London.

Ewing Christian College, Allahabad

ALLAHABAD :

THE INDIAN PRESS, LTD.,

1930

X
GO

*Printed and published by K. Mitra at the Indian Press, Ltd.,
Allahabad.*

CONTENTS

	PAGE
1. Foreword	i
2. Introduction	iii
SECTION I—PRACTICAL WORK	
3. Instructions for collecting Facts and Figures,	1
4. Questionnaire No. 1	5
5. Questionnaire No. 2	12
6. Questionnaire No. 3	19
7. Instructions for Tabulating the Material col- lected	24
8. Budget Charts	26
9. Instructions for preparing Diagrams, with two Model Diagrams	35
SECTION II—WRITTEN WORK	
10. Subjects of Essays with Bibliography ...	39
11. Questionnaire for Village Study ...	63
12. Model Essays	74
13. Test Questions	137
SECTION III—MAPS	
14. Maps	169

FOREWORD

When the written and practical work was first introduced into the intermediate course in economics, many of the teachers were strongly opposed to it. Many supposed that it was intended to make research workers out of the intermediate students, which it was urged was impossible without a background of theory. But the intention of the practical work was quite the reverse. *The practical work was intended to provide a background and a foundation for the right understanding of the theory.* After the first year's experience one of the teachers told me that the intermediate students with this practical background were grasping the definitions and concepts of economics as rapidly as the M. A. students did without it. At the conference of intermediate teachers held at Khurja two years later, all the teachers were unanimously in favour of the practical and written work. There can now be no doubt whatever that if this work is properly done, economics will become a real and live science, and a ready tool throughout life to the student; otherwise it is nothing but dull cramming and vague speculation. For carrying out the practical work correctly, for increasing greatly the value of this work to the student, and for shortening the time required to make the work successful, this little book will be found exceedingly useful.

HOLLAND HALL,
ALLAHABAD,
16th December, 1929. }

C. D. THOMPSON

INTRODUCTION

One thing that my intimate touch with the village life has brought home to me with a tremendous force is the general misery and abject poverty of the Indian agriculturist. His utter lack of information as to the means that would improve his condition, and also the lack of material resources that would secure him those things, have all tended to check his economic advancement; and there seems to be no likelihood in the immediate future that these defects would be removed. The appointment of the Royal Agricultural Commission indicates the extent to which the Government is interested in the improvement of the condition of the people in the villages. The chief drag on the wheel of progress of the country along this line has been the utter disinterestedness and apathy of the educated classes. It might have been said that the bourgeois are self-centred and selfish, deeply engrossed in the din and bustle of city life to devote any time to the work of rural uplift. But the pity is, that this apathy or disinterestedness is due mainly to the ignorance of the proper knowledge of the life and conditions in the rural areas. Those public men who know anything about it are busy in politics, and have no time to spare for the work of rural reconstruction. It is difficult to frame any scheme for improvement, until one is intimately acquainted with the conditions prevailing in the villages of India.

It is most unfortunate that all of our courses of study are so ill-devised that a student gets no chance of making himself conversant with the realities of life. His knowledge is limited to books. He is given no opportunity to exercise his power of observation, gather up facts for himself, and draw necessary conclusions from them. For the proper appreciation of the problems of the rural community it is essential that students be taken out often to the villages. A thing seen with the eyes makes a deeper impression than one read about in books. The practical work has much greater significance than the mere passing of the examination.

The success of the practical work depends very largely upon the teacher. He should make trips to the villages as pleasant as possible, and while in the village see that every student collects the facts and figures for himself.

This little book seeks to create in students love for the true spirit of research and if it is able to get even 15 per cent of the students of economics really interested in the rural problems, I shall consider my labours amply rewarded. It has, therefore, been prepared simply with a view to facilitate students, and others in their work of investigation. The students, because of their ignorance of the habits, whims and fancies of the farmer or the artisan, feel generally discouraged when they fail to induce them to give them the information they require. This is one reason why some students resort to the method of constructing imaginary budgets, or copying the budgets of the students of the

previous years. We have attempted in this book to acquaint the student with all the difficulties he would have to encounter in the work of his investigation, and the proper procedure he should adopt.

There is nothing ready made in this book. The student has to do everything himself. Only the lines on which the work has to be done are indicated.

An effort has also been made to cover the written work prescribed by the Board. A large number of subjects with bibliography has been given. A larger number of references to the periodicals and magazines dealing with economic subjects have been included. It is expected that this will stimulate the interest of the students in sources of information other than their text-books, and would help them to keep themselves posted in regard to information about the various current problems. To help the student to get an idea as to what is required of him in writing an essay, six essays have been included which are mainly the work of the students, but have been slightly improved by me in language and materials. They are by no means perfect models. It is very difficult to determine a model, and each person has his own ideas about it. But these essays simply indicate what is required of an average student, and this does not certainly hinder one from writing more if he has the time and patience.

In preparing the questionnaires I have freely used the material available on the subject and with these questionnaires we have been able to do most successfully the practical work for several years with our students.

I must acknowledge my thanks to my colleagues, Professors Saraswati Prasad and M. W. Maclay. I am more particularly indebted to my colleague, Professor Saraswati Prasad, M.A., L. T., for his suggestions and other help given to me in the preparation of this book.

I am also indebted to Professors C. D. Thompson and S. K. Rudra for their valuable criticism. I am further indebted to Professor Thompson for kindly writing the foreword to it.

E. C. COLLEGE, }
ALLAHABAD, }
July, 1929. }

E. C. B.

SECTION I
Practical Work

INSTRUCTIONS FOR COLLECTING FACTS AND FIGURES

Extreme care should be exercised in the selection of a family for the purpose of collecting material for the construction of a family budget. Select a fairly representative family, containing earning as well as non-earning members (husband, wife, three children or three dependents). There is no objection to selecting a family having more than five members.

To avoid suspicion, make the object of your inquiry clear at the very outset. Very often the villagers are frightened by your appearance in the village, as they have very few visitors like you except the Government officials. Considering the nature of your inquiry they are likely to suspect you as agents of the Government, collecting facts for the enhancement of revenue. In such cases the farmers tend to give incorrect figures of their income and expenditure. Hopelessly exaggerated figures are given of the expenses of production, and astoundingly low figures of their income. This will defeat the purpose of your inquiry entirely.

Speak gently and kindly, as if you were his best friend, and that you were very keenly interested in the betterment of his economic position. Do not try to assume an official air, otherwise you will be supplied with wrong figures.

During investigation assume an attitude of seriousness, and avoid too much of laughing and joking.

Too much indulgence in these is very dangerous. The farmer or the artisan will then begin to think very lightly of your object, and will give you distorted figures, or may refuse to give you any information, or may start joking with you. In this way you will not get anywhere, and after the farmer has stayed with you for some time, he would like to go away to attend to his work at the farm, or the shop.

The questions that you ask should be very simple and plain, such as may be very easily understood by the illiterate people whose condition you are investigating. Questions touching self-respect or private life should be very carefully and judiciously asked. There is a grave danger of causing annoyance by asking such questions injudiciously.

Group the questions according to the subject. Class them under the headings of food, clothing, etc. Considerable difficulty would be experienced by asking the questions haphazardly. If you do that, you are likely to confuse them. Advantage in grouping the questions is that the farmer or the artisan will be helped by the association of ideas and facts, thus making it easier for them to supply the information required.

Do not ask questions too rapidly but ask them slowly, giving them enough time to think over. They are not as keen-witted as you are, and it takes a considerable time to recall facts and figures. Do not become impatient when they take too much time on any particular question.

First of all read the questions very carefully yourself in order that you may get a clear notion of the nature of the information needed. If you do not have written questions with you, you must in that case be sure of the kind of questions that you would ask. If you have beforehand an idea of what you want, you can, in the course of investigation, undertake a gentle cross-examination of the information tendered to get at the real facts.

If you find that the farmer or the artisan is not giving you the correct information, do not tell him straightaway that he is telling a lie, but tactfully get the information out of him. Ask him in this case a number of cross questions, and so word them that he does not detect that he is being subjected to a searching examination. He would resent it if he came to know of it.

Try to ascertain the losses of both the farmer and the artisan, if possible. It is generally difficult to get figures of losses, which are often very small, and liable to be forgotten. If you want to get information on this point, suggest to them some very common items of loss, *e.g.*, loss due to the death of cattle, loss due to wild animals and birds, and loss due to erosion, etc., or breakage of tiles before and after baking them in the case of a potter.

In cases where you suspect the information, get in touch with his immediate neighbours or friends. Ask the same questions concerning his condition from

them. Compare the two informations; accept the most probable, and reject the other.

Write the answers obtained very clearly below each question if possible; otherwise the information obtained will become confusing; and after some time it would be difficult to disentangle the facts one from the other.

As soon as you return from the work of investigation, sit down, and take the regular form prescribed by the Board or prepared by your teacher, and fill in the information collected.

QUESTIONNAIRE No. 1

Consumption Budget of Cultivator or Artisan family

- A.—1.** Name of the village, tehsil and district.
- 2.** Nearest post office, police station and the railway station.
- 3.** Number in the family: men, women, children (below 14). Ages.
- (i) Number residing in the village.
- (ii) Number residing abroad and contributing to the income of the family.
- (iii) Dependents not living in the village.
- Total number in the family.
- 4.** Caste of the family.

EXPENDITURE

- B.—5.** For Food :
- (a) Flour.
- (b) Dal.
- (c) Oil or Ghee, or both.
- (d) Salt.
- (e) Massala.
- (f) Vegetables and Fruits.
- (g) Meat and Fish.
- (h) Sugar or Gur.
- (i) Milk.
- (j) Butter.
- (k) Tea.
- (l) Tobacco, Pan, Bhang, Charus, Liquor, Ganja, etc.

6. How much does $\left\{ \begin{array}{l} (a) \text{ an adult man} \\ (b) \text{ a woman} \\ (c) \text{ a child} \end{array} \right\}$ in the family eat?
7. How much milk is used by each adult person?
8. How much milk is used by the children?
9. Parts of the year when no dal is used.
10. Parts of the year when mangoes enter most into the diet.
11. Parts of the year when vegetables and sag are largely used.
12. When salt and red peppers only are used?
13. What grains used in what parts of the year?
14. Length of the periods during which different grains are used:

C.—Fuel and Light :—

- (i) Does it consist of firewood, or cowdung-cakes?
- (ii) If of both, then in what proportions?
- (iii) During what parts of the year are dung-cakes used?
- (iv) When is firewood used exclusively?
- (v) How are cowdung-cakes and firewood secured?
- (vi) Prevailing rates of cowdung-cakes and firewood?
- (vii) What is used for lighting purposes? Kerosene oil, or vegetable oil?
- (viii) Are hurricane lamps, etc., used; or dias?
- (ix) Total expenditure on fuel and light.

D.—For Clothing.**1. For Males :**

(a) Dhoties: How many generally purchased per adult man during the year ?

(i) How many has each adult man in the family ?

(ii) How many new and how many old ?

(iii) Prevailing prices of dhoties ?

(iv) How many purchased this year and for how much ?

(b) Kurtas. Use the same questions as in (a).

(c) Mirzais. " " "

(d) Bandi. " " "

(e) Topi or cap. " " "

(f) Safa. " " "

(g) Shoes. " " "

2. For Females :

(a) Lannga or Sari. " 1(a)

(b) Phariya or head-dress. " "

(c) Kurti. " "

(d) Choli or bodice. " "

(e) Ornaments (bangles, tika-bindi, bichhutas, etc.)

3. For Children (all persons under 14) :

(a) Dhoties. Use the same questions.

(b) Kurtas. " "

(c) Caps. " "

(d) Shoes. " "

4. For common use :

(a) Bedding—libáf, dohari, giláf, mattresses—
Repeat the same questions.

(b) Chárpáis. „

(c) Blankets, sheets, etc. „

5. Útensils:

(a) Number of household utensils and their
quality.

(b) Names of those purchased during the year
and their price.

(c) How long do these utensils last generally?

(d) How much spent upon the repairs of
utensils?

E.—Payments to village servants.

1. Barber :

(a) What services does he render to the
family during the year?

(b) How is he generally paid?

(c) What payments are actually made to him
during the year?

(d) Does he receive anything at the marriage
ceremonies? (If those amounts are
included in the marriage expenses,
then do not include them here).

(e) Total amount paid to the barber.

2. Washerman. Ask the same questions as for
Barber.

3. Sweeper. Ditto.

4. Blacksmith. Ditto.
5. Carpenter. Ditto.
6. Any other village servant.

F.—The village religious functionaries.

1. The purohit. What payments are made to him?
2. The bhát. Ditto.
3. The hólí phuka. Ditto.
4. Mullás, maulvis, etc. Ditto.

G.—Education :

1. Are any members of the family reading ?
 - (a) In the village school.
 - (b) Outside the village school.
2. What fees are charged in the village school ?
3. What other expenses are incurred on education during the year for books, etc. ?

H.—Travelling expenses.

I.—Festivals :

1. What are the usual festivals ?
2. What are the usual festivals kept in the family ?
3. How are they celebrated ?
4. Were any of the festivals celebrated during the year ?
5. Probable amount of money spent on them.
6. Any fair or tamáshás held in the village or near about, during the year.
7. Did any members of the family go there ?
 - (a) Were any purchases made ?
 - (b) How much money spent on them ?

8. Did any kathá or some other religious ceremony take place in the house?
How much was spent on them?

J.—Social ceremonies :

1. Did any marriage take place in the family?
How much was spent on it?
2. Did any births take place?
How much spent on them?
3. Did any bidai take place in the house?
Expenses on them.
4. Did any deaths take place?
Expenses on them.

K.—House :

1. Were some repairs done to the house?
How much spent on them?
2. How many persons worked; for how many days?
3. Was outside labour used?
 - (a) How many?
 - (i) men, (ii) women, (iii) children.
 - (b) For how many days each worked?
 - (c) Rates of wages paid.
 - (i) men. (ii) women. (iii) children.
4. Total amount of expenditure incurred?
5. New building :
 - Expenses on the construction of a new building.

L.—Sickness.

M.—Medical expenses :

1. Was there any sickness in the family ?

2. Expenses :

(i) How long ill ?

(ii) What treatment ?

(iii) Amount paid for medicine and treatment.

(iv) How long absent from work ?

(v) At what time of the year ?

(vi) Money loss due to illness.

(vii) What is being done to prevent illness in the village ?

(This should be mentioned in the remarks column only.)

QUESTIONNAIRE No. 2

Production Budget of Cultivator

- A.**—Address—Name of the village, tehsil, district, nearest police station, post office, hospital and railway station.
- B.**—Caste of the family.
- C.**—Number in the family :
- Men, women, children (under 14).
1. Number residing in the village.
 2. Number residing abroad contributing to the income of the family.
 3. Dependents not living at the above address. For the period 19 to 19 using the Fasli year.
- D.**—Total area under cultivation by the family :
- (a) Occupancy : (i) in the village.
(ii) in the neighbouring villages.
- (b) Non-occupancy : (i) in the village.
(ii) in the neighbouring villages.
- (c) In the company of a fellow-cultivator.
- (d) On batai (metayage tenure).
- E.**—Number of 'hals' kept by the family.
- F.**—Number of people generally working on agriculture.
- G.**—Area sown and harvested during the kharif (give the period over which the kharif lasts in that locality).

1. How much under each individual crop ?
 - (a) _____ (b) _____
 - (c) _____ (d) etc. _____
2. Number of 'hals' and tools used in kharif :
 - (a) Name the various processes of production.
 - (b) How much time is taken by each process ?
 - (c) What is the value of all tools of each kind ?
 - (d) Length of life of each tool.
 - (e) Depreciation on all tools of each kind.
 - (f) Expenses on repair of each tool.
3. Quantity of seed per bigha or acre used.
 - (i) Quantity of seed : home-kept.
 - (ii) " " " purchased for cash.
 - (iii) " " " taken from sowkar.
 - (iv) " " " taken from the landlord.
 - (v) Total value of the seed.
4. Quantity of manure applied to the 'kharif' fields :
 - (i) Quantity of manure : home kept.
 - (ii) Quantity of manure : purchased.
Rate of purchase.
 - (iii) Total value of the manure.
 - (a) Where is the manure generally stored ?
 - (b) Try to ascertain the loss of manure due to rainfall, strong winds, etc.
5. Number of ploughings and levellings done to each field.

6. Number of people permanently engaged in kharif.

(a) Of the family :

(i) Men (ii) women (iii) children.

(b) Outside the family :

(i) Men (ii) women (iii) children.

(c) Rates of wages prevailing in the village.

(i) Men (ii) women (iii) children.

(d) How many days each was engaged ?

(e) Total amount paid in wages, during kharif.

H. B.—Do not include in the total of wages, wages not actually paid, of the members of the family working on the fields. But calculate them.

7. Number of waterings done to the kharif fields :

(a) Any extra hands engaged.

(b) Expenses.

8. Weedings done to each field :

(a) Any extra hands engaged.

(b) Expenses.

9. Days spent in reaping :

(a) Any extra hands engaged.

(b) Expenses.

10. Days spent in threshing :

(a) Any extra hands engaged.

(b) Expenses.

11. Gross produce in kind of each crop :

(a) Quantity paid to labourers.

(b) " " " village menials.

- (c) Quantity paid to village artisans.
- (d) " " in almsgiving.
- (e) " " in batai or te sajhi.
- (f) " sold. At what price?
- (g) " of each grain, etc., given to the landlord.

(h) Prices at which sold to the landlord.

(i) Quantity of each grain given to the sowkar.

Prices at which sold to the sowkar.

(j) Quantity kept :

(i) For seed.

(ii) For home consumption.

(iii) Value in money of the above.

(iv) When consumed? Length of the period.

(k) Rent in money paid to the landlord or the Government.

(l) Money paid to the sowkar.

(m) Money paid to the co-operative society.

12. Gross produce in karbi or bhusa from each crop :

(a) Quantity paid to the labourers.

(b) " " " village artisans.

(c) " " " village menials.

(d) " " in almsgiving.

(e) " " in batai or sajhi.

(f) " sold.

Prices at which sold.

- (g) Quantity given to landlord.
Rates at which given.
- (h) Quantity given to the sowkar.
Rates at which given.
- (i) Quantity kept for the cattle.
Its value. When consumed? Length
of the period.
- (j) Estimate of crop consumed by the cattle
during the period under investigation.
(Jawar, bajra, etc.)
Its money value.
- (k) Area sown and harvested during the rabi
or kharif.

13. (a) No. of cattle used permanently in agriculture :
- (b) No. of cattle other than those used in agriculture :
 - (i) Cost of their maintenance.
 - (ii) How much dana, salt, fodder, etc., given?
 - (iii) How much secured from field, and how much purchased?
 - (c) How many men look after the cattle?
Wages of men employed for the work.
 - (d) Expenses on shoeing, etc.
 - (e) Total expenditure on cattle.

H.—Did the cultivator borrow any capital ?

- (i) How much ? (ii) At what rate ?

I.—Net income from agriculture.

J.—Wages received from agriculture through the members of the family working on it.

K.—Total income from agriculture (gross).

L.—Income from other sources :

- (i) Family members engaged in other occupations.
- (ii) Engaged in service.
- (iii) Spending part of their time outside as manual labourers.
- (iv) Any investment in trade.
- (v) How much income accruing from it ?
- (vi) Income from interest, or from grain loaned.
- (vii) Loan of the cattle, implements, etc.
- (viii) Income from carting.
- (ix) Any tax paid on this income.
- (x) Total income from these sources.

M.—1. Is there any income from milch-cattle ?

- (i) Sale of milk, ghee, cowdung, etc.
- (ii) Give the price of each of the milch-cattle ?
- (iii) What is the average milk yield of the farmer's cattle.
- (iv) What is the average period of lactation for (a) a cow (b) a buffalo.
- (v) For how many months are they dry ?

2. Any income from the sale of :

- (i) Bhusa, (ii) Karbi, etc.

3. Total income from these sources.
4. Any income from the sale of trees?
How much?
5. Any income from poultry?
How much?

N.—Net income of the family.

Total income of the family from all sources.

QUESTIONNAIRE, No. 3

Production Budget of an Artisan

1. Name.
2. Father's name.
3. Address.
4. Caste of the family.
5. Number of members in the family ;
Men, women, children. Total.
 - (a) Members living in the village.
 - (b) Members living outside and remitting money home.
 - (c) Members living outside and depending upon the home.Total.

6. Occupation.

A.—Name of the chief occupation.

B.—Name of the subsidiary occupation, if any.

(If it is agriculture, or any one of those mentioned in questionnaire No. 2, try to get the information on the same lines as indicated therein.)

INCOME.

1. Income from the chief occupation.

A.—How many kisans does he serve ?

(a) In the village.

(b) In the neighbouring villages.

(c) Total number of kisans.

B.—How many hals do your kisans have?

C.—Total number of hals.

D.—What is the customary rate of payment per hal for each fasal of rabi and kharif, in each of the villages in your jijmani? (Try to know the quantity of grain, bhusa, or any other farm produce which the cultivators generally pay to him.).

E.—What are the customary payments that he receives from his kisans on :—

(a) Marriages of (i) a boy, and (ii) a girl.

(b) Bidai of (i) a daughter; (ii) home-coming of a son's wife.

(c) Death ceremonies: (i) dasma, (ii) thehim, and (iii) barsi.

(d) Katha.

(e) Festivals: (i) Dashehra, (ii) Holi, (iii) Divali, and others.

(f) Births of (i) a boy, and (ii) a girl.

F.—Were there any marriages during the year in the families of his kisans?

(a) How many?

(b) How many of boys and how many of girls?

Ask the following questions about each and then calculate the total income from the source:—

1. What service was required of him or the members of his family?

2. For how many days ?
3. Had he to give certain things ? If yes, then try to get at the approximate value of those things. In this some of the following questions may help :—

- (i) Who supplied the materials for the making of those things ?
- (ii) What was the expense incurred in securing those materials ?
- (iii) For how many days or hours did he or some other members of the family work at the making of those things ?
- (iv) Find out the prevailing rate of wages of that class of workers.

G.—How much money did he receive ?

H.—How much of grain or of other things did he receive ?

Approximate money-value of the above.

I.—Did he or some of the members of his family dine ?

J.—How many of them, and for how many days or times ?

Calculate the money value of all these.

K.—What are the parts of the year, when he is very busy doing work for his *kisāns* ?

Calculate the number of days of the year when he is so engaged.

L.—What are the usual things that he does for them ?

M.—Who supplies the materials ?

N.—If he himself, then does he charge separately for the materials or not ?

O.—If not, then does he get them free, or has he to buy them ? If the latter, then at what rate ?

P.—What quantities of the different materials did he purchase during the year ?

Q.—How much did he incur during the year on the purchase of the materials ?

R.—What are the tools required for his trade ?

Name.	Value.	Average life.	Depreciation per year.	Value of tool.
a.				Total interest on capital invested in tools.*
b.				
etc.				
Total.				

* Interest to be calculated at the prevailing village rate.

S.—Did he purchase any tools during the year ? If yes, then their names and details as above.

T.—Total in money (representing the interest on money invested in tools, and the depreciation.)

U.—How does he busy himself when not working for the kisans ?

V.—What is the average income per day in money, when he works on the job system ?

W.—Did he go out of the village during the slack season to earn his living? If yes, then where and for how many days?

Rate of wages.

X.—Total income from this source.

If living in the city :—

A.—1. Is he employed as a job-worker?

2. Does he have his own shop?

3. If yes, how much rent does he pay?

4. How many men work at his shop?

(i) How many family members?

(ii) How many others?

5. How much per day does he pay them?

6. Total expenditure on this item.

B.—Does he market his own product or does he work for some bigger shop-keeper? If the latter, state the terms.

C.—How much capital invested?

(i) How much borrowed?

(ii) At what rate?

D.—What does he do with the waste material, e.g., small chips of wood?

If he sells them, then at what rate?

E.—How much income from this source?

F.—1. How much does he spend on transporting the raw materials?

2. Where does he buy all the materials?

(i) From the city.

(ii) Outstations.

G.—Total income.

EXPENDITURE OF THE ARTISAN FAMILY.

For getting information leading to his family expenditure, please make use of Questionnaire No. 1.

INSTRUCTIONS FOR TABULATING THE MATERIAL COLLECTED.

In the budgets of both the farmer and the artisan the period selected to show rate of consumption should be the same.

For each crop of Rabi and Kharif prepare separate statements. You may do the same for different products of an artisan as well.

Always mention the unit.

1. By the net income is meant all that the farmer or artisan gets in cash or kind for his own and his family's consumption. His total receipts should equal the sum of all (his) expenses of consumption and all his expenses of production provided that what he gets for his own labour and capital (in cash or kind) is not included in the expenses of production.
2. Prepare two such detailed statements—one for a farmer and another for an artisan. Give in each case, the period of time for which the statement is made, the number of men, women, and children (in the

family) who help the farmer or the artisan in his work with their ages, and the village, town or district where he carries on his business.

Do not use local weights or measures but give always the standard weights and measures.

Wages of himself and his family must invariably be calculated at a rate at which they would have been paid if they were employed by some one else for doing this kind of work, but these wages must not be included in the expenses of production.

$$\text{Depreciation} = \frac{V = \text{Value of the tool.}}{\frac{L = \text{Length of life of the tool.}}{P = \text{Period of time for which depreciation is to be calculated.}}}$$

Write a short introduction to every budget giving general information about the farmer, and the conditions prevailing in the village in which he is living. Only such conditions to be described which play some part in determining the course of production and consumption.

In the case of introduction to the Consumption Budgets mention the prevailing customs which affect the distribution of his income. Name those of his wants which must needs be satisfied as a matter of custom, or habit. Mention any changes in his consumption budget that have been introduced by his contact with the city people or other causes.

At the end of each budget write your suggestions for improvement.

BUDGET CHARTS.

Consumption Budget.

1.—Budget of consumption of a farmer ofdistrict for..... year from.....19 to.....19
an artisan, months

No. of men in the family..... aged..... years..... months.....
 " women " "
 " children " "

		(c) QUANTITY OR OTHER REMARKS.								
		(a) Expenses (in Re. s. p.)	(b) Percentage of total.	(i) Quantity consumed per day, week or month.			(ii) Total quantity consumed during the entire period.	(iii) Price per unit (mention the unit.)	(iv) Total value of each commodity consumed.	(v) Remarks.
				Commodity.	Quantity. (a) (b) etc.	Unit of time.				
1.	Foodgrains and pulses	...								
2.	Meat and fish	...								
3.	Milk and eggs	...								
4.	Butter, ghi and oils	...								
5.	Fruit and vegetables	...								

6.	Salt, sugar, gur, spices ...							
7.	Tobacco, pan, tea, etc. ...							
8.	Intoxicants, etc. ...							
9.	Clothes and shoes ...							
10.	Jewellery ...							
11.	Rent and repairs of houses ...							
12.	Purchase and repair of furniture and utensils ...							
13.	Fuel and light ...							
14.	Education (books, school fees, etc.) ...							
15.	Health (doctors, medicines, sanitation) ...							
16.	Litigation, fines, <i>panchayat</i> , police, income tax, etc. ...							
17.	Marriage, birth and funeral expenses ...							
18.	Other religious and charitable expenses ...							
19.	Amusements, entertainment of guests, etc. ...							
20.	Barber, washerman, sweeper, domestic servants, etc. ...							
21.	Travel, letters, messages, etc. ...							
22.	Savings and investments ...							
23.	Any other expenditure ...							
	Total ...	...	100p.c.					

V (a) Place where purchased.		
V (b) Cost of their transportation (in Rs. a. p.)		
IX (a) Quantity of land used (for each crop or purpose. Bighas—acres.	Land and rent.	
IX (b) Nature of tenancy. Its rent (per bigha or acre and total rent.) Rent per unit (in Rs. a. p.) Total rent (in Rs. a. p.)		
VII (a) and XI. List and quantity of finished products, (principal and bye products with their uses.) List. Quantity.	Finished Products.	
VII (b) and XI. Their selling prices per unit (in Rs. a. p.)		
VII (c) Their total value (in Rs. a. p.)		
VII (d) Quantity actually sold.		
VII (e) Its price (in Rs. a. p.)		
VII (f) Quantity reserved for future use.		
VII (g) Its value (in Rs. a. p.)		
VIII (a) Place where sold.		
VIII (b) Cost of marketing (in Rs. a. p.)		
XII. Industrial Risks (Gains or losses due to variations in quantity or quality of products caused by weather, theft, breakage, etc.) (in Rs. a. p.)			Risks
XIII. Commercial Risks (Gains or losses due to changes of prices of materials and of products) (in Rs. a. p.)		
XIV. Net income (For calculation of income please see page 4) (in Rs. a. p.)		
Remarks.		

Year
 Months from 18 to 18

CALCULATION OF INCOME FROM THE WORK INVESTIGATED

Receipts.	Rs. a. p.	Disbursement.	Rs. a. p.
By value of (a) principal products		To Raw materials	...
" (b) " ...		" Repair and depreciation of tools	...
" (c) " ...		" Wages paid to outsiders	...
" (d) " ...		" Interest paid " ...	...
" (e) " ...		" Rent paid " ...	...
" (f) bye-products	...	" Cost of transportation	...
" (g)	...	" Cost of marketing	...
By gains (Industrial) †	...	" Cost due to bye-products	...
By gains (Commercial) †	...	" Losses or other subtractions †	...
		" Taxes, octroi, etc.,	...
		" Miscellaneous costs	...
		" Net income (obtained by subtracting the total expenditure on all items given above from the gross-income).	...
Total (Gross-income)	...	Total	...

(32)

† Risks (gains and losses) are to be taken into consideration only when (1) there is a difference between the estimated and actual yield or value of the finished products and (2) the gross income is calculated on the basis of the estimated, not actual yield or value, otherwise these risks should only be noted on page 8, but they must not be allowed to variate the calculations on this page.

[N. B.—The two totals should always be equal.]

8. Cost of ... 9. Cost of ... 10. Cost of ... 11. Cost of ...	(a) Expenses.	(b) Percentage of total.	(c) Remarks and Con- clusions. Quan- tity, rates, etc.
12. Income as calculated above (with a detailed analysis to be given in the Remarks column)	Rs. a. p.		
Total			

N.B.— Break up this into its component parts—wages, interest, rent and profits. Income from other sources to be noted separately at the foot of this page.

The wages of labour of the artisan or farmer himself or of his family, the interest on their own capital (fixed and circulating) and the value of the time they spend in carrying or marketing are not to be included in their under item 12 above. However, these should be noted under remarks column.

(34)

**INSTRUCTIONS FOR PREPARING DIAGRAMS
WITH TWO MODEL DIAGRAMS.**

Prepare four diagrams illustrating the Production and Consumption budgets of the farmer and the artisan.

The diagrams should be rectangles all of the same height, say 10 inches, so that the same vertical distance represents the same percentage in all. Only the bases of the rectangles should differ.

The bases of the rectangles should be proportional to the total expenditure, *e.g.*, one inch for every Rs. 100. They should be horizontally divided into sections showing the expenditure on different heads. The percentages spent on each head will thus be shown by the height of each section of the rectangles. Use squared or graph paper ruled into tenths of an inch. Let the two diagrams representing expenses of production be drawn on one sheet if possible. The same expenditure should be coloured or hatched with the same colouring or hatching and the expenditure should be given in the same order from bottom to top in both charts.

All expenditure on food should be grouped together. Period of production or consumption should be given. The charts should have headings, and the vertical scale for reading percentages and the horizontal scale indicating the number of rupees represented by the base.

The expenses of production and consumption should relate to the same farmer or artisan, and to the same period of time. Make a comparative study of the expenses of production and consumption of the farmer with those of the artisan on separate sheets of paper.

SECTION II
Written Work

Cottage Industries

Bibliography: Agricultural Industries in India—S. R. Sayani.

Indian Industrial Commission Report—1916-18.

Indigenous Industries—Christopher Hay, M. A., in Mysore Economic Journal, April, 1926.

Indian Soils

Bibliography: Indian Economics—Bannerji.

Lessons in Indian Agriculture—Clouston.

Tropical Agriculture—Nichols.

Indian Economics—Chatterji.

Geography of the World—Morrison.

Basis of Agricultural Practice in the United Provinces, India—E. Martin Leake.

Indian Agriculture

(SELECT ONLY A SPECIFIC ASPECT OF THE SUBJECT.)

Bibliography: Indian Year-Book.

India in 1927-28.

The Bases of Agricultural Practice in the United Provinces, India—E. Martin Leake.

Annual Reports of the Agricultural Stations of the Different Circles in the United Provinces.

A Profit Cycle in Agriculture—Journal of the Royal Economic Society, March, 1926.

Agriculture in India—Agricola, Mysore Economic Journal, September-October, 1928.

Report, Royal Commission on Agriculture.

Agriculture in Travancore—Rusticus, Mysore Economic Journal, November, 1921.

Agriculture in Bombay—Mysore Economic Journal, June, 1928.

Agriculture in Burma—Mysore Economic Journal, February, 1921.

Principal Crops in India—Mysore Economic Journal, March, 1927.

Agriculture in the Punjab—Mysore Economic Journal, May, 1926.

Chief Sources of Motive Power in India

Bibliography: Indian Industrial Commission Report,—1916-18.

Indian Year Book.

Indian Economics—Jathar and Beri.

Possibilities of the Development of the Hydro-Electric Scheme

- Bibliography:** Indian Year-Book.
India in 1927-28.
Hydro-Electricity in Mysore—Mysore Economic Journal, Vol. IX, June, 1923.
Industrial Commission Report—1916-18
Canadian Hydro-Electric Works—Mysore Economic Journal, December, 1921.

Labour Problems in India

- Bibliography:** Labour in India—Janet Harvey Kolman.
Organised Labour—G. D. H. Cole.
Indian Economics—Jathar and Beri.
Labour Problems—Adama and Samner.
Labour in Indian Industries—Broughton.
Child Labour—Laura Scott.
Indian Labour Problems—A. R. Burnett Hurst, in Mysore Economic Journal, January, 1921.
Labour and Welfare Work in India—A. C. Chatterji, I. C. S., in Mysore Economic Journal, June, 1922.
Some Labour Problems and their Solution—Mysore Economic Journal, January, 1923.

The Population Problem in India

- Bibliography:** Indian Economics—V. G. Kale.
Indian Economics—Bannerji.
Population—Brij Narain, Lahore.
Population Problem in India—P. K. Vattal.

Leather Industry

- Bibliography:** Leather Industry—Rau.
Indian Industrial Commission Report, 1916-18.
Boots and Shoes—Mysore Economic Journal, December, 1921.
Export Duty on Hides and Skins—B.R. Rao, in Mysore Economic Journal, March, 1928.
Tanning Industry in the U. P.—Mysore Economic Journal, May, 1926.

Jute Industry

- Bibliography:** India in 1927-28.
Indian Year-Book.
Products of the British Empire—Cunningham.
Production in India—R. K. Dass.
Principles of Human Geography—Huttington and Cushing.
Review of Trade of India.
Industrial Commission Report, 1916-18.

Tea Industry

- Bibliography:** Indian Year Book.
India in 1927-28.
Review of the Trade of India.
Tropical Agriculture—Nichols.
Pioneer Economic Supplement, August
16, 1926.
Products of the British Empire—
Cunningham.
Industrial Commission Report, 1916-18.
Cattle Problem in India.

- Bibliography:** India in 1927-28.
Rural Economy of India—R. K. Mukerji.
Agricultural Industries in India—S. R.
Sayani.
Cattle Census of India.
Indian Economics—D. L. Dube.
Indian Economics—Jathar and Beri.
Improvement of the Draft Cattle in
India—Mysore Economic Journal,
November, 1928.
Fodder Question in India—S. Milligan,
in Mysore Economic Journal, April,
1923.
Indian Agriculture and Cattle Breeding
Problems—Mysore Economic Journal,
June, 1924.

**Indian Laws of Succession and Their Effect upon the
Agricultural Holdings in India**

Bibliography: Inheritance an Economic Factor—
Journal of Royal Economic Society,
September, 1928.

Indian Economics — Bannerji.

A National Rural Policy—Noel Douglas.

Irrigation in India

Bibliography: Indian Year Book.

India in 1927-28.

Lift Irrigation—Alfred Chatterton.

Indian Economics—V. G. Kale.

Irrigation in India—D. G. Harris, India
of To-day series, Oxford Press.

Irrigation in India—Mysore Economic
Journal, February, 1923.

Industrial Backwardness in India

Bibliography: Industrial Backwardness—Glyn Barlow,
M. A.

Indian Industrial and Economic Pro-
blems—V. G. Kale.

Industrial Migrations in India—R. B.
Gupta, in Indian Journal of Economics.
Vol. VIII, Part III, January, 1928.

India's Industrial Progress—Sir D. N.
Petit, in Mysore Economic Journal,
February, 1927.

Railways in India

- Bibliography:** **Inland Transportation and Communication**—B. K. Sarkar.
- Railway Finance**—S. C. Ghose, in *Indian Journal of Economics*, January, 1927.
- Report of the Railways Industries Committee**—*Mysore Economic Journal*, Vol. IX, January, 1923.
- Indian Railways and Business Methods**—*Mysore Economic Journal*, Vol. IX, June, 1923.
- Indian Railways**—K. V. Iyer, *India of To-day Series*, Oxford Press.
- Industrial Commission Report, 1916-18.**
- Branch Railway Policy**—*Mysore Economic Journal*, June, 1925.
- Indian Railway Committee Report**—*Mysore Economic Journal*, November, 1921.
- Provincialisation of Railways**—Sir Sivasvaraya, in *Mysore Economic Journal*, February, 1921.
- Railways in South India**—*Mysore Economic Journal*, March, 1923.

Indian Forests

- Bibliography:** **India's Forest wealth**—S. A. Smythies, *India of To-day Series*, Oxford Press.

A. Contribution to the Ecology of the
Upper Gangetic Plain—W. Dudgeon,
Ewing Christian College, Allahabad.

Indian Year Book.

India in 1927-28.

Indian Economics—V. G. Kale.

Production in India—R. K. Dass.

Indian Economics—Bannerji.

Indian Economics—D. L. Dube.

Timber Economy—Mysore Economic
Journal, Vol. XV, January, 1929.

Forest Products and Their Utilisation—
S. S. Aiyer, in Mysore Economic
Journal, Vol. III, 1927.

Madras Forest Panchayats—Bystanders,
in Mysore Economic Journal, January,
1926.

Poverty Problem

Bibliography: The Poverty Problem in India—C. N.
Vakil.

Has Poverty Diminished in India—A. L.
Bowley and M. H. Hogg.

Another Slum in Madras—N. G. Ranga,
in Mysore Economic Journal, Septem-
ber-October, 1928.

Preliminary Note on Pauperism in India
—P. S. Jain, in Indian Journal of
Economics, 1916.

The Poverty Problem in India—C. N. Vakil, in *Mysore Economic Journal*, September-October, 1928.

The Phenomenal Poverty of India—Dr. Arthur, R. S. Roy, in *Hindustan Review*, February, 1919.

Is India Becoming Poorer—*Mysore Economic Journal*, December, 1921.

Vagrancy—Miss A. E. M. Moinet, in the *Social Service Quarterly*, July, 1918.

Cotton Industry

Bibliography : India in 1927-28.

Indian Year Book.

Principles of Human Geography—Hut-
tington and Cushing.

Geography of Commerce—Hut-
tington and Cushing.

Review of the Trade of India, 1927-28.

A Day in a Cotton Factory—Oxford
University Press.

Cotton Industry—Pioneer Economic
Supplement, December 20, 1926.

Commercial Geography—J. Russel Smith.

British Cotton Industry—Sir C. W.
Macara, in *Mysore Economic Journal*,
December, 1922.

Cotton Industry—Christopher Hay, in
Mysore Economic Journal, September-
October, 1928.

Oil Industry

Bibliography : Oilseeds, Oils, Oilcakes and Spices—
Mysore Economic Journal, November,
1921.

Industrial Commission Report, 1916-18.

Indian Year Book.

India in 1927-28.

Paper Industry

Bibliography : Paper and Pulp Supplies from India—
William Rait, in Mysore Economic
Journal, September-October, 1921.

Pulp and Paper—Mysore Economic
Journal, January, 1922.

Industrial Commission Report, 1916-18.

India in 1927-28.

Mobility of Labour in India

Bibliography : Introduction to Economics—W. H.
Moreland.

Indian Economics—V. G. Kale.

Indian Economics—D. L. Dube.

Indian Economics—Bannerji.

Indian Economics—Jathar and Beri.

A Village in the United Provinces

Questionnaire for Village Study—E. C.
Bhatty.

Studies in Rural Economics of the Allaha-
bad District—B. G. Bhatnagar.

Questionnaire for Economic Inquiry—
Published by the Board of Economic
Inquiry, Punjab.

Steel and Iron Industry in India

- Bibliography: India's Iron and Steel Industry—Mysore
Economic Journal, November, 1924.
- Progress of Steel Industry (1924-27)—
H. L. Dey in Indian Journal of Eco-
nomics, July, 1928.
- Indian Industrial Commission Report,
1916-18.
- The Mysore Iron Works—Sir P. C. Ray,
in Mysore Economic Journal, May,
1928.
- Iron Works at Bhadravati—S. S. Iyenger,
in Mysore Economic Journal, July,
1925.
- Iron and Steel Industry in India—R.
Mather, in Mysore Economic Journal,
April, 1927.
- Coal, Iron and Steel—Mysore Economic
Journal, July, 1923.

Mineral Resources in India

- Bibliography: Production in India—R. K. Dass.
- Indian Year Book.
India in 1927-28.

India of To-day Series, Minerals in India,
Coggin Browne.

Indian Economics—Bannerji.

Industrial Commission Report—1916-18.

Indian Mineral Production in 1924.

Christopher Hay, Mysore Economic
Journal, January, 1926.

India's Mineral Resources—Mysore Eco-
nomic Journal, 1924.

Mineral Production in the C. P., 1923—
Mysore Economic Journal, January,
1925.

Dairy Farming in India

Bibliography: Agricultural Industries in India—S. R.
Sayani.

Rural Economy of India—R. K. Mukerji.
Pioneer Economic Supplement, Decem-
ber 20, 1926.

Indian Economics—Jathar and Beri.

Poultry Farming in India

Bibliography: Agricultural Industries in India—S. R.
Sayani.

Rural Economy of India—R. K. Mukerji.
Reports of the Government Poultry
Farm, U. P., Lucknow. ,

Capital

Bibliography: Evolution of Modern Capitalism—H. A.
Hobson.

Theories of Production and Distribution—Cannon.

Indian Economics—V. G. Kale.

Indian Economics—D. L. Dube.

Indian Economics—Bannerji.

Indian Economics—Jathar and Beri.

Indian Economics—Chatterji.

Introduction to Economics—W. H. Moreland.

Capital: True and False—Sir D. M. Hamilton. Mysore Economic Journal, December, 1928.

Capital Surplus in the U. S. A.—Mysore Economic Journal, July, 1925.

Sugar Industry

Bibliography: India in 1927-28.

Indian Year Book.

Tropical Agriculture—Nichols.

Reports of the Indian Sugar Committee.

Review of the Trade of India.

Geography of Commerce—Huttington and Cushing.

Industrial Commission Report 1916-18.

Review of the Sugar Trade in India during 1920.—Mysore Economic Journal, September-October, 1927.

Marketing of Agricultural Produce in India

Bibliography: Marketing of Agricultural Products—

J. E. Boyle.

Some Observations on Marketing in Northern Gujrat and Kathiawar—Gyan Chand. Indian Journal of Economics, Vol. IX, Part 3, January, 1929.

Marketing of Agricultural Produce and Government Aid—S. Kesava Iyenger. Indian Journal of Economics, Vol. IX, Part 3, January, 1929.

Marketing—C. Gopal Menon. Indian Journal of Economics, Vol. IX, Part 3, January, 1929.

Co-operative Marketing—B. B. Mukerji. Indian Journal of Economics, Vol. IX, Part 3, January, 1929.

Marketing of Agricultural Products—J. Guleri. Indian Journal of Economics, Vol. VIII, Part 4, April, 1928.

Marketing of Mangoes. "Son of the Soil." Mysore Economic Journal.

Scatteredness and Fractionalisation of Holdings in India

Bibliography: Indian Economies—Jathar and Beri.

Rural Economy of India—R. K. Mukerji.
Scatteredness and Fractionalisation of Holdings in India—R. K. Mukerji.
Indian Journal of Economics, Vol. VII, Part 4, April, 1927.

~~Indian Economics~~—V. G. Kale.

Consolidation of Agricultural Holdings in
the United Provinces—H. S. Jevons.

The Economics of Small Holdings, by
E. Thomas (Cambridge University
Press).

Land Tenure System in India

Bibliography: The Reform of Land Tenure—R. K.
Mukerji. Indian Journal of Eco-
nomics, Vol. IX, Part 3, Janua-
ry, 1929.

The System of Land Tenure in some
districts of South Behar, Gyan Chand.
Indian Journal of Economics, Vol.
IX, Part 3, January, 1929.

Land Tenure in Kamaon—D. Pant.
Indian Journal of Economics, Vol.
IX, Part 3, January, 1929.

Transfer of Occupancy rights in North
Behar—Indian Journal of Economics,
Vol. IX, Part 3, January, 1929.

Basis of Indian Economy—B. G. Bhat-
nagar.

Economics of Tenancy Law and Estate
Management—H. S. Jevons.

Infantile Mortality in India

Bibliography: Public Health and Social Service—
Mysore Economic Journal, January,
1929.

Annual Reports of the Department of
Public Health, U. P.

Child Marriage in India—Dr. Rao.
Mysore Economic Journal, Decem-
ber, 1928.

Infantile Mortality and its Prevention
—Rai Bahadur U. R. Rao. Mysore
Economic Journal, August, 1924.

Infant Mortality in India—Dr. Joseph
Benjamin. The Social Service Quar-
terly, October, 1918.

Welfare Work in India—by Mrs. Vera
Austey, B. Sc. (Economics), London,
The Social Service Quarterly, Octo-
ber, 1918.

Infant Welfare—Miss C. B. Pooviah,
B. A. The Social Service Quarterly,
January, 1923.

The Organization of Infant Welfare Work
—Dr. Jerbanoo Mistri. The Social
Service Quarterly, October, 1925.

Principles of Social Reconstruction—
Rev. R. M. Gray, M. A. The Social
Service Quarterly, April, 1919.

Health—Dr. A. Lankaster, M. D.
(London). The Social Service Quar-
terly, April, 1919.

Child Welfare Number—April, 1920.
The Social Service Quarterly.

Infant Welfare—Dr. H. V. Telsa. *The Social Service Quarterly*, April, 1924.

Maternity and Welfare Work in Dehli—Dr. K. S. Sethna. *The Social Service Quarterly*, October, 1923.

Child Welfare in London—Miss M. Hunt. *The Social Service Quarterly*, April, 1923.

Unemployment

Bibliography : **Control of Credit is a Remedy for Unemployment**—J. R. Bellerby (International Labour Office, Geneva).

The Ebb and Flow of Unemployment—by D. H. Robertson (The Daily News Ltd.)

Unemployment among Boys—by Wm. McG. Eagor and H. A. Secretan. (J. M. Dint & Sons, Ltd., London).

Unemployment and Wages Rates—by Prof. H. Clay. *The Economic Journal of the Royal Economic Society*, March, 1923.

Unemployment as an International Problem—by J. Morgan Rees (P. S. King, London).

The Menace of Unemployment—by Rt. Hon'ble J. R. Clynes, M. P. *The Social Service Quarterly*, April, 1922.

Organization of Medical Relief in the Villages

Bibliography: Medical Relief in Villages—by S. B. Mehta. The Social Service Quarterly, April, 1927.

The Control of Contagious, and Infectious Diseases—S. E. Sandilands. The Social Service Quarterly, January, 1925.

An Outline of Scheme of Rural Medical Service—Dr. D. N. Maitra. The Social Service Quarterly, January, 1924.

Co-operation in India

Bibliography: Principles of Co-operation—H. Calvert. Introduction to Co-operation—C. F. Strickland.

Co-operation, and the State—C. F. Strickland. Indian Journal of Economics, July 1920.

Agricultural Banks for India, 'Speeches and Writings—Sir William Wedderburn.'

Co-operation and Thrift in South India—John Mathai, Indian Journal of Economics, Vol. IV, Part 2, January 1924.

Theory of Co-operation—Ghosh. Indian Economics—V. G. Kale.

The Co-operative Peoples Bank—
Alphonse Desjordine.

Maclagan Committee Report.

Indian Year Book.

India in 1927-28.

The Co-operative Organization in British
India by B. G. Bhatnagar.

Indian Currency Problems

Bibliography : Indian Currency and Exchange—H. L.
Chablani.

Note on the Divergence of the Estimates
of the Volume of the Rupee Circula-
tion in 1920—S. K. Dave. Indian
Journal of Economics, April, 1924.

British India and the Gold Standard—
E. P. Wellenstien. Indian Journal
of Economics, October, 1927.

The Gold Standard *versus* the Managed
Currency—Benjamin M. Anderson,
Ph. D.

Exchange Fallacies exposed—Part I
and II—B. F. Madon.

India's Exchange Problem—B. F.
Madan.

Report of the Controller of the Currency
for the year 1927-28.

Banking System in India

- Bibliography :** An Elementary Treatise on Indian Money
Banking and Finance—Dass Gupta.
Elementary Banking—Rau.
Money and Banking—H. S. Jevons.
Money and Money Market in India—
P. A. Wadia and Joshi.
Indigenous Banking in Bengal. Indian
Journal of Economics, January, 1927.
Indian Banking Policy—Rao. Mysore
Economic Journal, February, 1923.
Banking in India. Mysore Economic
Journal, July, 1927.

Indian Foreign Trade

- Bibliography :** India in 1927-28
Indian Year Book.
Indian Economics—V. G. Kale.
Indian Economics—D. L. Dube.
Indian Economics—Jathar and Beri.
Industrial Commission Report—1916-18.
India's Foreign Trade—Mysore Econo-
mic Journal, December, 1922.
Trade of India—Mysore Economic
Journal, October, 1927.
Review of the Trade of India, 1927-
1928.

Causes of the Rise in Prices in India

- Bibliography:** Eighty Years of Punjab Food Prices—
1841-1920—Brij Narain. Indian Journal
of Economics, April, 1926.
Note on Prices and Cost of Living—
Indian Journal of Economics, Octo-
ber, 1926.
Report on the Inquiry into the Rise of
Prices in India—K. L. Datta, M. A.
Price Stability—Mysore Economic Jour-
nal, March, 1926.

**Description of a weekly village market, and its place in
the village economy**

- Bibliography:** Indian Economics—V. G. Kale.
A visit to a weekly village market
necessary.

Wages

- Bibliography:** Some Problems of Wages and their
Regulation in Great Britain since
1928,—A. G. B. Fisher.
Wage Policy and Unemployment—Prof.
A. C. Pigon. (The Royal Economic
Society Journal,—September, 1927)
Wages and the State by E. M. Burus.
Unemployment and Wage Rates—Prof.
N. Clay. The Royal Economic Society
Journal, March, 1928.

The Meaning of Wages—Lynda Grier.
The Royal Economic Society Journal,
December, 1925.

What is a Wage?—Major R. H.
Barker, M. P. The Social Service
Quarterly, April, 1922.

Minimum Wages for Woman—F. W.
Tausig. Quarterly Journal of Eco-
nomics (Cambridge, Mass).

**Distribution of Agricultural Produce on the Threshing
floor**

Bibliography: Some South Indian Villages—Dr.
Slater.

Rural Economy in the Bombay Deccan
—Keatings.

The Economic Life of a Bengal District
—J. C. Jack.

An Economic Survey of Gaggar Bhana,
a village in the Amritsar district
in the Punjab—Messrs. S. Gian
Singh, B. Sc., and C. M. King, C. S. I.,
C. I. E., I. C. S.

Business Opportunities in India

Bibliography: Indian Economics—D. L. Dube.
Indian Economics—P. N. Bannerji.
Indian Economics—V. G. Kale.
Indian Year Book.
Review of Trade of India.

Annual Reports of the U. P. Industries
Department.

The Mysore Economic Journal, Janu-
ary, 1922.

Ricardian Theory of Rent and its Application to India.

Bibliography: Indian Economics—D. L. Dube.

Introduction to Economics—W. H.
Moreland.

Indian Economics—V. G. Kale.

Indian Economics—Jathar and Beri.

Indian Economics—Bannerji.

Cost of Living

Bibliography: Report of an inquiry into working class
Budgets in Bombay—Findlay Shiras.

Cost of Living—N. D. Dearle. (Allen
and Co., London).

Note on Prices and Cost of Living.
Indian Journal of Economics, October,
1922.

Cost of Living in Madras in November.
Mysore Economic Journal, January,
1922.

The Housing Problem

Bibliography: The housing of Indian Unskilled Work-
men—W. H. Wiser. The Social

Service Quarterly, January, 1923.

Housing—A. E. Merans, L. S. I.,
F. S. A., F. R. S. I. The Social Ser-
vice Quarterly, April, 1919.

Housing Problem in Bombay—The
Hon'ble Justice T. V. Sheshgiri Aiyer.
The Social Service Quarterly, October,
1920.

**The Sources of Revenue of the Imperial and Provincial
Governments**

Bibliography: Indian Year Book.

Indian Economics—V. G. Kale.

Indian Economics—Chatterji.

Indian Economics—D. L. Dube.

Indian Economics—Bannerji.

QUESTIONNAIRE FOR VILLAGE STUDY.

General

1. Name of the village.
2. Pargana in which situated.
3. Tahsil " " "
4. District " " "
5. Police station.
6. Post office.
7. Railway station.
8. School, under what auspices ?
9. Nearest Hospital.

Physical Description of the Village

1. Area.
2. Nearness to the river.
3. Roads—Kachcha or Pakka.
4. Hills or mountains.
5. Streams (a) Perennial.
(b) Seasonal.
6. Forest.
7. No. and size of gardens.
8. No. of trees.
 - (a) Fruit-bearing.
 - (b) Non-fruit-bearing.
9. Tanks—or depressions for storing water.
10. Length of time for which the water lasts.

11. No. of wells—

- (a) Kacha.
- (b) Pakka.
- (c) No. of wells used for drinking purposes.
- (d) No. of wells used for irrigation purposes.

Soil

1. Give in detail the description of the soil.
2. How many kinds of soil are to be found in the village.
Classify them according to the following :—
(i) Alluvial (ii) Sandy loam (iii) Sandy
(iv) (v)
3. What is the condition of the soil near the village ?
4. Is it more or less productive than the soil lying at a distance of a quarter-mile from the village? Why ?
5. Do rents vary in the village according to the fertility of the different fields?

Village Officials

1. No. of Lambardars.
2. No. of Mukhias.
3. No. of Patwaris.
4. No. of Chowkidars.
5. What are the functions of the village officials?
6. Is there a Panchayat ?
7. What are the duties of the Panchayat ?

Population

1. Statistics of the last census.
2. Distribution by sex :—
 - (a) Males.
 - (b) Females.
3. Distribution by caste :—

(a)	(e)
(b)	(f)
(c)	(g)
(d)	(h)
4. Distribution by religion :—

(a)	(c)
(b)	(d)
5. Mortality from Epidemics :—

(Plague, cholera, influenza, small-pox, malarial fever or any other serious epidemics.)
6. Is mortality greater (a) between certain ages, or (b) in one sex as compared with the other?
7. Marriage :—
 - (a) Age of marriage for boys?
 - (b) " " " for girls?

Are there any marked variations from these averages?
8. The No. of (a) persons, (b) families, dependent upon agriculture for their livelihood.
 - (a) (i) Wholly dependent upon agriculture.
 - (ii) Partly " " "

- (b) (i) Zamindars (non-cultivating owners).
 - (ii) Landowners who cultivate themselves.
 - (iii) Tenants.
 - (iv) Labourers.
 - (v) Any other class of people living in the village.
9. The No. of persons or families whose chief means of livelihood is cottage industry.
10. No. of beggars? Are they living only on charity?
11. No. of (a) artisans (b) families of artisans, living in the village.
12. No. of (a) field-labourers.
(b) families represented in (a).
13. No. of persons or families whose principal means of livelihood is agriculture, but who depend on other industries as well (e.g., carpet-weaving in Mirzapore), or on grass or wood-selling, *chhakra* hire, service of the zamindar, etc., to supplement their income.
14. No. of persons or families whose principal occupation is other than agriculture, but who pursue agriculture as a subsidiary calling.
15. No. of persons who live outside the village for a large part of the year :—
- (a) Students.
 - (b) Military servants.
 - (c) Teachers.

- (d) Pleaders.
 - (e) Civil servants.
 - (f) Persons who work in cities as menial servants.
 - (g) Pensioners.
16. No. of shop-keepers or traders.
 17. What does the cultivator do when he has no work in connection with the farm ?
 18. What does the cultivator do in the slack season ?
 - (a) When agricultural conditions are normal.
 - (b) When they are abnormal.
 - (c) Does he follow any subsidiary industry ?

Beggars and Fakirs

1. How many beggars live in the village ?
2. How much, do you estimate, is given to them annually in the village ? Is the number of beggars in the village increasing or decreasing ?

Artisans

1. How are artisans paid ?
 - (a) In cash or (b) In kind ?
2. Are they paid daily, weekly, monthly, half-yearly, or annually ?
3. What is the general rate at which they are paid ?

4. Are they entitled to certain customary benefits at social or religious ceremonies?
5. Are there any other special rights or privileges enjoyed by the artisans in the village? Mention them.

Labourers

1. The No. of general and agricultural labourers (*mazdur*).
2. How are they paid? Cash or kind?
3. Rate at which paid?
4. Are they paid daily, monthly, six-monthly, or annually?
5. Are they paid anything at marriage or other social or religious ceremonies?
6. What is the economic position of a field-labourer in the village organization? Describe his rights and privileges in the village.
7. Is there a tendency among the villagers to emigrate?
8. What class or classes of people migrate more? Of what age generally?
9. Has there been any emigration in the last ten years? Has it been temporary or permanent?

Houses and Housing Conditions

1. No. of houses :—
 - (i) Pukka.
 - (ii) Kachcha.

2. Are the houses in the village very closely built together?
3. Are they well ventilated?
4. How far apart are the houses or group of houses situated?
5. What is the sanitary condition of the village?
6. Where is the manure generally stored, near the houses or at a distance from them?
7. Are there any houses recently built? What is the tendency in regard to ventilation?

Land

1. Total area of land belonging to the village :—
 - (a) Cultivated.
 - (b) Uncultivated.
 - (c) Cultivable.
 - (d) Non-cultivable.
 - (e) Irrigable.
 - (f) Non-irrigable.
 - (g) Ek-fasali.
 - (h) Do-fasali.
2. What is the condition of holdings :—
 - (a) Are they consolidated?
 - (b) Are they scattered?
3. What is the average size of a field?

4. What is the number of :—
 - (i) Occupancy tenants ?
 - (ii) Non-occupancy tenants, owners ?
 - (iii) Sub-tenants under tenants at-will :—
 - (a) Who own no land at all ?
 - (b) Who own no land in the village ?

Irrigation

1. Is irrigation carried on from wells ?
2. What is the system followed for working the wells ?
3. Are they used throughout the year or only for a short time for particular crops ? Name such crops.
4. How long does it take to irrigate a field which is one-bigha in size by the method of irrigation generally prevalent in the village ?
5. Is there any canal ?
6. How many times during the year is water given from the canal ? Is it given for both the crops *rabi* and *kharif* or only for one ?
7. Are there any streams ?
8. Are these streams used for irrigating fields ?

Rent

1. Do the cultivators pay rent ?
2. What is the average rate ?
3. Is it fixed or does it vary with the different crops ?

4. Are the rents high or low, considering the net income of the cultivators ?
5. Do the zamindars encourage improvements on the soil ?
6. Do the cultivators use any system of rotation of crops ?
7. Do they use manures ?
8. Where do they get the manures ?
9. (a) Are goats generally used for manuring the fields ?
(b) What is the general rate of payment for such manuring ?
10. Do the cultivators buy manure ?

Crops

1. What crops are generally grown ?
2. Divide them into Kharif and Rabi.

Note—Kharif crops :—(Rice, Jwara, Bajra, Maize, Til, Sugarcane, Pepper, Cotton, Indigo, Fruits, Vegetables.)

Rabi crops :—(Wheat, Barley, Grams, Peas, Tobacco, Fruits, Vegetables, Fodder, etc.)

3. How many ploughings are generally given to each of the chief crops, and when are they given ? Does this vary on different classes of soil ?
4. Is weeding regularly done ? If so, for what crops ?

5. Do farmers use improved implements? If not, why not? If so, from where do they buy them?
6. Is there any agricultural demonstration farm in the vicinity of the village under study? If so, do the villagers purchase seeds from there?
7. What is the average field of the chief crops in the village?
8. Is there any cultivator who cultivates the soil on a commercial basis?

Indebtedness

1. What are the chief objects for which loans are taken?
 - (a) Personal necessities such as food and clothing.
 - (b) Ceremonies such as marriages and funerals, etc.
 - (c) Litigation.
 - (d) Professional expenditure :—
 - (i) Fixed items :
Land revenue, rent, etc.
 - (ii) Advancement, such as land improvements, cattle, new implements, etc.
2. Is *taccavi* popular among the cultivators?
3. How many money-lenders are in the village?
4. What is the general rate of interest they charge? Does it vary according to the

urgency of the need of the borrowing cultivator, or is the same rate charged from every borrower?

5. Do the cultivators and others residing in the village consider the money-lender their friend?
6. Is there a co-operative society in the village? How many of the villagers are members?
7. What do they think of these societies?

Market and transportation

1. How far is the nearest market from the village?
2. Is produce carried to market by:—
 - (i) Carts?
 - (ii) Railways?
 - (iii) Pack animals, such as donkeys, camels, bullocks, etc.?
3. Do the *kunjras* (middlemen) come to the village to purchase the produce? Or do the villagers take it to the market themselves?
4. How much per load do they pay to the cartmen or to the owners of donkeys or bullocks?

Suggestions

1. Have you any concrete suggestions for the improvement of conditions in the village investigated?

MODEL ESSAYS**(1) Economic Survey of Bannahia Mirgunj**

At the present time the lowest unit of administration in India is the village. The village about which I am going to write, namely, Bannahia Mirgunj, is situated in the pargana of Sivauli, tehsil Bareilly. There is a police station as well as a post office in the village. The railway station Nagaria Sadat, E. I. R., is about a mile from the village. There are two schools, one a Primary and the other Vernacular Middle. Both the schools are run under the auspices of the District Board. The nearest hospital from the village is at Milak, a place about seven or eight miles from the village.

The area of the village is six hundred and five acres. Close to the village there are three rivers. The river Pilakhar lies at a distance of three miles, the river Siddia at four miles, and Ramganga at six miles. There is a pukka road to the north of the village running from Bareilly to Moradabad. The road is under the P. W. D. There is a kachcha road also to the west of the village running from Mirgunj to Sivauli which is under the supervision of the District Board. There are no hills or mountains anywhere near the village. There are three streams flowing close by the village. Two of them, namely, Pilakhar and Ramganga, are perennial and the other one, named Siddia, is seasonal. There are no forests near the village. The number of gardens in the village is ten. Total area under the gardens is 15 acres. There are seven hundred and forty trees in the

village ; of them 532 are fruit-bearing and 208 non-fruit-bearing. There are nine tanks in the village. In about three of them water lasts throughout the year, and in the rest just during the rainy and a part of the winter season. The number of kachcha wells is 21, and the number of pukka wells is eight. Thirteen wells are used for drinking purposes, of which five are kachcha, and the rest pukka. Sixteen wells are used for purposes of irrigation.

The kinds of soil in the village are Gohani, Domat Awwal, Domat Doyum and Matiyar Awwal. The produce in the soil near the village is of an average degree. There is not much difference between the soil near the village and that at a distance. Whatever little difference is visible, is due to the nightsoil being available as manure in the fields surrounding the village.

The rents of the land differ according to the fertility of the soil.

The Officials of the village are the Darbardan, the Mukhia, the Patwari and the Chowkidar. There are two Darbardans, one Mukhia, one Patwari and one Chowkidar in the village. The work of the Darbardan is to collect the revenue from the petty landholders and to maintain order in the village. Mukhia is the village Headman. The work of the Patwari is to keep the records of the village fields and its owners giving every necessary detail of the rent payable by each cultivator and zemindar. Khasra and Khatauni are the names of some of his important registers. The work of the Chowkidar is to guard the village at night

with an additional duty of reporting crimes and observing the movements of suspicious characters.

There is no Panchayat in the village.

The population of the village at the last census was between 900 and 1000. The number of males in the village is about 547 and that of females about 441. The principal castes in the village are Sheikhs, Barhais, Julábás, Lohárs, Brahmans and Kurmis. Exact number of each caste could not be ascertained, but the Kurmis are the largest in number. There are about 679 Hindus and about 200 Mohammedans in the village.

Last year the village was affected by plague in the months of February and March, 1928, which took away nearly 50 lives. Influenza did not visit the place this year. Malaria was rampant during the last rainy weather but is not known to have taken away any life. Small-pox among children was only on a small scale. Exact number of deaths from this epidemic could not be ascertained.

The age of marriage for boys in the village varies according to the caste. The age of marriage among Sheikhs is about 23 or 25, among Barhais about 14 or 15, among Brahmans 16 or 18, and among Kurmis 5 and 6 years. The age of marriage for girls among Sheikhs is about 19 or 20, among Barhais 11 or 12, among Brahmans 13 or 14, among Kurmis 5 or 6 and sometimes 10 or 11. It might be noted that among the Kurmis it so happens that sometimes the bride is older than the bridegroom. The number of persons in the village

wholly or partly dependent upon agriculture is 850. The number of those wholly dependent upon agriculture is 675 ; and of those depending partly is 175. About 100 persons in the village live upon cottage industries. There are no beggars in the village.

The number of artisans is 12, of field labourers 100. The number of families whose members work on the fields is 12. There are twelve men in the service of the zemindar. They only remain in service during the slack season. There are four persons who remain out of the village for a large part of the year. Three are in railway service and one is serving in the Allied Wood Crafts at Chitterbuckganj. There are sixteen shopkeepers and seven traders in the village.

. : When any cultivator of the village has no work in connection with the farm, he sits idle wasting his time in *shauq* and *tamasha*.

The artisans of the village are paid in cash at other times during the year except the harvest season when they are paid in kind.

There are 100 mazdurs in the village. They are paid daily in cash, their wages being 3 annas to 6 annas a day. They get as gift a *topi*, a *kurta* and a *jháran* on the occasion of marriages besides usual dinners.

The villagers generally do not emigrate.

There are 11 *pukka* and 177 *kuchcha* houses in the village. The houses are very closely built together. They have no idea of ventilation. Even the *pukka*

houses are at times suffocating. The usual distance between the groups of houses is the width of the lane or street ranging from 3 to 5 yards. The condition of the village is most insanitary. Manure is generally stored in the open near the chaupal where cattle are kept. A few members of the co-operative society however store their manure in pits near their fields. There are no newly-built houses in the village.

The area of cultivated land in the village is 538 acres, of uncultivated 67 acres, of cultivable 580 acres, of non-cultivable 540 acres. There is no Ek-Fasali land in the village, and the area of Do-Fasali is 538 acres.

The holdings of the villagers are scattered. The average size of a field is 1 acre. The number of occupancy and non-occupancy tenants in the village is 134, that of sub-tenants 28.

In the village irrigation is partly carried on by wells. Indigenous methods are followed in working the wells. The crops irrigated by wells are wheat, barley, gram and arhar. A field of one bigha in size takes full two days by the method of irrigation generally prevalent in the village. They generally irrigate their fields for ten hours a day. The system of irrigation used is "mot."

There is no canal in the village. The cultivators pay rent for their fields. The average rate of rent for occupancy tenants is Rs. 1/4 per Kham bigha and that of Khudkasht is Rs. 3/- per Kham bigha. The

rent is fixed and does not vary according to the crops. The cultivator does not consider the rate of rent to be high. He is satisfied with the rate of rent charged.

The zemindar, on his part, cares little for the improvement of the soil. The cultivators of the village use the system of rotation of crops. They also use manures. Their *Kura Karkat* (refuse and sweepings) and part of the cow-dung (which cannot be used for fuel during rains) is used as manure. No goats are used for manuring the fields. They do not generally buy manures.

The Kharif crops of the village are sugarcane, maize, juar, paddy; and the Rabi crops are wheat, barley, gram, masur, arhar, alsi and sarson. Weeding is regularly done to wheat, alsi, sarson and gram crops. Those farmers who are members of a co-operative society use Meston ploughs. They purchase them from some English firm through the Inspector, Co-operative Societies. There is no demonstration farm in the village. No cultivator in the village cultivates the soil on a commercial basis. The chief objects for which loans are generally taken are marriages, litigation, purchase of bullocks and seed, payment of rent and in a few cases for purposes of consumption.

Taccavi has to be taken during times of famine, but they do not feel happy about taking the *taccavi* loan. The number of ordinary money-lenders in the village is 16. They are generally those

whose chief occupation is shop-keeping. They generally charge 2 pice per rupee per month which works out $37\frac{1}{2}\%$ per annum. In cases which they consider more reliable they reduce it to 25% (*Sal Sawaya* as they call it). The same rate of interest is not charged from every borrower. The borrowers who need money urgently have generally to acknowledge receipt of something more than what they borrow actually. They consider the money-lender to be their friend at the time of borrowing but at the time of repayment he is their greatest enemy. There is a co-operative society in the village. Nineteen villagers are members of the society. The society is popular among the members.

There are four market days for this village, *viz.*, Monday, Thursday, Friday and Saturday. The produce of the village is carried to the markets at Bareilly and Milak by railway and carts. Middlemen or *kunjras* come during the *fasal* for purchase of the produce. There are very few villagers who take their produce to the market themselves. The bullock carts are generally their own but if they have to engage on hire, they have to pay a varying rate. Payment may be in cash or kind.

I have to make two important suggestions for the improvement of conditions in the village investigated. The first is the adoption of means for increasing the productive capacity of the average cultivator and the second of inculcating in the villager the habit of keeping himself and his surroundings clean.

For increasing his productive capacity, the cultivator must take resort to improved methods of cultivation and irrigation. As things at present stand he generally follows the line adopted by his forefathers ages ago. Under the heading of cultivation the points which need a mention are seed, manure and the implements used. The cultivators should try to obtain the best variety of seed in order to get a better yield. The manure at present given to the fields is not only poor in quality but insufficient in quantity. They should no more use cow-dung as fuel. All the cow-dung available must be applied to fields in the form of manure. The improved types of implements which can be of best use to the cultivator are Meston ploughs and Lever Harrows.

At present they seldom irrigate their fields. Few of them that think of irrigation only dig kachcha wells and irrigate their fields with a small earthen pot which does not hold more than ten seers of water at a time. The best means of irrigation, cheap and more profitable is the use of persian wheels. They should jointly dig pucca wells all even distance from their fields and erect persian wheels (*rahats* as they call them).

At present the villager has absolutely no idea of what cleanliness is. He is dirty, his children are dirty, his clothes are dirty, his house is dirty, his cattle are no better, and everything connected with him is unclean and consequently unhealthy.

My suggestions for improving the sanitation of the village are (1) that family pits be constructed for

storing manure, and for use as latrines, (ii) that they must wash their clothes once a week, (iii) they must cover their food and protect them from flies, (iv) they must not use water of tanks for drinking purposes, (v) they must have windows in their houses, (vi) they must not keep cattle quite close to their living place. All the rubbish and cow-dung must be kept covered in pits near their fields (to be used as manures).

Among other reforms in the life of the village may be mentioned the prevention of waste and extravagance on the occasion of marriages and festivals, and profitable utilisation of the time when there is less work on the fields.

Crop Production in India

A survey of the principal crops in India shows that India leads the world in the production of certain commodities, and makes herself sufficient in respect of its food-supply and large variety of raw materials. The production of the food crops is very large, which account for 81·2% of the total sown area, while non-food crops account for 18·8%. The general tendency nowadays is to increase the area under non-food crops, which is due to the high world-prices. This tendency is to be found only in those tracts where commercial farming is appreciated. In the backward tracts the farmers produce just enough to meet their barest necessities.

Rice.—Rice is the leading crop of India, as it is the staple food of most of the people of the

country. It occupies nearly 35% of the total cultivated area. Total area under this crop in 1925-26 was 83·7 million acres, yielding 612·60 million maunds. India is the largest exporter of rice in the world, though her average export has never exceeded 7% of her total production. Rice is generally grown in those tracts where the rainfall is heavy, and the climate is hot and moist. It would be interesting to note the area under cultivation in different provinces :—

Bengal	21·13	million	acres.
Bihar & Orissa	14·28	"	"
Burma	12·21	"	"
Madras	11·32	"	"
United Provinces	7·18	"	"
Central Provinces	5·08	"	"
Assam	4·58	"	"
Bombay	3·87	"	"

The above figures will show that rice is chiefly grown in these provinces because here the physical conditions are very favourable for its growth. Rice is the staple crop of the eastern provinces. Burma produces the largest quantity of rice, and because of its being thinly populated it has got a lot to spare. Burma rice makes good deficiencies in other parts of the country. India exported 24·8 lakhs tons of rice worth 39·39 crores of rupees in 1925-26. The Agricultural department has thus far paid no attention to this crop, and consequently no great progress has been made. The methods of cultivation are primitive and antique.

Wheat.—Wheat is the next important crop grown in India. It stands next to rice in the matter of acreage. It occupies 10% of the total cultivated area. Wheat is a rabi crop, and is sown from October to December, and harvested from March to May, the time of sowing and reaping varying with the variations in the climatic conditions in the different parts of the country. It is the staple food of the people in the Punjab, United Provinces, and N.-W. F. Provinces.

The chief wheat-producing provinces in India are the following:—

Punjab	10·68	million	acres.
United Provinces	6·99	„	„
Central „			
& Berar	3·63	„	„
Central India States	1·85	„	„
Bombay	1·74	„	„
Bihar and Orissa	1·16	„	„

As regards production India occupies a third place in the world. Since the war the area under wheat has increased, and some people are of the opinion that India would soon approach the second position. The export of wheat fluctuates according to the nature of seasons. In normal years about 10% is exported from India. In 1924-25 11·11 lakhs tons of wheat were exported valued at Rs. 17·19 crores. In 1926-27, the figures were 17·76 lakhs tons and Rs. 27·1 crores. The quality of wheat has greatly been improved. Formerly it had a reputation of being dirty and worthless.

improvements in the means of irrigation has given a considerable impetus to this crop. The activities of the Agricultural department have helped a good deal in improving the varieties of wheat sown in India. The introduction of Pusa 12 has improved the quality of the grain considerably. As compared to other countries the average yield of wheat in India is very low. Average yield per acre in England is very high, whereas the aggregate production in comparison to hers is very low.

Barley.—Barley is chiefly grown in the United Provinces of Agra & Oudh. Total area under this crop in 1925-26 was 4.11 million acres. A very small quantity of barley is exported to foreign countries. Value of barley exported in 1926-27, was 62 lakhs of rupees.

Jawar and Bajra.—The main varieties of Indian millets are Jawar and Bajra. They constitute an important part of the staple food of the masses of Madras, Bombay and the adjoining districts of Hyderabad, and some parts of the United Provinces.

Total area under Bajra and Jawar in 1925-26 was 29.59 million acres and 12.25 million acres respectively. Jawar is grown in Hyderabad, Bombay, Madras, Punjab, United Provinces and Central Provinces.

Pulses.—Pulses are largely grown in India and form an important part of the Indian dietary. They are chiefly grown in United Provinces, Punjab, Bombay,

Central Provinces and Bengal. Gram occupies the topmost place among pulses in India. In 1925-26, about 14·30 million acres were under it. In the United Provinces 6·64 million acres were sown. There is very great internal demand for pulses, hence very little is exported to other countries.

There are other food crops grown which include fruits, vegetables and spices. Total area under these crops was 7·75 million acres in 1925-26. Chief fruits grown in India are mangoes, oranges, apples, etc., and vegetables such as potatoes, cabbages, coulflovers, brinjals, onions, turnips, tomatoes, reddishes, etc. Fruit-gardening has not received much attention from the people. Indifference to this industry is attributable to the ignorance of the people in regard to the methods of fruit-growing, and also to the lack of demand in India, because of the poverty of the masses. Spices are chiefly grown in the South. Certain varieties of spices are grown all over India.

Sugar.—India was probably the original home of sugarcane, and the area under it was probably the largest of any other country in the world but the average yield per acre is very low. India does not even produce enough for internal use. In 1926-27 India imported 9·24 lakh tons of sugar valued at over 19·16 crores of rupees.

The chief cane-growing provinces of India are:—

United Provinces	1·43	million acres.
Punjab	·39	„ „

Bihar & Orissa	·29	million acres.
Madras	·11	„ „
Bombay	·083	„ „
Assam	·041	„ „

Government have taken up the question and sugar-cane has since 1901-02 been subjected to a systematic study with a view to improve its quality and the supply of canes, and recently a cane-breeding station has been started at Coimbatore in Madras. The Government of India appointed a Sugar Committee in 1919 to investigate the possibility of organizing and developing the sugar industry in India. The committee published their report in 1921, which recommends the organization of the sugar industry on the Java model. It was suggested to establish an Imperial Research Institute, with three divisions, Agricultural, Chemical, and Engineering to control the work of the Research Institutes in the provinces. A Sugar Board was also to be appointed. The Board appointed would guide the Research Institute, and advise Government on all matters regarding the sugar industry. It should be noted that the masses in India use Molasses or Gur, and, therefore, special attention has to be paid to Gur-making industry. Some improvement has been made along the line of cane-crushing. Iron cane-crushers have replaced the wooden cane-crushers.

Coffee.—At one time coffee industry in India was flourishing, but after 1862 its decline started. The cheaper Brazilian coffee has come into competition with the Indian coffee. This competition has affected

Indian industry adversely. In 1925-26 the area under coffee in the whole of India was 148·200 acres. It is chiefly grown in the Mysore State, Madras, Coorg, Cochin, Travancore and to a smaller extent in Burma and Bombay. Total quantity exported in 1925-26 was 150·000 cwt., valued at 1·32 crores of rupees.

Tea.—The only competitor of India in the production of tea is China. India had almost a monopoly of tea production before China tea came into prominence. Tea industry is prosperous and shows signs of future progress. Total area under tea in 1925-26 in British India was 728·857 acres and total yield was 363·5 millions of lbs. About $\frac{3}{4}$ th of her export of tea goes to United Kingdom. Tea is a very important commodity of export in India. In 1926-27, 349·26 millions of lbs. were exported. Consumption of tea in India is rapidly growing. Tea Association which has been formed for the promotion of this industry has proved very useful.

Oil Seeds.—India produces a large variety of oil seeds such as linseed, sesamum, rape and mustard, groundnut, cocoanut, castor, mowa, cotton-seed, niger, coriander, etc. Total area under these is 15·15 million acres in British India. Oil Seeds are exported in a large quantity. In 1926-27, 838·000 tons valued at 1·908 crores of rupees were exported. On the whole, oil seeds form a very large portion of India's export.

Fibres.—These form an important part of the crop sown in India. Nearly 8·5% of the total area sown is under these crops.

Cotton.— Cotton is the foremost fibre crop in India. In the production of cotton India occupies a second place, first being the U.S.A. Some people are of the opinion that within the next decade or two India will produce more cotton than the U.S.A. If this comes true then India will lead the world. Total area under cultivation in British India, in 1925-26, was 18·18 million acres, and if the area under this crop in the Indian States was also included, then the total area sown would be 28·49 millions. The yield of the crop in the same year amounted to 6·50 million bales of 400 lbs. each. Nearly 50% of the total produce is exported to other countries. From the time of the war the production of cotton has steadily increased, and with it the exports as well. Total quantity exported in 1925-26 was 7·4 lakhs of tons valued at 95 crores of rupees.

The principal cotton-growing provinces in India being :—

	1925-26.		
Bombay	8·11	million	acres.
Central Provinces & Berar	5·48	"	"
Hyderabad	3·78	"	"
Punjab	3·05	"	"
United provinces	1·	"	"
Madras	2·92	"	"

The fibre of the Indian cotton is inferior to that of the American and Egyptian. England is not the chief importer of this commodity. Indian cotton is chiefly exported to Japan and the continent. The Government

is trying to improve the quality of the cotton produce, by introducing improved varieties from other countries. "The Government appointed the Indian Cotton Committee in September, 1917, to examine the possibilities of increasing the supply of long staple cotton in India, to suggest improvements in the existing methods of sowing and marketing, to make recommendations in regard to the prevention of adulteration, damping and mixing, etc." Since the time of the submission of the report of the Indian Cotton Committee many improvements have taken place, and it is expected that soon India will be able to produce the variety of fibre that would meet the demand of Lancashire cotton.

Jute.—Jute is also one of the most important fibres. India enjoys a monopoly in the production of jute. It is generally cultivated in the provinces of Bengal, Assam, and the Indian States of Cooch Behar & Orissa. The soil of these tracts is eminently suited to the growth of this crop. It needs an alluvial soil and plenty of rainfall. This crop is very depleting and the rivers every year bring fine alluvium and deposit on the soil. This recuperates the soil every year. In 1925-26 total area under this crop was 3,115,000 acres, Bengal alone contributing 83% of the total sown area. In 1926-27, 70·8 lakh tons of raw jute valued at Rs. 26·78 crores, and jute manufactures valued at Rs. 26·78 crores were exported. Germany imports the largest quantity and United Kingdom comes the next. The jute industry has shown remarkable progress. The jute manufactures have increased considerably.

Other crops grown are indigo, opium and tobacco. At one time indigo constituted one of the most important products of India. But this industry has suffered because of the advent of the chemical dyes into market. The area under the cultivation of indigo has steadily decreased. In 1925-26, 2,000 cwts. of indigo valued at 4.24 lakhs of rupees was exported. An Indigo Research Chemist has been appointed by the Government of India with a view to assist this industry. The chief customers of the Indian indigo are China and Japan.

Opium.—There has been a tremendous decline in this industry, especially since the time of signing an agreement with China in 1907. Area under the cultivation of opium was 83,030 acres in 1925-26.

Tobacco.—There are three chief centres of the tobacco industry, i.e., Eastern and Northern Bengal, Southern India and Lower Burma. In 1925-26, the total area under tobacco was 1,964,862 acres. 38 million lbs. of tobacco valued at 111.40 lakhs of rupees were exported. Amount of manufactured tobacco is far in excess of the exports which is probably due to an increased use of cigarettes. Experiments are being made at the Research Institute at Pusa to improve the quality of the Indian tobacco.

Fodder Crops.—The area under the fodder crops, of late increased because of the special attention that has been given to improving the state of the Indian cattle. In 1925-26, 8.93 millions of acres were under the fodder crops. The Agricultural Department is trying

to introduce better varieties and the cultivation of beesum at Pusa may be regarded as a great success.

The figures given below will show the present position of crop production in India.

	1901—2 Acres (millions.)	Percentage of net area by profes- sional survey.	1925—28 Acres (millions.)	Percentage of net area by profes- sional survey.
Net area by professional survey	550·31	...	667·61	...
Area under forest	66·36	12·0	86·93	13·2
Not available for cultivation	135·35	24·6	150·19	22·5
Cultivable waste other than fallow	107·52	19·5	151·87	22·7
Fallow land	42·14	7·5	49·30	7·5
Net area sown with crops	199·71	36·1	225·84	33·8
Total area (includes area sown more than once)	220·35	...	256·99	...
Area irrigated	32·61	...	47·56	...

	Area under food grains 1901—2	Percentage of total area sown.	1925—28 Acres (millions.)	Percentage of total area sown.
Rice	70·06	...	80·17	...
Wheat	18·60	...	23·97	...
Barley	6·21	...	6·61	...
Jawar	21·81	...	20·61	...
Bajra	13·19	...	12·26	...

	Area under food grains. 1901-2	Percentage of total sown area.	1925-26 Acres (millions.)	Percentage of totalsown area.
Ragi ...	8'75	...	8'88	...
Maize ...	6'19	...	5'50	...
Gram ...	9'78	...	14'82	...
Other grains and pulses...	27'85	...	28'71	...
Total food grains ...	176'99	80'0	196'06	76'3
Area under other food crops (including vegetables, fruits, spices, etc.) ...	6'18	...	7'75	...
Area under Sugar ...	2'59	...	2'80	...
Coffee ...	'12	...	'09	...
Tea ...	'44	...	'72	...
Miscellaneous food crops ...	1'84	...	1'21	...
Total food crops ...	188'34	85'4	208'66	69'2
Area under oilseeds				
Linseed ...	2'26	...	2'52	...
Sesamum (oil) ...	5'75	...	5'40	...
Rape and mustard ...	2'87	...	18'08	...
Other oil seeds ...	5'07	...	'14	...
Ground nut ...	...	...	3'76	...
Cocoanut ...	...	...	'64	...
Castor ...	...	...	'57	...
Total oil seeds ...	11'96	5'4	15'15	5'9
Area under cotton ...	10'30	...	18'18	...

	Area under food grains, 1901-2	Percentage of total sown area.	1925-26 Acres (millions.)	Percentage of total sown area.
Jute	2'27	...	2'42	...
Other fibres	'56	...	'91	...
Total fibres	13'14	5'9	22'01	8'5
Indigo	'79	...	'13	...
Opium	'60	..	'08	...
Tobacco	'95	...	1'06	...
Fodder crops	2'94	...	8'93	...
Miscellaneous non- food crops	1'71	...	'88	...
Total non-food crops.	32'11	14'6	48'32	18'8
	220'35	...	256'99	...
Total sown area (in- cludes area sown more than once) ...	20'64	...	31'14	...

Estimated yield and area of principal crops (in-
cludes also crops in certain Indian States) 1925-26.

	1901-2 Yield (millions.)	1925-26 Yield (millions.)	1925-26 Area (millions of acres.)
Rice (tons)	19'21	30'63	62'37
Wheat	6'09	8'70	30'47
Jawar ... ..	...	5'31	29'58
Bajra ... ..	...	1'88	12'25

	1901-2 Yield (millions.)	1925-26 Yield (millions.)	1925-26 Area (millions of acres.)
Gram ... ..	...	8.87	14.80
Raw Sugar (tons)	2.02	2.97	2.67
Tea (lbs)	191.30	363.50	.72
Cotton (Bales 400 lbs.)	8.56	6.25	28.49
Jute	7.48	8.94	8.11
Linseed (tons) ... ..	.85	.40	3.57
Rape and Mustard (tons) ... ..	.95	.91	5.60
Sesamum (tons) ... ..	.85	.42	4.97
Castor seed (tons) .. ..	...	.14	1.40
Ground nut (tons) ... ..	.06	1.99	3.97
Indigo (cwts.) ... ..	.11	.03	.13
Coffee (lbs.)	15.57	92.10	.14
Rubber ,, ... ..	...	19.97	.15

Although so much of food grains, and other raw materials are produced in India, yet there is a scope for producing more from the same area under cultivation. Yield per acre in India is very low. Improvement in agriculture are of a vital importance for bettering the condition of the cultivator, and thus adding to the national wealth of the country. With the improved methods of cultivation the other countries have considerably raised their yield per acre of the different crops. The table below will show yield per acre in India and some other countries (1922).

	Wheat (Bushels 60 lbs.)	Corn (Bushels 56 lbs.)	Barley (Bu- shels 48 lbs.)	Rice (lbs.)	Cotton (lbs.)	Tobacco (lbs.)
Canada ...	17'8	43'4	27'6	...	..	...
U. S. A. ...	139	28'3	249	1,090	141'0	735'6
England ...	31'2	...	31'0	...	...	...
Denmark ...	39'0	...	45'6	...	...	...
France ...	18'6	16'0	23'9	...	...	1,426'1
Italy ...	14'1	20'2	14'3	2,151	...	917'9
Germany ...	20'5	...	25'7	...	...	2,639'2 (1921)
Egypt ...	24'1	36'3	30'1	1,456 (1921)	299'0 352'0 (1923-24)	...
India ...	13'0	15'6	19'8	911	98'0	...
Japan ...	22'5	27'7 (1921)	31'7	2,477	...	...
Australia ...	11'3	25'7	21'3 (1921)	...	...	...

THE APPLICATION OF MALTHUSIAN DOCTRINE IN INDIA.

The production of wealth in a country is so directly connected with the number and quality of the people in it that the problem of population has been one of major importance from times immemorial. This number is entirely dependent upon food, clothing and shelter that a country can supply. Invariably and

eventually, however, there is a limit to this; so that the population cannot go on multiplying to infinity. If it did increase beyond a certain point it would at once be overpowered by the checks of nature. Man has been conscious of this fact from the very earliest times. The attention of the state and the individual has therefore always been directed towards this all important subject. The law-givers in every age made a special mention of it in their mandates.

It is but natural to find, therefore, that the earliest savage, as he stood beside the shot-down-deer, knew that it would suffice only for a definite number of people and that he could not hope to shoot more during the period specified. If, therefore, that number was exceeded the result would be starvation. He sought to check any increase above that by means of abortion and infanticide, while on the other hand a need for the defence against the enemy helped the augmentation of numbers.

The principles affecting the check or growth of population have been the same—the means adopted towards its regulation may vary from community to community and from one stage of civilization to another.

We find that the Greeks and Spartans had an 'Ideal City State' before them. The population was therefore regulated so as to be compatible with that ideal. Any increase was got rid of by means of emigration, while growth was encouraged by rewards to

prolific parents and indignities to bachelors or the childless. The Romans who were a conquering race encouraged population, while there was a determined reaction against their immorality, love of luxury, and profligacy in the early Christian ages. Virginity and chastity were praised and life-long abstinence from marriage and sexual relationship were the gifts of a saint. Martin Luther was, however, in favour of marriage and progeny, but he enjoined upon the people to "make arrangements betimes, and get some works remembering always to remain upright and serious."

But the conditions under which nations have had to labour have been of so dynamic a character that it has practically been rendered possible for the people to hold widely divergent theories on population. Not infrequently have the writers also been in the habit of overstating facts about population. But now that the gigantic war is over and since there seems to be no likelihood of production ever accelerating its pace, as it did, when the Industrial Revolution began, we are in a better mood to receive Malthus with his essay on the Principles of Population and Ricardo with his Law of Diminishing Returns.

The sum total of their teaching is briefly this :— Malthus maintained that population tends to increase in a Geometric Progression, *i.e.*, as 1, 2, 4, 8 ; all other things remaining the same, while the means of subsistence increased only in Arithmetic Progression, *i.e.*, as 1, 2, 3, 4, 5.

The population was in early times thus necessarily kept down at a level with the means of subsistence by the checks of nature such as starvation, disease, deaths, wars and epidemics. But man possesses reason and should do all to prevent starvation and misery. Malthus therefore said that it was not the duty of parents to bring children into the world whom they could not educate to the same standard to which they were themselves educated. Hence he advocated preventive checks which are all resolvable into moral restraints ; *i.e.*, the deliberate actions of men to limit their numbers and bring them on a level with the means of subsistence.

Ricardo added a corollary to this and said that instead of the means of subsistence increasing in an arithmetical progression, the law of diminishing returns begins to operate when production has been pushed beyond a certain point and that additional doses of labour and Capital would result in a less than proportionate increase unless some improvements in methods of production took place simultaneously.

It was however thought that the theories of population would be greatly modified by the great world War during 1914-18 and that the increase would certainly be welcome after the immense destruction of life and property. It might be so in some countries but in India today we find that unemployment problem is very acute and that the lower classes of society are sorely distressed and live on the verge of destitution.

Our standard of living is hopelessly low leading to physical and mental degeneration, so that it is but

true to say that the wheel of things to which, in Lama's Philosophy, the human race is bound has turned full circle and that after taking account of all the social and economic upheavals the problem of population in India is as keen as ever.

The following extract from the Census Report of 1921 gives a most graphic view of the problem : "India is one of the countries in an intermediate stage as regards the process of population growth. She has abandoned more or less the all fashioned methods of limiting population to an optimism, *viz.*, periodic abstinence from intercourse, abortion, sati and infanticide and she has not yet adopted the methods of advanced countries, *i.e.*, postponement of marriage and voluntary birth control. She is at a point where her population is controlled by disease and disease only."

Now that we know where India stands as regards her population we are in a better position to consider the various factors concerned therewith.

Marriage.—The first and perhaps the most important point to consider in this respect is that marriage is almost universal in India. The Hindu and Mohamadan law-givers looked upon marriage as a necessary social institution and a sacrament. Perpetuation of race is a sacred duty and according to Manu the only way in which a man can become exonerated from the debt he owes to his father is to have a male issue.

Then, too, marriage is necessary for the performance of religious rites. But early marriage is a

departure from the wholesome practice of Brahmacharya. But granting even that one has to marry perforce, there is nothing in the mandates of the law-givers to prevent wholesome restraint throughout the married life. Manu himself says that the first son is begotten from a sense of duty, the rest from a love of pleasure. The number of children per marriage is lower in this country than where marriages take place at an advanced age. The figures for Burma also point to the same conclusion. It will be, however, noticed that the fecundity among the Mohammadans is higher than among Hindus. This is partly due to late marriages and partly to widow marriages.

Our crude birth rate is, however, higher than that of European countries. In India we have about 34 births per mille 1925 and the death rate is about 24·7 per mille. Thus we have a natural increase of only about 10 per mille. The following figures indicate our increase during the last 40 years.

1881-1891	13·2%
1891-1901	2·5%
1901-1911	7·1%
1911-1921	1·2%

The insanitary conditions under which Indians live and their proverbial poverty owing to which they cannot take a proper care of mothers, infants and children have taken a heavy toll of lives from us.

The increase in the population has been very great at the wrong end, i.e., in the lower strata of the Indian

society. It is no wonder then that the teeming millions of India are daily becoming poorer and poorer on account of a rapid increase in their numbers.

As regards the upper classes we find a number of different checks operating against marriages among them and against the birth rate in their society.

To sum up the whole situation it is necessary for us to take into consideration the expectation of life and the number of productive years in the life of people of different countries as is shown in the following table :—

	Age when productivity begins.	Average length of life.	Number of productive years.
China	16	20	4
India	16	22½	6½
United Provinces	16	25	9
Europe	17	35	18
America	18	37	19
New Zealand	19	44	25

In a country like India which has a population of about 32 crores the labour force is bound to be great in quantity. But if we look to the quality we have to admit that it is very poor. The difficulties of such an inefficient mass of labour are very great both at home and abroad and we therefore find that this world has so little to help the Indian labourers in the matter of improving their standard of living. The chances of

redistribution of population are so little on account of (1) the inhospitable condition of the soil of sparsely populated parts of India, and (2) the difficulties of climatic conditions, language, caste, manners and customs and the opposition of local inhabitants to admit foreigners generally in their midst.

Having established the proposition that the increase in the population of India and the want of improvements in our methods of production are mainly responsible for our increasing poverty, let us proceed to suggest some measures which are calculated to stop our further degeneration by quick multiplication.

As in so many other departments of national prosperity, so for our present purpose also, it is necessary that illiteracy should be reduced in the country. So long as 92% of Indians are illiterate it is idle to preach to them the benefits of a voluntary limitation of their numbers for they cannot realise its necessity and virtues. Elementary mass education only can have the way for progress in this direction.

France, U.S.A. and almost all other wealthy nations of the world have realised the importance of this suggestion and have acted accordingly. In an educated community a rapid increase in the population is not necessarily an evil, for such an increase might make it possible for the community to introduce a better division of labour and better organisation which might lead to an enormous increase in the production of wealth by the community. The stimulus of increased competition may lead an educated population to become

more forward and more willing to fight with zest the battle for existence.

After examining the conditions in India we become pessimists to a certain extent. We have been trying always for the last few centuries to overtake the food supply and have entirely neglected to take effective steps for reducing our birth and death rates and thereby to make it possible for people to advance intellectually and morally. On the other hand on account of this tendency to increase our numbers rapidly we have courted greater and greater competition, and a fully perfected system of family, caste and communal feuds.

The last-mentioned point really points out to us a solution of almost every malady from which our nation is suffering at the present time. If the Indian people learn how to control themselves in the matter of procreation of progeny, they will be able to attain an undreamt amount of self-control with which they can effectively fight against disease, misery, poverty, illiteracy, and narrow communalism. The amount of material, moral, physical and spiritual progress which would be possible for us then is simply incalculable. And it is this channel through which the ship of our nation has to be steered in order to reach the promised land of joy, prosperity and a fuller life.

OIL-SEED CRUSHING INDUSTRY IN INDIA AND ITS POSSIBILITIES.

Large crops of various well-known oleaginous plants including linseed, rape, mustard, sesamum,

ground-nut, cocoanut, castor, cotton, mahua and other oil-seeds are grown widely throughout the country. An idea of their importance can be easily formed by taking into consideration the fact that 15,156,008 acres of land were sown with oil-seed in India in the year (1925-26). The total estimated yield of different kinds of oil-seeds in the same year was as follows :—

Linseed	about 4	lacs of tons.
Rape and mustard	„ 9.1	„ „ „
Sesamum	„ 4.26	„ „ „
Ground-nut	„ 20	„ „ „

The export figures for the same year show that the export trade in oil-seeds is continuously increasing, and that in the year 1925-26 when we exported them to the extent of 12½ lacs of tons. At present they rank high in the order of importance on the export side of the trade of India. The most noticeable feature of the year's trade was on large increase in the shipment of ground-nut. Linseed, castor and cotton seeds also showed increasing exports. The quantities of the principal seeds exported are shown in the following tables :—

	(In thousands of tons)		
	1922-23	1923-24	1924-25
Linseed	... 274	369	371
Rape seed	... 252	337	261
Ground-nut	... 267	257	376
Castor	... 84	85	95
Cotton	... 183	150	161

Sesamum	36	10	31
Copra	14	4	...
Others	67	43	33
<hr/>			
Total	... 1177	... 1255	... 1328

Thus we see that the produce of oil-seeds in India is largely exported whole.

Increasing exports always cause a certain amount of pleasure to every patriotic member of the community but an increase in the export of oil-seeds has an opposite effect. The dangers attending their exportation can be summarised as follows:—(1) It allows other countries to reap the manufacturer's profits and to provide employment to their own people. India is suffering from acute unemployment and the exportation of oil-seeds as a whole means the taking away of work from Indian labourers and giving that work to the people of other countries. (2) The production of oil-seeds means the taking away of a certain amount of valuable chemicals contained in the soil on which they are grown. Unless we give back to that soil the oil-cakes, we are continuously robbing our soil of its fertility. The value of the oil-cake as manure has been recognised by Agricultural experts all over the world. It is, then, really very strange that Indian cultivators are courting bankruptcy, so far as the fertility of our soil is concerned, by exporting annually oil-seeds in increasing quantities. The loss of a great potential wealth, in the form of oil-cakes, to the country cannot be too strongly deplored. (3) The slack appearance

of human beings depends to a large extent on the quality of fats consumed by them. Similarly the health and fatness of cattle also depends on the inclusion of fats in their daily food. A most palatable form in which these fats could be included in the daily diet of cattle is to give them oil-cakes mixed with their daily food. For the improvement of the health of our cattle, and their quick regeneration it is necessary to keep as much as possible the oil-seeds in the country in order to get from them plenty of oil-cakes.

In spite of these serious objections to the exportation of oil-seeds as a whole from the country we find that very little has been done to start oil-crushing mills, run on modern lines in India and thereby to check their increasing exportation. Efforts were made, but they did not prove very successful on account of the following difficulties :—(1) There exist high protective tariffs in European countries which encourage the exportation from India of the raw material rather than the manufactured product. (2) There is a better market for the oil-cake in Europe than in India and the freight on oil-seeds is less than the freight on oil and oil-cakes. (3) The shipping and transportation work of India being largely in the hands of foreign countries, they generally charge higher transport rates on oil than on oil-seeds. It is much easier and less expensive for the Indian producer to export oil-seeds instead of oil. (4) In India itself there is a deep-seated prejudice against the use of machine-made oil-cakes as a cattle food or as manure because the Indian cultivator thinks

that it contains less oil and therefore less nourishment than the village-made cakes. He is therefore unwilling to buy it except at a reduced price.

An immense quantity of oil is, as a matter of fact, already manufactured in this country by more or less crude processes. Village oil-mills worked by bullocks and presses worked by hand exist in all parts of the country and supply most of the local demand of oil. Those village Ghanni or Kolhu mills are very uneconomical because (1) Only 38% of the oil contained in the seeds is extracted and the remaining 62% is entirely left in the oil-cake. (2) Only 3 to 3½ seers of seed are crushed per 3 hours and only about 9 to 12 seers of seed are crushed per day. (3) The use of oil-cakes containing 62% of the oil contents of seeds is really harmful to the cattle who are fed upon them. Just as a weak man cannot digest a lot of fat and can digest only a fraction of the quantity of fat which can be digested by a strong man, so the weak cattle of India also cannot digest as much fat as is contained in the village-ghanni-made oil-cake. The ignorant cultivator, wishing to make his cattle strong, feeds him on this super (fat) saturated village oil-cake with the result that they begin to suffer from diarrhoea and dysentery. The mill cake contains a lesser quantity of oil than the village cake, still it contains more oil than the cattle can digest.

Despite these drawbacks Indians have not generally adopted the hydraulic presses or accumulators or steam driven oil mill machinery which can save a large part

of the oil, which is allowed to run waste at present. Even in this age we find in southern India people using mainly the boiling out process with the slight improvement of squeezing the meal in a twisted cloth. In the Central Provinces and in other parts of India we still see the Roman Mortazium being used with no improvement other than that it is being worked with bullock power. The power driven ghanni obtains 30 to 33% of oil in from $1\frac{1}{2}$ to $1\frac{3}{4}$ hours according to seasonal temperature.

To make the industry paying it is necessary (1) to erect and work a model mill, (2) to have trained operators and managers of these mills and (3) to install plant for refining the oil, for manufacturing hydrogenated 'vegetable ghee' or 'hardened' oils for making soaps, candles, glycerine, water-proofing, electrical insulation, wax, and wax-like compositions.

The tremendous amount of work which would be created for the Indian people if this industry was improved in India has been amply proved by the foregoing observations. The increased imports of these finished products into our country have already taken a high price from us for our mistake. The same raw materials which we export from India return back to us in the form of finished products and the Indian consumers have to pay freight both ways, the profits of middlemen and manufacturers and the wages of skilled foreign labour employed on them. The oil industry has largely helped U.S.A. to become a leading

country in manufactures, and other countries are rapidly adding to their national wealth by improving their oil industry. When will the time come for India to realise the great national importance of the oil-seed crushing industry in India ?

COTTON INDUSTRY IN INDIA

OUTLINE

1. A brief account of the early history of the cotton industry.

2. Physical conditions necessary for the growth of cotton. Various processes of production—sowing, picking, ginning, baling, etc.

3. The importance of cotton-growing in India, her position as a cotton-grower in the world.

4. Improvements effected in the varieties of cotton grown in India, and their influence upon the future of the industry.

5. Acreage of production and export. Work of the Indian Cotton Committee.

6. Suggestions for the improvement of the industry.

Our modern life calls for an endless variety of articles that are durable and strong for which we use wood, stone and steel as raw materials—articles that are transparent like glass, elastic like rubber, tough like leather, light like cork, and so on. You can prepare a long inventory like this. On this long inventory of articles of every-day use you would find clothing occu-

pying a very outstanding place. In fact it comes next to food. For the satisfaction of this requirement suitable material is needed. We need a kind of material that would not hamper the free movement of the body—something flexible, durable and washable. Cotton is the most exquisitely suitable fibre, which satisfies this important human want, and it is considered as one of the most important commodities for trade and commerce.

About nine-tenth of the world supply of cloth consists of cotton. It includes that also which is used in the manufacture of woollen cloth. Cotton is used in the manufacture of other articles as well.

Cotton is a vegetable fibre obtained from the cotton plant. It has got many species and some of the important varieties are : (1) *G. barbadense*, linn. (2) *G. brasiliense*, linn. (3). *G. hircutum*, linn. (4) *G. herbaceum*, linn. (5) *G. arboreum*, linn.

The first species is one of the most valuable varieties of cotton. It is chiefly grown in islands and is known as the 'sea island cotton.' South Carolina, Georgia and Florida cultivate this cotton on a large scale. The "sea island cotton" is very fine, strong, and silky and commands a high price. The staple of this cotton is from $1\frac{1}{2}$ inch to 2 inches long.

The second species of cotton is grown in India, China and Africa. It has a small shrubby plant which grows to a height of 2 to 6 ft. The length of its fibre varies from $\frac{1}{2}$ to 1 inch.

The third variety of cotton is grown in South America but its fibre is not good. The fourth species is largely grown in India and China. This cotton has a tree-like plant and its fibre is poor and dirty, but is capable of improvement.

The fifth variety is found wild in Upper Guinea, Abyssinia, Senegal, etc. It is the 'tree cotton' of India and Africa, being typically a large shrub or small tree. In India it is known as 'Nurma' or Deo cotton. Commercially it is comparatively of minor importance.

Cotton is generally grown in the tropics and in the warmer parts of the temperate zone. In the tropics it is generally a perennial that is, it grows year after year without replanting; but the tropical plants do not yield so well as do the plants that are grown in the warmer temperate zone, where seed is planted each year. Cotton requires a long growing season free from frost at least from six to seven months. The plant is very particular about climate so much so that in spite of continuous effort to extend its cultivation, it is profitably grown on a large scale in only a few parts of the world. Not only does the plant require a long growing season, but it requires a particular type of rainfall—abundant in spring and early summer, but lighter in the late summer and autumn. The best type of summer climate is sunshine and shower type with plenty of warm sunshine specially in June and July, but the autumn must be fairly dry to permit picking. After the balls are open the white cotton protrudes and then it could be easily stained and injured by rain.

The plant is less exacting in the matter of soil than it is in the matter of climate, but its yield is abundant in fine, rich, black soils.

The name cotton is of oriental origin and is derived from the Arabic word *Katán*. About 306 B. C. Theophrastus, the disciple of Aristotle, mentions the use made by the Indians, of the capsules of a downy and silvery substance which bursts open some two months after the flowers have reached maturity. He observes that the trees from which they (the Indians) make their clothes, have leaves like those of mulberry. They set them in rows so as to look as vines at a distance. This evidence from quite an independent observer seems to point to the interesting fact that the Indians in those days were cultivating the plant on a large scale to provide cotton clothes for their people.

Herodotus, the Greek philosopher and the father of History, also mentions the cotton plant cultivated by the Indians.

Although no exact date can be assigned to the discovery of cotton, but, as a matter of fact, India has been the home of cotton trade from the earliest times. The cotton cloth of India was known far and wide. The term calico has originated from the fine woven cloth of Calicut. Dacca achieved great renown by producing the finest cloth that the world had ever seen. The 'malmal' of Dacca is still famous for its delicacy and tact of human ingenuity.

The delicacies and luxuries of India decorated and embellished the palaces of the great Asiatic and Euro-

pean potentates. Since the rise of the great European powers and their scramble for the supreme control of Indian trade, the prosperous trade of India began to decline.

Cotton is generally sown in the month of March or April. Generally the seeds are sown in rows and the crop receives careful attention. In some parts cotton crop is sown broadcast (often mixed with other crops). The cotton seeds are placed in groups a foot or more apart in rows. The strongest plant of each group is allowed to remain and the others are weeded out. The flowers appear about June, bloom for two or three days and then fade and fall. The blossoms are at first white or pale yellow but on the second day after opening they turn red.

Not only is thorough preparation of the ground necessary before the seed is sown but often the plants need constant attention and care during their growth. Grasses and weeds are destroyed and the ground is kept loose by frequent cultivation. In the mid-summer the plants bloom profusely and the flowers are superseded by green pods, known as balls. The growth of the plant is succeeded by the growth of balls which contain white fluffy balls and seeds. The balls grow continually, until they reach the size of a hen's egg. Towards the end of July and the beginning of August the seed of cotton is ripe and then the cotton balls begin to protrude. Soon the field is a mass of white—a lovely sight indeed.

When cotton is ripe, it is picked by men, women and children who gather it in their respective baskets,

or clothes whose one end is tied round the waist and the other end round the neck. The cotton-picking lasts for two or three months for the balls do not all ripen at the same time. The cotton that opens late is comparatively of an inferior quality. Sometimes the picking goes as far as the spring of the succeeding year. The spring cotton is, however, of an inferior quality. The cotton-picking by hand has been keeping pace with the march of time and it had to fight a fierce battle in recent years, with the introduction of new machines which in the end had to yield to the supremacy of its bitterest enemy. The new methods proved unfruitful because all cotton does not open at the same time. If you go to the Deccan you will surely find people busy in their work from morning till night. Sometimes the snowy white fibres of cotton are flying about in air and sometimes they travel long distances.

The quantity of cotton picked varies from one picker to another, the reason being that all do not have the same skill and industry. The cotton picked by a person varies from one hundred to three hundred pounds or more varying according to the nature of the crop.

After the cotton is picked it is left to dry and when it is completely dried the process of cleaning begins. By this process cotton is separated from the dust and other impurities. This is effected by rollers or by saw-gin invented by Eli Whitney in 1793. The saw-gin is a fine net of wires and it is employed in separating the cotton of short staple which rigidly

adheres to seeds. The cotton fibres are drawn through the holes which allow no passage to the seeds. Before the invention of this machine, cotton was separated from the seed by hand, and, later by a modern device, a very laborious and time-consuming process. The application of this method has greatly reduced the price of cotton yarn.

The next process is of baling which is carried on by means of presses. The cotton bales are partly covered with burlap or bagging and bound or tied with light iron bands or ties. In case the cotton is to be shipped a long distance, it is economical to compress it further into smaller bales in order that it may occupy less space. This is usually done at the large market centres where carding is also done. The Indian bales generally contain 400 lbs. of cotton. In India such factories are to be found in all the important cotton markets.

The peculiar feature of marketing cotton is known by what is called 'futures.' 'Futures' are the contracts made to deliver a definite quantity of cotton at a future date within an agreed period and at a fixed price settled at the time of entering into the contract. The variety of cotton promised to deliver is definitely stipulated. The delivery of cotton is never made contrary to the agreement.

The black cotton soil of Deccan is particularly suited to the cultivation of cotton and hence cotton is a dominating crop in the black cotton soil area. This soil is very rich because of the chemicals present in it,

which furnish nourishing food for the cotton plant. Despite the fact that the black cotton soil yields very good crops every year, the total produce of cotton in India as a whole is poor. Cotton suffers in quality also. Probably all the nature varieties have deteriorated through the exhaustion of the soil and careless cultivation. But success has been attained to some extent by improving the indigenous plant and educating the cotton growers.

India's cotton is chiefly grown in Bombay, Berar, C.P., Hyderabad, Gujerat, the ceded districts of Berar, Coimbatore and Tinnevely districts of Madras.

Bombay—

In the Bombay Presidency cotton is grown in the following areas:—

1. North Gujerat.—The adjoining districts of Baroda State, and the greater portion of Kathiawar where trade variety Dholera is produced.
2. Southern Gujerat—including the Baroach and Surat districts in British territory and the Mansari district in Baroda where Baroach cotton, the barometer of the Indian cotton trade, is grown.
3. The Bombay Deccan including the districts of East and West Khandesh, Nasik, Ahmadnagar and Sholapur, also the Northern part of the Bijapur district of the Hyderabad State, where Khandesh cotton is grown.

4. The Carnatic comprising the districts of Dhurwar, Belgaum and the greater part of Bijapur as well as the Indian States of Kolhapur and Sangli where Kumpta-Dharwar is obtained.

5. The territory to the left of Sind in the Nawabshah, Thar, Parker, and Hyderabad districts where Sindh cotton is raised. In parts of the Bijapur district 'Westerns' are also grown as in the Madras Deccan.

Punjab—

The cotton-growing area in the Punjab may be divided into three parts: (i) the territory lying north-west of a line drawn from Ambala to Hissar where Sind-Punjab cotton is cultivated; (ii) the Punjab canal colonies in the districts of Lyallpur, Montgomery, Jhang, Shahpur, Gujranwala, and Multan where Punjab American is grown under irrigation; and (iii) the territory south of the line from Hissar to Ambala where a variety of Bengals known as South-east Punjab is grown.

As early as 1903 Sir Malcolm Hailey now the Governor of the United Provinces introduced successfully the cultivation of the American variety in the Shahpur district of the Punjab, where he was at that time the Settlement Officer. Since then the Commercial cultivators of the canal colonies have taken to the cultivation of this variety in preference to the Indian. This variety is locally known as 'Narma.' Another improved variety of the American cotton called 'Ghora Narma' has recently been introduced and is fast sup-

planting the remains of the Indian variety. This variety has gained the favour of the cultivators because it yields a fine staple which commands a high price in the market.

United Provinces—

Cotton is also cultivated in certain parts of the United Provinces. Chief cotton-growing centres are Bulandshahr, Muttra, Aligarh and Agra districts. The chief varieties are (i) United Provinces, (ii) white flowered Aligarh (a variety selected by the Agricultural Department), and (iii) Cawnpore American grown in canal irrigated areas.

Central India—

In Central India cotton raised is of two kinds :—

(i) Malwa Cotton, and (ii) Central India Cotton.

Rajputana.—A little cotton is also grown in Rajputana. It has a very short staple, hence inferior.

Mysore.—In Mysore the chief areas growing cotton are Chitaldrug and Simoga districts. The chief varieties are known as Kumpta and Dharwar-American.

Burma.—Burma grows a short staple cotton. The chief centres are Thayetmyo, Sagaing, Lower Chindru, Meiktila and Myngyan. The staple is known as Wan gale.

Madras—

The cotton-growing tracts in the Madras Presidency fall into three well marked divisions :—

(i) The Deccan table-land including the districts of Bellary, Anantapur, Kurnool and Cuddapah in which Northern and Westerns are grown. The former is

chiefly in the first two-named, and the latter is chiefly in the last two-named districts.

(ii) The Coromandel coast including the uplands of Gantur, Kistna, Nellore and Godavari. Of these the district named first is most important. It grows Cocanadas.

(iii) The southern districts of Tinnevelly, Ramnad, Madura, Trichinopoly and Coimbatore where Combodia (a variety of American uplands the seed of which was obtained in about 1905) is grown on red soils preferably with irrigation, and Tinnevallies of which pure Karunganni, a variety selected by the Agricultural Department, is grown in the black soils.

Bengal—

In Bengal the chief cotton producing areas are Chittagong hill tracts, the districts of Bankura and Midnapur, and in Assam the Garo and the Lushai hills. The product of these parts is known as Kamila cotton.

Behar and Orissa—

The acreage in Orissa is insignificant. In Behar the districts of Saran and Santhal have more than 10,000 acres devoted to this crop, and with Ranchi district they produce a variety called Behar and Orissa. A variety known as Gathia is found in scattered parts of the same province.

North-West Frontier Provinces—

Peshawar and Dehra Ismail Khan districts of the N.-W. F. P. grow the bulk of the crop under irrigation. In the trade phraseology this cotton is known as N.-W. F. P.

The average yield per acre in India is 400 lbs. In 1918, the cultivated area was 25 million acres with a yield of 4 million bales while in 1919 the acreage shrank to 20 million acres with yield of 3.7 million bales. The yield is not high in India. It is difficult to say whether it is due to the selection of seed, or careless cultivation or defective manuring. In 1921 the Indian acreage was two-thirds of that in America but the yield was only one-third, being only at the rate of 85 lbs. of lint per acre. Following statistics will show the quantity of cotton produced, and exported to other countries :—

Indian cotton produce.

1924-25	1925-26	1926-27
Bales	Bales	Bales
(400 lbs. each)	(400 lbs. each)	(400 lbs. each)
6,088,000	6,250,000	4,973,000

The exports of cotton are as follows :—

1923-24	1924-25	1925-26
3,763,858 bales	3,553,434	4,173,120

The principal purchasers of Indian cotton are Japan and China which together took 59 per cent of the total export during 1924-25. Besides these Germany, Belgium, the United Kingdom, Italy and France who are large consumers of Indian raw cotton, had 5, 6, 5, 14 and 4 per cent. respectively.

The principal exporting centres of cotton are Bombay, Karachi, Calcutta, Rangoon, Tuticorin and

Madras. B6mby is the most important exporter of cotton in India.

India ranks second in the growing of cotton, first being United States of America.

A great deal of manufacturing is done by hand in India, but more recently machinery has been introduced, and mills and factories are increasing. Thousands of people are employed in these factories. The following figures will give an idea of the progress of the textile industry in the whole of India :—

Years ending 30th June.	No. of mills.	No. of spindles.	No. of looms.	Average No. of hands employed daily.	Quantity consumed.	
					Cwt. or	Bales of 362 lbs.
1925	337	8510833	154202	367877	7792084	2226310
1926	334	8714168	159464	373508	7396844	2113384

Lack of scientific knowledge and technical training are the chief drawbacks towards industrial progress: The British Government does not repress manufacturing, nor do they actively encourage it, for the British manufacturers naturally desire to sell their own products in India. In fact, that is one of the chief reasons why Great Britain desires to retain this populous dependency.

Besides cotton fibre there are many things that are obtained from the cotton plant. The cotton seeds are pressed hard by means of a kind of machine and cotton-seed oil is obtained. This oil is almost odourless. The full appreciation of the value of this by-product came in the latter part of the 19th century.

The use of this oil has been continually developing. At present the oil is used for cooking and in pharmacies. It is also employed in the preparation of lard and margerine. Sometimes it is substituted for olive oil. The coarser quality of oil is used for making soap, candles, lubricants and illuminants. The cotton seed cake or meal furnishes a good food for livestock. The genius of man has utilized the rugged cotton stalks of the cotton-plant for the production of superfine milk-white writing paper. The stalks of cotton serve as fuel as well. At the oil mills, the short, fuzzy cotton which is still sticking tenaciously to the seed, is removed by a special machine and becomes the linters of which cotton bathing and cotton felt are made.

Let us now consider the problem of labour that is employed in the production of cotton. In some parts of the cotton-growing area especially in the Canal Colonies of the Punjab, seasonal labour is employed and its remuneration is often paid in kind. The workers are paid on a piece-rate basis.

The Government has been devoting its attention to the extension of cotton cultivation. In 1921 the Government of India created an advisory body, known as Central Cotton Committee, which served until 1923. In 1923 a Cotton Cess Act was passed in favour of further development in the interests of the Central Cotton Committee and the promotion of agricultural and technical research in cotton. The Central Cotton Committee rendered an admirable service to the country by helping in various ways the cotton-growing in India.

The Transport Act of 1923 permitted every Local Government to define specifically, with the approval of its legislature, the cotton-growing areas, that need protection, and to prevent the import of cotton from illegal centres.

Before the Act was passed the cotton of inferior quality was imported into the staple cotton areas for purposes of adulteration and thus ruining the reputation of those areas.

The Ginning and Pressing Factories Act (XII of 1928) has been passed very recently. This has provided a certain control over the ginning and pressing factories which are required to make bales of certain fixed quality and quantity and to mark them with a definite mark and serial number.

In India the best cotton is grown in Broach, Hinganghats, Gangetic Valley and the Tinnevely districts of Madras. The high prices of cotton in recent years have encouraged the production of cotton on a large scale, but still the cotton-growers need financial assistance. The Sukkar Barrage scheme of Sindh gives a hope of further extension of cotton-growing. It is even possible that the staple suitable for fine fabrics may be cultivated in India on a commercial basis, for there is a good evidence that delicate fabrics were produced from raw materials in the past. For instance in a letter dated 5th September, 1818, the Court of Directors wrote as follows:—"The delicate fabrics of Dacca were at all times manufactured entirely

from the cotton of that district which is the finest of all cotton in India and is probably finest in the world." The problem of improving the variety is still receiving attention and conditions of revival may be discovered after careful experiment. Improvement in yield and staple is among the first problems that ought to engage the attention of the Central Cotton Committee.

The cotton industry is gradually increasing and it is hoped that India will make further advance in her industrial development and acquire a high position in the trade and commerce of the world as a textile producer.

TEA INDUSTRY IN INDIA

OUTLINE

1. Introduction.
2. A short account of the early history of tea-planting in India.
3. The gradual passing of the industry into the hands of the Western planters.
4. Physical conditions necessary for the growth of tea plants—processes of production—propagation, planting, cultivation, pruning, and manufacture of tea.
5. The present state of the industry with statistics of export, and total quantity produced.
6. The world consumption and India's position.

7. Suggestions for improvement.

Tea is known in almost every quarter in India. It is commonly sold in bazaars, and almost every shop-keeper has a few bundles of it. Modern India has become much accustomed to the use of tea, because the progress in civilization has brought in its train a great variety of wants. Present rate of increase in consumption makes one believe that in short time tea will become almost a universally consumed commodity in India. India has been exporting large quantities of tea every year. United Kingdom is the chief importer. She alone imports 75% of the total tea exported from India.

Before giving an account of the tea culture in India, it is highly desirable to trace its origin and its successive career, with all its vicissitudes through the succeeding decades.

There is a traditional belief, which pervades the ancient literature of China, that the virtues of tea were first discovered by the Emperor Chinney about 2737 B.C. The tea was used only as a regalia for royal entertainments for many centuries, and at an early date the tea novelty of China visited the West and the East, but people could not realize its full advantages for many centuries. The dawn of a new era of enlightenment, and advancement in civilization made the people to recognise the usefulness of tea leaves. The Chinese called it 'Tcha' and consequently it is known 'Cha' in almost all the vernaculars of India and 'Tea'

in most of the European countries. The name tea, which is given to the leaves of a tea bush prepared by decoction as a beverage, is also extended by analogy for an infusion or decoction of other leaves, *e.g.*, camomile tea, and similarly for an afternoon meal at which tea is served.

Tea, as we know, was originally grown in China but at an early time, before the dawn of history it was found growing wild in Assam. How tea came to India and who brought it, is not known, but this much is sure that the Assam tea is the offspring of the China tea. As a consequence Assam has been the chief tea growing centre in India. This leads us, by the way to know as to what extent tea culture flourished in Assam and how its development attained its present stage.

In the early times there were no tea plantations. It grew wild in the forests of Assam. But with the advent of the British Government in India and the exercise of its activities in various directions, a new era began in the history of the tea of Assam. As early as 1823 Mr. Robert Bruce, an Englishman, discovered that the tea shrub-grew wild in the forests of Assam. Not long after 1834 Lord William Bentinck appointed a committee for the introduction of tea cultivation in India. The Government first decided that the tea of Assam was suitable for commercial purposes and then appointed Mr. C.A. Bruce, the brother of Mr. Robert Bruce, as superintendent of the Government tea forests. Seeds were brought from China and tea plantations were

started near the confluence of the Brahmaputra and the river Kundil, but as the experiment failed on account of the porous nature of the soil, the plants were then transferred to Gaipure. A few years later the tea estate was sold to the Assam Company. At first the Company had to encounter many difficulties because Assam in those days was an isolated part of the country and the means of transportation and communication were in most undeveloped state, but by 1852 the Company had made considerable progress along this line.

Ceylon has largely extended its cultivation of tea, and a large quantity of tea is exported to foreign countries every year.

Tea was experimentally started in the Darjeeling district in 1840 and in the same year introduced into Chittagong district. The first garden in Cachar was opened in 1855. The industry in the Tarai started in the year 1862, and in the Western Doons where climate and soil proved extremely suitable for tea cultivation twelve years later, leading to enormous gains for the Company.

The tea industries achieved a great success during the Great European War, but in 1920, the markets were flooded with huge quantities of inferior tea held on behalf of Government. This coupled with a sudden rise in the value of rupee brought a great loss to some companies. This stagnant period was succeeded by a period of brisk trade which lasted for three successive years.

The tea plant flourishes in high, easily drained grounds, up to 3,500 ft. It also thrives best in places which are visited by frequent showers of rain to bring out leaf-bud, from which the finest tea is made. Assam gets rain nearly all the year round and therefore it produces large quantities of tea every year.

Tea is not only cultivated in Assam but in other parts as well. In Northern India tea is cultivated on a small scale, in United Provinces in the district of Dehra Dun, Almora and Garhwal; and in Chota Nagpur district of Bihar and Orissa. In the Punjab tea is grown in the Kangra valley, the states of Mandi and Sirmur and to a small extent in the Simla Hills.

Tea has also been profitably cultivated in Southern India since 1853, chiefly in the Wyaad, the Nilgiris, and latterly in the Anamalais and the high ranges of Travancore. The depreciation in the coffee values in the early part of the present century has led to the cultivation of considerable areas, formerly under forests, into tea gardens.

The production of tea in Burma is insignificant. Total acreage under cultivation was less than 2000. The tea grown in the Shan states is chiefly used for making let-pet or a picket tea, which is eaten as a condiment and not drunk as a decoction.

Assam is the chief tea centre in India. Tea cultivation is increasing with the lapse of time. The following figures indicate how tea-growing is increasing in India as a whole :—

Years.	1922	1923	1924	1925	1926
Acreage ...	Acres	Acres	Acres	Acres	Acres
Assam ...	412,100	411,900	413,300	416,500	420,600
Rest of Northern India	203,200	203,500	204,400	211,200	213,000
Southern India ...	92,900	95,800	97,000	100,000	105,100
Total ...	708,200	711,200	714,700	727,700	738,700

The following figures give us an idea of the total amount of tea grown in Assam and India as a whole.

Production.	lbs. (1,000)	lbs. (1,000)	lbs. (1,000)	lbs. (1,000)	lbs. (1,000)
Assam ...	199,965	237,601	237,153	225,155	241,982
Rest of Northern India	75,126	92,078	91,351	89,017	99,304
Southern India ...	86,548	45,679	46,752	49,305	51,918
Total ...	361,639	375,358	375,256	363,507	393,204

The principal buyers are England, France, Italy, America and Russia.

India does not consume the whole produce of her tea, but she exports tea to other countries. The following figures will give an idea of the export of the India tea. India is the largest exporter though China is the largest producer.

	1922—23	1923—24	1924—25	1925—26	1926—27
	lbs. (1,000)	lbs. (1,000)	lbs. (1,000)	lbs. (1,000)	lbs. (1,000)
From Northern India (Calcutta and Chittagong) ...	253,796	296,778	299,747	280,024	304,957
From Southern India (Madras parts) ...	30,386	33,560	37,717	43,138	42,935
From Bombay, Sindh and Burma ...	4,114	3,417	2,643	2,576	1,372
Total ...	288,296	333,755	340,107	325,738	349,264

If you go to Darjeeling and Assam you will find tea gardens flourishing on a large scale. The bungalows of managers and their assistants are standing on the lawns of the tea gardens. In close proximity to these gardens you will notice the factory buildings and the quarters of the factory workmen.

In the past these were ugly and unwieldy stretches of tea ground and plucked down to bushes about 3½ feet in height; but now the scene has entirely changed. Modern Assam is adopting new methods and using improved, and up-to-date machines and appliances. Consequently the tea planters have made much progress, and are cultivating on a large scale. This has reduced the cost of production considerably, leading as a consequence to a fall in price.

Tea-planting necessitates the employment of thousands of persons. Men, women and children all work as labourers. They go to the tea gardens and

pick the new delicate buds and fresh, green leaves from the young shoots. The process of picking is very important and interesting. The managers and superintendents personally supervise picking and give necessary instructions to the pickers. Many a specialist is specially employed for this purpose.

When the sun is very hot, the picked leaves are covered by a piece of cloth which protects them from heat; sometimes it is necessary to make the piece of cloth wet because tea is spoiled otherwise.

The weighing machines are there, ready to weigh the tea leaves picked. The wages vary according to the quantity of tea picked, that is, the labourers are paid on piece wage system. Next comes the process of withering which is of vital importance. The green leaves are hoisted into lofts and then they are spread on the liers of trays.

When temperature is high tea leaves are brought to cool-rooms where they are allowed to wither. But in cold districts some heat is required.

If there is heavy rainfall the leaves become wet and so fans are employed until water is dried up completely. In the hill districts tea takes almost 18 hours to wither, but it is still green and smells like a ripe apple. After withering tea leaves are sent to rolling factory. When they are rolled they are transferred to fermenting rooms which are separated from the main factory building. Every precaution is taken and in accomplishing it successfully skill is needed. This process also is

important. Tea is spread on glass and zinc plates and sometimes on mats or wooden tables or tiles with free access to the air to oxidise or ferment. After fermentation scene is changed and the colour becomes yellowish. The fermented tea is again brought to the factory and the leaf is fired and dried and the black tea resulting is graded, bulked and packed in lead lined chests of about 100 lbs. each, soldered up and sent to the port for shipment.

The principal grades of commercial tea being Flowery or Broken Orange Pekoe, Orange Pekoe, Broken Pekoe, Pekoe, Pekoe Souchong, Fannings and Dust. These names are derived from China. Flowery Orange Pekoe is the bud, Orange Pekoe, the tender leaf, and Pekoe, the second leaf. Pekoe Souchong is from a third leaf when a bush is medium plucked and coarse plucking yield inferior teas known as Souchong and Congons. But the commercial names have no longer any relationship to particular leaves. The broken leaf of each grade generally yields a stronger tea than the grade itself and consequently commands higher prices. The bulk of the tea produced in India is black tea. In some places the leaf is steamed instead of withering, and is called 'Green Tea.' The principal leaf grades of this tea are young Hyson, corresponding to Orange Pekoe, Hyson No. 1 to Pekoe, Hyson No. 2 to Pekoe Souchong, Gunpowder, Twankey, Fannings and Dust.

Another kind of tea known as Bick Tea is prepared in small quantities in the Darjeeling and Kumaon

divisions for the Tibetans and Bhutan markets but practically the trade has no commercial value. There was, however, a considerable trade in dust tea to the Chinese ports of Hankow and Shanghai where it was manufactured into Brik Tea for the Russian market. Generally speaking, all the important districts have to obtain their labour from considerably long distances and this involves a heavy outlay and an elaborate machinery to control recruitment.

Though the coolies are now better but nevertheless they are still in a state of primitive civilization and it is hoped that the Government will take measures of immediate relief and raise the poor labourers who will not only live well but effect a corresponding increase in the production of tea. Healthy industries are a vital necessity to India.

In Assam the employers have to face great difficulties in recruiting labourers. They are generally recruited from United Provinces, the Central Provinces, Bihar and Orissa and the East Coast. The Assam Labour and Emigration Amendment Act of 1915 made important changes in recruitment of labour for Assam which is regulated by the Assam Labour and Emigration Act 1901 (VI of 1901). Recruiting by contractors has been abolished and an Assam Labour Board formed for supervision of recruiting by local agents and garden sirdars.

Darjeeling district has facilitated its transportation by the introduction of good roads and railways. Bengal Assam Railway has made it easy for Assam to transport

its tea to Chittagong. Some of the Assam tea is sent to Calcutta by an excellent service of Cargo Steamers. On arrival in Calcutta, tea is warehoused at Kidderpore, where if for auction, it is stored, bulked if necessary, lotted, sold and eventually shipped. In Southern India also the conditions are improving. For many years in the past India has been exporting a superior type of tea seed to other tea-producing countries, chiefly Sumatra, Java and Ceylon.

The unit of sale is uniformly the lbs., *i.e.*, for London and f. o. b. for America. The unit of shipment is the chest which varies in weight approximately to 120 lbs. net according to the fineness or coarseness of the quality packed.

Fannings and Dust would approach more nearly to the maximum weight while Souchong owing to the size and coarseness of leaf would turn the scale or nearer the lower weight.

Shipments from India fall into two classes:—(a) Consignments direct from the garden to London where they are sold by auction in Mincing Lane. (2) Consignments sold at auction in Calcutta and shipped thence chiefly to what are known as outside destination, *i.e.*, countries other than the United Kingdom. The Calcutta tea auctions commence in May and continue weekly until January in the following year.

By the Indian Tea Cess Act (Act IX of 1903) a cess was imposed on the exports of tea. The Indian Tea Association was required to buy a tea cess which would furnish them with funds to advertise and stimulate

tea drinking habit and by the appointment of agents in India and abroad to push the sales of Indian grown tea. The advertisement that we see on city walls is as follows:—‘Hot tea cools in summer and warms in winter.’ Besides this several other methods are used to stimulate demand for tea. Sometimes the tea rooms are furnished with gramophones and songs composed containing the praises of tea.

If the Government took a little more active interest it would be possible to increase the acreage. The future of tea industry in India seems to be brighter, and it should be developed to its fullest extent.

The waste products of tea are not thrown away, but they are sold to chemists who manufacture from it a kind of drug known as Caffeine.

The steel chests of tea are too expensive to be used by every producer and so wood chests are used which are chiefly made of toon. Siml also is used for making tea-chests. These trees largely grow on the Himalayas. Some of the woods have a bad reputation for tainting the tea and others require prolonged seasoning before they can be considered suitable.

The cultivation of tea is steadily increasing in India. There is a great scope for the extension of tea cultivation in India, because certain suitable places in the Himalayas and other parts of India are still lying unused.

TEST QUESTIONS.

PRODUCTION.

1. What is meant by Production ? Can man create matter?

2. Name the different ways in which utilities may be created.

3. Name the different factors of production, and explain the term 'land' as used by economists.

4. In what manner is the production influenced by Physical Geography of a country ? Why is India a leading agricultural country in the world?

5. Why do not all of the agricultural labourers of the country concentrate their labour upon the most fertile soil of the country, leaving all less fertile soils uncultivated?

6. State the Law of Diminishing Returns. Are there any exceptions to the Law? If any, state them.

7. In what countries in general do you find the Law of Decreasing Costs in operation, and why?

8. Explain what is meant by the Extensive and the Intensive margin of cultivation. What sort of cultivation is being done in India?

9. Does the Law of Diminishing Returns apply to the following:—(a) City, Building Lots, (b) Fisheries (c) Capital, (d) Pottery, (e) Labour?

10. Comment on the statement:—

(a) "Man is dependent upon nature in every aspect of his life."

(b) "Man can control the forces of nature and modify his environments."

11. Mention the important raw materials produced in India. How far are they utilised in India? What would be the effect of preventing their exportation from India?

12. Distinguish between Intensive and Extensive cultivation. Prove that it becomes profitable to cultivate better lands more intensively when it becomes possible to extend the margin of cultivation.

13. (a) Discuss the merits and demerits of the Indian joint family system.

(b) What are the economic effects of the Indian Law of Succession?

14. Give the characteristic features of the different factors of Production in India.

15. Compare the average wealth per head of the population of India with the *per capita* wealth of other countries. Account for the difference.

16. What are the extractive industries? Choose three extractive industries and trace one raw material of each of them through all the processes of manufacture, etc., until it reaches the consumer.

17. Explain the calculations that are necessary to discover the income of the Indian farmer.

18. Mention the chief kinds of goods necessary in order to produce any commodity. State how services of each kind are remunerated.

19. Describe briefly any three machines you have seen and tell what they enable man to do. Why do we use the costly machinery?

20. What are the characteristic features of the present stage of economic effort?

21. Explain clearly the conception of increasing and decreasing returns and consider the part played by internal and external economies of production in bringing about increasing returns in an industry.

22. Describe the different stages in the evolution of economic effort and give their characteristic features.

23. "India is rich in the possession of natural resources." How is it then that India is poor?

24. Select any two agricultural products of India. Suggest improvements in their production and utilisation that would lead to the enrichment of the country.

25. (a) In order that India may become rich again should we first try for agricultural improvements or industrial development?

(b) Account for the decline of the Indian industries.

26. Discuss the possibility and advisability of using modern agricultural machines and implements in India.

27. How has the development of the means of communication and transportation in India affected rural industries and agriculture in India?

28. Account for the industrial backwardness of the people in India. Can India become a leading country in manufactures? Give reasons in support of your answer.

29. How has the introduction of Jute and Tea cultivation affected the people of India? Why does the Indian Government impose duties on the exports of tea and jute from India?

30. Discuss in detail the processes, organisation, prospects and suggestions for improvement of any cottage industry.

31. Account for the agricultural backwardness of India. How can the condition of the Indian peasant be improved and India be made more wealthy?

32. What conditions favour the growth of (a) a large industrial centre, (b) a prosperous sea-port, (c) a profitable railway line? Use Indian illustrations.

33. What conditions have favoured the development of railways in the Indo-Gangetic plain? Why are there no railways in Nepal or Kashmir? Select any Indian railroad, name the chief cities on the line and give the density of population and main type of freight of different sections of this line.

34. Write a short note on the natural resources of India and say how people are now-a-days utilising them.

35. What are the chief sources of power used in India? Why do people use different sources of

power? Indicate directions in which more power may be sought and applied.

36. Draw a map showing the soils in different parts of India and the areas that need more irrigation.

37. Discuss the importance, uses, production, supply and consumption of any two of the following products:—

Wheat, rice, cotton, jute, tea, tobacco and sugar.

38. India is rich in the possession of natural resources. Why, then, are the Indians poor? Suggest some means of improving the economic condition of India.

39. Select any two important industries of India. Give their past history, present condition and your suggestions for their future development.

40. Draw a map of India showing the important industries of different parts of the country.

41. Define and discuss the factors of production and bring out clearly their relative importance.

42. What are the reasons that led to large scale business? Does it pay to produce on a large scale? If so, name the advantages accruing therefrom.

43. What is meant by the terms 'internal' and 'external' economies of production? In what way does a large scale business avail of these?

Describe briefly the history of productive effort.

44. Define the Law of Diminishing Returns. Are there any exceptions to this Law? Is it applicable to manufactures? Explain the term 'decreasing costs.'

LABOUR.

1. Define Labour. Is labour always disagreeable? Is it perishable?

2. Show that what may be production from the individual point of view may not be production from the social point of view.

3. Enumerate the various requisites to efficiency of labour. What kind of labour do we have in India?

4. What do you understand by the term 'Mobility of Labour?' Is labour in India mobile? Give reasons for the immobility of labour in India.

5. Explain the statement :—"There is an army of labourers, and the factory managers still complain of the dearth of labour."

6. What is meant by the density of population? On what factors does it depend in India?

7. (a) How are the people of India distributed in different occupations?

(b) What factors determine the labour force of India? Estimate it.

8. Account for the high rate of infant mortality in India. Discuss its consequences.

9. What is meant by dynamics of population? What is being done by the Government and by the

philanthropists to decrease the high death-rate in the country? In what manner do the Municipal and District Boards reduce the death-rate. What would you do to stop the growing rate of mortality if you were appointed a chairman or an executive officer with powers of initiative?

10. Comment on the statement :—

(a) "Indians are a poor people in a rich country."

(b) "Indian labour is low paid but dear."

(c) "There is an underemployment in India but industrialists complain of scarcity of labour."

11. Draw a map of India showing the density of population in different parts of India.

12. Compare the average wealth per head of the population of India, with the *per capita* wealth of other countries. Account for the difference?

13. Classify labour according to quality. What sort of labour do we have in a large number in India?

14. Account for the industrial backwardness of the people of India. Can India become a leading country in manufacture? Give reasons to support your answer.

15. How is the population of India divided between towns and villages? How has this distribution or population been affected by the occupation of the people of India? How would you re-distribute the population of India to reduce the pressure on soil in certain areas.

16. Is the labour of the following productive? If so, what does it produce? The mason, the overseer of a gang of labourers, the broker, the merchant, the ekkawala and the professional gambler.

17. What do you mean by density of population? Account for its variation in different parts of India.

18. What is meant by efficiency of labour? How would you make the Indian labourer more efficient?

19. Account for immobility of labour in India. How would you try to make Indian labourer mobile?

20. What makes the individual worker efficient? How does the employer contribute to the efficiency of labour?

21. Of what use is the census of India to a student of Economics? Give the characteristic features of Indian labour. Discuss the effects of social customs on the mobility of labour in India.

22. State the principle of substitution and explain how it is availed of by producers.

CAPITAL.

1. What is Capital? Distinguish between Circulating and Fixed Capital and Acquisitive and Productive Capital.

2. Explain how capital is accumulated. Name the various motives that lead people to save. Is hoarding saving? If not, why not?

3. What is Free Capital? Specialized Capital? Give examples. Is land capital? If not, why not?

4. Define the term 'Capital.' Distinguish between Fixed and Circulating Capital. Which of the following are Capital:—

(1) Seed Corn, (2) A lawyer's knowledge of law, (3) Hoarded rupees. (4) The health of a coolie, (5) The good-will of a business, (6) Motor car of a doctor.

ORGANISATION.

1. (a) Describe the economic organization of an Indian village.
(b) Describe the changes that are taking place in the economic condition of India.
2. Describe the main features of the modern age of production.
3. Define division of labour and enumerate its advantages and disadvantages.
4. Of what importance is the principle of interchangeable parts in the mode of production that we have today? Is it useful for those that are using motor cars, bicycles, etc.?
5. What is a representative firm? Name the advantages that are enjoyed by such a firm. In what way will such a business be affected if sudden depression took place in the market with respect to the commodity produced by that firm?
6. Explain carefully how a cotton manufacturer would begin to earn large profits. What conditions would help him?
7. Mention five of the chief characteristics of our economic organisation and discuss one of them.

8. What are the advantages and disadvantages of competition? How can advantages be secured and disadvantages avoided?

9. What is division of labour? Explain how far it has been carried in modern industry.

10. Explain the following :—

(a) "It must be however remembered that the test applied to industry is not, is the output large? but, does it pay?"

(b) Enumerate the various divisions of labour. What do you understand by "territorial division of labour?"

11. Write short notes on any one of the following :—

- (1) Localised industry.
- (2) Attracting customers.
- (3) Packing department.
- (4) Specialisation.

12. What do you mean by the localisation of industry? Enumerate the advantages of a localised industry. Are there any localised industries in India?

ENTERPRISE.

1. What are the functions of an enterpriser? What other terms are used synonymously with enterpriser?

2. Explain the partnership form of management. What difference do you find between the partnership of business, and joint stock company?

EXCHANGE.

1. Define value, and show how values in use are influenced by values in exchange.

2. What is meant by Barter? Why did Barter fail? Do both parties gain in exchange?

3. In what manner has exchange been facilitated by the introduction of money as a medium of exchange?

4. Distinguish between a Demand Schedule and a Demand Curve. Construct an imaginary Demand Schedule and corresponding Supply Schedule, and explain where the price will be located.

5. What is a Market? Distinguish between a World Market and a Municipal Market.

6. Distinguish between Market Price and Normal Price. Why is the latter called a long period price?

7. Explain the statement "Foreign Exchange is an exchange of goods for goods."

What is meant by the term 'favourable balance of trade?' When did India have an unfavourable balance of trade during the last seventy years, and why?

8. What effect did the Industrial Revolution have upon the industry and trade of India? How were agriculture and arboriculture affected?

9. Trace the effect of the development of means of transportation and irrigation upon the prosperity of India. Why should both be developed side by side? How far did the Government carry out the policy of developing them simultaneously?

10. Explain the quotation given below:—

“It may be more cheap to export raw goods and import manufactured goods. But if India is to win stronger position as buyer and seller in the markets of the world, she must deepen the channels and regulate the action of her stream of production..... If the concentration of the agents of production on a great variety of undertakings is to prove advantageous, it must be on industries unaffected by drought. If the natural forces of industrial competition have not accompanied that aim then deliberate and determined action alone can achieve it.”—(Loveday)

11. Estimate the position of the trader or the middleman in the economy of the Indian Internal Exchange. It is said that in a small village it is not profitable at all to open a shop, and that is why the system of weekly markets, etc., came into being. Explain why a shop cannot be maintained in a small village.

To what extent is it the effect of the Standard of Living?

12. What are the chief characteristics of the Indian Foreign Trade?

13. Draw an imaginary Demand Schedule of an individual for a commodity showing lowering of the

schedule when income falls, and raising when it rises. Draw the curves as well.

14. What is meant by the term 'Elasticity of Demand?' Arrange necessities, comforts and luxuries in order of the elasticity of demand for them. Give examples and draw curves.

15. Discuss the relation of price to expenses of production in different periods of time.

16. What is meant by Supply and Demand? How is price determined?

17. Explain the Law of Demand. Distinguish between elastic and inelastic demand and give examples of each. How does a Demand Schedule differ from a Demand Curve?

18. Discuss the effects of competition.

Would charges for electric current have been less if there were four electric supply companies instead of only one? In what cases is co-operation more desirable than competition?

19. What is a Demand Schedule? A Supply Schedule? Make hypothetical demand and supply schedules for sugar in your district. (Take the population of the district being about two millions.) Explain how you arrive at this price.

20. If the exchange of Indian food grains with English cloth takes place at a fair rate, which country would be the gainer?

21. What effects on prices should be expected from an invention that makes possible the carrying of fresh milk from distant places to Calcutta?

22. Select an Indian commodity in common use. Has any change taken place in the extent of the market for this commodity? Give reasons in support of your answer.

23. In a given market at a given time—

A	is willing to buy	800	mds. of wheat	at Rs. 8	a md.
B	" " " "	1,000	" " " "	" " 6	" "
C	" " " "	1,200	" " " "	" " 5	" "
D	" " " "	1,500	" " " "	" " 4	" "
X	" " " sell	1,000	" " " "	" " 3-8	" "
Y	" " " "	2,000	" " " "	" " 4-4	" "
Z	" " " "	3,000	" " " "	" " 5-8	" "
W	" " " "	1,500	" " " "	" " 8(?)	" "

What would be the market price in this market and why? Who would be the marginal pair?

24. What are the causes of the rise in the price level?

Prepare index numbers from the following data:—

	1900	1901	1902.
	Rs.	Rs.	Rs.
Iron	50	53	51
Wheat	4	3-8	4-4
Cotton	1	0-12	1-4
Wool	4	3-8	4-8
Leather	2	2-8	3

What do these index numbers indicate?

25. Explain the following statements made by Moreland :—

- (a) Price depends upon supply and demand and *vice versa*.
- (b) "The production of wealth as well as the consumption is diminished in a community where any considerable proportion of the members adopt a religious way of life."

MONEY.

1. What is meant by free coinage? Is there free coinage in India?

2. Define the following :—

- (a) Standard Money, (b) Token Money,
- (c) Credit instruments, (d) Representative Paper Money.

3. Distinguish between Seniorage and Brassage. Does the Government charge any seniorage on the Indian coins?

4. What is meant by legal tender? Name the coins that are legal tender in India and also the extent to which they are?

5. What is Gresham's Law? Explain why it is true. Are there any exceptions?

6. What are the factors that determine the value of money? What is the effect of the increase in the volume of money upon prices?

7. What is a Bill of Exchange? What are the internal Bills of Exchange used in India?

8. Distinguish between a Letter of Credit, and a Cheque. In what manner do they facilitate exchange?

9. Explain the following terms :—

(a) Home Charges, (b) Convertible and Inconvertible Paper Money, (c) Gold Exchange Standard, (d) Appreciation and Depreciation of Currency.

10. Do you make a loan to the Government when you receive currency notes as money?

What is meant by fineness of coin? Give Indian examples.

11. What is meant by (a) limited legal tender, (b) bad money, (c) heavy money, (d) appreciation of money; (e) inconvertible paper money?

Can money disappear from circulation? If so, how?

12. Would an increased supply of money affect the crop from any piece of land or butter from any cow?

13. What is meant by (a) legal tender, (b) token money, (c) brassage, (d) seniorage, (e) free coinage? Use Indian illustrations if possible.

14. Explain and clearly distinguish between debasement and depreciation. What is Gresham's Law? What dangers attend the issue of paper money in large quantities?

15. How would you make payment to the Times' Book Club, London, for a large number of books purchased by you from the Club? What is C. O. D. ?

DISTRIBUTION.

1. What is meant by the Distribution of Wealth? Name the shares. To whom does each of these go ?

2. What does the National Dividend consist of? Does it include services as well ?

3. Show as clearly as you can that the forces governing, are also forces influencing distribution.

4. In what manner does the Marginal Productivity determine the remuneration ?

5. Does the Marginal Productivity theory of distribution assert that the owner of each unit of a factor in Production gets the actual product of that unit? Explain clearly.

6. Bring out as vividly as you can the relation of the Law of Diminishing Returns to the problem of Marginal Productivity. Give examples.

7. In accordance with the Marginal Productivity Theory of Distribution, is the reward of each of the factors determined independently of the rewards of the other factors? Give reasons.

8. Mention the chief kinds of goods necessary in order to produce any commodity. State how the services of each of these kinds is remunerated.

9. Describe the distribution of grain on the threshing floor of an Indian village. Name all the

people who obtain shares and state what services they have performed. Can you group these into four or five 'factors of production?' Are the shares fixed by custom or by competition?

10. What is National Income or National Dividend? Explain as clearly as possible the relation of National Income to the welfare of an individual and of a community? Is satisfaction limited by the output?

RENT.

1. Define Rent. Why is rent paid at all for the use of the land?

2. Enunciate the Ricardian Law of Rent. Why is it not applicable to India?

3. What is Economic Rent? How do you calculate it?

4. Where there is no non-rent land from which to measure, may we still think of Economic Rent as being measured by difference in Productivity? Explain.

5. Does rent enter into the cost of production? Is high rent of land a cause of high price of the product? Explain.

6. Distinguish between the Producer's Surplus and the Contract Rent.

7. Give the traditional law of rent. How far does it apply to India?

8. Discuss the influence of custom on rents, wages and prices in India.

9. Define and discuss rent. Is the relation of landlord and tenant essential to the idea of rent? Distinguish between economic rent, ground rent and contract rent. Which of these can be measured? Give reasons for your answer.

10. How is the rent of a farm determined? Distinguish between economic and contract rent. Mention the different classes of people who have been benefited by improvements in methods of cultivation and transportation in India. If you were renting land, would you pay more if you intended to grow wheat on it instead of oats?

11. In Bhutan ten acre plot of land range in productivity from 20 to 28 maunds as shown by the diagram which covers all the land to which the Bhutanis have access. Suppose that for each 100 of population a new plot has to be cultivated. What would be the total rent paid if the population were 900 ? 1800 ? 2300 ? 2900 ?

20	20	20	20	20	20
21	21	21	21	21	21
22	22	22	22	22	22
23	24	24	24	25	25
25	26	26	26	26	26
27	27	27	28	28	28

Suppose all land rent were released, how would this affect prices? Give reasons in support of your answer.

12. What do you mean by the term 'land tenure'? In what manner has the Agra Tenancy Act of 1925 affected (a) the tenants, (b) the landlords?

INTEREST.

1. What is Interest? Distinguish between Interest and Rent.

2. Name the elements that go to make up Gross Interest over and above the Net Interest.

3. In what manner do the savings of the people affect the rate of interest?

4. Is it a sufficient explanation of interest to say that the interest is the excess of the output that is turned out when capital is used, over what would be turned out if labour would be employed without capital? Why?

5. What relation does interest bear to the discounting of wealth? In what manner is the latter affected by education?

6. In what manner does the Marginal Productivity Theory affect the interest? Explain it as clearly as you can.

7. What are the characteristics of persons and of incomes which influence the rate of interest? Show how the various influences operate to fix the rate of interest.

8. When you gladly pay to the Railway Company for having your travelling bag safely kept in the cloak room for a few days, why do you refuse to pay the

banker for keeping your money even for a number of months? Could the rate of interest go down to zero?

PROFITS.

1. What do you understand by Profits in the popular sense? What items should be deducted from the Gross Profits in order to get the Pure Profits?

2. What are the sources of profits? Is it socially desirable that the enterpriser receive profits in compensation for undertaking risks? Justify your answer.

3. Differentiate between bonds, debentures and ordinary shares.

4. What do you mean by the term 'profit'? Why a blacksmith sometimes seeks services in the Railway workshop instead of carrying on his business independently in his own workshop?

5. Select some Indian industries and account for the presence or absence of large profits in them.

WAGES.

1. What is meant by Wages? Under what conditions does a man pay himself?

2. In what manner does an increase in demand affect labour? And also an increase in the supply of labour? Under perfect competition amongst the members of a group having same efficiency, will there be two rates of wages? Give reasons in support of your answer.

3. Why is there an inequality between the wages of men and women? Why do rates of wages differ from occupation to occupation?

4. Does the reduction in the hours of labour lead to the productivity of the labour? What is the real justification for the shortening of the eight-hour day?

5. In what manner does the Standard of Living affect wages? Does a rise in the standard of living necessarily mean a rise in wages?

6. Define task wage. Why are the sweepers in India so low paid whereas the drain cleaners in America are paid very high wages?

7. Explain clearly the effect of Trade Unions upon wages. Account for the existing inequality of wages between the different classes of labour. Why do the wages of labourers in the villages differ from those in the towns? What fixes the relation between wages in different occupations?

8. Account for the existing inequality in wages. How are wages determined? Why do the wages of men and women differ?

9. (a) Why are washerman's charges higher in America than in India?

(b) Has a man to be paid to play?

(c) Would you like to work in a factory without getting any wages?

(d) If the Government orders every Indian to wear standardised costumes as uniforms,

what would be the economic effects of this order ?

10. (a) Illustrate the difference between money wages and real wages. Why do people earn different wages in different occupations ?

(b) If the rate of interest is determined by the demand for and supply of capital, what determine the demand for and the supply of capital ?

11. Why do the wages differ in different occupations? Account for the difference in wages paid to men and women workers. Can Trade Unions raise wages? If so, how and to what extent ?

12. (a) What is your idea of distribution ?

(b) How does a man's standard of living influence his wages ?

(c) How does an increase in population affect rents ?

CONSUMPTION.

1. Indicate briefly the way to spend your income most economically.

A house-wife has to buy cloth, fuel, buttons, sugar and tea. She has Rs. 6-8-0 with her. Each unit of each of these commodities costs eight annas. How would she spend her Rs. 6-8-0 if the utilities of the different units were as follows :—

Cloth	Fuel	Button	Sugar	Tea
...	...	...	...	11
10	...	...	10	10
9	...	9	9	9
8	8	8	8	8
7	7	7	7	7
6	6	6	6	6

How would a reduction in price from eight annas to four annas affect her purchase?

2. Define and discuss consumption and bring out very clearly the difference between the popular and economic sense of the term 'consumption.' Do you agree with Mill when he says that saving and spending both are consumption? In case you do not agree with him, give reasons for your disagreement.

3. (a) Illustrate with examples the following statement:—

"The food possesses utilities, *i.e.*, power to satisfy wants, and just as we measure production by the amount of utility created, so we measure consumption by the amount of utility enjoyed."—(Penson)

(b) Explain the following statement with reference to the rise of fresh wants and its effects upon the civilization of the nation. "Appetite comes with eating."—(Penson). Do you agree with

Mahatma Gandhi's proposal of cutting down the wants to mere subsistence level? Give reasons in support of your answer.

4. How many kinds of consumption are there? Is there any distinction between consumption and production goods, wealth and capital? Give illustrations to make your answer clear.

5. What is national income? Explain as clearly as possible the relation of national income to the welfare of an individual and of a community. Is satisfaction limited by the output?

6. Enumerate the main characteristics of wants, and point out those upon which important laws of economics are based. Which important law is based upon competitive wants? How does this characteristic affect the distribution of our income? Do we make a selection out of those commodities that satisfy the same wants? What is the criterion of choice?

7. (a) Enumerate and discuss different kinds of wants.

(b) What is standard of living? Is it a fixed thing? What bearing does it have upon the industrial efficiency, or the social and political organization, or on the development of the people as a whole?

8. (a) What is the measure of utility?

(b) Define and discuss (1) the laws of diminishing utility and marginal utility, (2) consumer's surplus, (3) total utility.

Cloth	Fuel	Button	Sugar	Tea
...	...	...	...	11
10	...	...	10	10
9	...	9	9	9
8	8	8	8	8
7	7	7	7	7
6	6	6	6	6

How would a reduction in price from eight annas to four annas affect her purchase?

2. Define and discuss consumption and bring out very clearly the difference between the popular and economic sense of the term 'consumption.' Do you agree with Mill when he says that saving and spending both are consumption? In case you do not agree with him, give reasons for your disagreement.

3. (a) Illustrate with examples the following statement:—

"The food possesses utilities, *i.e.*, power to satisfy wants, and just as we measure production by the amount of utility created, so we measure consumption by the amount of utility enjoyed."—(Penson)

(b) Explain the following statement with reference to the rise of fresh wants and its effects upon the civilization of the nation. "Appetite comes with eating."—(Penson). Do you agree with

Mahatma Gandhi's proposal of cutting down the wants to mere subsistence level? Give reasons in support of your answer.

4. How many kinds of consumption are there? Is there any distinction between consumption and production goods, wealth and capital? Give illustrations to make your answer clear.

5. What is national income? Explain as clearly as possible the relation of national income to the welfare of an individual and of a community. Is satisfaction limited by the output?

6. Enumerate the main characteristics of wants, and point out those upon which important laws of economics are based. Which important law is based upon competitive wants? How does this characteristic affect the distribution of our income? Do we make a selection out of those commodities that satisfy the same wants? What is the criterion of choice?

7. (a) Enumerate and discuss different kinds of wants.

(b) What is standard of living? Is it a fixed thing? What bearing does it have upon the industrial efficiency, or the social and political organization, or on the development of the people as a whole?

8. (a) What is the measure of utility?

(b) Define and discuss (1) the laws of diminishing utility and marginal utility, (2) consumer's surplus, (3) total utility.

9. Discuss the economic aspect of spending.

10. How do you distinguish between expenses of production and expenses of consumption? Make a list of principal expenses of production and of consumption of an Indian cultivator.

11. Enumerate and discuss the various characteristics of wants, and point out the part that they play in the science of economics? Give examples where necessary.

12. Define utility and differentiate between total utility and final utility; if possible give illustrations.

13. Enumerate the chief characteristics of wants. Are all wants satiable? If so, why? If not, why not?

14. What is Engle's Law of Consumption? Does it hold good among your acquaintances? If your income were Rs. 50 monthly, what proportion would you be likely to spend on food, on clothing, on other purposes? If it were Rs. 125? If it were Rs. 15?

15. What income per month would you consider necessary in Allahabad to provide a family of five with (1) the 'necessaries of life,' (2) a reasonable amount of the 'comforts,' and (3) some of the 'luxuries'? Explain what you mean by the Standard of Living of Families with the incomes you have just mentioned.

16. State the Law of Diminishing Utility and discuss the reasons for believing it is true.

17. What is meant by 'Consumer's Surplus'? Can you always measure it in terms of money?

18. Select an article of (a) luxury, (b) comfort, and (c) necessity used by you, and give graphical representation of the Consumer's Surplus enjoyed by you from their use ?

19. What is truly an economic method of spending one's income ?

A man has Rs. 20 with him. He has to buy food, clothing, shelter and ornaments. Each unit costs Re. 1. How many units of each commodity would he purchase if the utilities of the different units are as follows :—

Food	Clothing	Shelter	Ornaments
10	8	6	3
9	7	5	2
8	6	4	1
7	5	3	0
6	4	2	
5	3	1	
4	2	0	
3	1		
2	0		
1			
0			

20. How does an individual spending his income affect (a) producers, (b) other consumers ? Are wastage and use of luxuries profitable ?

21. "Our wants evoke our activities and our activities evoke fresh wants." Comment. "The physical environment is in reality the basis of all economic activity, but man can modify his environments."

Explain and illustrate this statement with Indian examples.

22. Enumerate and discuss the various characteristics of wants and point out the part they play in the science of economics ? Give examples where necessary.

23. Define utility and differentiate between total utility and final utility ; if possible, give illustrations.

24. Criticise from the economic point of view the following edict passed by Ibn-i-Saud's Moral Council, established recently to improve the morals of the people :--

“That population must not trim or shave their beards, must clean shave their heads, or leave their beards entirely uncut, and any way avoid European styles. That they should not wear gold ornaments, or silken cloths, and also should not wear titles and decorations awarded by ex-king Hussain.”

25. What is luxury ? Is luxury justifiable ? If so, under what circumstances ? Will you keep a cook who cooks more food than you can eat at one meal simply on the ground that God has created ravens and other birds and they must also be fed ? Why do you rebuke and fine your servant when he breaks your plates ?

26. Define and discuss wealth. Are the following wealth :—

(1) Sand in the builder's yard.

- (2) Air to the diver.
- (3) Jumna River.
- (4) A Canal.
- (5) Sunshine.

TAXATION.

1. What do you mean by (a) direct and indirect taxes, (b) incidence and impact and (c) taxes and local rates ?

2. Distinguish between—

- (a) Taxes, fees and rates.
- (b) Direct and indirect taxes.
- (c) Productive and unproductive expenditure of Governments.
- (d) Incidence and effects of a tax.

Examine the Indian Tax System and say how far it approaches perfection.

On whom do the following taxes fall :—

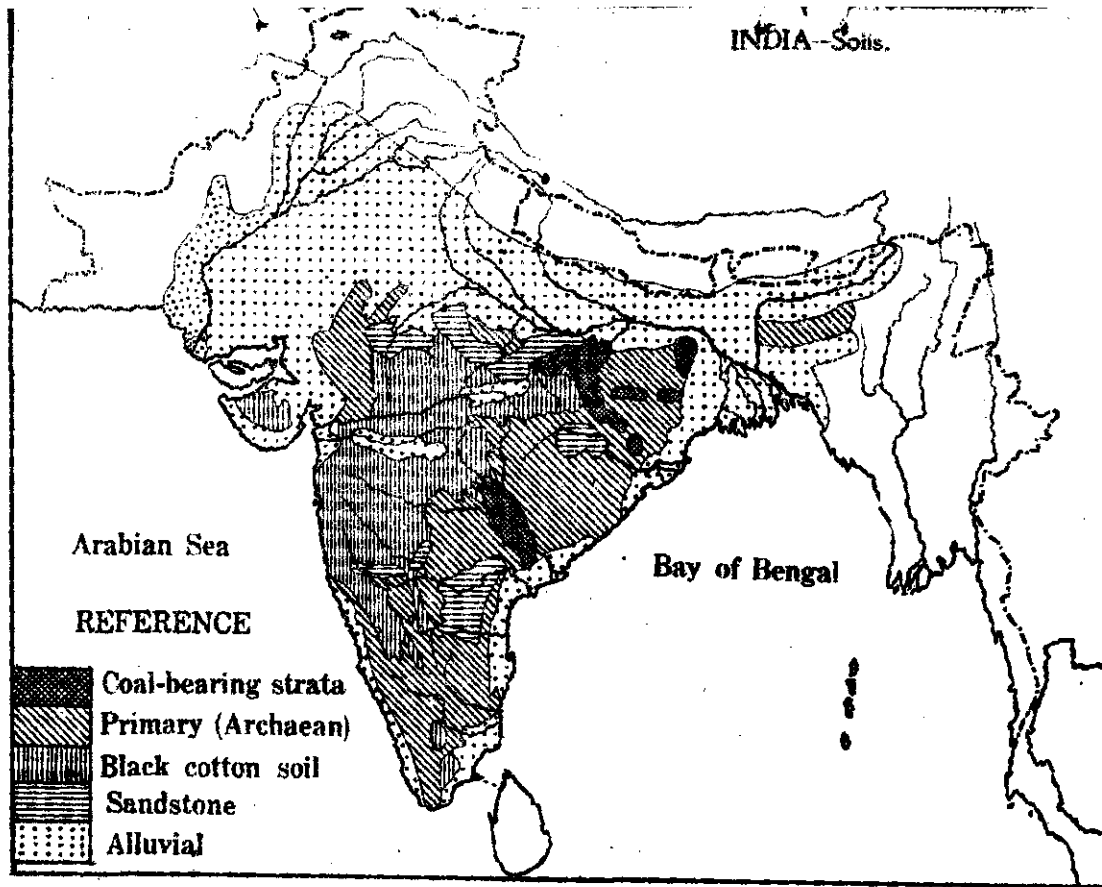
- (a) Import duty on Manchester cloth brought into India.
- (b) Excise duty on Indian cloth.
- (c) Export duty on Indian jute.

3. What are the heads of income and expenditure of the Government of India ?

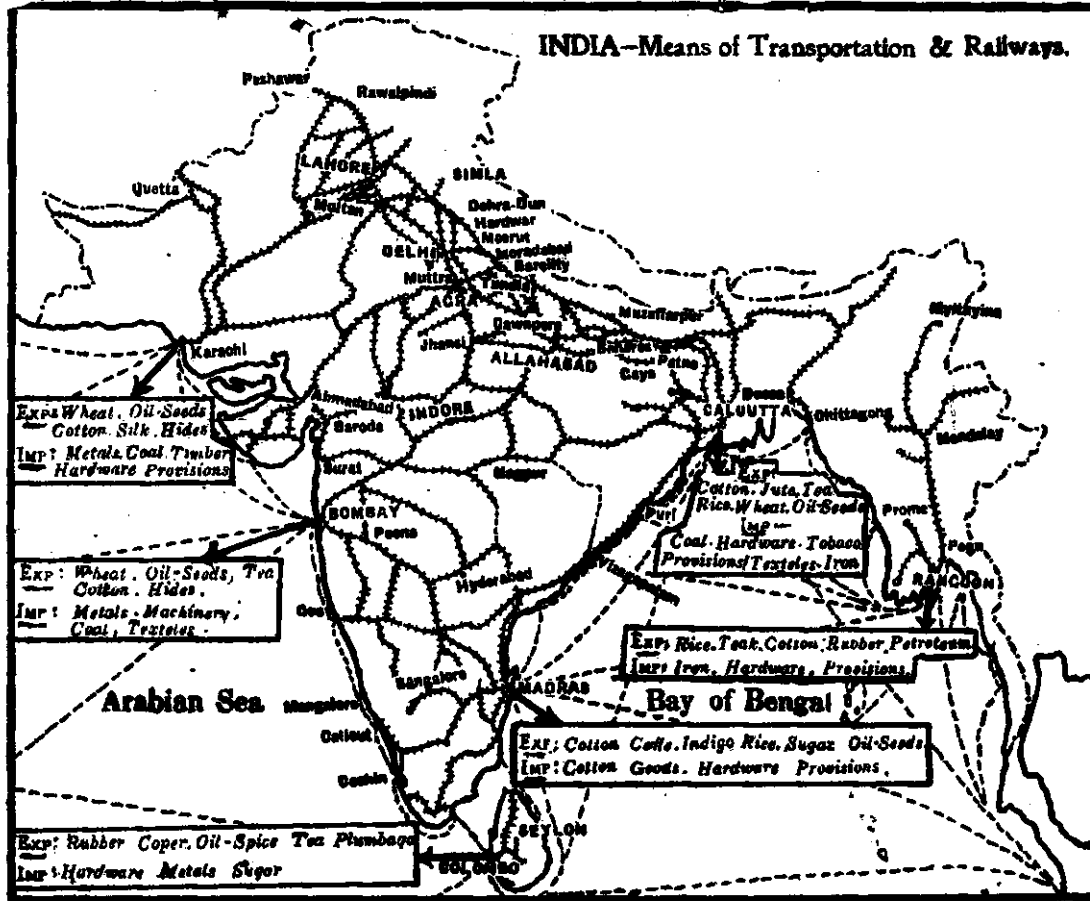
4. Name the sources of income of the Local Government and the District Boards.

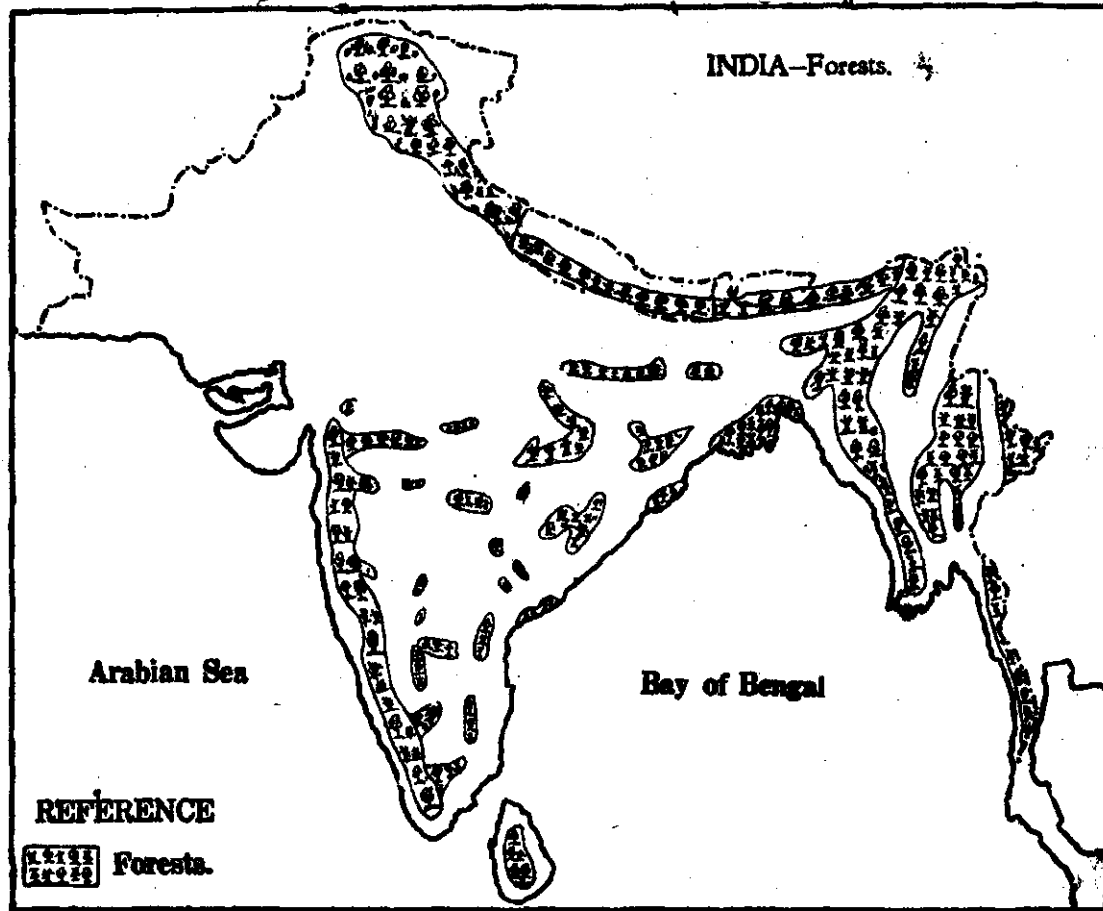
5. Make an imaginary budget of the Bombay Municipal Corporation.

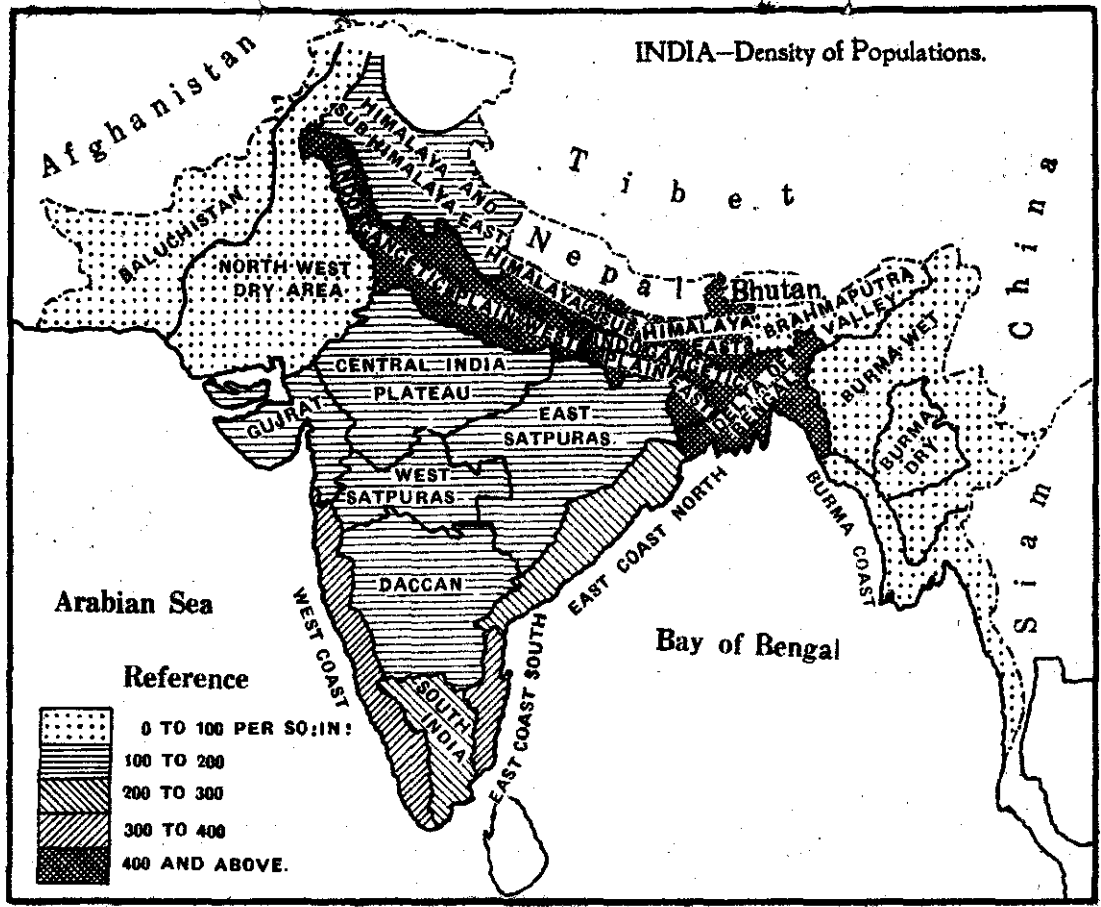
SECTION III
Maps



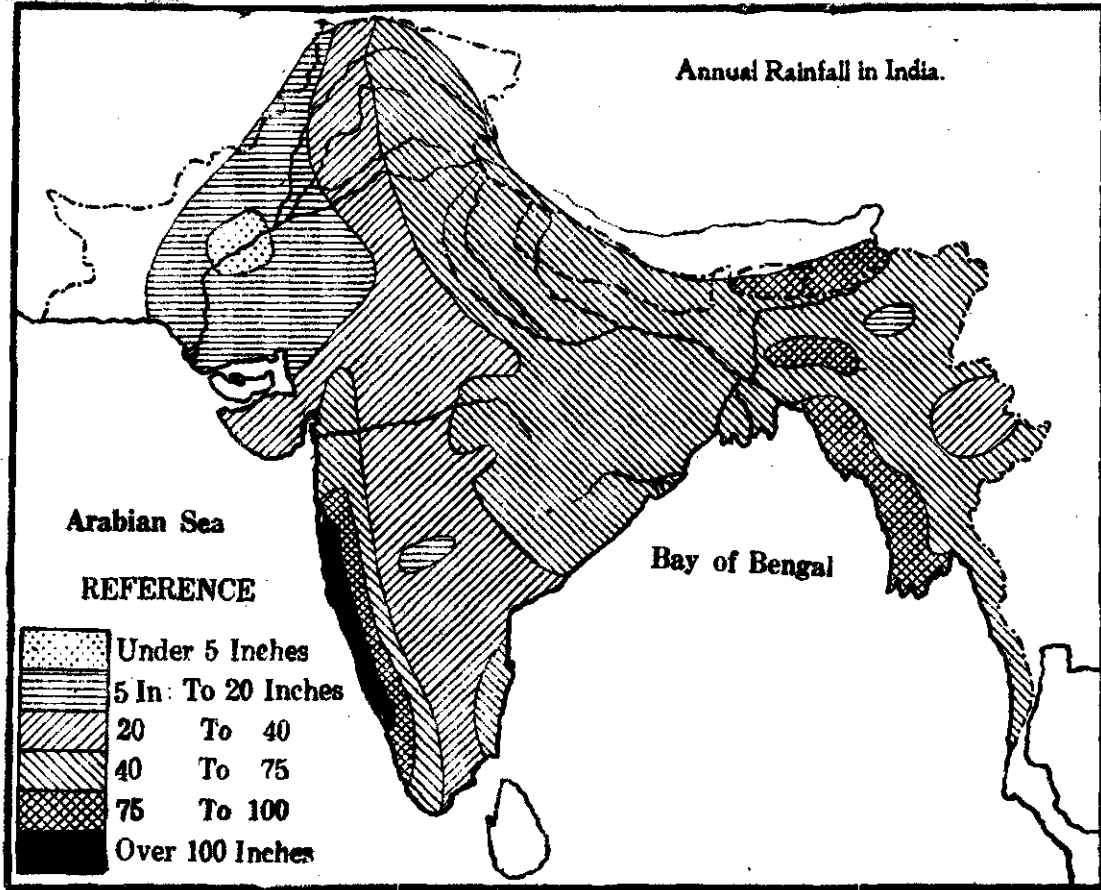
INDIA—Means of Transportation & Railways.



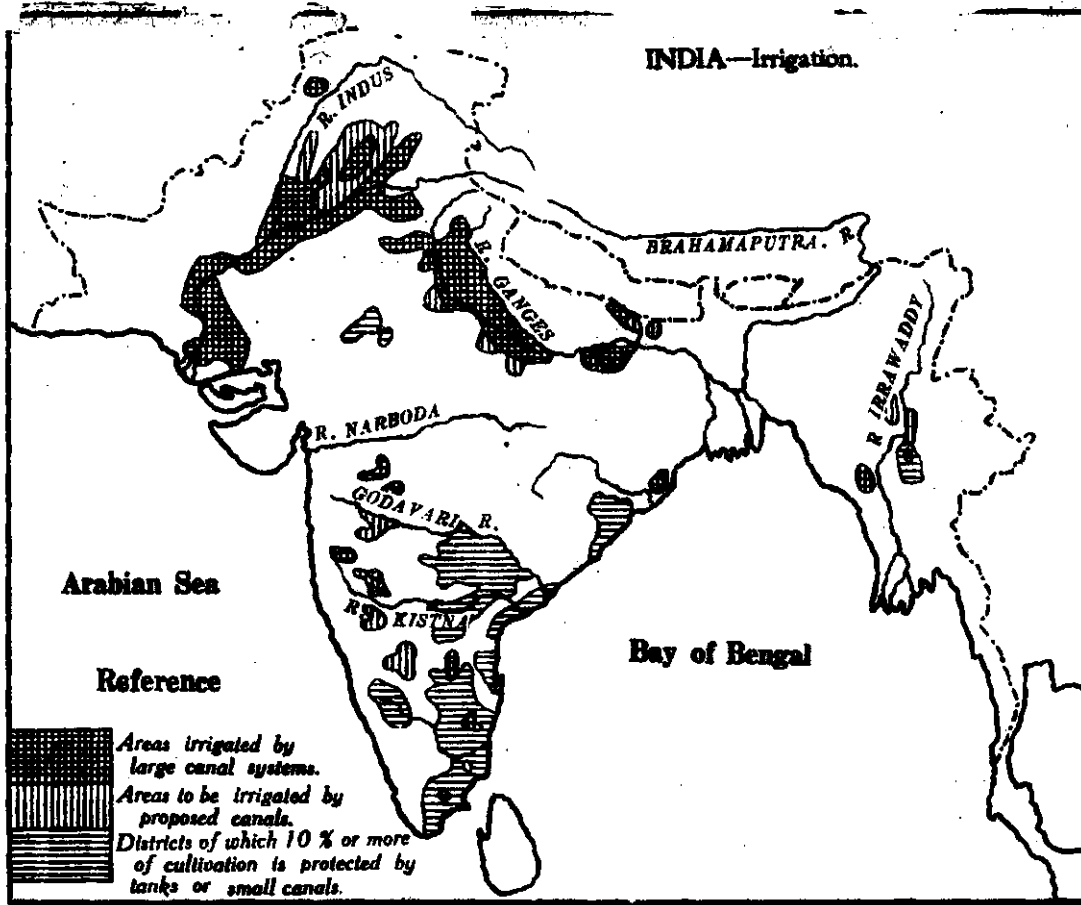




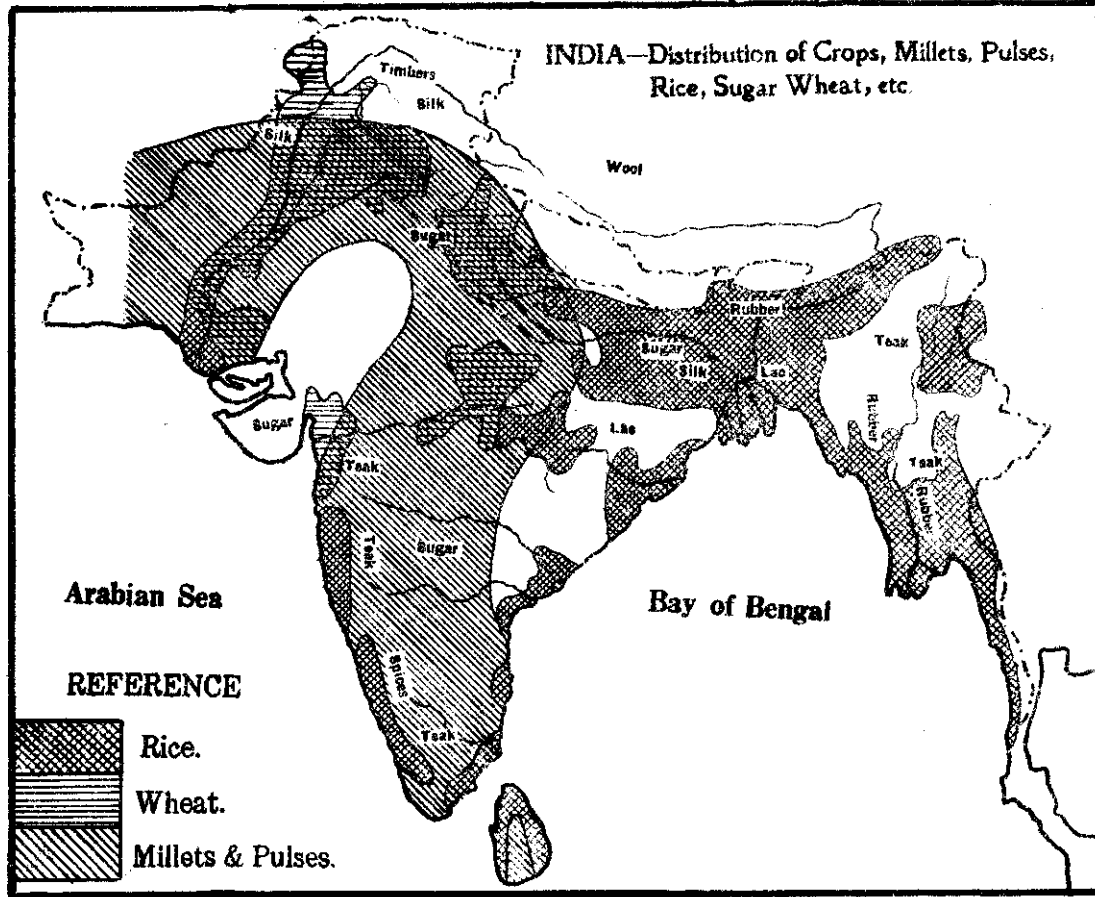
Annual Rainfall in India.



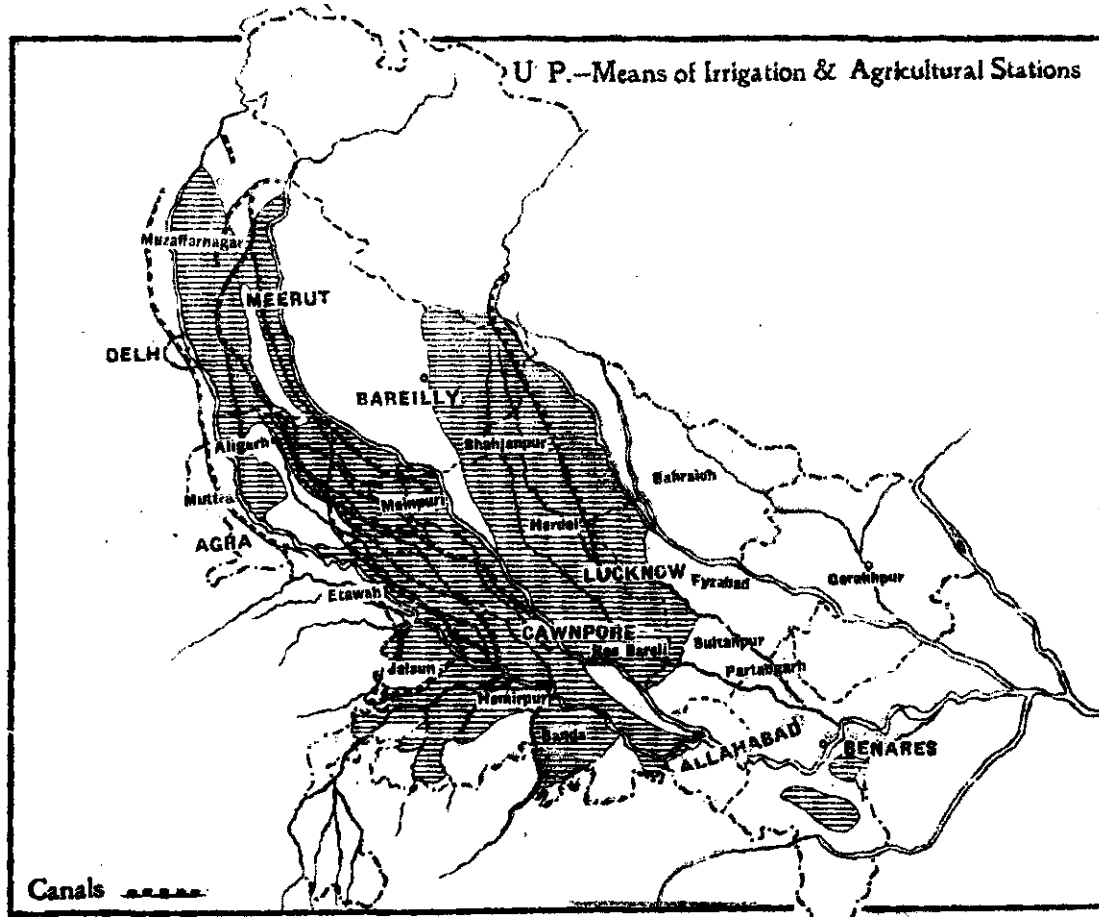
INDIA—Irrigation.



INDIA—Distribution of Crops, Millets, Pulses, Rice, Sugar, Wheat, etc.

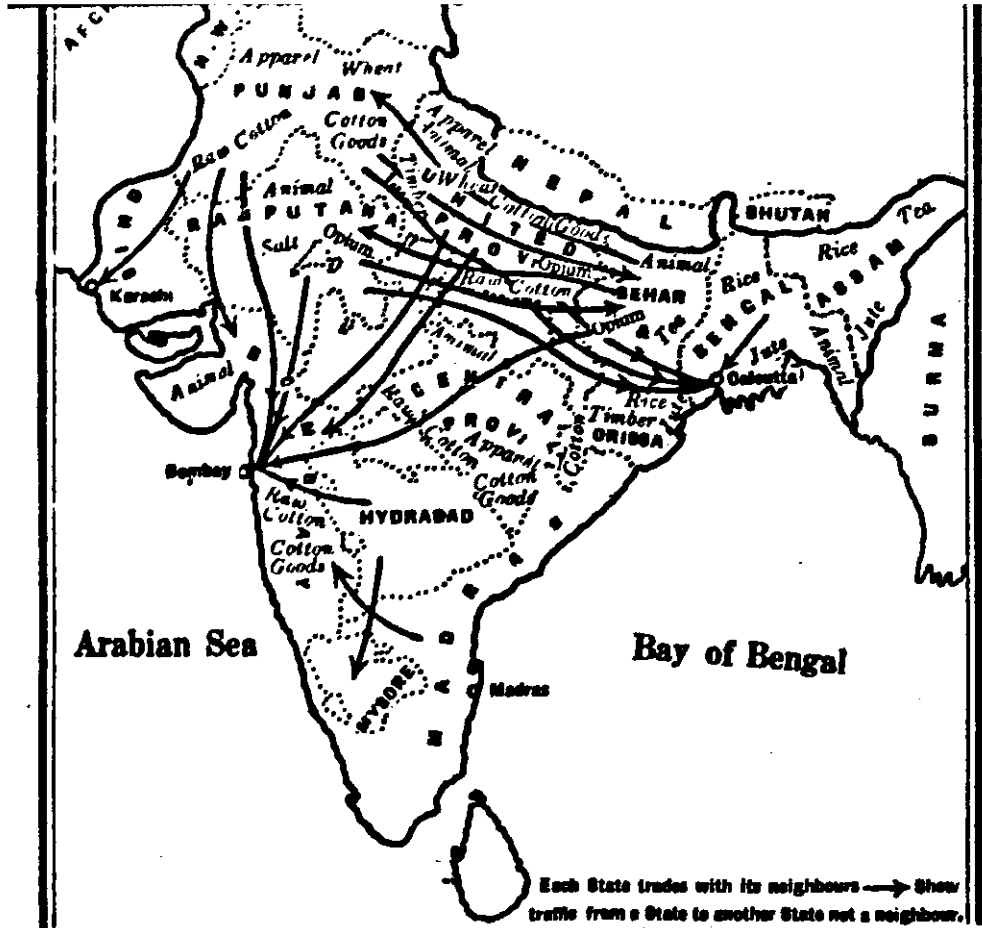


U P.—Means of Irrigation & Agricultural Stations



Canals -----

Each State trades with its neighbours → Show traffic from a State to another State not a neighbour.



Each State trades with its neighbours —→ Show traffic from a State to another State not a neighbour.

FOR ONE YEAR I.F. FROM JULY 1926 TO JUNE 1927.

FARMER'S

N: OF MEN IN THE FAMILY WHO READ 45 & 35 YEARS.
 " WOMEN " " " 35 & 25 "
 " CHILDREN " ONE " 3 " "

PERCENT 100

87.427%
6.551%
3.576%
1.918%
0.488%

FOOD & DRINK

CLOTHES & SHOES

HOUSE RENT & REPAIRS & FUEL & LIGHT.
 RELIGIOUS, CHARITABLE, GUESTS, BARBERS, WASHING, etc.
 SAVINGS AND INVESTMENT.

Rs: 366-6-6

ARTISAN'S

N: OF MEN IN THE FAMILY ONE 4000 40 YEARS.
 " WOMEN " " " NIL
 " CHILDREN " ONE " 5 " "

PERCENT 100

72.623%
6.028%
13.4%
4.342%
3.837%

FOOD & DRINK.

CLOTHES & SHOES.

HOUSE RENT & REPAIRS FUEL &
 LIGHT & PURCHASE & REPAIR
 OF FURNITURE & UTENSILS.

RELIGIOUS, CHARITABLE, BARBER
 WASHERMAN & HEALTH.
 SAVINGS & INVESTMENT.

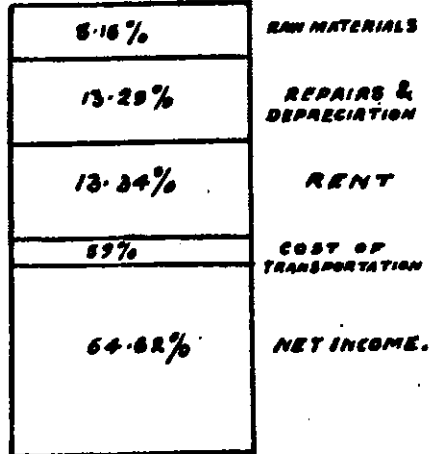
Rs: 234-8-0

FOR ONE YEAR I.P. FROM JULY 1920 TO JUNE 1921.

FARMER'S

NO OF MEN IN THE FAMILY TWO AGED 45 & 25 YEARS.
 " WOMEN " " " 35 & 25 "
 " CHILDREN " ONE " 3 "

PERCENT 100

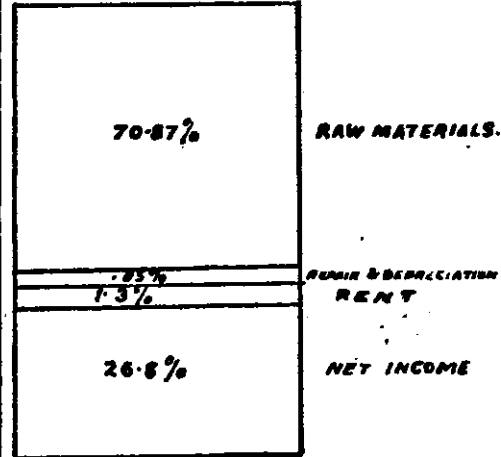


Rs: 575-8-0

ARTISAN'S

NO OF MEN IN THE FAMILY ONE AGED 40 YEARS.
 " WOMEN " " " " "
 " CHILDREN " ONE " 5 "

PERCENT 100



Rs: 886-7-0

ETHICS OF PUBLIC DEBTS.

(Being a Series of Seven Articles contributed to
The BOMBAY CHRONICLE in February-March, 1930.)

3

(2nd Edition)



BY

"POLITICUS."



X75.2.N3
G0

A. G. M. D.

PREFACE.

(First Edition.)

The articles reprinted in this pamphlet originated in the necessity to reply to the gross misrepresentation of the effects abroad of the Indian political developments, in which high Government officials have of late frequently indulged. Their own record of financial administration for seventy years in this country is by no means so impeccable as to permit them to throw stones at their neighbours. The present Series does not give a full historical account of the origin and growth of the so-called Indian Public Debt. But such items as have been selected for special mention would suffice to show the general character of the whole of our "public debt" as it stands to-day.

A careful examination of this "Debt" has led the writer of this Series to demand a proper review of all the items of India's "Public Debt," before an impartial tribunal of International Jurists. If such a review were held, he feels confident the bulk of the "Debt" would be wiped off as not chargeable in law as well as in conscience against the Indian people; and the remainder would admit substantial set-off. India is an original member of the League of Nations. Would the National Congress of the Indian People be allowed to submit such an application for review to that body?

POLITICUS.

BOMBAY,

25th March, 1930.

PREFACE TO THE SECOND EDITION.

The following pages came to birth early in the current year. The atmosphere in India was, even then, dense with rumours and conjectures about an approaching dissolution of the existing regime; and a consequent dislocation of the screws and buckles which had hitherto held it together. The opportunity was, therefore, seized of the first Sterling Loan floated this year by the Government of India in January last to lay out the component elements which constitute the problem of India's "Public Debt." The Indian National Congress had only recently passed a resolution, which was represented by interested parties to the popular mind as equivalent to a notice to refuse payment. The text of the Congress Resolution is, however, amenable to a more orthodox interpretation as a notice to the would-be creditor of India as regards future liability, and a demand for an impartial investigation by some international tribunal into the equity—if not the legality—of the obligations now sought to be fastened upon India in the name of her "Public Debt." The Government of India have, through their finance department, more than once lent colour to such misapprehension of the Congress Resolution. Time and again they have expressly excused the high rates of interest offered for their Sterling borrowings in the current year on the pretence of the unwillingness of the lender induced in him by the political developments in India. These pages were accordingly written, as newspaper articles, to point out how far there was justice in this and like contentions; how far the financial plight of India—needing constant recourse to borrowing—was the outcome of misguided enterprise, or even to actual mismanagement of their task by the Indian financial authorities; and how far, finally, there were similar factors at work in the past which had piled up this legacy for India.

The main thesis demands an impartial investigation. Its argument is developed on the lines of the Law of Contract as well as the principles of Equity applying to a Trustee in the management of the Trust Estate. The present British Government in India have claimed too often to be trustees for the India people—the British Parliament has solemnly described itself to be a Trustee, and the Government in India at present is simply an agent of the British Parliament—to avoid this argument founded on a Trustee's responsibility.

How far the argument is effective; how far the counter-claims urged on behalf of India are sustainable; how far the analogies instanced are valid—must necessarily be left to the reader to judge for himself. The writer would only express his hope that his effort, taken collectively, will make a case for investigation and adjudication, without pre-judging the issue as indicated in these pages.

The finances of India have not improved since these pages were first penned; nor has their management been amended in any way which would render the main argument in these pages, and its underlying *motif*, nugatory. In the course of the year, the Government of India have already floated 3 Sterling loans, in January, in May, and in October last, making an aggregate of £25 million. The yield to the investor in each case is well over 6 per cent. The net burden of the Government of India is over 7 per cent., if we take into account the immunity from the Indian Income Tax of the investor in the Sterling securities of the Government of India. Each time the loan was several times over-subscribed, which clearly indicated that the panicky tone of the Indian Government was less than justified. The fact, moreover, that private corporations in Britain engaged in public utility services, like the Electrical enterprise, obtain all their capital requirements in the London market at less than 5 per cent.; and even then their loans have been over-subscribed, makes the Nationalist mind in India more than ever sceptical as to the technical competence, if not the general bona fides, of the Indian financial authorities, and the Government of India as a whole.

In addition to these Sterling borrowings there was a considerable Rupee loan this year in India. Despite the intense trade depression—or perhaps because of it—the loan could hardly be described as a failure. And yet even that addition has not sufficed to meet the needs of the Government of India. They have been almost incessant borrowers in the short term market through the instrumentality of their Treasury Bills. The aggregate outstanding on this account was, at the end of October last, over 54 crores. This is besides the increase, if any, in the Post Office Cash Certificates. All these indicate bad finance; and though the Indian financial authorities might retort by saying that the income of the Government has suffered seriously owing to the political developments in the country, they cannot escape the indictment that when the Budget was framed it was their duty to foresee these factors and allow for their effects. They have

failed to read the writing on the wall. Their Budget estimates¹²³ in the Ways and Means section, provide only for a Rupee loan of some 23½ crores net new cash; the balance of 26 odd crores being made up for from the various reserves and unfunded debt. There was no provision for any Sterling borrowing; and yet there has already been a heavy demand on the Sterling market, before the financial year of the Indian Government is eight months old. Their most considerable revenue resources have, no doubt, shown substantial shrinkage, but that is not taken to be the warning it is by the powers that be. And so the orgy of a reckless and incessant addition to the burdens of India goes on unchecked, till the Indian people have begun to wonder if it be not all a deliberate penalising of them for having ventured to call their self-made Trustee to account for the Trust estate.

The question of the equity of these obligations being fastened upon the Indian people—as a sort of a condition precedent to their acquiring a Dominion Status in the British Commonwealth of Nations—has a significance in India, and to the Indian economic system, which people outside India can never appreciate. The most crying evil of the Indian economic system is the load of unproductive indebtedness under which the present—the primary producer in India—labours. Perhaps not even a tenth of this debt is real capital borrowed. It is largely made up of accumulations of unpaid interest, which even when the debt was first incurred, was beyond the ability of the peasant ever to pay. If the recurrent charge of interest is unpaid because impossible to pay, what chance can there be for the repayment of the capital burden of this debt? The Indian peasant, however, knows of no Limitation Law, which would render an unacknowledged obligation of a given age to be ineffective, or at least unenforceable at law. The Statute of Limitations obtains nominally in India. But its benefit goes only to large capitalists, well-versed in the wiles of legalised robbery of their fellows. The peasant is too honest and unsophisticated to have recourse to such a law. And his money-lender generally takes good care to see that even if the borrower was made aware of such a remedy, he would not be in a position to take advantage of that remedy. For the reconstruction, however, of the Indian economic system, the problem created by this is a direct challenge. Without going the length of a wholesale and categorical repudiation of all obligations, those intent on re-making the Indian economic system might well be allowed to investigate if the claims they

are faced with are really due from them. In equity, as well as economy, much of these claims can simply be not sustained; and hence the urgency as well as the expediency of this problem of our "Public Debt." Even in Nationalist India there is still sufficient strength of orthodox economics to venture the statement that the leaders of Nationalist opinion will not resolve lightly upon wholesale repudiation of public or private indebtedness, unless forced to such a measure by absolute despair. The advantages of beginning with a clean slate are no doubt clearly perceived; but the ways and means of attaining to such a clean slate are not by any means clearly perceptible. The moment is, therefore, doubly ripe for an open and impartial investigation into the entire question, not only because the resulting award of a burden on India, if any, will, there is good reason to believe, be honestly and amply met by India; but also because such an investigation would set a most valuable precedent for the unjustly overburdened Indian peasant, for whom sheer decency demands some relief, in a manner that the common conscience of an enlightened world can approve of.

The plea is, accordingly, put forward in these pages for a full, free, impartial investigation into the entire question of the Indian public Debt, without any confusing of the issue by ideas about Repudiation on the one hand, or unconditional acceptance of the total burden as presented by the present steward of the property on the other. The realisation is growing fast in Europe, indeed, that the burden of debt, as created by the last War, must be regarded as a legacy of our collective insanity. Enlightened humanity can do no better than agree simultaneously and universally to wipe it out. The assets against the liabilities of this European War Debt are far more substantial—in the judgment of the present writer, in European countries—than those in the hands of an emancipated and self-governing India to meet the obligations sought to be imposed on her. But even that consideration should not be allowed at the stage when the question is under investigation to prejudice or pre-judge the issue in any way. If an international and independent tribunal, after due hearing of all the arguments and counter-claims that India may have to put forward, makes any award against the Indian people, that people cannot avoid that final award without placing themselves outside the pale of commercial civilisation and intercourse. On the other hand, if the claims against India are adjudged to be unsubstantial, or unfounded in law and equity; or, if India is allowed

to participate in some all-round plan for the liquidation of the world's burden of past follies and mistakes, the claimants against India could have no reason to grumble for such an eventuality, for those who join to bring about such a decision will, it may safely be assumed, make adequate provision to see that the process of writing off the bad debts of mankind does not result in unnecessary and avoidable hardships upon private individuals. The writer trusts that this view of the case presented in these pages will be constantly kept before whosoever takes up this problem in an earnest desire to solve it in justice and equity; and, if that is assured, there is no reason to apprehend any disaster or needless hardship in any direction.

No changes have been made in the text of the Articles as they originally appeared, but advantage has been taken of a new edition to add a few footnotes to bring the argument up to date; and also a table showing the growth of the Indian Government debt from 1820, together with general reasons for such additions to the debt.

POLITICUS.

London, December 1, 1930.

LAHORE CONGRESS: RESOLUTION, DEC. 1921. 25

This Congress is of the opinion that the financial burdens directly or indirectly imposed on India by the foreign administration are such as a free India cannot bear and cannot be expected to bear. This Congress, while re-affirming the resolution passed by the Gaya Congress in 1922, records its opinion for the information of all concerned that every obligation and concession to be inherited by independent India will be strictly subject to investigation by an independent tribunal; and every obligation and every concession, no matter how incurred or given, will be repudiated if it is not found by such a tribunal to be just and justifiable.

PUBLIC DEBT.

THE ETHICAL STANDPOINT.

Mahatma Gandhi writes in the " *Young India* " :—

Thanks to the Congress resolution on public debts, important literature on the subject is springing into being. The " BOMBAY CHRONICLE " is rendering a service by publishing the informing series of articles by *Politicus* on this subject. Financial problems are always a dry subject, requiring concentration and some previous study. It is for our learned economists to put these problems in an interesting manner capable of being understood by the public. The series by *Politicus* is an attempt in that direction. I am not, however, sure that the presentation of his subject cannot be made simpler, even if that should require a fuller treatment. I pick up from the series two things for the reader's consideration. After examining all available figures, *Politicus* concludes that " the aggregate burden of all kinds of ' Public Debt,' owed by all sorts of authorities, and incurred for no matter what purpose or in what form, will be not much short of Rs. 1,200 crores at the present moment. This is about half of India's total annual wealth in material goods of all kinds. And that wealth barely suffices to give only one meal a day, of the coarsest kind, to every human being in the land; and that, too, if we exclude all other needs of human life." If this statement is true, it constitutes a black record of crime against India. It shows that the debts are largely unproductive. If these obliga-

tions were healthy, our wealth should have so increased as to give more than enough to every one of us to eat. Having summed up the total debt, *Politicus* examines the ethics of the obligations, and sums up thus:—

“ The fact, however, must be repeated, that hitherto, the debt has been contracted by the Government without consulting the people of India; that the latter have no power to vote the borrowing programme of the debt charges, even under the reforms of 1919-20; and that any condition precedent to the recognition of our political majority, even in the form of a full Dominion Status, which will serve as an encumbrance for all time to come on the people of India, without their explicit consent or confirmation, must, in law as well as conscience, be held to be void. The trustee liquidating or dissolving the trust is entitled, of course, to a full statement of accounts regarding his management of the trust, so that no unexpected claims or counter-claims be urged against him subsequently by the beneficiaries coming into their own. But that is no reason why the trustee should be permitted to insist, on the occasion of dissolving the trust, that all his claims against the trust estate shall be passed and adopted, without examination, by the erstwhile beneficiaries under his trust.”

ETHICS OF PUBLIC DEBTS. I.

By "POLITICUS."

NEW STERLING LOAN EXAMINED.

The recent flotation of the Government of India of a Sterling Loan, yielding, from the stand-point of the burden on the Indian Exchequer, something like 7.5 per cent. to the investor, has given rise to serious criticism, which needs, however, to be explained in its elementary bearings.* The place, moreover, of the counter criticism, which makes the Indian political aspirations particularly responsible for these heavy burdens in favour of alien capitalists, is also unintelligible, until and unless one perceives the full bearing of public credit and its use in these ways, in the true economy of a community. It is, therefore, proposed to examine, in this series of article, not only why and how the debt is generally incurred; but also its place and contribution in the general economic development of a people.

CONDITIONS OF FOREIGN BORROWING.

Let us begin by dissecting the reasons for this latest flotation of the Government of India. At Budget time last year, India's present Finance Member admitted in principle the unwisdom of having recourse to foreign markets for borrowing. Said he, in para. 75:—

"I entirely agree in principle with the policy which was advocated by my predecessor that Government finance should be based as far as possible on attracting rupee capital in India. It is only in so far as money cannot be raised from the investing public in India that I should ever consider having recourse to sterling borrowing. . . . How far it is possible to follow out this policy depends almost entirely on the people of India. If all the money which

* This refers to the Government of India 6 per cent. bonds for £6 million issued in February, 1930, at 99, and redeemable at par in June, 1932, or at 101 in June, 1935. This was for paying of India Bills and railway capital expenditure. In May, 1930, another £7 million in 6 per cent. bonds, repayable 1933-35, was issued at 99 for railway and general expenditure. The net yield, allowing for profit on redemption at par in 1935, was nearly 6½ per cent. This was also heavily over-subscribed. In October, 1930, another £12 million was raised at 6 per cent. in 1935-37 bonds, issue price being 100. The increase in the burden on the Indian Exchequer, owing to the exemption of the sterling interest from the Indian Income tax, has been mentioned in the Preface. No accurate estimate can, however, be made of the real weight of the burden on the Indian tax-payer, paying for these burdens in produce whose money-value is steadily falling due to an enforced policy of deflation necessary to maintain the artificial exchange value of the Indian Rupee.

now goes to the import of treasure was to be made available for investment in productive undertakings, India's needs for foreign capital might well disappear."

This somewhat lengthy extract is needed, not only to record this financial testament of our administrators; but also the more effectively to show how far the criticism urged by the Indian public against the latest creation of Sir George is well-founded.

Let us, first of all, consider the conditions which necessitated this loan in the first instance. At the commencement of the current financial year, Sir George had budgeted for Ways and Means as shown in these figures:—(in crores of rupees).*

Liabilities.				
Railway Capital Outlay	...	...	...	26.5
Purchase of Railways	...	...	...	7.0
Other Capital Outlay	...	...	...	2.1
Provincial Government Transactions	...	...	...	7.2
Discharge of Debt	...	...	...	3.9
Miscellaneous	...	...	...	1.4
Total	...	...	...	48.1
Assets.				
Rupee Loan (Net)	...	...	...	18.0
Sterling Loan (Net)	...	...	...	7.0
P.O. Cash Certificates	...	...	...	5.3
Other Unfunded Debt	...	...	...	4.9
Debt Redemption	...	...	...	6.0
Depreciation and Reserve	...	...	...	5.8
Reduction of Cash Balance	...	...	...	1.1
Total	...	...	...	48.1

* The Ways and Means Section of the Indian Budget is a summary of the resources and obligations of the Government in a given year. It includes capital obligations more particularly, and so comprises the capital resource of borrowing. The following figures relating to the Budget for 1930-31 will serve to illustrate the point:—

In crores of Rupees.				
Resources or assets.			Obligations or Liabilities.	
Revenue Surplus	...	.35	Railway Capital	16.75
Rupee Loan (net)	...	23.50	Purchase of Railway	—
Sterling Loan	...	—	Other Capital Outlay	3.97
Treasury Bills	...	-4.00	Provincial Transaction	7.93
P.C. Cash Certificates and Savings Banks	...	6.20	Discharge of Permanent Debt	18.84
Other unfunded debt	...	3.16	Other Transactions	1.86
Appropriation for reduction of debt	...	5.90		
Depletion of Reserves	...	5.27		
Reduction of Cash Balances	...	8.62		
		49.00		49.35

Some of these items of liabilities are open, in themselves, to criticism; and the Finance Member has certainly not answered the entire charge-sheet against himself, when he has enumerated these as the irreducible obligations of the State of India, to be met somehow in the course of the year. In fact, his own remarks, properly construed, must make an open-minded critic doubtful if Sir George is himself not aware of the thin ice he is skating on in respect, for example, of the perennial capital outlay for railways in India. On the other hand, there are on the assets side items, which, in a true conception of the duty of the rulers—and such rulers, at that—towards the ruled, must demand far fuller explanation before recourse is had to foreign borrowing than seems to have been the case, despite the Finance Member's protestations already noted. Take them seriatim:—

PROSPECTS OF RUPEE LOANS.

A loan was floated in India in June last, and was open to subscription from the 20th to the 28th of that month. They offered the loan in two divisions: A loan proper, to be redeemed not earlier than 1939, and not later than 1944, at 5 per cent., at 96-1/2 issue price. Conversion Rights and Depreciation Fund provision were promised as usual; and the maximum cash subscription invited to this part of the total loan was fixed at Rs. 12 crores. In addition, 5 per cent. Bonds, to be redeemed in 1935, were simultaneously issued at 98; and the maximum cash subscription invited to this part of the loan was fixed at 15 crores. In spite of this aggregate of 27 crores, Government reserved to themselves the right to close the list at the moment the actual cash subscriptions exceeded 18 crores. As the result, the aggregate subscriptions, by way of older loans and bonds tendered for conversion, and the new cash subscriptions, amounted as follows:—

Total Subscriptions of all kinds ... Rs. 36.86 crores.

Of these, fresh cash subscriptions was 13.26 crores, being 10.02 crores for the Loan proper, and 4.24 crores for the Bonds. There were, in addition, 37 lakhs of Treasury Bills exchanged against this Loan; and the rest of the subscription was in the form of Bonds payable in 1930, 1931, and 1932. So far as the cash subscription was concerned, the loan was not a failure; and Government might well feel themselves short of their requirements by at least 5 crores.

THE FLOATING CHARGE.

For the Ways and Means Budget, however, Government do not rely entirely on their permanent loan programme. They have an excellent alternative in the shape of either the Post Office Cash Certificates, or the Treasury Bills of 3, or 6 or 12 months' duration. The former is an excellent method of investing savings for the ordinary citizen, and has a no less beneficial indirect effect in promoting the banking habit, which Sir George professes himself so anxious to develop in this country. It is, however, a cruel irony of fate for our rulers in this land of marvels, that their professions tally so little with their practice. One need not believe them to be thorough-going hypocrites when one merely points out that the financial authorities of India have not done all they could well have done in developing this excellent medium of small investment. According to the latest report of the Controller of Currency, there were outstanding, at the end of the last financial year, 32.30 crores of these certificates, while the other deposits in the Post Office Savings Banks aggregated some 34½ crores. Have Government done all they well might do to encourage these methods of investment and popular banking in India? I think not. True, the yield from the P.O. Cash Certificates has recently been somewhat raised; but it in no way corresponds to the high yield of this sterling loan. And in view of the other conditions restricting its amount, etc., the P.O. Cash Certificate seems to have a vitality of its own, which Government have not encouraged as they should have done. According to his own condition, Sir G. Schuster is in honour bound not to have recourse to foreign money markets—and at such rates as the last—unless and until he has exhausted all such means. It is difficult to say how much floating money of this kind is available in India, particularly at this season. But, if the balances of the Post Office Savings Banks are any index, if the current deposits in the Exchange Banks are any guide, the loan for 8 crores floated in England could have been easily taken up by the genuine—as distinguished from the speculative—investor in India. That is, if only the right conditions for calling out such capital had been offered.

TREASURY BILLS TAKE UP CURRENT CASH.

Then there is the Treasury Bill. Sir George, in his Budget, seems to have allowed for only 4.9 crores of such unfunded debt to help him make up his Ways and Means.

Exactly how much of these Bills are in the hands of the public, and how far in this way Government have taken up for their own requirements the current cash of the community, I am not in a position, at the moment, to say. But a recent question in the Assembly elicited the information that over 130 lakhs were paid already by way of discount on these Bills during the year. Some must, however, have been repaid out of the aggregate borrowings in this manner. But the figure above mentioned might well be taken to represent an outstanding liability in respect of these Bills of close upon 40 crores, if not more.* These Bills are offered in such large units that only Banks and great financiers can take them up. As the liquid, or floating, capital of the community is taken up in this manner for their own needs by Government, the genuine commercial needs must needs be starved. And through the dearth of short term, liquid, capital in commerce, the industry also suffers a chronic shortage of its indispensable life-blood.

MANIPULATE THE CURRENCY.

This is not all the indictment. In the course of the year, they have considerably, and more than once, contracted the volume of currency notes in circulation† This operation is needed from time to time to maintain the exchange value of the rupee at 18d. For, if rupees were at any time allowed to be too plentiful, by the mere action of the laws of supply and demand, the exchange value of the rupee—in its origin an unnatural, artificial creation—must sag. Incidentally, however, because the currency supply of the community is thus restricted and reduced from time to time, capital begins to be dearer, and ever more dear. Government thus force the market up against themselves by their own acts. And they, poor devils, cannot help this idiotic maze of a vicious circle. For, if they did not manipulate the volume of currency, every time that the Rupee-sterling exchange showed signs of going against India, they would have the mortification to find their exchange resolutions exploded like thin bubbles into ether.

* In the current financial year, practically the entire day to day financing of the Government seems to have been done by Treasury Bills, whose outstanding aggregate has exceeded 55 crores. The interest charge on Treasury Bills being paid in the shape of discount is ordinarily not noticeable.

† The process of deflation in India takes the shape, either of notes withdrawn from circulation, or of rupees in the currency reserve which are frequently sold off as silver, the loss being written off in the shape of the notes held against that silver being cancelled. The aggregate of such deflation in the last four years is estimated at 100 crores. No wonder Indian prices have fallen so heavily.

And, if they went on manipulating the currency volume from time to time, they must confront a dear money market in the busy season of the year, viz., October to March. There is, of course, no choice left to them but to follow the involutions and evolutions of this endless maze of their own creation. It may be that, in the course of this vicious circle, they find industry dying and trade languishing. Take the figures of the foreign trade for the nine months of the current year, and contrast them for the corresponding period of the last year. Last year, our exports all told were, by this time, 221 crores : this year, they are 214 crores. Sir George Schuster might, perhaps, be gratified at the fact that this year the bullion imports in payment of our favourable foreign trade have fallen very considerably, even in proportion to last year, which itself had marked a record decline. For, for the first ten months of this year we have only imported about 19 crores net of gold and silver, as against 27 crores roughly about the same time last year. But, alas, even though the people have taken the sage advice of Sir George against this wasteful habit of taking payment for their goods in honest money, to the extent of reducing their imports of precious metals by nearly a third, if not more—they have, really speaking, a progressively reducing means of buying such luxuries—he can afford to have no mercy upon them.* Or rather, instead of using the surplus apparently indicated by his own index of prosperity, Sir George prefers to invite the foreign capitalist; and at rates of interest, which in effect are fifty per cent. better than he thought it worth his while to offer to the Indian investor, large or small. True, the interest paid to the Indian lender would remain in the country; while the interest on sterling loan is an endless drain-pipe, which goes on progressively impoverishing this country. What do Sir George and his like care for such trifles? True, again, the high terms offered to this Sterling Loan are, by the "equal" facilities for investment therein offered to Indian capitalists, likely to attract what small surplus of floating capital might still be lingering in some nook or corner in this country. But what of either? The capitalists and big bugs will be pleased, even if they are not in silent partnership with the Government in this barefaced organised loot. Not a single awkward question seems so far to have been addressed to the

* The foreign trade of India in the current year has been showing a decline, since last April, on the import side, as compared to last year, of over 40 per cent., while on the export side, the decline in value seems to be partly compensated by quantity owing to fall in prices.

Finance Member *apropos* of this loan, though the Secretary of State himself assured the Indian gullibles the other day that exploiting of India had ceased, and would discontinue absolutely in the near future. These are the usual claptraps of modern democracies, which no one misses to utter when they look excellent salad-dressing—but which no one believes in. The only sufferer is the tax-payer. But then, why does he support such Congress maniacs as the talk of Repudiation of Debts? Don't they need a lesson to be taught? And is this not an excellent method of teaching an overdue lesson? There was no talk of repudiation in 1921, when another such ruinous 7-1/2 per cent. loan was floated in England. But what of that either? They rule in this land on the excellent maxim of "Heads I win, and tails you lose." And woe betide the hardy critic who dares to point out the intrinsic absurdity of this position, or even hints at mere despair driving the Indian to think of insolvency as the only way out of an intolerable, unjustifiable, burden. After all, to him it cannot but appear as a mere cutting of the losses: and a time might come when he may be past caring what his creditors and governors think of his expedients of despair.

ETHICS OF PUBLIC DEBTS. II.

EXCUSES FOR INCURRING DEBT.

Reflections on our last Sterling Loan cannot but ingeminate further heart-searchings on the entire nature and volume of our Public Debt. There is a variety of ways in which the aggregate of India's public debt can be, and is, viewed.

(1) You may consider the nationality of the creditor, or the issue-place of the debt; and, according to that, classify the total debt between Rupee Debt, mostly held in India, and probably by Indians; and Sterling Debt, issued in Britain, and held largely by Britishers in Britain. The distinction is not a mere matter of domicile of the creditor. The English, or Sterling Debt, is a contractual obligation, that has hitherto been held to limit effectually the sovereignty of the Government of India, such as it is, so far as to exempt the interest payments on these debts from any taxation of income by the Government of India. Not only that non-nationals of our country are principally concerned in this debt, and consequently hold on our Government the Damocles' sword of foreign intervention in the event of any—the justest—abrogation of these entrenched vested rights being thought of in this country. They create, by mere imitation, and the logic of the transfer of claims by purchase in the open market of such bonds or debts by Indians, a corresponding class of vested interests in this country of its own nationals, that cannot be too strongly deplored. In the present plight of India's political constitution, the existence of such specially privileged interests is particularly ominous; and no really sympathetic Indian Government could dream of adding to these.

HEADS I WIN, TAILS YOU LOSE.

The distinction between the Sterling and the Rupee Debt is further significant, because of the differences in the currency in which the debt and its annual burden have to be met. The Interest on these Sterling Loans, and the other "Home Charges" of the Government of India, are, between them, responsible for the whole of that trouble, loss, and injury, which we associate with the currency problem of this country. The foreign creditor, entrenched already in a specially privileged position, and backed by the overriding might of the

100

Secretary of State, has always been in a position to demand his pound of flesh, more harshly than any Shylock of the poet's fancy. For when the rupee declines in value as compared with the pound sterling, he naturally demands that his interest be paid to him in the terms of the contract, i.e., in sterling, which would thus indemnify him against any loss in the purchasing power that may have resulted from the depreciation of the rupee currency. And when the rupee is artificially appreciated, as in recent times, he nevertheless can sleep in peace; since the manipulation of currency by his bondsmen in the Government of India will assure him of such an integrity of the purchasing power of the pound sterling that he will incur no loss. When the pound is really depreciated, as after 1918, they, the Government of India, see to it that no proposals are adopted for the repayment, bodily, of the corpus of the debt in England; even though India may have about that time large adventitious surplus to her credit for such redemption. And when the pound appreciates, we consider it excellent opportunity to borrow still further, to take advantage of the appreciation in the purchasing power of the sterling(?). For, have we not always an insatiate borrowing programme on the eternal excuse of our so-called productive works, whose productivity can only go on if you go on feeding them with fresh morsels of capital borrowed in Britain?

WHITE ELEPHANT IN RAILWAYS.

(2) Another basis of classification, that in some respects runs crosswise over the first, divides all our debts into productive and unproductive. Precisely what constitutes productivity is not strictly—much less statutorily—defined. To make up for the lack of precise definition, they have introduced a volume of presumption that classes all new debt, as well as old, as productive, which is supposed to be incurred for a particular class of outlay. The exact purpose for which a given loan is eventually spent is not so much thought of, as the aggregate of the whole class of such projects. For example, the entire class of Railways—excluding what are called “strategic lines,”—is now assumed to be a productive asset. And so, any loan which is supposed to be incurred for the general excuse of railway expenditure, will be regarded as productive, even though the particular line for the construction, extension, or expansion of which the specific loan is incurred may be wholly unproductive, or unproductive for a long

number of years. Even thus, the term "productive" is used, not in the sense of adding new material wealth to the sum total of our annual national dividend; but to the merely financial aspect of obtaining an income, which would be in excess of all the working expenses of that whole class of assets. Considered in the strict sense of productivity, i.e., as adding periodically to the material wealth of the community, the Railways certainly cannot be regarded as truly productive; for no amount of railway mileage, stations, sheds, can make two blades of grass grow where formerly there was only one. The Government of India themselves have, in their list of assets against their liabilities, items which do fulfill this criterion, viz., their larger irrigation works, expressly constructed for adding to the area of cultivation in the land, and so to the sum total of the annual national wealth. But they confound the truly economic with the merely financial, or at most commercial, aspect of the term "productivity" as applied to an enterprise. In the latter sense their Railways may be considered to be "productive," after fifty years of serving as a white elephant. In the former sense, they never have been, and never can be productive. A strict, impartial review of the history of Railway finance in this country will reveal the astounding fact that not one of the lines which are now regarded as earning assets, was originally constructed as an exclusively economic venture. Motives of strategy have entered into the building of every railway mile in India, and not only in regard to those frontier lines, which are even to-day unable to make both ends meet. Further, no line has ever been able to meet all its expenditure, as well as the interest charge, for a long term of years after it had been opened for traffic. Under the circumstances, to call this vast enterprise "productive" is a fiction of accountancy, which is only tolerated because of the destitution of our governing authorities in matters of economic exactitude. The best example, apart from the railway, is found in the so-called "developmental" debt of the provinces, which has left such a heavy legacy to the Presidency of Bombay, and which elsewhere also shows very little direct productivity of new wealth, or even superior amenities, which might serve as an excuse for such debts.

PROVINCIAL AND CENTRAL DEBT.

(3) This last offers yet another basis for classification of debts. They sometimes divide the total debt according to the

authorities which are primarily responsible for each particular item of debt. In theory, all public debt is the debt incurred by the Government of India, on the aggregate security of the revenue resources of the entire country. In practice, however, and particularly since the "reforms" of 1920, Provinces have been allowed to borrow on their own credit or offer their own credit to the Government of India for such borrowings as they desire to incur through the Government of India. The latter is not constitutionally authorised to demand that no provincial borrowing shall take place except for a strictly and clearly defined productive purpose, as the Federal Government have actually done in the German Federation with respect to the borrowings by the constituent states in the Federation. They are, therefore, not in a position to scrutinise too strictly the provincial excuses for borrowing, quite apart from the argument "*Tu Quoque.*" And then there are the Municipalities, Port Trusts, Improvement Trusts—all semi-governmental bodies, engaged in rendering services rather than in producing new wealth; and depending on taxation of some sort to maintain their credit, rather than on a surplus of their creation, which might enable them to liquidate their obligations easily. This last distinction, based on the authority borrowing, is of significance, only in so far as it adds one more complication against any radical measures that might be thought necessary for the treatment of this debt.

FLOATING AND UNFOUNDED DEBT.

(4) One more distinction—or principle of classification of the public debt in India—and we shall go on to consider its volume and treatment. They speak of the temporary, floating debt, as against their permanent funded debt. The latter, as its very name implies, is an obligation for which some systematic provision has been adopted to meet its annual charge as well as its ultimate liquidation. The merits of that provision we need not consider here. The contrasted item of unfunded, or floating debt, consists of all those obligations represented by the Post Office Savings Banks Deposits, Postal Cash Certificates, Treasury Bills, Ways and Means advances from the Imperial Bank, and "*ad hoc genus omne,*" which is, of course, in addition to the main volume of the debt, and which exposes the public credit to a peculiar vulnerability, the full significance of which does not seem to have been grasped by our present Government quite as fully as they might have.

CROSS BREEDS.

The intelligent reader need not be told that often the actual addition to the volume of the aggregate debt is capable of being concealed or camouflaged, thanks to these cross breeds in the public debt. There are, inevitably, cross currents, which, to be recognised, must unavoidably add to the confusion of the subject, itself a mass of complications. For the sake of simplicity in analysis, as well as the clearness of apprehension of the main thesis, we leave out these cross-currents and needless confusions. Leaving them out, the main elements we have to consider, in this examination of the Ethics of Public Debt, are :—

- (a) The nature of the contract in each case.
- (b) The parties to the contract, including their consent, benefit, consideration..
- (c) The purpose of the debt, and the asset already available against it.
- (d) The treatment of the debt in the past, and the side issues, like currency changes, bearing on the same;
- (e) The analogy of treatment found in the experience of other countries.

These are the main considerations. Incidental points will be noticed as they arise. Let us now consider the volume of the debt in its several classes.

ETHICS OF PUBLIC DEBTS. III 32

THE TOTAL BURDEN.

The aggregate of our Indian Public Debt was given, in the last Budget Statement, as follows:—

(N.B.—Figures are in crores of rupees, and as outstanding on 31st March.)

					In India.	
					1923.	1929.
Loans	...	...	...	...	339.83	396.61
Treasury Bills in Public Hands	...	...	...	...	21.59	6.95
Treasury Bills in P.C.R.	...	...	...	...	40.65	39.15
Other Obligations—						
P.O. Savings	...	...	...	...	23.20	34.74
P.O. Cash Certificates	...	...	...	...	3.13	32.20
Provident Funds	...	...	...	...	36.17	60.42
Depreciation Funds	...	...	...	...	—	31.85
Provincial Balance	...	...	...	...	2.86	8.09
Total Loans	...	...	...	...	411.07	486.71
Total other Obligations	...	...	...	...	65.35	167.40
Total India	...	...	...	...	476.43	604.11

In England.

(In Million Sterling.)

					1923.	1929.
Loans	...	...	...	...	£222.92	282.05
War Contribution	...	...	...	...	19.71	16.72
Capital Value of Railway Annuities	...	...	...	...	61.31	53.35
Provident Fund	...	...	...	...	0.04	0.42
Total England	...	...	...	...	£303.98	352.54
Equal at 1Sd. per Rupee, in crores of Rs.	...	...	...	...	405.31	470.05

Grand Total in Interest Bearing Obligations, in crores of Rupees ... Rs. 881.74 1074.16

CAVEAT: EXCHANGE.

It may interest the reader to note and remember, even at this stage, that the Sterling Debt, converted as above at the present rate of exchange, is little better than an accountancy fiction. For, unless we are liquidating on the spot, such a conversion has no meaning. For all we know and can say to the contrary at present, we may have to face a 16d. rupee at the time of actual repayment, as we are doing to-day in the shape of actual values paid.

CAMOUFLAGE OF PRODUCTIVITY.

There is also another point worth noting. The above statement does not distinguish, as the last Finance Minister was in the habit of distinguishing, between Productive and Unproductive Debt. According to his figures, on March 31st, 1928, the total Productive Debt was Rs. 812.88 crores, of which Rs. 686.54 was owed by the Government of India, and 126.34 crores was on account of the Provincial Governments; the balance of Unproductive Debt on that date being represented to be 178.73 crores. Sir Basil Blackett was, however, in the habit of ignoring certain obligations, which the present Finance Member has included in the Statement above given. It thus represents a truer position than under Sir Basil. It is, however, still not quite accurate, nor up-to-date. If we add the loans floated this year, yielding 15 crores of new money in India, and about 8 crores in England; if we bring into account the increased Treasury Bills of this year; and if we remember to make an adjustment for the difference in the exchange value of the rupee on a more natural basis, the aggregate burden of all kinds of Public Debt, owed by all sorts of authorities, and incurred for no matter what purpose, or in what form, will be not much short of Rs. 1,200 crores at the present moment.* This is about half of India's total annual wealth in material goods of all kinds. And that wealth barely suffices to give only one meal a day, of the coarsest kind to every human being in the land, and that, too, if we exclude all other needs of human life.

* The real aggregate of India's present debt of all kinds, including the flotations, up-to-date as well as outstanding Treasury Bills, must be about 100 crores more than the figure mentioned in the text.

ASSETS.

133

In examining the ethics of a debt like this, we are bound to consider the ' *contra* ' side of the account, before we analyse the contract of debt in its express terms, or its unavoidable implications. Sir George Schuster has in this, as in the other respects, already mentioned, broken new ground, by appending to his last year's Budget a statement of account of the assets of India. These assets are:—

(In crores of rupees.)

	31-3-1923.	31-2-1929.
Capital Advanced to Railways ...	517.22	698.00
Capital Advanced to Commercial Departments	19.43	21.75
Capital Advanced to Provinces ...	87.49	186.95
Capital Advanced to States, etc ...	8.90	15.43
Cash, Bullion and Securities ...	44.80	30.57
	<hr/>	<hr/>
Total Value of Assets	677.84	903.30
	<hr/>	<hr/>

WHAT ABOUT CURRENCY RESERVES.

We are not concerned, for the moment, with the accuracy of these valuations. But the reader must note here, also, that apparently the Securities, etc., held in the Gold Standard and Currency Reserves of the Government of India are not included in the statement of Assets, whereas a portion of the obligations in the Paper Currency Reserve has been included, in the form of Treasury Bills in that Reserve. The obligations in respect of the currency of the country—both the silver rupee and the paper note, which do not possess intrinsically the value they profess on the face of them to bear, and which circulate at all because the people believe the entire credit of the country is behind them—stand on a wholly different footing. But that is no reason why we should not bear in mind our responsibilities in that regard as well. The total stock of silver rupees in the country as a whole is impossible to estimate. But whatever it is, its real value has been reduced to something like 40 per cent. of its face value by the artificial depreciation of the silver. And that, too, on the assumption that, should the whole stock of silver held in India come to be unloaded on the world market, the price of silver would remain even what it is. The price of

silver rupees in the Currency Reserve is given at the face value of 104.04 crores, of gold at 32.27 crores, and of silver bullion under coinage at Rs. 2.03 crores, in the latest statement regarding the Paper Currency operations that I could get hold of. Nominally, this makes an aggregate metallic Reserve of over 76 per cent. against the total Paper Money obligations of some 180 crores in round terms. But is the silver rupee worth anything like what it is represented to be! And if we take it at its true bullion value of somewhere near 40 crores, the total metallic reserve dwindles to the very small proportion of a little over 40 per cent. of the total currency note liability. This is worth considering for its own sake, quite apart from its bearing on the present subject of the ethics of public debts. The artificial depreciation of the silver stocks of this country—whether as rupees or as ornaments—brought about as the unavoidable consequence of the exchange and currency policy of the present Government of India in the last half century—has a vital bearing.

COUNTRY'S RESOURCES MORTGAGED.

Let us now consider the several issues of a legal and ethical nature, raised at the end of the last article. As regards the *nature of the contract* in each case, it is a clear obligation of the Government of India, though the form may not be the same in each case. Sometimes no time limit for repaying the capital is fixed, as in the old $3\frac{1}{2}$ per cent. India Paper; though in recent times a definite time limit, instead of making each loan "payable when able," is coming more and more in vogue. The economics of these two alternative forms of contracting debts are interesting. But we need not side-track this discussion according as the debt is only meant to be an excellent, safe investment for the relatively small investor, unfamiliar with the wiles of the Stock Exchange; or as a clearly economic proposition, on its own merits, as judged by its expected consequences. The interest obligation is sometimes concealed, as in the case of the Post Office Cash Certificates; or only partially concealed, as in loans issued at discount. Sometimes, again, special rights are given by way of conversion into future loans, or assurances for special provision for repayment in the form of a definitely instituted Sinking Fund are also afforded. These raise grave questions of ethics, as regards the parity between creditors of the same party; though I suppose, the differences in parity of treatment in these respects, as between several

classes of creditors, may be said to be evaluated in the market quotations of these several forms of debt. The pledge in almost all such indebtedness is that of the entire national credit, so far as the Government of the country can afford such a pledge. No specific asset, or special branch of revenue, is set apart for the service of the particular debt. That means that, in the last resort, the entire country is responsible for the liquidation of that debt, no matter what may have happened as regards the amounts borrowed. For reasons of economics, the consolidated treatment of the public credit of a country may be advisable; but it is open to argument if the ethical considerations on the same point would bear in the same direction. And the same remark may be ventured on the ethics of Conversion Rights, and Redemption promise, by means of special Sinking Funds.

THE LAW OF CONTRACT.

On the ethical ground, the far more complex and important consideration is that concerning the parties, their consent, benefit, and the consideration given for each debt. The Law of Contract must be appealed to in this matter—at least on all points on which the international jurisprudence may be said to be agreed, and thereby to represent a consensus of opinion, which may well be regarded as the mirror of the ethical conscience of the world. The parties to every contract must be—if the contract is to be held valid at law, and binding in conscience also—of full age; of sound mind, freely bargaining, each with a clear appreciation of its own benefit under the contract. There must be no force nor fraud in inducing either party to an agreement; nor should their consent be obtained under false pretences, or by undue influence, violence, or coercion, moral or physical. Do these elementary considerations apply to the contract of debt incurred by the Government of a country in the name of its people? And, more particularly, do these principles hold good in a case like that of India, where the Government of the country is conducted by the people of another country, and is not responsible to the people of the country indebted? True, in all corporate bodies, such obligations cannot be incurred by and with the consent of each and every member making up the corporation. Someone appointed by the corporation, or holding such a place in the corporation, in virtue of law or usage, which entitled that person or committee to act so as to bind the entire corporation, generally incurs such obligations. But the essential point is that the

corporation should, as a whole, be vested with the final power to accept, endorse, ratify, as also to denounce the obligations thus incurred on its behalf. Even the trustee, acting on behalf of the beneficiaries of his trust, is liable to this implicit condition. And guardians or trustees for minors must particularly abide by this condition. It is good law, and better morals, to insist on this. Otherwise the beneficiaries will have to whistle for their property as against a careless or unscrupulous trustee, who just manages to keep on the right side of the technical law.

THE BENEFICIARIES' RIGHT.

Apply these principles to the case of India. The Indian people are governed—not by themselves, nor by a body appointed by them, or removable by them, or even responsible to them. Their governors expressly declare themselves to be trustees, in their present position, for the people of India. Hence, by express declaration, or by the unavoidable implication of the obvious analogy, the question of the competence of the parties in the contract of our public debt is extremely material. **Like all minors coming of age ; like all beneficiaries under a trust that is being dissolved, we, the people of India, would, of course, be at full liberty, by our own unfettered choice and decision, to ratify, adopt, or accept what has been done by our present Governors in our name, and on our behalf, hitherto. But these rulers cannot ask such an adoption and ratification of the obligations incurred by them without our consent, or when we were not, on their own theory, in a position to give a valid consent, as a matter of course. It is of the essence of our political majority ; it is of the essence of our dissolving the trust—supposed to be created and maintained by our present rulers on their own authority—that we, the sole beneficiaries under the trust, should have a free opportunity to review our position, to take stock of it, and to decide of our own free will, on attaining our political majority, what obligations or benefits coming from the days of the Trust, we shall accept as our own.** The fact, however, must be repeated that hitherto the debt has been contracted by the Government without consulting the people of India ; and that the latter have no power to vote the borrowing programme, or the debt charges, even under the Reforms of 1919-20 ; and that any condition precedent to the recognition of our political majority, even in the form of a full Dominion Status, which will serve as an encumbrance for all time to come on the people of India, without their

explicit consent or confirmation, must, in law as well as conscience, be held to be void. The trustee liquidating or dissolving the trust is entitled, of course, to a full statement of accounts regarding his management of the trust; and so that no unexpected claims or counter-claims be urged against him subsequently by the beneficiaries coming into their own. But that is no reason why the trustee should be permitted to insist, on the occasion of dissolving the trust, that *all his* claims against the trust estate shall be passed and adopted, without examination, by the erstwhile beneficiaries under his trust.

ETHICS OF PUBLIC DEBTS. IV.

CONSENT—THE ESSENTIAL FACTOR.

Having considered, in general, the nature of the contract of Public Debt, and also the character of competence of the parties thereto, let us next examine the elements of consent and consideration. Without proper consent, or valid, adequate consideration, no contract can be said to be complete and binding, under the English common law. To some extent, the *exposé* of the character of the parties concerned in this contract must have already prepared the reader for what follows here in regard to the element of consent. Where one of the parties to a contract is, in the theory of the law, a minor—or otherwise incompetent, validly and properly to contract for himself—the contract, if it is to be made in his behalf at all, must be made by his Guardian or Trustee; must clearly be for his benefit; and must be always subject to his ratification when he comes of age, or when the Trust is dissolved. The Government of India have, it is true, made themselves Trustees for the people of India. But the contracts of our “public debt”—or, strictly speaking, the “debt” incurred by our Government for their own reasons,—**have yet to be proved to have been made exclusively for our benefit; and their ratification by the free consent of the Indian people has yet to be given.** The examination of the benefit involves, of course, the scrutiny of the assets created by such borrowings, and of the occasions for such borrowing which have left no visible assets to counter-balance the burden. The reasons, or occasions, for which the Government of India have borrowed in the past; or according to which a burden of debt has been added on to the people of India, may be classified as follows :—

THE GENESIS OF THE “DEBT.”

EAST INDIA COMPANY'S DEFICIT.

(a) The beginnings of the present “public debt” of India are found in the deficit of the East India Company, which the mal-administration in the business of that concern by its public servants inflicted upon that body; or which was occasioned by the projects of conquest and annexation of parts of India to the Company's dominion. When, in 1858, the British

100
Brown took over the administration of the country from the East India Company, the accumulated deficit of that body was considered to be in the nature of the "public debt" of this country, and as such foisted upon us. The essence of the transaction was: that the British Crown purchased a handsome property from a confessedly bankrupt corporation, whose assets were far below the liabilities. The purchase price was fixed to be the accumulated losses of this insolvent concern; and the people of India were made, by a one-sided transaction, to bear the burden of these losses. The consideration offered by the Crown to the Company for the transfer of the Indian Empire to the former was made the nucleus of the public debt of India.* In other words, the East India Company had acquired the Empire of India by means of Indian blood and money. And when the time came for it to surrender that Empire to the British Crown, it demanded compensation for its catalogue of blunders! The British Crown could afford to be generous, since the burden of that generosity was not to be borne by the British people, but by the Indians who had no voice in the matter. The exact amount of "debt" created by this transaction carried out by our "Trustee" is difficult to estimate, since, in the course of a century, India had been made to liquidate large sums of such "debts" from current revenues, or from war spoils. For purposes of accounts, however, we shall not be far wrong if we put that figure at Rs. 70 crores! The assets against this are nil, unless we reckon the intangible benefits of a perpetual tutelage as a benefit!!!

OFFICIAL INEPTITUDE IN CURRENT DEFICITS.

(b) The next considerable pretext for incurring "debt" was the repeated deficit in the current finances of the country under British administration. Notwithstanding the addition of many new taxes, the British Indian financing has been anything but an economic success. The failure has been more or less artfully masked by specious excuses, which, however, can deceive no one. The fact is indisputable that large sums have been added to the "debt," simply and solely because of the ineptitude of the Anglo-Indian financiers for conducting the finances of a country like India. Take one single instance:

* This has been estimated to amount to some 70 crores. Besides taking over the debt of the East India Company as a debt of the new Government of India, \$12-million bonus was given to the proprietors of that Company—which was also added to the debt of India.

In the five years immediately following the world war, there were accumulated deficits in current financial administration exceeding 100 crores! And though during the epoch of the Temples and the Stracheys—those infallible master-hands of the Indian Civil Service—the scale of operations was not quite so magnificent, the tale of deficits is by no means only twenty years old in India. I dare not venture to calculate the exact amount of these revenue deficits. While the Railways were learning to make themselves “productive” assets of Government, deficit in Indian revenues was the rule, and surplus the exception. If an account were taken, on the basis of a Trust estate, what Court could, in conscience or law, award such “deficits” to be converted into “debts” on the Trust Estate? Let us put this aggregate at 150 crores in 70 years; let us forbear to add compound interest on this capital amount lost through ineptitude, incompetence, or mal-administration of our irresponsible foreign rulers, that have had hitherto the sole charge of the Indian public finance. The assets side against this burden is a sad, wide blank!

FAMINE INSURANCE.

(c) The third excuse for adding to the encumbrances on the Indian people was the cost of famines. Famine is an ordinary contingency of the Indian economic life, against which any sane and sensible Government must provide as for current costs of administration. Really scientific financing would have made of it a regular Insurance for a well-known risk. They did not make such a provision for a long time. When they did, they did not understand the nature of such a provision. When they came to understand the nature of this obligation, they could not always command the requisite integrity to maintain in tact what little provision they had been forced to make for the purpose. Famines have been there, in spite of the provision; and the attendant hardships no whit diminished. The relief they afford is misconceived, misdirected, misapplied. The total “debt” incurred in Famine Relief as such cannot be much below of 100 crores, taking all the famines, in all the provinces, since the establishment of the direct administration of the British Crown into consideration. **Contrasted with the two preceding instances, this may, in some fairness, be admitted as a valid charge against the Trust estate.*** But still the assets created by this charge are pure air!

* cp., *Sixty Years of Indian Finance*, by K. T. Shah, pp. 394, et. seq.

TRADE DAMAGE & SILVER LOSS BY CURRENCY 137 POLICY.

(d) The next most prolific occasion for "debt" increase was that of the Rupee-Exchange. Because all the revenues of the Government of India were derived in Rupees; and because a considerable,—and an increasing,—proportion of their expenditure was defrayed in sterling, they were always most anxious to maintain a sterling-rupee parity. Owing to world factors, the gold price of silver began to fall since 1870; or was it, perhaps, that the value of sterling appreciated? That meant for the Government of India, however, the collection of an ever increasing amount in rupees for the "same amount" of sterling obligations. Sensible financiers would have taken care, immediately they sighted danger, to curtail those obligations, which were the cause of so much weakness. Instead, our infallible Civilians went on "adding" to the sterling obligations of India. And for this piece of high finance, they made the country responsible for—Goodness knows what amount of "debt." For every time that they were out in their Budget calculations, they blamed the vagaries of Exchange, added to the "debt" to wipe out the deficit, and went on merrily in the same vicious circle. They could not bring their masters in England to listen to reason, and agree to some scheme of international agreement, whereby the price of silver could be maintained at a definite point by the joint action of all the countries concerned in the production and consumption of silver. Singly, no country,—not even the United States,—was able to maintain such a fixed price. Jointly, they might have. But England would not agree at Brussels as elsewhere; and, without the concurrence of Britain, what could her henchmen in India accomplish? They could only make rupees artificially overvalued, by forbidding their free coinage. And they did so, by closing the Mint in 1893. The rupee appreciated gradually,—as a coin, not as a piece of silver. The latter continued to decline. Incidentally, the Indian peasant, with his paltry savings in the form of silver ornaments, was mulcted to the tune of some 50 per cent. to conceal the incompetence,—not to use a harsher, if a juster, phrase,—of his foreign rulers!!

The end was not reached, even so. Exchange continued to be a fruitful field for experimentation for the currency maniacs of Britain; and India continued to pay in the shape of an invisible burden on the export of her produce all through the

period of artificially enhanced exchange value of the rupee. Exactly how much loss the Indian people have suffered through the depreciation of their silver stocks in this way; and through a secret tax on their exports, we shall never know. If we take our exports to average 200 crores per annum in the last 35 years, on which the artificially enhanced rupee has made the Indian producer lose 25 per cent.,—a most modest basis for calculating—we have suffered material loss in this direction only of 1750 crores! And this without counting compound interest on this capital loss! The loss on the silver stocks must aggregate not less than 500 crores. Even the direct losses due to exchange, and openly admitted as such in the accounts of the Government of India since 1875, would exceed 50 crores! When, for a little while, the tables were turned, by reason of the world-war, the Indian Government disowned their solemnly made bargain in respect of the maintenance of the exchange value of the rupee; and declined to shoulder such “losses” for one or two years as their own incompetence had brought about.

Incidentally, our Public Financiers may be presented with this instance of the nature and degree of public faith our Government have preserved in the past with the Indian people, especially when these financiers are waxing eloquent on the evils of Resolutions for Debt Repudiation passed by the Indian National Congress. Where was their sense of public decency and of commercial integrity, when they played havoc with the standard of value in India? When would they account for the losses inflicted by their own incompetence and blind perversity in the matter of exchange, while they are setting out figures of Indian “Indebtedness”?

In one form or another, at one epoch or another, this one source of mischief alone must have occasioned, in the aggregate, hundreds of crores of losses—only a part of which is openly converted into “debt” for the people of India. Is this “debt” a fit case for any Court of Justice to charge the property of the Trust, because of the sins of commission and omission of the Trustee? Whether concealed by additions to tax-burdens; or displayed as net deficit, the exchange losses must never be overlooked in making up the national statement of accounts during the period of the Trust. I estimate, very hesitatingly, that loss at 100 crores to the Exchequer alone, either as net “debt” caused by exchange difficulties for fifty years; or as burden of taxation added in those years to avoid

uch deficit. Against this "debt," also, the assets are, of course, imaginary. And in this, please note, I take no account of the far greater loss inflicted on the silver wealth of the poorest peasant in the world, or damage done to him on the export of his produce.

MILITARY ADVENTURES.

(e) War, and military adventures, are, of course, the unending source of fresh "debt" burdens every year on the Indian people. Those wars were never, never, of our seeking, and, still more emphatically, never for our benefit. Our Government waged Britain's wars on our frontier at our cost in blood and money. And when it came to any benefit—e.g., the oil concessions in Burma,—it was, of course, the British capitalist who secured it, and obliged us by opening up this fresh avenue of employment, on cooly terms, for our teeming millions! How much "Debt" has been caused to India by Britain's wars? The last War alone added nearly 200 crores of such debt. The Afghan Wars meant 50 crores at the least; and the cost of preparedness for such wars must have meant at least 500 crores in the last fifty years! In that I do not include the cost and losses of our "strategic" railways, nor of port defences. Shall we call this aggregate 800 crores in seventy years? Is this a just "Debt" to be foisted by a Trustee on the Trust estate? No assets, as usual.

THE GROWTH OF THE INDIAN PUBLIC DEBT.

Year.	Registered Debt		
	in India.	in England.	
	Rs.	£	
Period of constant wars, annexations, consequent Budget Deficit, and, therefore, debt additions.	1820-21 ...	27,24,77,630 ...	5,762,888
	1830-31 ...	33,12,96,680 ...	3,750,479
	1840-41 ...	29,47,65,040 ...	1,750,992
	1850-51 ...	45,42,87,550 ...	3,920,592
	1860-61 ...	63,44,58,100 ...	28,496,917
Period of Famine, smaller expeditions of Imperialist character, and beginnings of state borrowings for "productive public works."	1860-61 ...	63,44,58,100 ...	28,496,917
	1861-62 ...	63,42,08,450 ...	32,116,217
	1862-63 ...	63,82,11,060 ...	31,860,017
	1863-64 ...	63,40,38,320 ...	26,332,517
	1864-65 ...	63,36,66,840 ...	26,146,017
	1865-66 ...	62,38,10,770 ...	26,967,317
	1866-67 ...	62,97,84,230 ...	28,559,917
	1867-68 ...	63,76,50,020 ...	29,718,417
	1868-69 ...	63,41,06,910 ...	31,218,917
	1869-70 ...	65,59,34,220 ...	35,217,617
Period of Famines, rupee depreciation, and the second Afghan War. Also intense Railway construction.	1870-71 ...	66,80,96,570 ...	37,627,617
	1871-72 ...	67,96,89,420 ...	39,012,617
	1872-73 ...	66,45,83,690 ...	39,012,617
	1873-74 ...	66,41,72,910 ...	41,117,617
	1874-75 ...	69,84,99,590 ...	48,597,033
	1875-76 ...	72,77,29,810 ...	49,797,033
	1876-77 ...	71,92,31,260 ...	55,397,033
	1877-78 ...	74,95,45,200 ...	59,677,033
	1878-79 ...	78,83,89,260 ...	59,029,117
	1879-80 ...	82,87,25,090 ...	68,855,556
Period of Russian scare, military additions, falling rupee, and Burmese War, and annexation, leading to grave increase of debt.	1880-81 ...	85,95,97,460 ...	71,429,133
	1881-82 ...	88,65,31,620 ...	68,181,947
	1882-83 ...	90,68,87,660 ...	68,585,694
	1883-84 ...	93,19,13,840 ...	68,108,837
	1884-85 ...	93,18,36,600 ...	69,271,088
	1885-86 ...	92,70,39,820 ...	73,806,621
	1886-87 ...	92,65,36,300 ...	84,228,177
	1887-88 ...	98,08,98,620 ...	84,140,148
	1888-89 ...	1,00,87,97,420 ...	95,033,610
	1889-90 ...	1,02,76,11,750 ...	98,192,391
1890-91 ...	1,02,74,65,550 ...	104,408,208	

Year.	Registered Debt	Registered Debt	
	in India.	in England.	
	Rs.	£	
Rapid decline in rupee, stopped by stabilisation and closure of Mint. Intense Famine at Heavy deficit and borrowings.	1891-92 ...	1,02,69,23,170 ...	104,404,143
	1892-93 ...	1,02,93,75,520 ...	106,683,767
	1893-94 ...	1,05,54,60,780 ...	114,113,792
	1894-95 ...	1,04,37,37,400 ...	116,005,826
	1895-96 ...	1,03,78,89,280 ...	115,903,732
	1896-97 ...	1,09,11,50,530 ...	114,883,233
	1897-98 ...	1,11,69,56,340 ...	123,274,680
	1898-99 ...	1,12,65,46,980 ...	124,268,605
	1899-00 ...	1,12,47,47,010 ...	124,144,401
	1900-01 ...	1,15,33,19,058 ...	133,435,377
	Period of surplus and reduction of unproductive debt; increase of Railway and Irrigation Debt.	1901-02 ...	1,16,19,13,833 ...	134,307,090
1902-03 ...		1,17,55,40,660 ...	133,796,261
1903-04 ...		1,19,42,43,035 ...	133,045,844
1904-05 ...		1,22,29,78,235 ...	132,887,191
1905-06 ...		1,26,08,10,618 ...	146,457,439
1906-07 ...		1,30,45,50,655 ...	147,518,634
1907-08 ...		1,32,82,94,955 ...	156,481,074
1908-09 ...		1,34,56,60,505 ...	160,973,369
1909-10 ...		1,36,84,33,105 ...	170,105,911
1910-11 ...		1,38,09,72,155 ...	177,998,335
Period of the World War, disorganised exchange, etc. Heavy additions to the debt of the country.		1911-12 ...	1,39,96,36,205 ...	178,486,597
	1912-13 ...	1,42,83,64,790 ...	179,179,193
	1913-14 ...	1,45,68,55,790 ...	177,064,757
	1914-15 ...	1,50,52,65,200 ...	176,190,358
	1915-16 ...	1,55,45,97,700 ...	175,171,829
	1916-17 ...	1,62,86,03,073 ...	174,144,724
	1917-18 ...	1,70,07,88,793 ...	236,957,575
	1918-19 ...	1,99,06,53,494 ...	202,528,570
	1919-20 ...	2,19,44,60,981 ...	192,631,082
	1920-21 ...	2,57,13,68,841 ...	191,329,245
	Period of reconstruction; rapid increase in railway debt; disorganisation of exchange and re-fixing of the same.	1921-22 ...	3,85,59,35,651 ...	205,128,482
1922-23 ...		4,24,66,02,345 ...	242,631,497
1923-24 ...		4,26,09,18,309 ...	263,800,652
1924-25 ...		4,35,53,60,385 ...	341,040,430
*1925-26 ...		4,17,93,93,408 ...	342,199,485
*1926-27 ...		4,15,91,11,246 ...	339,086,453
	*1927-28 ...	4,11,77,39,918 ...	344,395,520

* These figures, particularly of the sterling debt, are misleading, when converted at the varying rates of exchange.

ETHICS OF PUBLIC DEBTS. V.

PRODUCTIVE ASSETS.

(c) The most considerable item,—one of which they make the greatest parade, in season and out of season, as the wealth producing assets built up out of borrowed money by the Government of India,—is the Railways. In the latest summary of accounts, the value of the Railway asset, measured by the capital advanced by the State on this account, is shown at very nearly 700 crores in round figures. This vast asset is able, after a long period of substantial loss, to yield a surplus, which suffices for a little more than just meeting the total working expenses, including the Interest charge and a reasonable provision for depreciation and reserve. The contribution made by the Railways to the general finances of the country even now scarcely comes up to $1\frac{1}{4}$ per cent. after meeting the charges above named. And even that contribution has been made regularly since 1925-26 only. Prior to that, and for a long while after the Railway enterprise had begun in India, the net effect of the Railways was an aggregate loss, which had to be made good by the general revenues, and that did not allow for any provision for Reserve or Depreciation. Notwithstanding this loss, however, no body in the Government of India ever dreamt, for fifty years, of calling a halt to this mad policy of reckless waste, simply because to do so would have meant cutting off the most fruitful and safest source of investment for the surplus capital of Britain. Long before Indian critics of the Railway policy of the Government of India had learnt to appreciate the bearings of railway economies on the general development of the country, conscientious and experienced Englishmen, like Sir Arthur Cotton, had pointed out the unpardonable waste of Railways in India, and had insistently suggested the undertaking of the alternative and more suitable means of transport, viz., by the waterways. But these critics were laughed out by half-baked statesmen of the India Office; and the race for railway construction went on unchecked, in spite of the triple loss on that account. The loss in the shape of the gross receipts being unequal to the total working expenses of the Railways, including interest, was only one such item; and the only one officially admitted to be a "loss" on the Railway account for fifty years after the

Railway enterprise had come to be on the Indian soil. But the loss in the shape of Exchange deficit on Railway Account was deliberately left out of calculation from the Railway account proper. That loss was caused by that clause in the agreement, which required remittances on Railway account to be converted into sterling at the fixed rate of 22d. per rupee, even when the rupee was equal to 13d. The loss occasioned by the free gift of all the land required for railway purposes was never seriously estimated even.

LOSS ON RAILWAYS.

A painstaking witness before the Welby Commission on Indian Expenditure at the end of the last century made that body estimate this triple loss to India at 51.84 crores. If to that you add the loss occurring since that estimate was made, the aggregate would be much above 60 crores. A retired Railway official, Rai Saheb Chandrika Prasad of Ajmere, has calculated the aggregate loss on Railway account, since the beginning of that enterprise in India,—and including compound interest at 4 per cent. on all the losses made good out of revenue,—to be Rs. 346.06 crores! Surely, in sheer fairness, before the Railways in India are shown as capital assets valued at their present level of earning, this amount paid out of Indian revenues must first be made good! If the Government of India do not want to place themselves in a class with insolvent corporations, unwilling and unable to meet their past obligations, they must desist from such misrepresentation of the financial position of their railways! They must set off this debt against the assets they show on Railway account; or rather, they must allow so much debt as having been already met by the Indian people from the proceeds of the general taxation imposed upon them, before they reckon the total capital spent by them on railway construction and expansion as representing the "public debt" of India on that account. If this allowance were admitted as a counter-claim, the Railway "Debt" would be reduced in our books by at least one half!

THE CAUSES OF THE LOSSES.

But the tale of the injury wrought by Railways on India is much grimmer still. A considerable proportion of the Railway debt has been piled up in a purely fictitious manner. Not only were the earlier Railways constructed from capital

borrowed on ruinous terms of a fixed guarantee of return. irrespective of the proposed railway proving a commercial success; but, when the term of contract came to an end, after 25 years of wasteful and losing management, the same company were generally renewed in the management of the enterprise. When the financial liabilities on account of a guaranteed Railway Company were taken over by the State, the terms offered were the acme of wastefulness, for which no body has yet thought of calling the Indian Government to account. The contracts were, generally speaking, made, in the first instance, for a period of 25 years; and the provision was inserted in each such contract, that if, at the end of the term, the Government of India decided to take over the line—at least as regards financial liability in respect thereof—they would pay to the Railway Company capital equal to 25 times the last three years' dividend, if any; or the total capital sunk in the construction and working of the railway, "plus" a bonus of 25 per cent. ! That means that the Railway Companies were rewarded for their wastefulness by being given a bonus at the end of their term of extravagance! On this basis, would it be anything but the strictest justice to hold that something like 25 per cent. to 50 per cent. of the present debt, shown to have been incurred on Railway account, is nothing but deliberately watered stock, taken over by Government in the most reprehensible neglect of Indian interests? This is the sort of Trusteeship our Government have been capable of in the past!

STRATEGIC RAILWAYS.

Even this does not exhaust the chapter of the sins of commission and omission on account of the Railways. I have already remarked, in an earlier article, that though the Railways are fashionably described as "productive assets" of Government, no railway ever could be "productive," in the sense of materially adding to the sum total of substantial wealth produced in a given year in the country. Even on a narrower interpretation of the term "productive," almost every considerable line of Railway in India has been constructed,—not strictly, not even predominantly, on commercial grounds only. Considerations of strategic nature have always,—and necessarily,—influenced the Indian authorities in their railway programme, with the result that the loss on the railways was, in a large measure, a concealed unproductive expenditure on

account of the army. Pressed by their Indian critics, the Anglo-Indian authorities have begun to show, of recent years, the accounts of certain specified Railways as those of "strategic lines." It is impossible to camouflage the loss on these Railways; and so they make a virtue of a necessity, and parade their strict probity in accounting to the Indian people for the management of the trust estate.

If, however, we bear in mind: that not a single line of railway in India can strictly be said to have been constructed on purely economic grounds of commercial profit; if we remember that Railways have not been, and they never can be, productive in the strict sense of the term: if we think of the losses the Indian Revenues have been made to bear on account of this white elephant for over half a century; if we recall the substantial watering of the stock of these losing concerns when taken over as the direct assets of the State,—we cannot but hold, that the Railway "debt" admits of a very substantial set-off before the figure can be admitted in the statement of accounts; that a reduction must further be made in regard to the artificially inflated volume of that debt; and that, when all these counterclaims have been duly accounted for, the real worth of the railway asset will appear to be far more slender than is represented in the Budget statements of the Indian Government. No impartial tribunal of international jurists, aided by respectable auditors, could allow this vaunted asset of the Government of India to be valued, for purposes of reckoning the "Debt" of India, at anything more than 300 crores.

IRRIGATION DEBT.

(d) The "debt" said to be incurred on account of such public works as the large Irrigation Canals, or the construction of New Delhi, stands on a different footing. The Irrigation works have certainly added to the annual production of wealth in India. As such, they may fitly be considered to be productive assets, in the best sense of that term. The frenzied haste with which the railway enterprise was pushed in the last century left out these Irrigation Works for a long while in the cold. Even now the Government of India cannot be said to have done all they well might have done in this respect. But the "debt" accounted for by this asset is barely a hundred crores in a total of over a thousand crores. And even that "debt" has been more than paid off in the shape of interest

paid on that account. However, even if we reckon this as a justifiable item in the "public Debt" of India, the same can by no means be said of those other items, which, like the Civil Works, have cost enormous sums at Delhi and elsewhere.

INDIA TO BE COMPENSATED.

On the whole, then, of all the items making up the "assets" or "consideration" against the so-called "public Debt" of India, the only one which an impartial tribunal of international jurists could in justice allow against India, is the small item of some 100 crores, incurred in the construction of large-scale irrigation works. The rest either admit of very considerable counterclaims, which would reduce the actual figure to vanishing point; or consist of items which can on no account be said to have been incurred for the benefit of India, with the consent of the Indian people, having substantial "consideration" to back the same. In fact, if we press hard the logic of this point, the conclusion seems to be irresistible and inevitable that, rather than India owing anything in respect of all those excuses on which the so-called "Public Debt" of this country has been piled up; it would far more likely be India who would require considerable compensation for the deliberate mismanagement of her resources and government, of which her present rulers have in the past been guilty. Our trade has been injured by their Exchange policy, for which we ought in fairness to be compensated. Our silver wealth has been depreciated, again by their Exchange policy, for which also we ought to be compensated. Our resources in men and material have been gambled away in British Imperial wars, for which also we ought to be compensated. And, finally, our finances have been managed in the past so inefficiently, that deficit in the ordinary financial administration has been the most fruitful cause of such wasteful "debts" being piled on. For these, in justice, the Indian people, who had no share in this administration, cannot be made liable.

In fine, if a strict account were taken of the Trust Estate, before an impartial tribunal of international jurists, it would be found, I feel confident, that very little of our present "debt" would be or could be charged against us; and that, in all probability, we would be entitled to and awarded very substantial compensation, which would far outweigh our so-called "Public Debt" of India.

ETHICS OF PUBLIC DEBT. VI.

HISTORIC AND INTERNATIONAL PRECEDENTS.

The case made out so far is based, almost entirely, on the fundamental principles of the law of contract; and these, in their turn, are reinforced because of their ethical basis in the conscience of civilised mankind. Let me now mention a few of the "precedents," of historic and international importance, which should convince the reader that what is sought to be conveyed in this Series is not a mere special pleader on behalf of a bankrupt people; but the argument for a case, strengthened by every consideration of law and morality, and backed by the most unimpeachable precedent.

The only case, in which a future Swaraj Government of India could at all be held to be bound by "debts" incurred by the present Government of India, is in the event of the transfer of effective power and constitutional authority being made **peacefully**. That is the only way to preserve, in the eyes of the law, a continuity of life and identity. This is one, —and the strongest,—argument for a rapid achievement of "Dominion Status." The British Indian Government, in their own interests as well as of those others whose guarantors they may constitute themselves to be, must consider, in regulating the rate of constitutional advancement in India, if it be wise to drive a people to counsels of desperation, for sheer inability to grasp the significance of the changes of the day.

UNCONSCIONABLE CLAIMS.

But even a "Dominion Status"—or Swaraj—Government for India, achieved peacefully and by mutual consent, so as to maintain the continuity of the legal corporation, cannot accept blindly and without scrutiny the aggregate of obligations, which it may suit the present Government to incur, and pass on to the successor. If the obligation in respect of "Debt" is thus taken over blindly, there is no knowing what other claims of vested interests may similarly be attempted to be perpetuated. The claims of the Indian Civil Servant, in respect of salary, pensions, leave, etc., as guaranteed to-day, are already unconscionably excessive in view of the economic inability of India. And, if to these and such like, we add the

“claims,” of people like Lord Inchcape, for an absolute monopoly of our carrying trade; or of the Exchange Banks for our financing business,—on no stronger ground than that they were doing this business while India was still in political minority, and in an economically backward condition,—then the Swaraj we shall pretend to possess will only be a mirage.

ANALOGY OF THE AMERICAN CIVIL WAR.

If, then, a careful scrutiny of every item of public “debt” is to be premised as an indispensable condition of taking over charge, the negotiator on behalf of India would have ample reason in law, morality, and history to urge against the bulk of the present “Debt” charged to India. If the matter is, as I think it ought to be, submitted to an International Court to be thrashed out, that body cannot but take notice of the analogy already advanced. There is a whole chapter of International Law regarding the continuity of treaty obligations, after an interruption has been made by a war or such like between the contracting nations. If the change of government in India is made after a forcible breach with continuity, it is exceedingly doubtful if the League of Nations, or any similar body, could, in fairness, ask the Indian National Government to shoulder the responsibility for such “debts,” if the latter decline to take that responsibility without a “quid pro quo.” Take the most glaring case in point. When the Northern States of the American Union went to war with the Confederate States of the South, on the question of slavery; and when the former won, there was no question of any “compensation” to the dispossessed slave-owners of the South. And yet, slaves were, before that date, regarded as much a form of property as any bonds held by the creditors of India could be. It was treated simply as a means of abolishing a wrong; and there can be no “compensation” for such an act. The case of the Irish Free State, exempt from any portion of the United Kingdom debt, is another precedent more akin to India’s case.

THE CASE OF RUSSIA.

The case of the Soviet Russian Government, declining to shoulder any responsibility for the Tsarist debts incurred for the enslavement of the country, may perhaps seem too radical a measure to be mentioned in an orthodox series of

articles, like the present. But the *rationale* of the Russian Repudiation of Debts will have to be deeply pondered over by whoever negotiates the ultimate terms for a Swaraj Government in India. For the Indian "Debt" has been incurred by an alien Government, without the consent or concurrence of the people of India. The bulk of this "debt," moreover, is due to reasons and conditions, for which the Indian people cannot be made liable by any stretch of imagination, much less of ethics or law. For a large slice, again, of this "debt," payments have already been made far more than the amounts received, not only by way of interest, but also by way of capital repayment, though concealed and camouflaged so as to prevent detection of the real nature of such payments. And, finally, for almost the whole of this "debt," there are either no assets, no "quid pro quo"; or the assets are such as to involve the most substantial claim for set-off, which must be admitted before an account may be said to have been properly rendered, and discharged.

ANALOGY OF PRIVATE DEBTS.

The analogy of private debts may also be mentioned to round up the ethical moral of this contention. The laws of insolvency in every civilised country regard the failure to meet the liabilities due to the absence of adequate assets to be not as in the nature of a crime, which must be visited with the heaviest punishment the legal system of the country provides. No Shylock will nowadays be permitted to grind his knife preparatory to taking his stipulated pound of flesh from his defaulting debtor, merely because the latter, through no fault of his, is unable to meet the bond on the due date. Even when the defaulter is suspected of some trick or illegal action accounting for the failure, he is not allowed to be treated as an enemy of society. Punishment may be inflicted where acts of deliberate swindling are too great and too palpable to be overlooked. But where the failure is due to the ordinary mischances of a commercial-cum-capitalist activity, no country would permit nowadays the life and future of a citizen to be hounded out of existence, merely because of a commercial default in meeting obligations. The public representative will step in to realise as much of the estate as it is possible to realise; and to distribute the proceeds "*pro rata*" among the creditors. Thereafter the defaulter will be discharged from his default, and will be free to make a new life for himself.

Where there are no assets, on the other hand, and no charge of deliberate fraud, there can be not even that much persecution of the defaulter, whose career will suffer no material check, imposed with the sanction of the law, towards the process of rehabilitation.

AN ELEMENTARY RIGHT.

These analogies of private municipal law and international precedent may be multiplied endlessly. The object is, in the present instance, simply to show that, merely because a beneficiary of a trust, coming of age, proposes to scrutinise minutely the obligations alleged to have been incurred on his behalf by his trustee during the period of his minority, he shall not be branded as a defaulter or an insolvent. It is a simple matter of his elementary right, which neither in municipal law nor in international usage can be denied to him. In the case of India, the complication of the "debt" being owed not exclusively to her own nationals is an added argument for a yet more searching scrutiny before the obligation is taken over. We must not put our signature or endorsement to a bond, which is not rightfully due from us. **And, as will be shown more at length in the concluding article, we must not fail to honour the bond, which we have with our free consent, and after every possible scrutiny, consented to adopt and ratify as our own transaction.**

On that basis, the example of the European countries, like France, Germany, Italy and "*ad hoc genus omne*," who suffered from the depreciation of money in the post-war years, brought about by deliberate inflation of the currency, to a point where the medium of exchange lost all real value, may not be without its own significance. Nobody dares call France a bankrupt nation, or dares to go to war with her, because the franc is now worth one-fifth of what it was before the war. Incidentally, in consequence, the debts incurred by the French Government in terms of the franc of pre-war value, or even post-war position, for a long time after peace was restored, can be and have been discharged in terms of value one-fifth or less of what was actually paid by the creditor to the debtor. In Germany, by this simple process of currency inflation, the entire internal,—or rather Mark,—debt has been paid off by means of worthless paper. Nobody, again, calls Germany an insolvent for that

reason. Even England, despite her professions of rigid integrity in the matter of such obligations, had to ask, and did ask, for concessions in the repayment of her debt to America arising out of the War, which makes it perfectly respectable for anyone in a similar predicament to reconsider his position.*

A COMMON CLEARING HOUSE.

These examples of recent history affect the debt both to the nationals of a country taking such means of reducing the burden, as well as the foreign bondholders. So far as the former are concerned, the net effect of such a step is only a redistribution of the wealth of the community concerned; and it interests no one except the citizens of the particular country. In the latter case, the problem is complicated by questions of international relations. But the conscience of civilised humanity has already perceived the unethical nature of such debts. The lesson sought to be conveyed by the great dramatist in the "Merchant of Venice" may now very easily be applied to nations as the classic case was applied to individuals. The justice of the claim for reconsideration by most debtor nations in the world is found in the unproductive nature of such debts, not to speak of the tragic memories associated with some forms of such debts. And so the time may perhaps be not distant, even at the moment of writing, when, because of the true perception of these burdens, the conscience of mankind convenes or sets up a common clearing house for the liquidation of ancient mutual burdens, in which all the considerations advanced in this series will have to be duly taken into account, and decided upon.

* In all these cases, there were no assets against the "Debt" created by the War-borrowings; and the same may be said about the Indian "Debt"—at least for a major portion thereof. It is the result of what we may call a general bad administration—for want of a more expressive term; and civilised humanity, if it wants to free itself from the shackles of such a stifling past, should agree to call all such indebtedness an all-round washout. The resultant hardship on individuals—lenders—will not be impossible to guard against.

ETHICS OF PUBLIC DEBT. VII.

INDIA CREDITOR NOT DEBTOR.

So far I have dwelt on the perfect regularity and orthodoxy of the suggestions for reviewing and scrutinising the totality of our "Debt" obligations. The object is to consider which of these obligations should, in fairness and mere honesty, be taken over by us, and which rejected. **This is not because I approve, as a matter of public policy, of an incontinent rejection of all such obligations for a country like India. On the contrary, I regard the use of public credit for purposes of national economic development to be of such a transcending importance as to make us most meticulously anxious for its proper treatment.** I have pondered over the Russian experience in repudiation; and I realise that, for a country industrially so backward as ours, the only hope for an economic revival lies in a plentiful,—or at least adequate,—supply of economic capital. That supply might conceivably be deflected, if a needlessly aggressive attitude is adopted regarding a recognition of the claims of capital. In a world so partially and half-heartedly socialised as ours, there is, I fear, little chance of an uncompromising attitude in respect of such obligations to go entirely scot free. We may be strong, or desperate, enough to "damn the consequences" of a policy of wholesale repudiation; but I do not think we in this country and at this juncture are in any such position as to make an uncompromising attitude of absolute rejection advisable, in the best interests of the Indian people. We have a large leeway to make up in the development of our obvious resources; and, still more so, in exploiting India's yet unpioneered possibilities. And so, in our own interests, we would do well not to adopt a policy of wholesale repudiation, from which there might be no honourable retreat possible.

NEED FOR SCRUTINY.

But while I realise to the full the wisdom of moderation and reasonableness in dealing with the prejudices of a people nurtured in the traditions of a commercial civilisation making a fetish of private property, I see neither wisdom nor justice in refusing to take note of the utterly unjustifiable obligations

sought to be foisted upon us, in the sacred name of our national credit. Both as regards the bondholders at home and abroad, we have, in sheer justice to the dumb myriads of India, to scrutinise, as strictly as we may, every item of encumbrance attempted to be charged on our national resources. And the same logic must apply to matters of private debt as to those of public. The Law of Limitation has remained for the most part a dead letter in India, because the ingrained honesty of the Indian peasant refuses to disown ancestral obligations. He is born in debt, he lives in debt, he dies in debt. Neither he, nor his son, and son's son to the nth generation, will ever dream of a repudiation of the pledge of their progenitors. He prefers to continue the debt from generation to generation, rather than avail himself of the Limitation Acts, or of the various Agricultural Debtors' Relief Acts, or the Usury Laws. Such an attitude is fatal to any programme of his own economic development. But unless he is given a laudable example; unless he realises not only the futility of any hope on his own part to be ever able to liquidate even a fraction of his own debts; but also the un-wisdom and injustice of shouldering his common, national debts—there can be, in my opinion, no hope of an industrial regeneration of India. It is a question for the Indian people, when they arrive at their political manhood, to decide; not for their present trustees to foreclose, without even offering them once the equity of redemption.

HOW INDIA IS IMPOVERISHED.

On this basis, and with this objective, I have endeavoured to examine the ingredients, occasions, or excuses for piling up our "Public Debt." The reader, if he has followed carefully the trend of logic adopted here, will remember that the analysis of the law of contract, in all its essential particulars, gives not one valid ground for maintaining the bulk of the so-called Indian public debt. With an amount of capital such as is represented by our public debt, this country could and should have regained her industrial pre-eminence that once had made her the envy of the world. The total capital needs of India, for the fullest possible industrial development of resources known to-day to be full of promise,—and including a margin for the liquidation of the ages old agrarian debt,—have been estimated at Rs. 1,000 crores! If such a sum was skilfully laid out, say in the space of half a generation, India would once more be the smiling garden of the world that it was

of old reputed to be. There would then be not a beggar, nor a destitute, nor an illiterate, throughout the length and breadth of this vast continent. Nor would she then fail to realise the proud boast, made by one of the Anglo-Indian financiers in the Victorian era, that, given suitable conditions, there is not a single article needed for the wants of man that India could not produce within her own borders and from her own resources. Sir John Strachey made of this his observation the ground for insisting on a policy of absolute non-intervention in matters of industrial development in this country. That tradition, still continued by his successors, has been responsible for that drain of Indian resources,—that backwardness of Indian industry,—which has not only added this vast and crushing load of indebtedness to our shoulders; but has resulted in a progressive impoverishment of our people, bringing thousands of them to the verge of starvation. Were there, then, no other reason, this single fact would alone suffice to make it imperative on us to scrutinise our burden of “debt” most scrupulously and minutely, so as to discard every one of those obligations for which no warrant can be found in the basic elements of public ethics, in international jurisprudence, or in elementary economics; and to insist on a counterclaim for every item in which the present burden is the result of administrative incompetence, or worse, of our alien bureaucrats, not responsible for their acts to the people of India.

DEBTS INDIA MUST REPUDIATE.

I have already enumerated the main divisions of our “public debt,” and attempted to show which of these we must in fairness disown, and for how much of the “debt” we must demand a set-off. The “debt” occasioned by the purchase price of the Indian Empire by the British Crown, and payable to the bankrupt East India Company,—Rs. 75 crores in round terms,—can, on no account, be charged against us. Nor can the “debt” due to sheer administrative incompetence in matters of finance, e.g., to cover an ordinary deficit; or the one due to exchange complications. Between the two, I cannot precisely say how much of our “debt” has been occasioned. I have given elsewhere a figure, which I think is very moderate, and may be open to revision at the time of final settlement. For my part, I am satisfied that, were we given a fair trial in an international tribunal, presided over by an impartial jurist, on this double score, India would easily obtain a reduction of

he present "debt" figure to the tune of 250 crores! We were in no sense a party to this happening. And when we come to our political majority, and seek to dissolve the trust that has been forced upon us by the unilateral act of our self-made Trustee, we are in mere fairness entitled to demand an account of the trust estate and its management, which will not leave much for the creditor-trustee.

On account, moreover, of the Exchange mismanagement and Currency manipulation, our trade in the last half-century has suffered an enormous secret damage, for which we ought to be compensated. The loss inflicted on our silver ornaments by the same factor is more obvious, and ought to be similarly treated. Precisely how much this counter-claim would amount to it is all but impossible to say. If my figures were admitted, we should not be a debtor, but a substantially creditor country, if mere justice were done to us. But the claim must be urged, if only to show the many—and often unperceived—directions in which British rule in India has not been for the clear, undisputed, exclusive benefit of India.

IMPERIAL WAR DEBTS—LET BRITAIN TAKE THEM.

Next we come to the "debt" incurred on account of British Imperial wars waged by India, under the present Government. We cannot ask for compensation for the loss of our human treasure in those wars, not because I count human life as less precious than filthy lucre; but because I fear there is no possibility of accurately estimating this loss. But the amount spent on these Imperial wars in money we can most easily estimate, and present it in the final settlement of accounts between us and our self-made trustee. That must demand an equivalent set-off. If Britain elects to be honest as well as honourable, let her take over this debt. In historic justice, it is debt incurred for her sake, by her sons,—in our name. She would then prevent an amount of injury and loss, not only to the Indian holders of these war bonds,—not expressly so called, but none the less truly of that category,—but also to many of her own nationals. The claim for such a treatment becomes all the stronger when it is further remembered that many of the present holders of these bonds may be helpless orphans or widows, whom it would be a crime to rob, especially for those who believe in the axiom of private property as the key-stone of their commercial morality.

For us, the course is clear. We were never a party to such contracts. We have never received a farthing worth of benefit from such wars. It would be generous in us if we do not claim special compensation for the thousands of promising young lives cut off in their prime in the senseless wars of insatiate Imperialism, or for the valuable concessions made over in conquered territories to non-Indians, as in Burma. More than that we cannot do, and no one has a right to expect us to do. Our counter-claim for actual money spent by us in Britain's wars would not be less than 500 crores!*

RAILWAY DEBT.

The so-called productive "debt" under the Railways and the other public works would leave a very small figure, on a strict scrutiny of their origin and history. I believe, however, that, with the best will in the world, we would not be liable, on this head even, for an aggregate of more than a couple of hundred crores. And that will be far more than outbalanced by the counter-claims on other accounts already mentioned.

Further, we have several reserves and cash balances due to us, but held in England, which might be used for further proof of our integrity, were one needed, of this kind. I fear, however, England will not leave us an opportunity to be generous when she perceives that we are determined to force her to be just. I recall the treatment meted out to the gold deposit of the Bank of France in the Bank of England, ever since the

* To summarise, the greater portion of the Indian "Public Debt" has arisen as follows :—

Purchase price to East India Company	Rs. 70 crores
Exchange losses	Rs. 100 crores
Budget deficit through bad finances	Rs. 150 crores
Imperial Wars, and preparation or contributions for the same	Rs. 500 crores
Railways	Rs. 900 crores
Irrigation works	Rs. 100 crores
Other developmental works	Rs. 50 crores

Rs. 1,870 crores

or in round terms, Rs. 1,900 crores

Of this, the debt actually paid off may be computed at Rs. 500 crores. For the balance, we have good assets in our Irrigation Works, Roads, and Buildings, which may be valued at 150 crores, roughly; Railways plant, stock, road, etc., which, after allowing for counter-claim and the amount paid off, may be valued at Rs. 350 crores. The balance of about Rs. 900 crores, must demand a most careful scrutiny and impartial investigation at the hands of an independent international tribunal.

ommon danger had made the two peoples working partners. And the memory of that deal makes me shudder at the likely fate of our own Gold Standard and Paper Currency Reserves,—or such portions thereof as may be held by Britishers in Britain, or in British securities. But that is an inevitable risk, the moment we begin to take an account of the trust's management by the trustee. I think we have no alternative but to run such a risk,—at least so long as our self-styled currency experts will continue to hammer at the accident of the Ratio, without looking to the essence of the Gold Standard.

COMPENSATION.

What is the balance? I do not think a single pie of the "debt," as it stands to-day, can, in fairness and on final account, be charged against India. The mere disallowance would amount to over 800 crores. And even if Britain only pays a shilling in the pound of our just counter-claims for damage done to us, our resources, or our opportunities, the balance against us will vanish into thin air. We should be entitled to a handsome compensation, which, if there is truth or justice in the League of Nations, if there is the most rudimentary sense of international honesty among the British people, we ought to be most certainly allowed. We cannot, of course, adopt the "ultima ratio regis" for enforcing recognition of his counter-claim. But that will not deny our claim before the court of conscience of civilised humanity. Thrice is he armed who hath his quarrel just; and I know of no justice in this world, if the plea here advanced is not considered to be one purely of justice as between one people and another.

ETHICS OF PUBLIC DEBT.

(Bombay Chronicle, 15th March, 1930.)

The series of seven articles by "Politicus" published under the above caption in the "Chronicle" must have afforded serious food for thought to every earnest reader. The writer is obviously familiar, not only with the demands of public morality and international jurisprudence, but also with national economics. His review of the occasions on, and the excuses under, which the several items of our so-called public debt were incurred throws a penetrating searchlight on some less known aspects of recent Indian history, which deserve the most earnest consideration from every patriotic Indian. The statistical material is left intentionally vague and in general terms, so as not to confuse the average reader. But, since the sources, in which the basis for the writer's estimates on each head can be found are indicated, his general statements should only prove a spur to further investigation. The case, as he presents it, is founded on the essentials of every contract, as required under any legal system in a civilised community, and more particularly under the law with which we ourselves may be most familiar. It is, possibly, this aspect of his plan, which has led to his language being somewhat too technical at times, and the style a little involved. But what might have been gained by simplicity of style the writer apprehended would have been sacrificed in precision of legal statement. Hence, steering between extremes, he has endeavoured to present a fairly intelligible, and at the same time comprehensive, view of the genesis and bearing, in justice and equity, in ethics and economics, of our so-called Public Debt. The picture, as we see it—as revealed by historical precedent and legal argument—adds the most poignant comment to the remark of Mahatma Gandhi in "Young India," reviewing the first two or three of these articles, that if the facts are as represented in the articles, the piling up of these "debts" must be regarded as a serious crime against the people of India.

The main thesis of "Politicus" may be very briefly stated. Practically the whole of our present so-called public debt is, in strict justice, not due from us. It was never incurred by the people of India or their representatives. It was never consented to by them. Nor has it yielded any benefit to India. On the other hand, the sins of commission and omission by the

resent non-Indian Government of India, in no way effectively responsible to the people of India, will, if adequately explained, entitle this country to substantial compensation, which would more than counter-balance such fraction of the "debt" as may in strict justice be eventually adjudged against it. "Politicus" mentions particularly the instance of the Currency and Exchange muddles of the Government for fifty years or so; and advances the perfectly unimpeachable plea that, through this un-Indian policy, the Government have inflicted heavy losses on the exporter of Indian produce, and perhaps even more substantial injury on our silver stocks in the shape of the poor people's ornaments. This counter-claim may be,—must be,—presented against the Public Works "Debt," or such portion of it as is charged against this country in the final settlement of the accounts. The Railway "debt," forming part of this category, itself demands heavy rebates, in virtue of the considerable and continued losses on railway account made good from the general revenues in the past, as well as because of the unduly onerous terms of the contracts of railway construction and management with the leading railway companies. Even that, however, does not exhaust the tale of the railway policy working an injury to the real interests of the national economy of India: but still "Politicus" refrains from making any demand for compensation on that account. Finally, he works out in detail the analogy of Trusteeship, with special reference to the case of India under her present Government. The British Government have in season and out of season; claimed to be Trustees for the Indian people. He accepts their professions at par, and demands of them a full account of the Trust on the eve of its beneficiary reaching a political majority. If these professions are not a mere eye-wash, if the Trustee has been honest even as the law requires him; and if the management of the Trust has been exclusively in the interests of the beneficiary, the Trustee can have no reason to fear, and much less to seek to evade, such a demand. The recent utterances, however, of some of the highest officers of the Government of India, with Sir George Schuster leading, cannot but make an impartial reader question if there is not something rotten somewhere in the state of Denmark. All that we can say is to echo Molière's classic taunt: "Tu l'as voulu, Georges Dandin."

The point, however, of the "Politicus" series on Public Debts lies, not so much in the thorough exposure of the

inequalities of our public "debts," as in the suggestion running throughout it asking for an impartial international tribunal for a searching investigation into this very complicated question. India, we know, is an original member in her own right in the League of Nations. And though her representation hitherto has been exclusively of the official complexion at all its sessions, we see no reason why the Indian National Congress should not submit this case to the League, provided the latter agrees to refer it to an independent tribunal for examination. It would be a test case in more respects than one. It would serve to show the real efficacy of the League, which so far has been generally believed to be a registry office for Franco-British dictates. It would be a test case, also,—an acid test, verily,—for the vaunted honesty of the British in public dealings. In the absence of any really Nationalist representative at the Round Table Conference, we have no hope of crucial questions like this being taken up by that body. Much as we may wish it, we despair of our "Liberals" and other allies of Government taking up even a watching brief in such a case before such a one-sided tribunal. But all that only serves to reinforce our suggestion that the Indian National Congress should seriously take up this vital question of the country's well-being; present it to the League for an immediate, independent enquiry or arbitration; and begin preparing the brief in the hope that its request would be acceded to. For our part, we have no doubt experts like "Politicus" would, if required, be only too happy to make these contentions irresistible and unanswerable, in law, in ethics, or in economics, before a genuinely impartial and independent tribunal of international jurists.

Blanchard Field, Printer (T.U.), 106, Blackfriars Road, S.E.1.

$\frac{2}{2.31}$

Rev. - 2/6

12 DEC 1931

149

4

TRADE DEPRESSION
AND THE WAY OUT

BY THE SAME AUTHOR

Trade and Credit

8vo. 10s. 6d. net.

Currency and Credit

THIRD EDITION. Thoroughly Revised. 8vo. 16s. net.

The Gold Standard in Theory and Practice

Crown 8vo. 3s. net. 49.

Monetary Reconstruction

NEW EDITION. 8vo. 10s. 6d. net.

The Economic Problem

8vo. 10s. 6d. net.

Economic Aspects of Sovereignty

8vo. 9s. net.

TRADE DEPRESSION AND THE WAY OUT

BY

R. G. HAWTREY

AUTHOR OF 'CURRENCY AND CREDIT,' 'THE ECONOMIC PROBLEM,'
'MONETARY RECONSTRUCTION,' 'THE GOLD STANDARD,'
'ECONOMIC ASPECTS OF SOVEREIGNTY,'
ETC.

LONGMANS, GREEN AND CO.
LONDON • NEW YORK • TORONTO

1931

LONGMANS, GREEN AND CO. LTD.

39 PATERNOSTER ROW, LONDON, E.C. 4
6 OLD COURT HOUSE STREET, CALCUTTA
53 NICOL ROAD, BOMBAY
36A MOUNT ROAD, MADRAS

LONGMANS, GREEN AND CO.

55 FIFTH AVENUE, NEW YORK
221 EAST 20TH STREET, CHICAGO
88 TREMONT STREET, BOSTON
128-132 UNIVERSITY AVENUE, TORONTO

X:742.1.N3

G1

PREFACE

My purpose in writing on this subject has been, in the first place, to elucidate the character and causes of the present trade depression ; secondly, to link up the explanation so given with other current theories ; and, thirdly, to indicate the appropriate treatment of the trouble.

The detailed practical steps requisite at any particular time depend upon the circumstances of the moment. The situation is constantly changing, and has become especially unstable since the outbreak of the financial crisis in Germany. But I have endeavoured to make clear the root principles to which *any* remedy must conform.

Advocates of the monetary theory of trade depressions are often accused of recommending a panacea which is too simple for a situation complicated by many and various economic ills. But that is a misunderstanding. The monetary theory offers an explanation of *one* important class of economic disorders, and indicates the remedy for them. It does not pretend that a community perfectly free from monetary fluctuations would have no economic disorders at all.

If an otherwise prosperous valley suffers from floods, an engineer who can prevent the floods is in a position to remedy what may be the most urgent of all the economic troubles of the community, but that does not mean that there will be no others, or that he claims to bring a panacea.

What I have written represents my own personal views, and is not to be associated in any way with my official position in a Government Department.

R. G. HAWTREY.

August 26, 1931.

CONTENTS

	PAGE
PREFACE	v
INCOMES AND DEMAND	1
THE VICIOUS CIRCLE	2
BANKS GENERATE INCOMES BY LENDING	4
THE LIMIT IMPOSED BY MONEY	5
PRODUCTION OF CAPITAL GOODS	7
QUANTITY OF MONEY AND THE PRICE LEVEL	8
THE INHERENT INSTABILITY OF CREDIT	10
THE GOLD STANDARD	10
CONTROL OF CREDIT BY CENTRAL BANKS	11
EXTERNAL AND INTERNAL PRICE LEVELS	13 ✓
THE BALANCE OF PAYMENTS	14
ANARCHY IN WORLD CREDIT CONTROL	15
CREDIT CONTROL BEFORE 1914	18
THE DEMAND FOR GOLD AS MONEY SINCE 1914	20
GOLD AND CREDIT CONTROL	22
CREDIT POLICY 1919-25	23
CREDIT POLICY 1925-30	26

CONTENTS

	PAGE
DEADLOCK IN THE MONEY MARKET	30
EFFECTS OF THE ABSORPTION OF GOLD	33
DISPARITIES	35
SAVINGS AND CAPITAL OUTLAY	38
ENTERPRISE AND CONFIDENCE	41
WAGES AND PRICES	44
A FUTURE RECOVERY OF PRICES	48
OVER-PRODUCTION	50
ACCUMULATION OF STOCKS	56
NATIONAL ACTION—PROTECTIVE TARIFFS	58
PUBLIC WORKS	61
THE RESPONSIBILITY OF CENTRAL BANKS	64
THE CREDIT POSITION IN THE UNITED STATES	66
BANK RATE POLICY	68
THE WAY OUT	73

TRADE DEPRESSION AND THE WAY OUT

INCOMES AND DEMAND

TRADE depression has many symptoms, but perhaps the most characteristic of all is the shortage of demand. Those who produce or buy goods with a view to sale are faced with a difficulty of selling them. Production is restricted and prices are reduced, and still it is found that sales fall short of output. Thus the under-employment of industry, with consequent unemployment of labour, the fall of prices and the accumulation of unsold goods are all related to the shrinkage of demand.

Where does demand come from? Clearly from people's incomes, and incomes are derived from production. People get their incomes by working, or else by letting their property or capital be used productively. The traders who sell things apply the proceeds of sale to paying the costs of production, and retain the balance as profit. The profit supplies the traders' incomes, and the costs are composed of other people's incomes in the form of wages, salaries, interest, etc. In fact the whole income of the community is composed of the proceeds of sale of all the goods and services which constitute its output. One trader's outlay on materials or intermediate products goes to pay the incomes of those

TRADE DEPRESSION AND THE WAY OUT

employed by others to produce these goods. Such incomes as old age pensions and the interest on the national debt, which are not paid in return for any current contributions towards the productive output of the community, are charged by taxation, etc., on the productive incomes. The consuming power of the latter is diminished by the amount of the former. The total consuming power of the community is therefore equal to its output.

THE VICIOUS CIRCLE

This seems at first sight rather a surprising result. If consuming power is equal to output, how can there ever be a failure of demand? But, of course, once industry *is* under-employed, that very fact means an equivalent reduction of incomes, so that demand is only equal to the reduced supply. What we have to explain is how the shrinkage in both output and demand starts.

A very prevalent explanation is 'over-production.' When those engaged in any one industry find that they cannot sell their output, they are likely to describe the situation as one of over-production of the product of that industry. Output exceeds sales. Against this is urged the objection that there cannot be *general* over-production, unless there is general satiety of all human needs, a condition which is very far from being fulfilled. But that does not quite dispose of the matter.

Suppose that over-production occurs in *some* industries. Those industries find that they cannot sell their output. They restrict production and reduce prices. The fund out of which the incomes of the industries are paid is thereby doubly reduced, on account of smaller quantities and of lower prices. There is less employment and there are lower profits. The result of this

THE VICIOUS CIRCLE

reduction of incomes is that the demand for the products of *all other industries* contracts. They in turn, finding their sales declining, suffer a reduction of income, which means a further reduction of demand for products in general.

So a vicious circle is set up. The fall in demand causes a fall in output and prices ; the fall in output and prices causes a fall in incomes from profits and wages ; and the fall in incomes causes a further fall in demand. Adversity in any industry or group of industries tends to spread to all the others. And the adversity need not take the form of over-production. *Any* circumstance which results in the total receipts from which the incomes of the industry are provided being diminished will have the same effect.

It must constantly happen that some industry or other is exposed to adversity. In the ordinary course of events there are always some industries under-employed, and less remunerative than normal. Are we to infer that the economic system of the world is doomed to chronic depression, that it can never escape for long from the disastrous operation of the vicious circle ?

Certainly not. If there is a vicious circle of depression, there is likewise a vicious circle of activity. Let any industry or group of industries find increased demand, then the incomes of the group are increased, and they provide an increased demand for the products of all other industries. The other industries are stimulated, and so provide a still further increased demand, which takes effect either in increased output or, when output approaches the limit of capacity, in increased prices. The vicious circle of activity passes into a vicious circle of inflation.

There are thus two contrary tendencies at work. An increase or decrease of activity originating anywhere

TRADE DEPRESSION AND THE WAY OUT

in the realm of industry tends to spread everywhere with cumulative effect. If we wish to discover which is to predominate, we must get a little closer to the process by which production generates incomes, and through incomes demand.

BANKS GENERATE INCOMES BY LENDING

The incomes have to be *paid*. Producers make themselves responsible for paying the incomes of those whom they employ in production, and have to pay these incomes *before* the product is available for sale to the consumer. For that purpose they must provide themselves with money. A producer who extends his output will need more money to pay increased wages and costs ; unless he has a reserve of idle money at hand (which is not the most usual case) he will borrow the requisite sum from his banker. Producers as a body are always indebted to the banks ; they are constantly incurring fresh indebtedness and paying it off out of the proceeds of sale.

If production is increased, the producers' disbursements are increased immediately, whereas their receipts from sales are only increased after an interval. A prerequisite condition of increased production is likely therefore to be increased lending by the banks.

When a bank lends, it creates money out of nothing. The borrower becomes indebted to the bank for a sum to be repaid in the future with interest, and the bank becomes indebted to the borrower for a sum immediately available. The bank's debt is subject to the special condition that it can be assigned to another creditor by the drawing of a cheque. It can be used as a means of payment, and is therefore for practical

THE LIMIT IMPOSED BY MONEY

purposes the equivalent of money. For certain classes of payment, it is true, cheques are not the most convenient medium. But nowadays in nearly all countries the standard money takes the form of bank notes, which are created by the issuing bank in the same way as bank credit subject to cheque is created by an ordinary bank. When the Bank of England buys securities or lends, it creates bank notes, or deposits convertible into bank notes, which count as money in the hands of the banks and the rest of the community.

When production is increased, the producers obtain from the banks the means of paying the increased incomes. The increase of production is therefore conditional on the action of the banks. When the banks lend they *generate incomes*.

In fact no one borrows money to hold it idle. Whatever is borrowed from the banks is borrowed for the purpose of being paid away and forming new incomes. This is true even if the money is used in the first instance to buy goods not from a producer but from a dealer who holds a stock of existing goods. For the dealer will replenish his stock from the producers, either directly or through other dealers.

It would seem that in this process the initiative rests with the producers and dealers in commodities, and the part played by the banks is purely passive. But the banks cannot afford to acquiesce in such a position.

THE LIMIT IMPOSED BY MONEY

We have seen how increased production generates increased incomes, and increased incomes mean increased demand, and how when production approaches capacity the growing demand will start a cumulative rise in prices,

TRADE DEPRESSION AND THE WAY OUT

the 'vicious circle of inflation.' This process requires that the banks consent to lend and so to create credit in sufficient amounts.

But banks are not free to create credit without limit. A bank must have regard to the transactions for which its customers will want to use money in preference to cheques. It must preserve a due proportion between the credit it creates and its holding of money. The money, it is true, is created by the central bank, but the power of the central bank to create money is limited by law. The limitation takes the form of requiring the notes and deposits of the central bank to be convertible into gold, and requiring it to hold a prescribed reserve of gold.

If producers seek to increase output, and can only do so on condition that the supply of money is increased beyond what the banking system can allow, then the banks must intervene to prevent the increase of output. This they do by deterring traders from borrowing; they increase their charges for interest and, it may be, in some cases actually refuse to grant advances. If the producers cannot provide themselves with the means of paying the costs of production, they are precluded from undertaking the increased output. In practice the pressure is applied by the banks not so much to the producers themselves as to the dealers in commodities, who order goods from the producers. The producers will be allowed all the bank advances they require to carry out the production they actually contract for. Dealers, on the other hand, can exercise a wide discretion as to the amount of goods they choose to hold in stock or to order in advance, and are amenable to pressure from the banks. If they have to pay higher interest charges and meet with greater reluctance of the bankers to lend, they can readily arrange to carry on with

PRODUCTION OF CAPITAL GOODS

somewhat smaller stocks of goods than usual and correspondingly smaller bank advances. There result diminished orders to producers, diminished productive activity, and diminished incomes derived from production.

The producers will probably meet the situation by price concessions. The dealers will be induced thereby not to make so great a reduction in the orders they give, and the reduction in the volume of production and of employment will be to that extent less severe. But that is achieved only at the cost of a reduction of the producers' own profits, so that the reduction of incomes is not avoided. Unemployment may induce the work-people to accept a reduction of wages, and the consequent saving on costs will relieve profits and will further mitigate the reduction of output, but still the effect is to give the reduction of incomes a different form without escaping from it.

In fact when we speak of incomes being increased or diminished as a result of an increase or diminution of demand, we are referring primarily to profits and wages, the variable classes of incomes, and incomes from wages may vary either through changes in the volume of employment or through changes in the rates of remuneration.

PRODUCTION OF CAPITAL GOODS

The foregoing applies in principle to incomes derived from the production of capital goods, though the details are in some respects different. Producers of capital goods, such as buildings, works of construction, engineering products, ships, and all the material equipment of industry and transport, find the demand for their products emanating from the promoters of capital enterprises,

TRADE DEPRESSION AND THE WAY OUT

and the promoters in turn procure funds through the investment market or Stock Exchange. The investment market is an intermediary, receiving the investors' savings on the one side, and buying the new securities issued by the promoters on the other. The savings come out of income ; they represent that part of people's incomes which is applied to capital purposes, and which constitutes the current demand for capital goods. The new issues will not be exactly equal to the savings. If they exceed the savings in any interval of time, the excess has to be held by the dealers in the investment market (stock jobbers) and they have to borrow money for the purpose. If the new issues fall short of savings, the dealers in the market receive more money than they pay out, and are enabled to repay bank advances.

The workings of the investment market are complicated, especially when the borrowings of the dealers are supplemented by those of speculators and speculative investors among the general public. But it will suffice for our present purpose to point out that, in regulating credit, banks will take measures to influence the borrowing operations of the investment market as well as those of the commodity markets. Thereby they will encourage or discourage new issues, and so stimulate or retard capital outlay, and capital outlay, like other forms of production, generates incomes.

QUANTITY OF MONEY AND THE PRICE LEVEL

The relation between the banking system and the productive activity of the community is often misunderstood in two respects. In the first place it is assumed that the governing condition is the quantity of money, or rather the quantity of money *plus* bank

QUANTITY OF MONEY AND THE PRICE LEVEL

credit, constituting the total means of payment at the disposal of the community. And secondly it is assumed that the effects of any disturbance are to be measured by changes in the price level.

In the long run the quantity of money and the price level must be in due relation to one another. But over short periods their relation is constantly being disturbed. An acceleration or retardation of lending by the banks results *directly* in an increase or decrease in incomes; it does not have to work upon incomes through changes in the quantity of money. The changes in the quantity of money are themselves an effect of the change in the volume of lending. The lending generates money, but the money, when it becomes income, is spent, and the sellers of the goods on which it is spent are likely to apply the proceeds to repaying their own indebtedness to the banks. The increase in the quantity of money and bank credit is equal to the excess of lending over repayment.

The first effect of an increase or decrease of incomes is increased or decreased sales *at existing prices*. It is only when stocks of goods are reduced, and producers are becoming too fully employed to replenish them quickly, that prices are raised; and in the contrary case, it is when stocks of goods are accumulating and production is slackening that prices are lowered. The adjustments of price are in the first instance no more than *symptoms* of increased or decreased demand. Later on an appropriate adjustment of prices is a necessary condition of equilibrium. But so long as we are considering conditions of disequilibrium, we must direct attention in the first instance to the volume of demand, and regard the consequent price movements as symptomatic.

The essential relations are to be found in the association of production with incomes, ~~incomes with demand~~

TRADE DEPRESSION AND THE WAY OUT

and demand with production, and the intervention of the banks to accelerate or retard borrowing. Production generates incomes, but only so far as the banks allow the requisite creation of credit.

THE INHERENT INSTABILITY OF CREDIT

The banks, by restricting credit, can start the vicious circle of deflation, or, by relaxing credit, can start the vicious circle of inflation. Either process, once started, tends to continue by its own momentum. In the one case there will ensue a cumulative shrinkage of demand, curtailment of output and decline of prices ; in the other a cumulative expansion of demand, increase of output and rise of prices.

Credit is thus *inherently unstable*. Equilibrium once disturbed, the departure from equilibrium tends to grow wider and wider. Thus 'over-production,' or any other circumstance affecting an industry or group of industries unfavourably, may cause a depression in the sense of *starting* the vicious circle. But when we are seeking a remedy for the depression, the character of the initiating cause has very little to do with our problem.

THE GOLD STANDARD

In order to deal with it, we must examine further the limitations under which the banking system works. These limitations arise from *the gold standard*. Formerly the gold standard used to mean the use of money made of gold. Gold coin was used as a hand-to-hand medium of payment. At the present time the gold standard

CONTROL OF CREDIT BY CENTRAL BANKS

means in most countries the use of money convertible into gold. The central bank is required to exchange paper money into gold and gold into paper money at a fixed rate. The currency of any gold standard country is convertible into gold, and the gold is convertible into the currency of any other gold standard country. Thus the currencies of any two gold standard countries are convertible into one another at no greater cost than is involved in sending gold from one country to the other.

Gold is a commodity with other uses than as money. But it would be a mistake to suppose that it therefore provides an independent standard of value. The industrial demand for gold throughout the world is insignificant in comparison with the demand for it as money. The annual industrial demand is hardly equal to half the output, and the annual output itself is less than 4 per cent. of the total stock held by the central banks and currency authorities of the world in their reserves. The market for gold practically consists of the purchases of the central banks from the mines and from one another. It is by their action that the value of gold in terms of other forms of wealth is determined.

CONTROL OF CREDIT BY CENTRAL BANKS

A central bank is compelled to buy and sell gold at a fixed price, and cannot bid for gold by offering a higher price. If it wants to acquire more gold, it must take measures which are equivalent to raising the value of the money in which its fixed price is computed.

The central bank supplies the other banks with money. By restricting the supply of money it can compel them to contract credit, or by increasing the supply of money it can induce them to expand credit. It is the

TRADE DEPRESSION AND THE WAY OUT

practice for the central bank to act as the lender of last resort in the banking system ; it will lend at a prescribed rate (' Bank rate ') on suitable security to any of the other banks needing cash.¹ In order to restrict the supply of money it raises Bank rate, and can reinforce this measure by selling securities in the open market and extinguishing the money received for them. To increase the supply of money it lowers Bank rate and buys securities in the market.

If the central bank wants to acquire more gold or to stop an outflow of gold, it sets on foot a contraction of credit and thereby reduces the incomes of the community expressed in terms of money. People, having less money to spend, buy less of everything and incidentally buy less imported goods. The contraction of credit does nothing to diminish exports (in fact the decrease in the home demand for exportable goods tends actually to increase them), and the result is a ' favourable ' balance of payments, an excess of exports over imports (visible and invisible) which tends to bring about an inflow of gold.

The reduction of incomes may be regarded as causing a ' scarcity ' of the country's money. Less of the currency is offered in exchange for goods in the world's markets. The scarcity is made good by the importation of gold which can be turned into currency by being sold to the central bank.

Similarly if a country relaxes credit and increases incomes, it attracts imports and loses gold.

¹ In England the practice is for the Bank of England to lend, not directly to the Joint Stock Banks, but to the Discount Houses. But the effect is the same.

EXTERNAL AND INTERNAL PRICE LEVELS

EXTERNAL AND INTERNAL PRICE LEVELS

So long as all the countries which have a gold standard aim at keeping their gold holdings approximately unchanged (except for natural growth), the effect of the system is to keep their relative purchasing power in equilibrium. Incomes in each country are kept at such a total that what the country buys in world markets is just suitably balanced by what it sells in world markets.

By world markets we mean the markets in all those goods which are adapted for exportation from one country to another. They may conveniently be called foreign trade products, in contradistinction to those for which exportation is impossible or impracticable, and which may be called home trade products. Foreign trade products include the great majority of foodstuffs, industrial materials and manufactured commodities. Home trade products are largely composed of *services*, such as those of cleaning and repairing, construction, inland transport, domestic service, teaching, entertainment, etc., but they also include some material commodities which are too fragile or perishable, or too bulky in proportion to value to be suitable for transportation.

A foreign trade product has an international price. That does not mean identically the same price in different countries, but prices connected together by competition in the market ; the price in any importing country will only differ from the price in an exporting country by an amount not exceeding the cost of transport between the two, and import duties (if any).

Now when credit is restricted or relaxed in any country, and incomes are contracted or expanded, the prices of home trade products are free to adapt themselves to the change, but not so the prices of foreign

TRADE DEPRESSION AND THE WAY OUT

trade products, which are determined internationally. If we call the price levels of home trade products and foreign trade products the internal price level and the external price level respectively, we may say that the gold standard requires a country to adapt its incomes to its external price level, and its internal price level to its incomes.

THE BALANCE OF PAYMENTS

The governing condition is the external price level. And to get at the root of the matter, we have to discover what determines the external price level, or in other words the *world* price level.

That does not mean that no adaptation is called for from any country as long as the world price level remains unchanged. Suppose something occurs to diminish the country's power of producing foreign trade products, a crop failure, perhaps, or, more permanently, increased competition from rival producers. Its purchases in world markets must be reduced by as much as its sales, and this requires a restriction of credit and a contraction of incomes. The same is true of any new external liability, like the German reparation payments. Or, if a country increases its external investment, that is for the moment a new liability from it to the countries in which it is investing, though there will arise in the future a liability for interest or dividends from the latter to the former. We may regard the purchase of foreign securities as an invisible import and the encashment of coupons or dividend warrants as an invisible export.

Thus everything which affects the balance of payments of a country requires a corresponding adjustment of its incomes and of its internal price level, and its banking system is responsible for effecting the adjust-

ANARCHY IN WORLD CREDIT CONTROL

ment. Failure to do so results in an outflow or inflow of gold.

When the difficulties of the coal and cotton industries are put forward as explanations of trade depression in this country, what is really implied is that our diminished exporting power involves us in a reduction of our incomes, and so (if equilibrium is to be maintained) in a reduced standard of living. If depression were confined to this country, an explanation on those lines would be relevant. At the time when depression practically was confined to this country, in the years 1927-29, the special difficulties of our exporting must have been a contributory factor. But, as I shall show presently, even then credit policy may be regarded as the governing cause.

ANARCHY IN WORLD CREDIT CONTROL

At the present time the depression is world wide. It is not to be explained by any disturbance of the balance of payments of particular countries. The outstanding fact is the catastrophic curtailment of demand throughout the world, made manifest in the collapse of prices and the appearance of extensive unemployment.

Every country has had to adapt its incomes and its internal price level to the world price level. What that means is that every country has had to adapt its incomes to the incomes prevailing in all the others. No one of them could afford to stand aside, for if its incomes failed to contract as fast as those of its neighbours, it would lose gold. Some in fact have given up the struggle; Australia, Argentina, Brazil, Uruguay, Peru, Mexico, have suspended the gold standard.

What has to be explained is this world-wide collapse

TRADE DEPRESSION AND THE WAY OUT

of demand or, in other words, of *incomes*. To each separate country it appears as pressure from the others. But if we view all the gold standard countries as a single community, we can apply to this community the reasoning we have already used. It will be exposed to the alternative possibilities of a vicious circle of depression or a vicious circle of inflation, and the responsibility for determining which prevails or whether both shall be kept in check rests with the banking system.

But we no longer have to consider a single banking system. We have a number of independent banking systems connected together only by the gold standard. Each system has its own currency, supplied by its own central bank. The central bank regulates credit only within the domain in which the notes it issues are current. The regulation of credit in the gold-using world is the resultant of the action taken by all the central banks.

If their action averaged out, so that the resultant was usually a neutral or moderate effect, this might be a very tolerable practical solution of the question of credit control. But the inherent instability of credit makes this impossible. If expansion takes hold of some countries and contraction of others, the tendency is for the gap between the two groups to widen. Gold movements from the former group to the latter result and compel a reversal of their respective credit policies. But it cannot be assumed that when they have successfully corrected the divergence and stopped the flow of gold, there will on balance be neither expansion nor contraction. Even if this state of perfect quiescence were attained, it would be liable to be disturbed by some fortuitous occurrence starting the vicious circle of inflation or deflation in the system *as a whole*.

Suppose that contraction prevails. Credit restriction has made the holding of goods by traders all over the

ANARCHY IN WORLD CREDIT CONTROL

world less attractive, and they buy less from producers and order less from them. Production slows down. Initially contraction would not be universal. Some countries and some industries would be free from it. But if contraction on the whole predominates, then those countries and industries which are at first unaffected will soon suffer from the diminished purchasing power of the rest.

The merchants and dealers in foreign trade products, finding that demand contracts, will anticipate a fall of prices. This will be a fresh inducement to restrict and retard purchases. Every exporting country experiences a flagging of demand in world markets, and is compelled to contract credit in order to keep down its imports. Thus the vicious circle of depression works in an international system. The essence of the matter is the reluctance of *intermediaries* to buy goods. It is through their action that the tendency of the various countries concerned to buy imports in excess of exports fails to recreate demand. The merchants and dealers in international markets sell to such countries, but the money they receive is applied to extinguish bank advances or is held idle on deposit ; it is not passed on to producers to elicit fresh output.

The vicious circle of inflation is equally likely to develop. Merchants and dealers are encouraged to borrow and therefore to buy. Production in all exporting countries is stimulated, and they expand credit and expand incomes so as to attract equivalent imports.

Though either course of events is the resultant of the action taken by the several central banks, no one of them has any responsibility for it. It has never been the practice for those in control of central banks to consider their responsibility for the behaviour of the system as a whole. They are like a party walking across

TRADE DEPRESSION AND THE WAY OUT

country, no member of which knows the way or exercises any conscious control of direction. All the members indeed would indignantly repudiate any suggestion of a 'managed' walking tour.

In principle this system would seem to be purely anarchic. The expansion or contraction of incomes throughout the gold-using world is brought about by the unco-ordinated action of a number of independent authorities recognising no common aim, no leadership, no responsibility to one another.

CREDIT CONTROL BEFORE 1914

In the century preceding 1914 this anarchic situation was mitigated in two respects.

In the first place there is a tendency to centralisation inherent in any credit system, which makes itself felt even in an international system. Convenience requires something in the nature of an international centre or clearing house for all kinds of financial markets—the stock markets, the discount markets, the insurance markets, the foreign exchange markets. Transactions in these markets at places other than the centre give rise to residual balances, and these balances require to be brought together at a single centre to be set off against one another and settled. This function devolved upon London, so that London became the undisputed leader in the world of credit. Credit relaxation or credit restriction would start in London and spread to other countries, because everywhere international trade was in great part financed by bills drawn on London and discounted in London at the rates prevailing in the London market.

Secondly, there was some degree of continuity in

CREDIT CONTROL BEFORE 1914

the monetary policy of the countries concerned. So long as no country made any violent or discontinuous change in the amount of gold it held, the demand for gold was kept steady. This was not enough of itself to keep the value of gold in terms of wealth stable, because there was room for considerable variations in the proportion of bank deposits in any country to the quantity of gold and in the proportion of incomes to bank deposits. But still these variations were kept within limits.

This continuity of policy in regard to gold, however, was not completely maintained. Up to 1872 the monetary standard of the world was not gold but bimetallic. The gold standard of England and the silver standard of Asia and half Europe were linked together by the free coinage of gold and silver at a prescribed ratio of values in France and a few other bimetallic countries.

The wars of the period 1854-71 drove a number of countries, including the United States, France, Austria-Hungary and Russia, to inconvertible paper. As in the war of 1914-18, the effect was to release a quantity of gold and silver, and to raise the price level in terms of those currencies which retained a metallic basis.

After the end of the war with France in 1871 Germany decided to change over from a silver to a gold standard. In a year or two Germany imported gold to the amount of £50,000,000, nearly one-tenth of the world's entire monetary stock of gold at the time. There resulted a financial crisis and a precipitate fall of the price level. Bimetallism broke down, and one country after another passed from silver or paper to a gold standard, and started to accumulate a gold currency or a gold reserve. The demand for gold outstripped

TRADE DEPRESSION AND THE WAY OUT

the yearly output from the mines, and a fall of prices prolonged till 1896 was accompanied by a severe depression of trade, broken only by short intervals of revival in 1880-82 and 1889-90.

From 1896 to 1914, though the change over from paper to gold still remained to be carried into effect in a few countries, this demand for gold was more than offset by an enormously increased output from the mines.

THE DEMAND FOR GOLD AS MONEY SINCE 1914

But since 1914 arbitrary changes in monetary policy and in the demand for gold as money have been greater and more numerous than ever before. First came the general abandonment of the gold standard by the belligerent countries in favour of inconvertible paper, and the release of hundreds of millions of gold. By 1920 the wealth value of gold had fallen to two-fifths of what it had been in 1913. The United States, which was almost alone at that time in maintaining a gold standard, thereupon started contracting credit and absorbing gold on a vast scale. In June 1924 the wealth value of gold was seventy per cent. higher than at its lowest point in 1920, and the amount of gold held for monetary purposes in the United States had grown from \$2,840,000,000 in 1920 to \$4,488,000,000.

Other countries were then beginning to return to the gold standard, Germany in 1924, England in 1925, besides several of the smaller countries of Europe. In the years 1924-8 Germany absorbed over £100,000,000 of gold. France stabilised her currency in 1927 and re-established the gold standard in 1928, and absorbed over £60,000,000 in 1927-8. But meanwhile the United States had been parting with gold freely and her

DEMAND FOR GOLD AS MONEY SINCE 1914

holding had fallen to \$4,109,000,000 in June 1928. Large as these movements had been, they had not seriously disturbed the world value of gold. The price level, as measured by the American wholesale index, had not, on balance, fallen appreciably between 1924 and 1928.

But from 1929 to the present time has been a period of immense and disastrous instability. France has added more than £200,000,000 to her gold holding, the United States more than \$800,000,000. In the two and a half years the world's output of gold has been a little over £200,000,000, but a part of this has been required for the normal demands of industry. The gold absorbed by France and America has exceeded the fresh supply of gold for monetary purposes by some £200,000,000.

This has had to be wrung from other countries, and much of it has come from new countries such as Australia, Argentina and Brazil, which have been driven off the gold standard and have used their gold reserves to pay their external liabilities, such as interest on loans payable in foreign currencies.

According to estimates furnished to the League of Nations Gold Delegation, the world's supply of monetary gold has been as follows (in \$ millions) :

	<i>December 1913</i>	<i>December 1930</i>
United States	1924	4593
France	1700	2099
Other countries	5149	5023
Total	<u>8773</u>	<u>11,715</u>

Since the end of 1930 the United States holding has increased to \$4964 millions and the French to \$2292 millions. Allowance being made for an addition

TRADE DEPRESSION AND THE WAY OUT

of \$200 millions from the mines, the gold in the rest of the world may be put at \$4660 millions or \$490 millions less than in 1913.

France and the United States between them have absorbed the whole of the gold output of the past seventeen and a half years (so far as not used in industry) and £100,000,000 in addition.

GOLD AND CREDIT CONTROL

But it is not to be assumed without further investigation that this absorption of gold has been the direct cause of the depression. In so far as the demand for gold has caused a restriction of credit throughout the world, and the restriction of credit has caused a contraction of incomes, the absorption of gold is linked up with the depression. But the super-structure of credit in a modern community is built not directly on a foundation of gold, but on an intermediate sub-structure of *money*. It rests with the central bank (acting within its statutory limitations) to say how much money shall be built upon a given foundation of gold. The effect of the withdrawal of gold by one group of countries from another depends upon how the central banks of the latter group react. If they simply acquiesce in the loss of gold and maintain the same superstructure of money and credit on a smaller foundation of gold, the effect is nullified. In that case the absorption of gold by one group and the release of gold by the other together result in the demand for gold remaining unchanged.

If, on the other hand, when one group absorbs gold, the other resists the loss, that means that the central banks of the latter group will restrict credit. They will

CREDIT POLICY 1919-25

endeavour to bring about a contraction of incomes, so as to reduce the demand of their own people for goods in world markets. This will tend to cause depression. If the causes tending to bring about the absorption of gold by the first group are powerful, the depression caused may be intense.

CREDIT POLICY 1919-25

To discover how far the existing depression has been caused by the French and American absorption of gold, we must turn to the course of credit policy in the countries concerned in recent years.

We no longer find London with an undisputed leadership in credit policy. Such has been the growth in the financial strength of the United States, that New York is in a position to participate with London on equal terms.

On the other hand, no other centres are anywhere near exercising the same international influence as either of these two. The next in importance are not the great capitals, Paris and Berlin, but Amsterdam and the Swiss banking system. But it is only the London and New York discount markets and money markets that can ever exercise a decisive influence on world credit. Of the two London still exercises the more extensive influence. There is a greater concentration of banks with foreign and colonial business in London, financing international trade all over the world through the instrumentality of sterling bills. American mercantile business has not developed the same variety and world-wide extent as British. It flows in somewhat more specialised channels, and the banking business maintains the same characteristic. American mercantile and

TRADE DEPRESSION AND THE WAY OUT

banking concerns have not fully assumed the British function of impartial intermediary all over the world.

From the end of the war till 1925 London and New York were carrying on business with mutually independent currency units. The dollar had been restored to the gold standard in June 1919. The pound was not restored till April 1925. It was therefore possible for the two centres to carry out contrary credit policies without coming into conflict.

This did in fact occur. At first, it is true, America and England alike were involved in the inflation of 1919-20, and resorted almost simultaneously to ruthless credit restriction in 1920-21. But New York relaxed the tension in 1921 before London, and enjoyed trade revival and rising prices in 1922 while depression was still nearly at its worst in England.

Ever since the Bank Charter Act of 1844 came into operation, it had been the invariable practice of the Bank of England to treat trade depression with a low Bank rate and credit relaxation. In every trade depression without exception in the period from 1844 to 1914 Bank rate was lowered to $2\frac{1}{2}$ per cent. or even to 2 per cent. for long periods. Sometimes cheap money prevailed uninterrupted for years as in 1894-6, sometimes it was broken into by the exigencies of a crisis as in 1878 or 1884. This resort to cheap money was strictly in accordance with the theory of credit regulation. Depression is the result of an undue contraction of incomes and therefore of demand in terms of money. Cheap money is the means of inducing an expansion of incomes, for the lending operations of banks generate incomes.

In 1922 the well-tried policy of cheap money was put into force. It was rather late in the day, for the wholesale price level had been reduced by half since the

CREDIT POLICY 1919-25

spring of 1920, and the number of unemployed had risen almost to 2,000,000. And Bank rate was not reduced below 3 per cent. Still, revival unmistakably made itself felt.

Meanwhile, in the spring of 1923, the Americans, finding that credit expansion in their country had gone far enough and threatened to degenerate into inflation, reverted to restriction, and the divergence of policy between the two countries made itself apparent in a fall of the exchange from 4·70 in March 1923 to 4·20 in January 1924. The rise in Bank rate to 4 per cent. in July 1923 did not materially alter the situation, because the 4 per cent. rate was not made effective in the market.

But in the summer of 1924 the position was again reversed. The Americans, finding that they had done much more than counteract inflation and were lapsing into depression and unemployment, reverted to credit relaxation and cheap money. The English, unwilling to see sterling depreciate relatively to the dollar and the prospect of re-establishing the gold standard recede, restricted credit and made the 4 per cent. Bank rate effective. Depression vanished in America, productive activity rapidly increased, and the price level rose. In England the policy of cheap money was abandoned, the revival of trade was interrupted, and the exchange improved.

At the beginning of 1925 sterling was within 1½ per cent. of gold parity, but British industry was still saddled with what came to be known as the 'refractory million' of unemployed. Thus at the moment when the dollar and the pound had practically once more come together, American industry was in the full tide of activity, while British industry was in a state of grave depression, only less severe by the standard of the disastrous stagnation of January 1922.

TRADE DEPRESSION AND THE WAY OUT

CREDIT POLICY 1925-30

The relative values of the pound and the dollar had been responding with an almost mechanical precision to the regulation of credit in London and New York. It was perhaps natural to suppose that what was wanted to bridge the small remaining gap between the pound and parity was a little extra pressure in London.

At the beginning of March 1925 Bank rate was put up to 5 per cent. At the end of April the free export of gold was re-established, and the return to the gold standard was an accomplished fact.

But there was here a miscalculation. So long as the pound sterling was an independent paper unit, it was possible to affect the value of the pound relative to gold by restricting or relaxing credit in London. But the restoration of the gold standard made the pound once more an international unit.

The price level that was determined by credit regulation in London was the *world* price level. London, as I have already mentioned, was no longer the only centre concerned. The actual price movements in the world were the resultant of the credit policies of London and New York. Whenever London and New York pursued different policies this resultant would differ from the effect of either policy taken separately. And credit regulation in London, while affecting world conditions, would, in general, affect British conditions more directly and closely.

If credit restriction started in London, the resulting contraction in British incomes and British productive activity might be expected to be more marked than in those elsewhere. Under the earlier conditions, when the London market possessed the sole leadership, credit

CREDIT POLICY 1925-30

restriction in London would soon have been followed by credit restriction in all other centres, and the question whether there would be any differential effect making contraction relatively more severe in British industry would not have arisen.

But in 1925 there was a definite divergence of credit policy between London and New York. Curiously enough each country adopted the policy appropriate to conditions in the other. In America, where trade was prosperous and prices were rising, cheap money was continued. In England, where trade was depressed, dear money was imposed. The 5 per cent. Bank rate was continued by the Bank of England (except for one interval from August 6 to December 3, 1925) for two years. The rediscount rate in New York fluctuated in the same period between $3\frac{1}{2}$ and 4 per cent.

The upshot was on the whole that the dear money policy prevailed. The depression in England remained unrelieved. The activity in America was perceptibly diminished. The index of manufacturing production, by contrast with the big increases which have been recorded at all times of prosperity since the war, was practically stationary, rising from 105 in 1925 to 108 in 1926 and falling again to 106 in 1927. The world price level was falling. The American index of wholesale prices¹ fell from a high point of 104.2 in March 1925 to 93.7 in April 1927. The British Board of Trade index² fell from 166 to 140 in the same period.

These developments were extremely unsatisfactory. There had been some apprehension at the beginning of 1925 that the effort needed to maintain the pound at the level of purchasing power then corresponding to the historic gold parity would be found formidable. And possibly it would have been. But the purchasing

¹ 100 in 1926.

² 100 in 1913.

TRADE DEPRESSION AND THE WAY OUT

power of gold had since been *raised* by more than 10 per cent. The effort involved in maintaining the gold standard was by so much greater.

In 1927, however, the situation was in some degree relieved. In the first place France was stabilising the franc, and was accumulating an enormous reserve of foreign exchange. The resulting demand for sterling and dollar bills lowered market rates of discount. In London the 5 per cent. Bank rate became ineffective. It was lowered to $4\frac{1}{2}$ per cent. on April 21, 1927, and that rate in turn became ineffective in May. For the rest of the year, it is true, pressure was exercised to make the $4\frac{1}{2}$ per cent. rate effective, but the rate itself was not raised. And meanwhile the policy of credit relaxation in New York was intensified. The rediscount rate was not reduced below $3\frac{1}{2}$ per cent., but lavish purchases of securities in the open market by the Federal Reserve Banks increased the supply of money. Manufacturing activity began to revive. The fall in the price level ceased, and made way for a slight rise.

In England, however, there was no revival. The growing activity in America caused a disparity of conditions between America and Europe, and there resulted very large exports of gold from America, which went mainly to France but partly also to England. By June 1928 these exports of gold had amounted to £100,000,000.

This was the period of the great speculation on the New York Stock Exchange, itself the result of the unexampled prosperity of American industry since 1922. The speculation and the loss of gold between them led the Federal Reserve Banks once more to make a change of policy. The New York rediscount rate was raised by successive steps to 5 per cent. (July 1928), and was made effective by large sales of securities by the Federal

CREDIT POLICY 1925-30

Reserve Banks. For the first time since gold had resumed its function as an international standard, New York and London had ceased to pursue conflicting credit policies. They combined in a policy of credit restriction and dear money. The United States ceased to lose gold, but the speculation continued and gained force, particularly in the closing months of 1928 and then, after a quiescent interval, in the summer of 1929. England, on the other hand, began to suffer an outflow of gold, mainly to France, but at times in 1929 also to the United States. The Bank of England raised its rate to $.5\frac{1}{2}$ per cent. in February 1929, and to $6\frac{1}{2}$ in September 1929, and the New York rate was raised to 6 per cent. in August 1929.

Meanwhile, credit restriction had already begun to produce its effect on industry. When business is active, there is invariably found to be an interval of some months before its activity can be checked by dear money and other restrictive measures. That is bound to be so, because producers have an accumulation of forward orders to work through, and will not begin to slacken operations till these orders are completed. In the United States productive activity reached its maximum in June 1929.

By October 1929 it had begun to fall off so palpably that the optimism of the speculators in Wall Street was cooled down. By the end of that month the collapse of the speculation had started.

With the history of the speculation and its collapse I am not concerned here further than to say that the psychological effect of the enormous paper losses sustained was bound to intensify the reaction in trade and industry that had already been in progress for several months. I have explained the operation of the vicious circle of activity and the vicious circle of depression.

TRADE DEPRESSION AND THE WAY OUT

In 1929 a drastic credit restriction was applied to break the vicious circle of activity in the United States. That meant that, by restricting those lending operations by which incomes are generated, the banks in America and England and all over the world caused a *reduction of demand* for goods and services of all kinds. The reduction of demand led to a reduction of activity and of incomes and so to a further reduction of demand. The vicious circle of activity made way for the vicious circle of depression.

That was just such a situation as had, in the period from 1844 to 1914, invariably been treated with cheap money. But this time there was an interval of hesitation. It was not till February 1930 that Bank rate was reduced below 5 per cent., or the New York rate below 4½. Three months more passed before Bank rate had come down to 3 per cent.

DEADLOCK IN THE MONEY MARKET

A moderate trade depression can be cured by cheap money. The cure will be prompter if a low Bank rate is reinforced by purchases of securities in the open market by the Central Bank. But so long as the depression is moderate, low rates will of themselves suffice to stimulate borrowing.

On the other hand, if the depression is very severe, enterprise will be killed. It is possible that no rate of interest, however low, will tempt dealers to buy goods. Even lending money without interest would not help if the borrower anticipated a loss on every conceivable use that he could make of the money. In that case the purchase of securities by the Central Bank, which is otherwise no more than a useful reinforcement of the

DEADLOCK IN THE MONEY MARKET

low Bank rate, hastening the progress of revival, becomes an essential condition of the revival beginning at all. By buying securities the Central Bank creates money, which appears in the form of deposits credited to the banks whose customers have sold the securities. The banks can thus be flooded with idle money, and given a new and powerful inducement to find additional borrowers.

Something like this situation occurred in the years 1894-6. The trade reaction which began after 1891 was disastrously aggravated by the American crisis of 1893. Enterprise seemed to be absolutely dead. Bank rate was reduced to 2 per cent. in February 1894, and remained continuously at that rate for 2½ years.

The Bank of England received unprecedented quantities of gold, and yet added to its holding of Government securities. Its deposits rose to a substantially higher total than was ever reached either before or after, till the outbreak of war in 1914.¹ Nevertheless revival was slow. The fall of prices was not stopped till 1896. But by that time the unemployment percentage, which had exceeded 10 per cent. in the winter of 1893, had fallen to 3·3 per cent.

Since the war the Federal Reserve system of the United States has resorted freely to the policy of open market purchases of Government securities. It was a feature of the credit relaxations in 1922, 1924 and 1927. The same policy was followed at first in 1930, but after June of that year no considerable further purchases were made till June 1931. The holding of Government securities was not raised beyond the point at which it had provided the member banks with the means of reducing their rediscounts to a minimum.

¹ This is still true even after allowing for a balance of £10,000,000 or more being tied up for many months in connection with the payment of the war indemnity from China to Japan.

TRADE DEPRESSION AND THE WAY OUT

Subsequent experience has shown that that by itself was not enough to restart the credit machine. Industry has become deeply entangled in the vicious circle of depression. Prices have fallen and fallen. Unemployment has increased beyond all precedent. Those industries which produce capital goods are in many cases employed to less than half capacity. Prices of primary products have fallen so low that a very large proportion of the production is being carried on at a loss. Debtors, public and private, all over the world are threatened with bankruptcy by the appreciation of the gold units in which their debts are calculated, or, as it appears to them, by the depreciation of their assets in terms of money.

From May 1930 till the crisis of July 1931 all the principal financial centres had cheap money. But this by itself was quite insufficient to overcome the reluctance of borrowers. The normal process by which lending generates incomes has been interrupted not, as in 1929, by an impediment from the side of the lenders, but by an impediment on the side of the borrowers.

It is sometimes said that the depression cannot be due to a 'scarcity of money' because, in the language of the money market, there is a 'plethora of money.' But that only means that there is a plethora of *offers to lend money*, or, in other words, an insufficiency of offers to borrow. To generate money, lenders and borrowers must combine, and the process may be interrupted by an insufficiency of either.

The decisive step was the credit restriction adopted by London and New York in 1929. After the Wall Street crisis the further progress of the depression no longer depended on any active intervention from the central banks. Provided they remained simply passive,

EFFECTS OF THE ABSORPTION OF GOLD

the vicious circle was bound to go on magnifying the effects cumulatively.

And it is not true without qualification to say that they remained simply passive. The Bank of England made persistent efforts to make Bank rate effective in the first three months of 1930, and again in the first four months of 1931. That meant keeping down its holding of securities with a view to cutting short the bankers' deposits, and so reinforcing the unwillingness of traders to borrow with an unwillingness of bankers to lend.

EFFECTS OF THE ABSORPTION OF GOLD

If it be asked how far the absorption of gold by the United States and France is to be regarded as the real cause of the trouble, this can only be decided by considering the motives by which the central banks have been guided in their policy of restriction. The transition of New York from credit relaxation to credit restriction in 1928 was induced, in part at any rate, by the preceding outflow of gold. The French imports of gold were already beginning, but some of the gold went also to England. By the time of the Wall Street crisis in October 1929, the United States had only recovered a part of the gold lost in 1927-8. France, on the other hand, made a definite reversal of policy in regard to gold in 1929. The Bank of France reduced its holding of foreign exchange by 6 milliards (£48,000,000) in the first four months, and in the course of the year acquired 10 milliards (£80,000,000) of additional gold. This was more than could be supplied from the new output of the mines, and the result was to reduce the reserve of the Bank of England, which always feels the first impact of any demand

TRADE DEPRESSION AND THE WAY OUT

for gold. The reduction of the Bank's gold from £163,000,000 in June 1929 to £132,000,000 in September was the immediate cause of the rise of Bank rate to $6\frac{1}{2}$ per cent.

After the Wall Street crisis the United States began to lose gold again. The gold went mainly to France and England, and enabled the Bank of England to build up its gold to £150,000,000. But this movement only lasted a few weeks, and from the beginning of 1930 the United States began to receive gold again. In May 1930 the French inflow of gold, after a short interruption, was also resumed.

As I have already mentioned, the gold absorbed by them was supplied in part by exports from debtor countries, which had suspended the gold standard. Japan also contributed. From January 1930 to May 1931 countries outside Europe and North America lost in the aggregate over £100,000,000 of gold. It may be that, if the contraction of credit had been less violent, these countries would not have parted with their gold, that in that case the whole brunt of the French and American demand would have fallen on London, and that the Bank of England would in any case have refused to part with £100,000,000 more of its gold without resorting to a severe credit restriction.

If that is so, then the absorption of gold made credit restriction inevitable. The vicious circle of depression merely relieved the Bank of England from the necessity of imposing a high Bank rate.

And in a way it is obvious that a scarcity of gold is in some sense at the root of the matter. For if the depression arises from the shortage of demand, and demand is the amount of money offered for goods, then, since money means gold, the shortage is in the amount of gold offered for goods. The fall in the

DISPARITIES

prices of goods is identical with a rise in the value of gold. The value of gold has been raised by the additional demand emanating from France and America. If other countries had refused to contract credit in face of this additional demand, but had nevertheless maintained the gold standard, they would have lost gold. In other words, they would have contrived to keep down the value of gold by releasing an additional supply to balance the additional demand.

Many people hesitate to accept the monetary explanation of the depression, because they cannot believe that it can account for effects of such startling magnitude. They do not allow for the potency of the inherent instability of credit.

The economic system of the world is built up on the pecuniary motive. Money is the nervous system of industry. People produce for profit. Credit restriction tampers with the free flow of money. The shrinking of demand impairs the operation of the pecuniary motive and produces paralysis.

The pecuniary motive is as essential to economic activity as the disciplinary motive to the functioning of an army. In 1917 the Russian army was reduced to powerlessness because the disciplinary motive was destroyed by the revolution. In the same way industry has been brought to a standstill all over the world through interference with the money motive.

DISPARITIES

It is well to understand clearly how far-reaching are the consequences of a contraction of demand. It affects different industries in different ways, and so causes striking disparities among them.

TRADE DEPRESSION AND THE WAY OUT

The first symptom of contracting demand is a decline in sales to the consumer or final purchaser. The orders given to manufacturers fall off, and they reduce output. It is worth while for a manufacturer to make price concessions in order to keep his plant as nearly as possible fully employed. But these price concessions are made tentatively and gradually. Any manufacturer who carries them beyond what the circumstances require will lose the more lucrative orders by taking the less. Nor will price concessions in the wholesale market stimulate demand at all until they are passed on to the consumer. And here there may be considerable delay.

It is therefore true to say that in manufacturing industry, not only the first impact of a decline in demand, but its predominant effect for a protracted period is a reduction of output, accompanied by unemployment and by an encroachment of overhead costs on profits.

On the other hand, the producer of primary products, foodstuffs and raw materials, does not in general adjust his output to orders given beforehand. In the case of agricultural products particularly, the character of the production is determined from season to season, and a decline of demand is met in the first instance not by a reduction in output but by a reduction of price. A reduction of price may lead to a reduction of output in the next season. But in the case of crops a reduction in the acreage of one crop usually means an increase in the acreage of others. When demand as a whole falls off, and the prices of *all* crops decline, there is not likely to be a very drastic reduction of the total acreage under crops.

The demand for primary products is apt to be inelastic, in the sense that price concessions do not elicit a proportional increase in sales. That is notoriously

DISPARITIES

the case with cereals. And it is bound to be so also with all forms of raw material, because the further removed a process is from the final sale to the consumer, the less will a price concession on that process affect the price charged to the consumer. When the price of raw cotton falls from 8*d.* to 4*d.*, the effect on the price of yarn is very considerable, on the price of cloth less, on the price of a finished garment much less again. When the price of rubber falls, the effects on tyres may be perceptible, but the effect on the cost of a car is very small.

Thus when demand contracts, the incomes of the manufacturing population and of the agricultural population of the world will both fall, but whereas in the former the fall will at first, at any rate, be mainly due to reduced output, in the latter it will be mainly due to reduced price.

Retail prices are the most recalcitrant. The retailer will acquiesce in a decline in sales for a long time before he will try to correct it by reducing prices. The wholesale dealer also will not take the initiative in cutting prices to stimulate sales, at the cost of reducing his profit margin. Price concessions originate with producers and particularly with those producers who have either heavy overhead costs or a long production period. The agricultural producer is a particular case of this principle, and there may be wide disparities between one manufacturing industry and another.

Disparities also arise from differences in the character of the demand for the products of different industries. When there is a reduction of incomes, and prices remain unchanged, the effect is the same as if incomes had remained unchanged and prices had risen. The falling off of sales is greatest among luxury goods and those for which the demand is 'elastic,' and is least among

TRADE DEPRESSION AND THE WAY OUT

necessaries and those for which the demand is 'inelastic.' The falling off also tends to be greater among relatively durable goods, such as clothes, of which the replacement can be postponed a little than among goods, such as food, which are destroyed by the act of consumption.

Whenever there is delay in reducing prices to the point at which consumption keeps pace with output, an accumulation of goods in stock begins. Accumulations of finished goods are usually kept within narrow limits, for dealers do not order more goods than they sell, and manufacturers are reluctant to produce for stock. But big accumulations of foodstuffs and raw materials are a conspicuous feature of trade depression.

SAVINGS AND CAPITAL OUTLAY

The case of the producers of capital goods requires separate consideration. The demand for capital goods is determined by the amount of investible funds becoming available. Investible funds consist primarily of savings *out of income*, though they may be reinforced by bank advances to stock jobbers or speculators, or may be diminished through the repayment of such advances.

We are supposing a credit contraction to be in progress, and it may be assumed that the bank advances to the Stock Exchange are being curtailed, or at any rate actively discouraged, along with the rest. The supply of savings therefore will not easily be supplemented by bank advances.

Now in any community the main source of savings is likely to be the traders' profits, taken in the widest sense to include industrial, commercial and financial profits. The rentier, whose income is composed of pure interest, has little motive to save, because his income is

SAVINGS AND CAPITAL OUTLAY

already secured independently of his personal exertions, health or life (except for the encroachments of the tax-gatherer). The recipients of salaries and wages have a motive to save, but can spare but little. It is the profit makers who have incomes that are *large, precarious and fluctuating*, and who have both the means and the motive to save.

And the main impact of a trade depression is on profits. First the restriction of output diminishes the margin available after meeting overhead costs. Then there follows a fall of prices; which diminishes the proportion of profit to output, unless costs are reduced by cuts in wages or other means. Costs probably are reduced, but the shrinkage of demand and the fall of prices are progressive, and while they continue, the reduction of costs is likely to lag far behind them.

The result of reduced profits is reduced savings. The owners or partners of firms, unable or unwilling to effect drastic economies in their personal expenditure, leave less of their profits in the business. Companies, in the effort to maintain dividends, or not to reduce them too severely, make smaller payments from profits to reserve. Some businesses draw on past reserves to keep up their dividends, and some are carried on at an actual loss, encroaching on capital even when they make no distribution at all.

The incomes of shareholders and other profit makers are reduced in spite of these devices, and they in turn save less out of their incomes. The stream of money seeking investment through the Stock Exchange is diminished. The market becomes less favourable to new capital issues. Underwriters of new flotations become overburdened, and issuing houses become reluctant. If the new issues are not cut down fast enough, the market has to hold the excess with additional

TRADE DEPRESSION AND THE WAY OUT

bank advances, and is exposed to all the pressure that the banks are exerting in order to contract credit.

Since profits fall more than in proportion to prices, and savings fall more than in proportion to profits, the reduction in capital outlay is likely to be very heavy indeed. Capital outlay employs the industries engaged on constructional and engineering work, and it is well recognised that they and the industries providing them with materials (*e.g.* metals) are particularly susceptible to trade depressions. Recently the steel industry of the United States has been working at less than one-third of capacity.

But the shrinkage of capital outlay causes disparities in the effects of depression not only on different industries, but also on different *localities*. Under normal economic conditions a considerable part of the capital outlay of the world is incurred in new countries, where natural resources are in course of development, population is being swollen by immigration, the means of transport are being extended to new districts, cities are being founded and enlarged with all the consequent expenditure on buildings, public utilities, etc. Since the greater part of the savings of the world comes from the *old* countries, where the profit makers are concentrated in the great commercial and financial centres, there must be a flow of investment from the old countries to the new.

The import of capital has a favourable effect on the balance of payments of the new countries. As explained above, it is an invisible *export*, an export of securities. When depression brings about a collapse of profits, the supply of savings in the old countries is cut short. Investment has to be cut down everywhere, and investment in the new countries undergoes its share of the process. The result is a big decrease in the flow of

ENTERPRISE AND CONFIDENCE

capital from the old countries to the new. The balance of payments of a new country is adversely affected by this reduction of an invisible export, and it is compelled to restrict incomes all the more severely.

Since the new countries, besides being international borrowers, are also exporters of primary products, and since the primary products suffer the heaviest reductions of prices, these countries are doubly affected by the trade depression. That is why so many of them have been driven off the gold standard, and have found the greatest difficulty in discharging external liabilities.

ENTERPRISE AND CONFIDENCE

Concurrently with the shortage of savings there is another aspect of depression which affects capital outlay. Capital outlay is incurred with a view to future interest or profit. When demand contracts, the prospect of profit from a given enterprise is lessened. A large part of capital outlay is devoted to extending the capacity of industries of which the output is failing to keep pace with demand. Under normal conditions most industries require such extension, if only on account of the natural growth of population. But when demand suffers contraction, the need for extension is diminished or entirely suspended. At a time of depression, therefore, not only do savings fall off, but enterprise also dwindles. When this occurs the investment market has the less difficulty in restricting capital issues to the available savings, and may even be found trying to tempt promoters to bring out more capital issues to use up savings.

On the other hand, it must be kept in mind that

TRADE DEPRESSION AND THE WAY OUT

capital outlay is not applied exclusively to extensions of capacity. It is constantly required for improvements in industrial plant and equipment, which reduce costs, replacing obsolete equipment and often displacing labour. However depressed markets may be, it is worth while for those industrial concerns that *are* employed to reduce their costs. Capital outlay of this class is encouraged by an investment market favourable to new flotations.

Yet another complication arises in the capital market in that depression impairs confidence in borrowers. The fall in prices means a depreciation of debtors' assets in comparison with their liabilities. To put the same thing in another way, the appreciation of money increases the burden of debts.

In the case of a commercial or industrial concern the position is obvious enough. The market valuation of stocks of commodities falls. The valuation of the fixed capital of industry or agriculture is reduced in proportion to its profit-earning power. Overdrafts, debenture debts and mortgages remain fixed in money, while the money value of the assets on which they are secured becomes less and less. Concerns previously solvent and prosperous find their net value a negative quantity. Others, which still have a balance on the right side, cannot make a good enough showing to satisfy intending lenders. Experience of this drift into bankruptcy makes lenders more exacting.

In the case of Governments and public authorities the same process is at work. Incomes are contracted, and taxable capacity decreases. A falling revenue is available to meet a public expenditure which usually includes a large proportion of items fixed by contract in money and others which it may be difficult to alter. The strain may become so great as to threaten default,

ENTERPRISE AND CONFIDENCE

especially where there are weaknesses in the political situation.

It is conceivable that the restriction of capital outlay combined with the distrust of borrowers might result in new flotations falling short even of the restricted supply of savings available at a time of depression. The excess savings will either be applied to buying existing securities and so extinguishing part of the bank advances to the Stock Exchange, or be simply held idle in balances. In either case so much income as the excess savings represent will have failed to materialise in demand for goods at all. This is really a phase of the vicious circle. The depression causes a reluctance to invest, and the failure to invest intensifies the depression.

The accumulation of idle deposits has occurred both in England and in America, but not on so great a scale as to result in an actual *increase* in deposits ; it has merely retarded the *decrease* required to bring them into the accustomed proportion to incomes, turnover and prices. The banks in which the idle deposits are placed are apt to cover them with purchases of investments in the Stock Exchange on their own account. The result is to reduce still further the bank advances to the Stock Exchange ; it makes the market more favourable to new issues and so tends ultimately to counteract the reluctance to bring out new issues.

But it is safe to say that the main cause of the decline of capital outlay is the decline of savings. The reduction of openings for investment is not such as to leave a part of the exiguous stream of savings unused. Nor if savings increased would the market fail to find capital outlay to employ them.

It is very important not to confuse the two quite distinct questions of investment and the creation of

TRADE DEPRESSION AND THE WAY OUT

credit. By investment is meant primarily the acquisition of permanent capital assets or securities *out of income*. It is the process by which savings out of income are applied (mainly through the intermediary of the Stock Exchange) to increase the capital equipment of the community.

If investment of savings is supplemented by funds lent by banks, a creation of credit occurs. But that is because the acquisition of *any* asset by *banks* involves the creation of new bank credit. Investment securities provide a very convenient vehicle for the creation of credit, because they can readily serve as collateral for bank advances. But investment is quite a distinct process from the creation of credit.

WAGES AND PRICES

Of all the disparities that arise out of a collapse of demand, perhaps the most fundamental is that between wages and prices. Shrinkage of sales is met partly by reduction of output and partly by reduction of prices. The obstacle to the reduction of prices is that, so long as costs remain unchanged, the entire loss falls on profits. Production is curtailed, because producers cannot get a price which will yield them a profit. If wages are reduced, a price previously too low will become remunerative. If wages were reduced in proportion to the previous reduction of prices, and the disparity between wages and prices wholly eliminated, profits would become normal and industry would be fully employed again.

This requires that the fall of wages should *overtake* the fall of prices. If the fall of wages starts a new fall of prices, so that the former process continues to lag as

WAGES AND PRICES

much as ever behind the latter, nothing is gained. Whether this happens will depend mainly on the action taken by the banking system.

In practice we have to consider the credit policy of one country in an international system. The external price level appears to the country as a given fact, and credit regulation has to be applied to prevent incomes so expanding as to attract an excess of imports. If wages are reduced, a given total of incomes corresponds to a greater volume of employment.¹ The internal price level falls, and the production and consumption of home trade products are both increased, but so long as there is no change in the external price level or in the total of incomes in terms of money, there will be no increase in the consumption of foreign trade products.

If there is no change in the external price level, however, the production of foreign trade products (whether exports, or goods competing with imports) becomes more profitable, and is likely to be stimulated. The result will then be a favourable balance of payments, and an actual *expansion* of incomes becomes possible. If the banking system allows this to occur, there will be a still further improvement in demand and employment. Alternatively there will be imports of gold.

Thus a relatively moderate reduction of wages may bring a very substantial increase in productive activity, *provided* a similar reduction of wages does not occur in other countries. In fact when one country lowers wages relatively to the others, it gains a competitive advantage and shifts part of the burden of depression from its own shoulders to theirs. France emerged in 1927 from the devaluation of her currency with wages

¹ It is often assumed that a reduction of wages necessarily means a reduction of incomes, and therefore of demand. But that is not so. In the first instance what wages lose profits gain. The income from profits furnishes demand just as much as the income from wages.

TRADE DEPRESSION AND THE WAY OUT

relatively very much lower than in England, Germany or America. Even in 1930, when they had been rising steadily for three years, they were only 48 per cent. higher than in 1911 (in terms of gold), whereas in England they were 70 to 75 per cent. higher than in 1914. The increase was somewhat less in Germany than in England, but still much greater than in France. In the United States wages were more than double what they had been before the war. The result was that while the other three countries were suffering from unemployment on an unparalleled scale, France escaped with a very mild attack.

But it cannot be assumed that any one country will be able to reduce wages faster than its neighbours. When one sets the example, employers in all competing countries are at once supplied with a new and formidable argument for extracting similar concessions from their own workpeople.

If we suppose all industrial countries to reduce wages together, no one of them will gain a favourable balance of payments at the expense of the others. But the prices of foreign trade products can no longer be regarded as given and fixed. They will fall, and there is no certainty that they will not fall so far as to nullify the advantages of reduced wages. Producers will, no doubt, offer price concessions as an inducement to dealers in commodities to order more. But the price concessions will be less than in proportion to the reduction of costs (since the producers will hope to get back nearer to normal profits), and it may be that dealers, counting on larger price concessions, will hold back. It is a matter of chance whether the vicious circle is broken, unless the banking system intervenes. The reduction of costs may give a specially favourable opportunity for intervention, but the decisive action still rests with the

WAGES AND PRICES

banking system—that is to say, with the central banks of the world.

And that being so, it may fairly be asked, Why should the central banks wait for a reduction of wages before taking action? If the world price level has been *irrevocably* reduced, and is never to increase again, the price level of labour must sooner or later be adjusted to the price level of goods. The various disparities must somehow be eliminated, so that once again the due relation is established between wholesale prices and retail prices, between prices of primary products and prices of manufactures, between wages and profits. In that case the reduction of wages is a question that had better be grappled with once and for all.

But the central banks are by no means in a position to say that the world price level has been irrevocably reduced.

Those who take the view that the world price level is determined by something beyond human control cannot take upon themselves to say what the future will bring. Those who take the view that the world price level is determined by the action of the central banks themselves, will hardly say that those banks either should or will stereotype the existing price level indefinitely. The fall in the price level is still so recent that the adjustments required to re-establish the relativities of wages, prices, profits, etc., have hardly begun. It is impossible to say within a very wide margin what reduction of wages is required, whether 15 per cent. will be enough, or whether it must be 40 per cent. Even when the economic level of wages is assumed to have been settled, the increase in the burden of debts opens an appalling gulf of bankruptcies and budget deficits to be bridged.

Those who contend that wages should be adjusted

TRADE DEPRESSION AND THE WAY OUT

to prices rather than prices to wages are like Grock moving the piano up to the music stool instead of the music stool to the piano.

A FUTURE RECOVERY OF PRICES

There are very good grounds for thinking that, even if central banks wash their hands of responsibility and leave matters to drift, there will still be a very marked recovery of prices.

The vicious circle of depression cannot go on unbroken for ever. The inherent instability of credit is itself a guarantee of that. Alongside the deflation bacillus there is always latent the inflation bacillus. For the time being the former is at work unchecked. But eventually the chapter of accidents is certain to favour its rival.

It may be contended that when that occurs the central banks can prevent it. If they stick at no sacrifice, they can. But it does not follow that they will. The very same state of mind that makes them acquiesce in depression will make them acquiesce in expansion.

Depression leads to a stagnation of money and bank credit. They both circulate more slowly, so that with given stocks of gold and of money, and with given proportions between bank credit and money, the total of incomes is less than normal. When revival comes, incomes can expand, output increase and prices rise, without a proportional addition to money or to bank credit, and perhaps for a time without any addition at all.

The existing absorption of gold in France and the United States is undoubtedly in certain respects exceptional. In the case of France it is mainly attributable

A FUTURE RECOVERY OF PRICES

to the narrow limitations imposed by law on the character of the assets that may be held by the Bank of France. The Bank of France is precluded from buying Government securities or any similar investments in the market, and the power given to it in 1926 to buy foreign exchange was withdrawn in 1928. Apart from a few other classes of assets of minor importance, it is restricted to holding either bills with two French signatures or gold. The supply of eligible bills is very limited, and the transactions out of which such bills arise cannot be increased at will.¹ The result is that since 1928 any increase in the liabilities of the Bank of France has had to be covered by gold to an equal amount.

As a result of the preceding years of inflation, the monetary circulation of the country was much below normal in 1928, and the note issue of the Bank of France has increased since then by 20 milliards (£160,000,000). But the Bank's liabilities have also been increased at times by an accumulation of Government balances (at present 9 milliards or £72,000,000, though they have sometimes been as high as 14 milliards) and, since the German crisis began in June 1931, by a great increase of private deposits.

In the future it may be expected that the deposits at the Bank of France will be much less than at present. And revival of business is likely to lead to an increase in the supply of bills eligible to take the place of gold among the Bank's assets.

In the Federal Reserve Banks of the United States there is likewise an excessive accumulation of gold. As the result of numerous bank failures the monetary circulation has been abnormally increased. It is not

¹ This is not true without qualification. If, for example, the Bank of France wishes to support sterling, French commercial banks willing to co-operate can make sterling bills eligible by endorsing them with the requisite French signatures.

TRADE DEPRESSION AND THE WAY OUT

merely that people are led to hoard money by distrust of banks, but in some outlying districts banking facilities within convenient reach have become restricted. The gold cover is also much greater than need be. It is true that the holding of eligible bills as cover for the Federal Reserve note issue has fallen (partly as the result of depression) to a very exiguous total; but even after the whole of the balance of the note issue has been covered with gold there is still left \$2000 millions of gold to be held against the \$2500 millions of deposits. These deposits require by law a reserve of only 35 per cent. or \$875 millions, and they are almost entirely composed of the statutory reserve deposits of member banks which practically cannot be considerably reduced. It is difficult to conceive of any good reason for holding \$1000 millions of idle gold, which could be released without difficulty, if the Federal Reserve Banks chose to replace it by Government securities bought in the market. Even half that amount might well be enough to start credit expansion and trade revival throughout the world.

Thus, far from there being a real scarcity of gold at the present time, there is a big redundancy, which is likely to make itself felt in two or three years in a rise of the world price level.

OVER-PRODUCTION

It is sometimes argued that the collapse of the price level is not due to monetary causes at all, but is merely the natural consequence of the increased productivity made possible by modern technological progress. Less is heard of that argument now than in the early stages of the depression when the fall of prices was still

OVER-PRODUCTION

relatively moderate, but it has not been entirely abandoned. The answer to it is simple. In so far as the fall of prices is due to improved methods of production, *no* reduction of wages or of other costs is required for the maintenance of equilibrium. In 1929, when productive activity was at its height in the United States, wages were 120 per cent. higher than in 1913 while commodity prices were only 50 per cent. higher. The difference indicates the magnitude of the improvements in production. But the fall of prices by 30 per cent. in the two years that have since elapsed has nothing to do with improvements. Or at any rate their contribution to it is quite insignificant.

But suppose, for the sake of the argument, that the trouble does arise from over-production, that the over-development of the areas in which such products ~~as~~ wheat, coffee, rubber or sugar are grown has led to the accumulation of enormous redundant stocks, that over-investment in certain manufacturing industries has increased their capacity far beyond the absorptive power of their markets. To what remedies, what practical measures will this interpretation of the situation point?

One answer that is given is the Rationalisation of Industry. The solution offered is the ruthless closing down of the less efficient or the obsolescent concerns, and the concentration of production in those fit to survive. The latter, relieved of the desperate competition of the former, will then be enabled to make a profit. Output will be diminished and the selling price raised, and at the same time ~~costs~~ costs will be reduced.

But what sort of remedy is this? The complaint is that in consequence of over-production industry is under-employed, and capital and labour alike are out of work. And it is proposed to throw more capital and more labour out of work!

TRADE DEPRESSION AND THE WAY OUT

But that is not the only form of rationalisation recommended. There may be a general overhaul of an industry with a view to increasing its efficiency, and leading not to a smaller but to a larger output. A curious way of dealing with over-production! The proposal, however, is not quite so illogical as it appears. If *any one country* can make its industries more efficient than those of its competitors, it can take away business from them, just as it could by reducing wages relatively to theirs. But of course there is nothing to prevent them from taking similar measures, and, if they do, there results precisely that over-development of certain industries which was assumed to be the cause of the trouble.

It is not to be inferred that increased efficiency is undesirable, but that over-production is not the cause of the depression. Over-production may well be troubling *some* industries. And, if so, rationalisation may well be the appropriate treatment. Either let superfluous plant be scrapped, or let efficiency be so improved that the product can be supplied at a real cost low enough to elicit an adequate new demand. But this has little or nothing to do with the remedial measures required for the general depression.

Again, rationalisation may be very much in point for British industries which are suffering from intensified foreign competition. If they really have been falling behind in respect of efficiency, and if the way can really be shown by which they can make up the lost ground, it is highly desirable that they should take it. But to recommend 'more efficiency' in the vague as the remedy for our economic troubles is as helpful as to recommend good health as the remedy for a want of doctors.

And in considering plans for rationalisation it is important to bear in mind that the demand for the

OVER-PRODUCTION

products of *any* industry under present conditions is below normal. It is most unwise to start adapting the productive power of an industry definitively to a reduced demand, when in a year or two trade revival is likely to increase the demand to an indefinite extent.

To arrive at a measure of normal demand in any industry, we must consider what the situation would be if all industries were fully employed, and the profits in all were normal. That does not mean that every industry is to be employed up to capacity. There is so much surplus capacity in most manufacturing industries that the available supply of labour would not suffice to man them all at the same time. But our hypothesis requires every workman to be employed on full wages, and the employers on the whole to be making normal profits, even if some concerns are under-employed or altogether idle and making an inadequate profit or incurring a loss.

That is to assume that the existing shortage of demand is completely remedied. If it is the case that there has been an inequality of development of industries, the result will be that those which have been over-developed will find that they cannot sell all their output, while the others will find that their output cannot keep pace with demand. There need not be any unemployment, except so much as is incidental to workpeople changing from one job to another. The over-developed industries will have a part of their plant unemployed, but there will be a demand for the labour displaced in the under-developed industries, which must first extend their equipment and will then employ more hands.

The unequal development of industries is not a cause of depression at all. If the over-developed industries threaten to engender the deflation bacillus, the under-developed industries threaten to engender

TRADE DEPRESSION AND THE WAY OUT

the inflation bacillus. It is the behaviour of the banking system that decides which of the two is to prevail. At the outbreak of war in 1914 a huge transfer of productive activity from one set of industries to another became urgently necessary. A very great part of the equipment and labour of the peace-time industries became redundant, and the war-time industries had to be hastily expanded. In that case the inflation bacillus was so stimulated that all the benevolent schemes for assisting the unemployed broke down from scarcity of labour.

After allowance has been made for the disparities which I have already shown to be the natural result of depression, it is not at all clear that the over-development of particular industries is in any degree more prevalent or more serious than it has usually been. And even if it is, the natural process by which inequality of development remedies itself cannot *begin* to operate till the normal relation between prices and wages has been restored, and those industries which have been insufficiently developed are enabled to feel the excess demand for their products. The restoration of monetary equilibrium is the essential first step.

Theoretically there might be a real general over-production in the sense of a satiety of human wants. We need not suppose satiety to reach the stage at which people would not wish to consume additional goods of any kind even if available at no cost at all. But output may outstrip needs to the extent that the working population would prefer to work shorter hours and have wages reduced in proportion, because the additional income is not in their opinion worth the additional effort. When this occurs, the right measure clearly is the appropriate shortening of hours. And hours are from time to time shortened, though, owing to the general increase in productivity, no proportional

OVER-PRODUCTION

reduction of real wages is usually involved. But a shortening of hours beyond what the workpeople desire on these conditions does not offer a means of escape from a trade depression. Nor does any form of short time. It merely gives a different form to the unemployment caused. This form may be more tolerable to the individual workman than intermittent spells of complete unemployment, but it does nothing to break the vicious circle. Contraction of output still means contraction of incomes and therefore contraction of demand.

There may be a general over-production of *factory* products. Modern methods of mass production tend to produce this result. Satiety of demand for such products might be reached, and the result might be the displacement of a large amount of redundant labour. But this does not happen *suddenly*. It has been happening visibly in the United States ever since the war. The numbers employed in factories have been shrinking, not merely in proportion to population but absolutely (this quite independently of any unemployment such as has occurred in the last two years). Simultaneously the numbers employed in distribution and in rendering all the multifarious individual services that subserve the purposes of modern civilisation have been growing. It may be mentioned that in this division of tendencies agriculture is to be classed with manufacturing. Labour in agriculture is being displaced by machinery.

The tendency of the population to move out of factory work into distribution and its miscellaneous occupations is visible in this country also. But it is less measurable, because we have had no period of normal manufacturing prosperity since 1920.

It would be a mistake to regard the change as a

TRADE DEPRESSION AND THE WAY OUT

matter of regret. The movement cannot be anything but gradual, and so long as that is so it need not cause any unemployment or distress. The new occupations of the population are probably on the whole preferable to the old. We may be approaching a state of society in which the mere production of any desired commodity becomes almost as easy and cheap as picking it up from the ground, and all the hard work will be put into the business of discovering the needs of consumers, specifying the appropriate products, and then (after they have been produced and transported) making them available for sale.

ACCUMULATION OF STOCKS

Yet another form of over-production is the accumulation of excessive stocks of goods. This is a very real cause of dislocation. It could not amount literally to *universal* over-production, because a part of production consists of services rendered, of which it is not possible to accumulate a stock. But if there were excessive stocks in hand of *every* material commodity, then all producers of such commodities might be under-employed.

That might occur, and, if it did, what would be the remedy? The worst possible course is to let the vicious circle of deflation gain a hold. If production is damped down, demand contracts with it, and the stocks which were already redundant become still more redundant in proportion to the reduced consumption.

All possible steps ought to be taken to encourage the creation of credit and so the maintenance of demand. The ultimate cure is to be found in the redundant stocks being sold off at less than replacement value, through the holders' desire to save the cost of storage and interest.

ACCUMULATION OF STOCKS

But in practice what we have to deal with is not an excessive accumulation of stocks of *all* material products, or of anything like that. There is no redundancy at present of stocks of manufactured goods. In fact these stocks are probably below normal. The excess is entirely in the stocks of primary products. The excess may be reduced by a restriction of output of the products in question, but what would be far better would be a restoration of activity in manufacturing industry. It is manufacturing industry that provides the demand for the primary products. So long as the demand from the final purchaser for manufactured goods is contracted, great sacrifices of price on the primary products have but little effect in stimulating demand for these latter. The demand for manufactured goods depends on incomes. If incomes expand, and sales of manufactured goods expand, the demand for primary products becomes normal. It may be that, in some cases at any rate, stocks will still be redundant even in proportion to a normal demand. But that will be a manageable problem. On the one hand, reductions of acreage are more practicable when only some branches of agriculture and not all are depressed; and on the other, cheap materials do afford *some* stimulus to the manufacturing industries which use them.

The invariable conclusion to every line of approach is that, whatever causes there may be of depression and distress, an essential condition of any remedy is a monetary expansion in the sense of an expansion of incomes.

And it is evident that many 'disparities' that are frequently adduced as independent causes of depression are themselves no more than consequences of the original shrinkage of demand. We have found this to be true of the disequilibrium between retail prices and whole-

TRADE DEPRESSION AND THE WAY OUT

sale prices, between prices of manufactures and prices of primary products, between wages and prices. We have found it to be true of the contraction of capital outlay, of the decline in investment by the creditor countries in the new countries, of the loss of confidence in borrowers, of the accumulation of stocks of unsold goods. In some of these cases there may also be independent causes concurrently at work. But it is not certain that there are, and there is no reason to believe that the shrinkage of demand is not by itself adequate to account for all.

Lord Bradbury in his Memorandum of Dissent from the Report of the Macmillan Committee specifies four causes of the economic troubles of Great Britain apart from the fall of world prices : ' (i) the burden of unproductive debt, (ii) over-lavish expenditure by the State and local authorities, (iii) excessive cost of transport and distribution and of the products of sheltered and protected industries, and (iv) the attempt by all classes to maintain a standard of living higher than is justified by the facts of the economic situation ' (p. 263). Every one of these four, if not caused by the same appreciation of the value of gold that takes shape in the fall of world prices, has been directly aggravated by that appreciation. The real burden of debts, costs, wages, so far as they are contractually or practically fixed in pounds, has been increased by a proportion that cannot be much less than 50 per cent.

NATIONAL ACTION—PROTECTIVE TARIFFS

The restoration of equilibrium requires action by the banking system of the world, and that involves international co-operation. If this cannot be attained,

NATIONAL ACTION—PROTECTIVE TARIFFS

may be asked, is there nothing that one country can accomplish in isolation ?

One possible expedient is the suspension of the gold standard. That has already been resorted to by several new or 'debtor' countries. They, however, have only acted under necessity and have not allowed the depreciation of their currencies to go so far as to counteract the effects of depression altogether. The special objections to England abandoning the gold standard are well known, and I need not repeat them.¹

But even within the limits of the gold standard, there are proposals for isolated action which require consideration. The key to these proposals is to be found in the balance of payments. We have already had occasion to notice that anything which makes the balance of payments more favourable to a country permits of an expansion of incomes. The only obstacle to the expansion of incomes is that with the gold standard the prices of foreign trade products are pegged, and the expansion of incomes will attract an excess of imports. If therefore any measure is adopted to diminish imports, a corresponding expansion of incomes is made possible.

A protective tariff is one device directed to this object. Duties are placed on imported goods which compete with home products, and the result is the exclusion of a part of the imports which would otherwise have entered the country. Thereupon it becomes possible for incomes to expand.

It would be quite out of place here to enter upon the controversy of free trade and protection. It will be enough to point out that it is quite indisputable that a new tariff (or an increase in an existing tariff) has *some* efficacy as an emergency measure against trade depression. Its remedial power depends upon the amount of

¹ See my *Monetary Reconstruction* (second edition), pp. 29-31 and 168-71.

TRADE DEPRESSION AND THE WAY OUT

imports excluded. The remedial power of agricultural protection is likely to be slight, because the production of the area protected cannot as a rule be greatly or quickly extended, and the consumption of most of the products is not very sensitive to a rise of price. The very high duties recently imposed on cereals in some European countries have not given much relief except directly to the farmers and peasants whose profits are increased. Many countries have been led to increase their tariffs or to impose direct restrictions on imports during the present depression. That is one of the usual concomitants of trade depression. The modern reaction towards protectionism may be said to have begun with Bismarck's conversion to it in 1879, the year which supplied the nearest parallel to the black depression of 1931 to be found since the Napoleonic Wars.

Even if protection is advocated as an emergency measure, most people will judge of it rather as a permanent policy. A policy of going backwards and forwards between protection and free trade according to the state of trade would be universally condemned as intolerable.

As an emergency measure in a trade depression, protection suffers from the vital defect that it is avowedly and essentially a policy for promoting revival *in one country* at the cost of intensifying depression in the others. If it really promised a thorough cure, it would of course be difficult to restrain any country from resorting to it, even though when all did so none gained any benefit. But in reality the benefit it offers is very modest, perhaps almost insignificant, and for a great exporting country any measure which threatens to retard a world revival is injurious.

PUBLIC WORKS

PUBLIC WORKS

Another proposal for isolated action by one country is for the initiation of works of development at the public cost. This is advocated for the sake of the employment given directly to the people employed on the works. But in reality its virtue lies exclusively in its effect upon the balance of payments.

If the Government raises money in the investment market and applies it to capital outlay at home, which would not otherwise have been undertaken, the presumption is that there is a favourable effect on the balance of payments. Suppose for example that the country is investing £250,000,000 a year at home and £100,000,000 a year abroad, and that the Government undertakes an *additional* capital outlay of £50,000,000 at home. Then if the Government's outlay were provided by diverting £50,000,000 from the capital outlay commercially undertaken at home, the latter must be reduced by 20 per cent. at the cost of a very severe dislocation. But if it were provided by diverting £50,000,000 from external investment, this would be almost negligible in comparison with the aggregate capital outlay of all the rest of the world. The latter is the line of least resistance.

Probably therefore nearly all the funds raised by the Government from the investment market will be diverted from external rather than from internal investment. External investment is an invisible import, and the result will be a favourable balance of payments, which permits an expansion of incomes. An expansion of incomes means increased employment.

On the other hand, if the outlay undertaken by the Government merely replaces capital outlay that would

TRADE DEPRESSION AND THE WAY OUT

otherwise have been undertaken privately, or if for any other reason the balance of payments is unaffected, incomes cannot expand without attracting an excess of imports, and causing a loss of gold. If there is no expansion of incomes, there is no increase of employment.

In this case also, as in that of a new protective tariff, whatever relief the country gets is at the cost of intensifying depression elsewhere. The favourable effect on its balance of payments is an unfavourable effect on the balance of payments of the countries to which it would otherwise have been exporting capital. What it gains in employment they lose.

If we view all gold-standard countries as a single unit, capital outlay by Governments cannot on the whole give employment at all ; it can only divert employment from some localities and industries to others, *unless* the outlay is financed in such a way as itself to give rise to an expansion of credit. Inflationary Government finance is a most potent instrument of credit expansion. In effect it means nothing more or less than the purchase of Government securities by the central bank. It is quite unnecessary to undertake works of development in order to bring this about, if the central bank is willing to take the requisite steps.

Just as most countries have taken measures to restrict imports or increase their protective tariffs during the present depression, most of them have likewise entered upon programmes of public works to give employment. Taking the world as a whole, it is probably true that the one policy like the other has done nothing whatever to improve matters.

One feature of the depression, to which I have referred above, is the decline in external investment by the great creditor countries, and the distress in which the cessation of the international flow of capital has

PUBLIC WORKS

involved the debtor countries. Proposals have been put forward from time to time for stimulating external investment. But of course this policy is the direct contrary of that of undertaking works of development in the capital-exporting countries.

And viewed from the standpoint of the depression in the world as a whole, the one policy is as futile as the other. Whether we aim at encouraging external investment at the expense of internal or internal investment at the expense of external, all we can hope to do is to *transplant* a certain amount of demand from one place to another, without increasing the total amount of demand at all.

On the other hand, this would not be true without qualification if the effect of increased external investment were to release gold from the investing country, and to make it available as a means of credit expansion elsewhere. If France or the United States invested more abroad, and thereby had a less favourable balance of payments, gold might be set free. This cannot be taken for granted. It is a mistake to suppose that lending money and lending gold are one and the same thing. External investment only releases gold because it requires a contraction of incomes in the investing country, and the contraction of incomes is likely to be accompanied by a contraction in the volume of currency. In practice this contraction in the volume of currency may be small or even non-existent.

If the release of gold does occur, the only advantage is that it is an asset which central banks can buy, and is therefore a means of creating an additional supply of money. Whatever advantage is to be derived from it might equally well be derived from the purchase of any other assets by central banks.

It is in any case difficult to bring about a net increase

TRADE DEPRESSION AND THE WAY OUT

in the external investment of a country. An increase in foreign loan and share flotations can be brought about by arrangement among issuing houses and banks. But securities issued are not necessarily held in the country, or, if held, they may merely replace other securities which are sold abroad.

To stimulate foreign flotations in France or the United States in the hope that gold will be thereby released, is, to say the least, not a very hopeful line of approach to the problem of the depression.

THE RESPONSIBILITY OF CENTRAL BANKS

Whatever other economic evils there may be, whatever their causes and whatever the treatment appropriate to them, one outstanding calamity is the collapse of demand throughout the world. Production is far below normal, and what is produced is sold at greatly reduced prices. This is so because demand is restricted, and demand is restricted just because the proceeds of sale, out of which incomes are provided, are restricted.

Productive power is available, and the human needs that it is equipped to meet are as clamant as ever. The fault is in the mechanism of exchange. The flow of money has been cut short.

If so, where does the responsibility lie? In the modern world the responsibility is clear. The *sole* source of money in each country is the central bank. The hand-to-hand currency used by the public is composed of notes of the central bank.¹ The means of

¹ This is not literally true of the United States. But of the various forms of currency in use there, Federal Reserve notes alone are capable of free variation, and that free variation is at the discretion of the Federal Reserve Banks.

THE RESPONSIBILITY OF CENTRAL BANKS

payment used to discharge the liabilities of one bank to another are cheques drawn on deposits at the central bank. The whole vast and complex structure of bank credit is built upon the 'money' created by the central bank.

The obligations of the central bank, whether notes or deposits, are money, and against its obligations it holds equivalent assets. Every increase or decrease of its assets is accompanied by an equal increase or decrease in its liabilities and therefore in the supply of money.

So long as conditions are anything like normal, the power of the central bank over the monetary system is complete. The superstructure of bank credit responds to any change in the supply of money in the manner I have already described. The action of the central bank is restricted by statutes requiring it to maintain the gold standard, and prescribing the character of the assets it may hold and the amount of gold to be included among them. That means, however, not that its power over money is limited, but that the manner in which that power shall be used is in these respects dictated by the legislature.

The gold standard itself presupposes the power of the central bank to control the value of money. The duty of the central bank is to keep the value of the currency unit at par with the value of a prescribed amount of gold in world markets. In order to discharge that duty, it *must* have the power to modify the value of the unit whenever it departs from this standard.

But our examination of the course of events during the present trade depression has disclosed a weak point in the power of the central banks. The functioning of the superstructure of bank credit requires the co-operation of lenders and borrowers. Ordinarily the

TRADE DEPRESSION AND THE WAY OUT

willingness of borrowers can be counted on, and credit control requires nothing more than a judicious regulation of the charges made by lenders. Relaxation will quickly stimulate borrowing, and will generate additional incomes. Now, however, the borrowers have become unwilling. The rediscount rate in New York is $1\frac{1}{2}$ per cent., the market rate for bank acceptances is under 1 per cent., commercial paper with the best names is dealt in at 2 per cent. Of course for the ordinary undistinguished borrower rates are higher, and in outlying districts very much higher. But on the whole, allowance being made where necessary for differences in the standing of borrowers, rates of discount and short-term interest could hardly be lower. That condition of things has now lasted for some months, and rates have been low for more than a year. But business does not respond. There is no acceleration of borrowing and no revival of demand.

THE CREDIT POSITION IN THE UNITED STATES

The position in the United States is for the time being the dominant factor. As I have already pointed out, the credit regulation of the world is practically in the hands of London and New York. The discount markets of Western Europe have little more than a local and subsidiary influence, and their importance in the world credit system arises not so much from any direct effect of their credit policy on the world price level as from the effect of their absorption or release of gold on the credit policy of London and New York.

It is in the United States that the reluctance of borrowers is most conspicuous. It is there that the depression is most intense, and the contraction of pur-

CREDIT POSITION IN THE UNITED STATES

chasing power greatest. That is the principal reason for the inflow of gold.¹

The situation has been complicated by the numerous bank failures. The total number of suspensions in the eighteen months from January 1930 to June 1931 has been 2000, with deposits amounting to \$1,100,000,000. That must obviously mean not only a loss of confidence in the remaining banks in many localities, but a serious restriction of banking facilities. In a country where branch banking is circumscribed by very narrow limitations and over large areas is not allowed at all, small banks spring up to meet the local convenience of isolated communities remote from any considerable urban centre. It is just these small banks that are most liable to fail, and when that happens their depositors are driven to accumulate hoards of money to take the place of the deposits which are no longer available. Some, it is true, may borrow for the purpose; but this does not in effect mean an addition to the number of willing borrowers, for the borrowing does no more than replace a part of the bank credit annihilated. And some of the money will be saved out of income.

Wherever the money comes from, the result is to increase the amount of money in circulation *required* for a given amount of incomes. Since the beginning of 1930 the United States has imported \$670,000,000 of gold. The money in circulation has increased by \$300,000,000 (the difference is due to the big decline in the bills and investments held by the Federal Reserve Banks). But there has been no effective increase in the substructure of money on which the superstructure of credit is built. The additional money (and probably

¹ The tariff of 1930 may well have contributed something. But protection was already so high before it was enacted that the volume of imports actually excluded by the tariff cannot have been very great.

TRADE DEPRESSION AND THE WAY OUT

more) has been needed merely to fill up the gap in purchasing power made by the bank failures.

From the very beginning of the Wall Street crisis in October 1929 the Federal Reserve Banks started buying Government securities in the market. Their holding rose from \$136,000,000 on October 23, 1929 (the lowest figure since 1923), to nearly \$600,000,000 in June 1930. But from that time till June 1931 they made no further addition (except that made temporarily in December, in accordance with their regular practice, to ease the seasonal strain on the money market). Since their holding of bills had meanwhile fallen from \$1,175,000,000 on October 23, 1929, to \$334,000,000 on June 25, 1930, and fell further in 1931, their earning assets had on the whole declined. The increase of investments bought in the open market had brought about a big decrease in sums lent to member banks, and that is undoubtedly an important step towards credit relaxation. But in face of so intense a depression no half measures could suffice.

Up to May 1930 the recession in business, though pronounced, was nothing sensational. But from that month onwards it advanced with a terrible impetus. The rediscount rate was reduced to $2\frac{1}{2}$ per cent. on June 20, but the collapse had by that time already gone too far to respond to cheap money alone. And the purchase of securities in the open market was suspended.

BANK RATE POLICY

The intense depression in the United States meant of course a reduction in incomes, and therefore in the demand for foreign trade products. The foreign exchanges became favourable to the United States, and

BANK RATE POLICY

therefore unfavourable to other countries. In particular this affected the position of London. When the New York rediscount rate was reduced to $2\frac{1}{2}$ per cent. in June 1930, the Bank of England rate remained at 3 per cent. From that time the Bank of England has reverted to the policy of keeping discount rates higher in London than in New York, a policy pursued continuously, with short intervals,¹ since 1924.

What, it may be asked, is the significance of this policy? The disorder with which the economic system of the world has been infected is the unwillingness of traders to borrow, and the consequent interruption of the normal process by which credit is created and demand is generated. But even when the disorder has reached its maximum intensity, we find a central bank administering pressure, gentle pressure perhaps, but still pressure, to lenders. Nor was the pressure so very gentle. For, at any rate after the turn of the year, Bank rate has been made effective by the usual method of keeping down the Bank of England's holding of open market assets, the direct reverse of the policy of open market purchases tentatively pursued by the Federal Reserve system up to the middle of 1930. That means restricting the amount of deposits at the Bank of England, which include the reserves of the clearing banks, and thereby, if not giving them an inducement to cut down their advances, at any rate making them quite contented to keep their advances down to the existing amount.

How does it come about that such a policy can be regarded as appropriate at such a time? The explanation is to be found in a change in the attitude of financial opinion in the City towards Bank rate policy. Bank rate policy as it grew up in the nineteenth century was

¹ From May 18, 1928, to February 7, 1929, August 9 to September 26, 1929, March 20 to June 20, 1930.

TRADE DEPRESSION AND THE WAY OUT

recognised primarily as an instrument for regulating the amount of borrowing, and through it the price level. A high Bank rate was resorted to when trade was 'over-extended.' As the Governor of the Bank, Horsley Palmer, explained to the Select Committee of 1832 (Qn. 678), the diminution of discounts 'naturally tends to limit transactions and the reduction of prices,' and so causes a reduction of imports and an increase of exports. That doctrine prevailed all through the nineteenth century, and was restated by the Cunliffe Committee in 1918. It is of interest as an important piece of economic theory that was established not by the theoretical economists, but by the practical men of the City. No doubt the influence of Ricardo is to be traced in its origin, but it can hardly be said to have passed into academic economics till the days of Henry Sidgwick and Marshall.

Alongside this theory of the operation of Bank rate, though appearing a few years later, is another theory, which traces its effect to the attraction of foreign balances seeking temporary investment. This view was put forward by Thomas Tooke before the Select Committee of 1840 (Qn. 3758), and was already familiar to the City when Goschen explained it in his 'Foreign Exchanges' in 1861.

Goschen quite recognised the other doctrine of Bank rate, and pointed out that the attraction of foreign money was a device only appropriate to a 'temporary derangement.' If there is a more deep-seated disorder of the foreign exchanges, temporary borrowing 'can only increase the evil.'

The Cunliffe Committee were even more emphatic. Reliance on the policy of attracting money from abroad 'would have resulted in the creation of a volume of short-dated indebtedness to foreign countries, which

BANK RATE POLICY

would have been in the end disastrous to our credit and to the position of London as the financial centre of the world.' The Macmillan Committee also regard the influx of short-term foreign balances under the influence of a temporary attraction 'as the equivalent of a *negative* gold reserve and consequently as a potential source of future weakness' (Sec. 298).

Both theories of Bank rate are correct. But whereas the restriction of borrowing tends to restore equilibrium by lowering the price level (or, as I prefer to put it, by contracting incomes and therefore demand), the attraction of foreign balances is nothing but a stop-gap, and rather a perilous stop-gap.

But the attraction of foreign balances by a higher short-term rate of interest is a thing that anyone can understand, whereas the effects on incomes, demand and the price level are hardly to be appreciated without some theoretical knowledge. The former readily passes into the current talk of the City, and the latter does not.

The consequence in recent years has been that the more fundamental doctrine has been forgotten and ignored, and public discussions of Bank rate policy have been conducted on the assumption that the sole question at issue was the extent to which an influx or efflux of short-term foreign money ought to be stimulated.

Had the money markets of the world been working in the old way, this superficial and fallacious view might have done little or no harm. The phases of the trade cycle used nearly to synchronise in different countries, so that, except for a few exceptional cases, where, for example, the balance of payments was disturbed, all required much the same Bank rate policy at the same time. A rise or fall in the Bank of England's rate was the signal for similar rises or falls elsewhere, and the movement of balances to or from London usually meant

TRADE DEPRESSION AND THE WAY-OUT

simply that the country from or to which they came had failed to make the appropriate adjustment.

But since the re-establishment of the gold standard in 1925 conditions have been radically different. There has not been the synchronisation of phase. Great Britain entered the gold standard in a state of severe depression, while business in the United States was in a state of prosperous activity.

Under such conditions foreign money might be attracted and gold temporarily acquired by a high Bank rate. But at the same time the more deep-seated effect was not any the less at work because it was not thought of. Dear money tended to damp down enterprise, and to intensify depression or at any rate to delay revival. And, as I have pointed out above, dear money in London tended to lower the world price level.

That is to say it *raised the value of gold* and made the effort required to maintain the gold standard greater.

It might be supposed that, while depressing the world price level, it would act more directly on the British internal price level, and that there would be a differential effect favourable to the maintenance of the gold value of sterling. To some extent that would be so. But there was yet another result. The fall in the world price level adversely affected producers for export all over the world. And those who would suffer most would be those who had the smallest margin of profit to start with—that is to say the producers in countries *already suffering from depression*. That was the position of the British producers. The fall in the world price level tended to cause a relative diminution of British exports. Here was an adverse effect on the balance of payments, and one that would become greater as the depression grew more severe. It could have been

THE WAY OUT

moderated or avoided by cuts in wages, but very little was done in that direction.

Thus there was a danger that the dear money which was intended to attract foreign balances would intensify the depression and raise the value of gold, *without* having any favourable effect on the underlying foreign exchange position. And in so far as the policy was successful or was believed to be successful in its immediate object, the fear of the foreign money being withdrawn at once became an obstacle to Bank rate being reduced.

Since the Wall Street crisis of 1929, with which the present world depression may be said to have started, the same view of the functions of Bank rate has persisted. The City has invariably thought only of how to protect the gold reserve by attracting foreign money. The ulterior effect of dear money in intensifying depression has been left out of account.

THE WAY OUT

It is quite clear that the only satisfactory way of escape from the trade depression is by the restarting of the normal process by which the banks lend, and generate incomes and demand.

In a sense a general reduction of wages would be an alternative. If the world price level remained unchanged, the reduction of wages would revive profits, and so open the way to equilibrium and normal activity. But even this would require the banking systems of the world to co-operate in maintaining the price level. It does not avoid co-operation on the part of the banks. And it is open to the serious objection that it would stereotype existing burdens of debts and budgets, which have been made almost intolerable in some

TRADE DEPRESSION AND THE WAY OUT

cases by the appreciation of the units in which they are reckoned.

Thus the reduction of wages offers no more than a partial remedy. The *only* real remedy is the expansion of credit by the central banks.

How, then, are they to surmount the difficulty of the reluctance of borrowers? When short-term interest rates have been reduced to the lowest possible point (as they practically have in the United States) no further direct inducement to borrowers is available. But that does not exhaust the possibilities. However severe the depression may be, that does not mean that economic activity has been brought to a dead stop. It may be working at no more than 70 or 80 per cent. of its normal capacity, but 70 or 80 per cent. is still something, and wherever there is economic activity there are potential borrowers. There is in fact a steady stream of new advances and bills replacing those paid off, and when we say that cheap money fails to stimulate borrowing we mean only that, when cheap money has had its full effect, the new borrowing does not exceed the repayments.

But it does not follow that if a new motive were given to the banks to lend more, they could not find additional borrowers. Borrowers have other circumstances to consider besides the rate of interest they have to pay. And prominent among these is the willingness, or the reverse, of their bankers to lend.

Purchases of securities by the central bank in the market have the effect of creating new money, and that new money, so far as not required elsewhere, appears as an addition to the reserves of the other banks. By this process their reserves can be expanded *to any desired extent*. They can be flooded with idle money. And here is the motive for additional lending.

So long as the reserves of the banks bear the accus-

THE WAY OUT

tomed proportion to their deposits, they are perfectly contented to acquiesce in the existing volume of advances. As soon as they begin to be encumbered with idle money in excess of the accustomed proportion, each bank tries to get rid of its unremunerative surplus by lending more than its competitors. There is a definite change in their attitude towards those of their customers who seek to borrow.

It might be that the stimulus to borrowers fails to work. Even so the expansion of credit is not defeated. The banks can follow the example of the central bank and buy investment securities in the market. In any case it is their practice to do this when trade is inactive and the demand for advances insufficient. When they do so, the sellers of the securities are left with money on their hands, for which they need a fresh investment. The result is to facilitate new issues in the investment market, and so to stimulate capital outlay.

It is sometimes objected to any proposal for accelerating the creation of credit that the difficulty will be to find *solvent* borrowers. Undoubtedly at a time like the present insolvency, latent or known, is frightfully prevalent. But it is not yet *universal*! And in reality it is not during a depression that the danger of making unsound loans is greatest. There are, of course, distress borrowers, but the banks can impose rigorous conditions on them, and refuse assistance, at the cost of driving them to bankruptcy, if the conditions are not complied with.

It is during prosperity that unsound borrowers are accommodated. When depression comes and their assets depreciate (or money appreciates) they fail. And when depression reaches an acute stage numerous sound and prudent borrowers are landed in difficulties in consequence of liabilities incurred at the time of prosperity.

TRADE DEPRESSION AND THE WAY OUT

But in the depths of depression when the old borrowers are most embarrassed, the new borrowers are least likely to get into difficulties. There is the *possibility* that the depression may still not have reached its worst. But if the measures for expanding credit are effective, that by itself will re-create demand, raise prices and improve the position of *all* debtors.

Moreover, it should be borne in mind that, important though it obviously is that loans should be sound, the efficacy of a credit expansion does not depend on the soundness of the loans. The bank credit which brings about revival is composed of the *liabilities* of banks, not of the assets held against them.

Proposals for credit expansion are sometimes criticised on the ground that they are 'inflationary.' And if the economic system of the world had adjusted itself to the existing price level, that would be a very pertinent objection. Inflation is rightly condemned, because it means an arbitrary change in the value of money in terms of wealth. But deflation equally means an arbitrary change in the value of money. The reason why inflation is more condemned and feared is that it is apt to appear convenient and attractive to financiers in difficulties. The consequences of deflation are so disastrous and the difficulties of carrying it out so great that no one thinks it necessary to attach any stigma to it. And since from time to time deflation has to be applied as a corrective of inflation, it is given the status of an austere and painful virtue.

But it is not essentially a virtue at all, and when it is wantonly imposed on the world, not as a corrective of inflation but as a departure from a pre-existing state of equilibrium, it ought to be regarded as a crime against humanity. ♦

Just as deflation may be needed as a corrective to

THE WAY OUT

an inflation to which the economic system has not adjusted itself, so at the present time inflation is needed as a corrective to deflation. If the monetary affairs of the world were wisely governed, both inflation and deflation would be avoided, or at any rate quickly corrected in their initial stages. Perhaps the ideal of monetary stability will be achieved in the future. But to start by stereotyping conditions in which prices are utterly out of equilibrium with wages and debts, and with one another, would be to start the new policy under impossible conditions.

A conspicuous feature of a trade depression is always a stagnation of balances, a low velocity of circulation. These balances are mainly composed of the idle working capital of industrial or commercial concerns. The same contraction of demand which makes people fear falling prices and restrains them from borrowing to buy commodities, also leads them to hold money idle. It is sometimes contended that it is no use creating additional bank credit, because it will not circulate, but will merely be added to these idle balances. And without doubt it ought not to be taken for granted that every addition to the volume of bank balances will necessarily and automatically be accompanied by a proportional addition to demand.

But people do not have an unlimited desire to hold idle balances. Because they already hold more than usual, it does not follow that they are willing to hold more still. And if in the first instance a credit expansion seems to do no more than swell balances without increasing demand, further expansion is bound ultimately to reach a point at which demand responds.

A variant of the same argument is to be found in the fear that money may flow into the Stock Exchange instead of into industry. The fact is that the Stock

TRADE DEPRESSION AND THE WAY OUT

Exchange holds practically no idle money. There is no branch of business in which there are better facilities for keeping down cash balances to a minimum. Money lent to the Stock Exchange is passed on to be placed in new issues, and through them it pays for new capital goods. If it is not required for new issues, it pays off part of the bank advances to the Stock Exchange; in that case what happens is not that the money is locked up in the Stock Exchange; but that the intended creation of credit has been abortive. Credit has been created only to be extinguished. The banks that wish to create additional credit must try again.

The fears that efforts to expand credit will be defeated in one way or another by the pessimism of traders are not wholly irrational. But that pessimism is no more than an obstacle to be overcome. And the much more usual view is that inflationary measures take effect only too easily. For example, when it is suggested that the note issue in Australia be increased, it never occurs to anyone to say that that will be ineffective because when business is very depressed the notes will not circulate. Everyone takes it for granted that inflation can be induced, however depressed business may be.

The real obstacle to measures of credit expansion is not the fear that they will not be effective, but the fear that they *will*. Any one country which starts expanding credit will, if it succeeds in inducing a revival in its own business conditions, find itself losing gold. If all countries are equally afraid of losing gold, all will be afraid to begin.

It may be very reasonably urged that the opportunity to take the first step towards credit expansion has been with the United States ever since the depression began. It has been importing gold all the time (except just in November and December 1929), and could therefore

THE WAY OUT

perfectly well have afforded to take any measures requisite to start an expansion. The obstacle has been perhaps that public opinion has never fully appreciated the intimate connection between the state of business on the one hand and the functioning of the banking system on the other.

In June 1931 after an interval of twelve months the Federal Reserve Banks once more resumed buying securities in the open market. But even then it was only done tentatively and on a very modest scale, and at that very moment the financial crisis in Germany burst out, and brought new difficulties and complications.

But it has, I think, been quite insufficiently recognised that England also could have played a decisive part in averting the depression. The Bank of England, it is true, with a gold holding never rising much above £160,000,000, could not afford to face an outflow of gold nearly so well as the United States with £900,000,000, now increased to £1,000,000,000.

But that does not mean that it could not be worth while to risk a heavy loss of gold for sufficient reason. The pivotal position of London places a very special responsibility upon the English banking system in the regulation of credit throughout the world. The power of London to contract world credit has been only too disastrously illustrated since 1925. In the contrary case credit relaxation in London extends to merchants all over the world an inducement to buy more freely. Producers in other countries feel an increase in demand, production expands and with it incomes. In so far as this international influence is at work, the credit relaxation does not cause any loss of gold. Gold is only taken by those countries which for any reason do not respond to the credit expansion or resist it. And the gold that goes to them tends to evoke a response

TRADE DEPRESSION AND THE WAY OUT

and to overcome resistance. Consequently the loss of gold involved might after all have been quite moderate.

The means of expanding credit I have already indicated. A minimum Bank rate (2 per cent. as it used to be at times of depression in the nineteenth century, or $1\frac{1}{2}$ as it is now in New York) might be insufficient by itself. But lavish purchases of securities would flood the joint stock banks with idle money.

Perhaps gold would have gone to the United States. 'Distress gold' came thither in large quantities from South America and Japan without breaking the vicious circle. But it does not follow that, because so much was not enough, more still would have been useless. Nor can it be assumed that a big inflow of gold from Europe and particularly from England would have been entirely without effect upon American credit policy.

France might have taken more gold. But here again it is a mistake to assume that because she had taken so much, therefore she could have taken more. The French imports of gold, large as they have been, have been governed by a very definite need, the need to replenish the country with a normal stock of currency. They are often explained as caused by a favourable balance of payments. It would be as useful to explain sleeplessness as caused by insomnia.

If measures of credit relaxation in England did not lead the French to need a larger stock of currency (or of deposits at the Bank of France) they would not lead to France absorbing more gold.

Perhaps in one way or another the losses of gold would have been heavy. Perhaps the Bank of England's holding might have been reduced to £50,000,000. But where would have been the harm? Gold reserves exist to be used. They ought to be carefully conserved

THE WAY OUT

except in a great emergency. But the depression of 1930 was a great emergency.

It may be said that so great a loss of gold would risk the gold standard. But the greatest threat to the gold standard is the appreciation of gold, which makes the effort of maintaining the gold standard so much the greater.

Or the objection is that confidence would be forfeited. Not at all. The lesson of experience, illustrated for centuries past by innumerable runs on banks, is that what inspires confidence is readiness to pay, what forfeits confidence is reluctance or hesitation. The willing release of gold *as a deliberate act of policy* would not impair confidence.

And the release of gold is a direct attack on the root cause of the depression. The depression arises from the appreciation of gold. What better treatment than a release of gold? An increased supply should cheapen it.

And I have argued that in practice the loss of gold would have been found to be quite moderate. The *willingness* to release it, made manifest in the relaxation of credit, would have sufficed to cheapen gold, without any considerable amount having to be actually sold.

All this is necessarily hypothetical. The depression entered a new phase, and a grave one, with the crisis that began in May with the failure of the Austrian Credit Anstalt and culminated in the suspension of the Darmstädter Bank and the temporary closing of all the German banks on July 13.

The crisis has had individual characteristics of its own, but fundamentally it is true to type. A financial crisis is the natural result of the appreciation of money increasing the burden of debts. It is merely a more acute form of trade depression. The process of bank-

TRADE DEPRESSION AND THE WAY OUT

and to overcome resistance. Consequently the loss of gold involved might after all have been quite moderate.

The means of expanding credit I have already indicated. A minimum Bank rate (2 per cent. as it used to be at times of depression in the nineteenth century, or $1\frac{1}{2}$ as it is now in New York) might be insufficient by itself. But lavish purchases of securities would flood the joint stock banks with idle money.

Perhaps gold would have gone to the United States. 'Distress gold' came thither in large quantities from South America and Japan without breaking the vicious circle. But it does not follow that, because so much was not enough, more still would have been useless. Nor can it be assumed that a big inflow of gold from Europe and particularly from England would have been entirely without effect upon American credit policy.

France might have taken more gold. But here again it is a mistake to assume that because she had taken so much, therefore she could have taken more. The French imports of gold, large as they have been, have been governed by a very definite need, the need to replenish the country with a normal stock of currency. They are often explained as caused by a favourable balance of payments. It would be as useful to explain sleeplessness as caused by insomnia.

If measures of credit relaxation in England did not lead the French to need a larger stock of currency (or of deposits at the Bank of France) they would not lead to France absorbing more gold.

Perhaps in one way or another the losses of gold would have been heavy. Perhaps the Bank of England's holding might have been reduced to £50,000,000. But where would have been the harm? Gold reserves exist to be used. They ought to be carefully conserved

THE WAY OUT

except in a great emergency. But the depression of 1930 was a great emergency.

It may be said that so great a loss of gold would risk the gold standard. But the greatest threat to the gold standard is the appreciation of gold, which makes the effort of maintaining the gold standard so much the greater.

Or the objection is that confidence would be forfeited. Not at all. The lesson of experience, illustrated for centuries past by innumerable runs on banks, is that what inspires confidence is readiness to pay, what forfeits confidence is reluctance or hesitation. The willing release of gold *as a deliberate act of policy* would not impair confidence.

And the release of gold is a direct attack on the root cause of the depression. The depression arises from the appreciation of gold. What better treatment than a release of gold? An increased supply should cheapen it.

And I have argued that in practice the loss of gold would have been found to be quite moderate. The *willingness* to release it, made manifest in the relaxation of credit, would have sufficed to cheapen gold, without any considerable amount having to be actually sold.

All this is necessarily hypothetical. The depression entered a new phase, and a grave one, with the crisis that began in May with the failure of the Austrian Credit Anstalt and culminated in the suspension of the Darmstädter Bank and the temporary closing of all the German banks on July 13.

The crisis has had individual characteristics of its own, but fundamentally it is true to type. A financial crisis is the natural result of the appreciation of money increasing the burden of debts. It is merely a more acute form of trade depression. The process of bank-

TRADE DEPRESSION AND THE WAY OUT

ruptcy is suddenly hastened by panic. There results a violent contraction or destruction of credit. Pessimism is deepened. The collapse of prices is hastened by forced sales.

At the present time a frightful intensification of the depression is threatened. Hoarding is increased in the United States. In France the banks are heaping up idle deposits at the Bank of France. Cheap money has been abandoned in England, and Bank rate has been raised to $4\frac{1}{2}$ per cent. Distrust and pessimism prevail everywhere.

By just such occurrences have previous depressions been aggravated, for example by the American crisis of 1893, and by the City of Glasgow Bank failure of 1878. Experience teaches that what we have to expect is more unemployment, more bankruptcies, bigger Budget deficits.

If opportunities have now been lost, the general principles I have expounded still apply as well at this stage of the depression as at any other. What is needed is concerted action by the central banks to expand credit. That means that low bank rates should be reinforced by open market purchases of securities, and that central banks should become willing to part with gold. *Any* means of adding to the assets of the central banks will serve the purpose. If they grant credits to one another, the result is the same; when the credits are drawn on, provided they are not repaid and extinguished before revival is well under way.

There is talk about a re-establishment of bimetallism. That would help; but only because it would provide a new asset for the central banks to buy in the shape of surplus silver. It may be pointed out, however, that there would be little surplus silver to be bought unless the gold value of silver were substantially raised; while,

THE WAY OUT

if it were, that would mean adding to the many troubles of the Chinese an appreciation of their currency and a share of the world depression. The fall in the price of silver, though aggravated by other causes, is partly due to the appreciation of gold.

Suppose these measures are not taken, what is to be the outcome? Former depressions have ended, and this one must and will end. There cannot be an *unlimited* appreciation of gold and gold currencies, because eventually incomes, and turnover, and prices will shrink to such a point that cash balances become definitely redundant. Bankers will not allow their deposits to contract indefinitely with a given stock of money; central banks will not allow money to contract indefinitely with a given stock of gold. Thus the process of contraction will eventually be brought to a dead stop, when it comes up against a hard core of unshrinkable gold.

How far matters must go before that happens it is difficult to say. When people start hoarding money under the influence of mistrust or panic, the end may be considerably deferred. And of course as the price level falls and falls, bankruptcy spreads and loss of confidence is intensified.

As to unemployment, that need not increase greatly *provided* workpeople all over the world are willing to acquiesce at short intervals in prompt and large cuts in wages. Otherwise the disparities might be such as to bring industry to such a state of paralysis as has hardly been thought of.

Into the financial consequences of the further increase in the burden of debts, private and public, it is unnecessary to enter.

This end of the depression comes, it will be noted, because the assets of the central banks, including the

TRADE DEPRESSION AND THE WAY OUT

hard core of gold, are greater than the banking system of the world can assimilate, given the reduced level of incomes and prices.

But the end can be accelerated and the intervening ordeal of intensified depression avoided by the simple process of extending the assets of the central banks. Let the stock of *money* be made greater than the banking system of the world can assimilate. That is within the power of the central banks, for they are the sole source of money.* Concerted action is not even necessary. If the central banks or some of them take action independently in the right direction that will be just as effective so far as it goes. Undoubtedly the Federal Reserve system could of itself do all that is required without waiting for co-operation from any quarter.

It may be freely admitted that a solution *may* be provided by the chapter of accidents. It is a result of the inherent instability of credit that a chance jolt to the economic system may start revival, and that the inflation bacillus may unexpectedly gain control. Even the present crisis might quite possibly produce that effect. Gold has been released from Berlin and London and has built up idle balances in Paris and elsewhere. These balances may start circulating and impelling a credit expansion. The year 1879 which followed the crisis of 1878, though it was one of terribly intensified depression, ended with a revival which proved to be the turning-point and led to the revival of 1880-82.

But these chances are no justification for letting things drift and waiting for something to turn up.

**THE CAUSES of THE
PRESENT DEPRESSION
and POSSIBLE REMEDIES**

5

WINTHROP W. ALDRICH
Chairman Governing Board and President
The Chase National Bank
of the City of New York

X:742.1.N3

93

**THE CAUSES *of* THE
PRESENT DEPRESSION
and POSSIBLE REMEDIES**

The Finance Committee of the United States Senate has been directed to study and analyze the causes of the present depression and possible legislative remedies. At its invitation Mr. Aldrich appeared before the Committee at Washington, D. C. on Wednesday, February 22, 1933, and made the statement which is published herein.

THE CAUSES *of* THE PRESENT DEPRESSION and POSSIBLE REMEDIES

MR. CHAIRMAN:

I am glad to appear before you in response to your invitation, not because I have any panacea to present, but because I think it eminently desirable that there should be frank interchange of opinion between those who are charged with responsibility for government and those who are charged with responsibility for finance and for other phases of the economic life of the country. It is in some ways unfortunate that the political capital and the financial capital of the country should be separated. Misunderstandings between the financial community and the Congress have created many needless difficulties. I feel sure that many of these misunderstandings would pass away and better coöperation would exist if we knew one another better personally, and had the opportunity of talking more frequently and frankly with one another.

I understand that you wish me to present my views as to proper remedies for the present economic trouble. In order to do this it is necessary that I should first undertake to diagnose the situation, and I will ask you to bear with me therefore while I present something of the history of the events which led up to the existing situation. This will introduce the presentation of the remedies which I shall venture to propose.

CAUSES

The present depression has, of course, many features of preceding depressions. Any period of intense financial and business activity develops stresses and strains and maladjustments which compel liquidation and reaction. But the unprecedented severity—absolutely unprecedented as far back as good statistical records go—of the present depression, and the slowness with which the automatic restorative forces have worked, must be found in certain unprecedented circumstances which have preceded it. These are, I believe as follows:

(1) *Shift from Debtor to Creditor Position of U. S.*

The immense shift produced by the war in international debtor and creditor relations, and, very especially, the great shift of the United States from a debtor to a creditor nation.

Before the war we owed Europe a great deal of money, represented largely by American stocks and bonds held abroad. During the war we re-purchased most of these and we bought a great many European securities. Finally, following our entrance into the war in 1917, our own government advanced roughly ten billion dollars to our European allies.

Before the war we paid interest and amortization on our debt to Europe by sending out an excess of exports over imports. In general the normal thing for debtor countries is to have an excess of exports over imports, and for creditor countries to have an excess of imports over exports, or a so-called "unfavorable" balance of trade. England before the war regularly received about a billion dollars more imports than she sent out in exports, the difference being covered by her interest on foreign investments, her shipping services, banking services, and other items. France regularly received about half a billion dollars more a year than she

sent out in goods. Germany, the Netherlands and Switzerland all had import surpluses or unfavorable balances of trade, because the rest of the world, debtor to them, paid them in goods. The logical expectation following the war was that countries formerly creditor and now debtor would send out an excess of exports, and that countries formerly debtor and now creditor would receive an excess of imports.

(2) *Inter-governmental Debts*

One of the worst legacies of the war was the existence of the inter-governmental debts, and especially the reparations. These debts involve both a budgetary problem and a transfer problem.

The budgetary problem is the problem of raising the money that has to be paid to the foreign government through taxation or other means in the debtor country, and in the currency of the debtor country. As all the principal debtor countries, very especially Germany, had exceedingly high taxes anyhow, taxes running far beyond anything we have experienced in the United States, the additional pressure on their budgets of raising the money for inter-governmental payments was very severe. This was softened for England, and eliminated for France, so long as Germany paid reparations. In the case of Germany herself, however, the pressure was so great as really to be endurable only in times of very active business, and it was a major contributing factor to the fiscal deficit which was so embarrassing to Germany in late 1928, in 1929 and in subsequent years. The existence of the huge reparation debt, moreover, greatly lessened the credit of the German government, so that it was unable to make much use of the resource which a great government usually can use in times of depression of borrowing to fill in the gap between its revenues and its expenditures.

The other problem involved in inter-governmental debt payments, as in all international payments, is the transfer

problem—the problem of exchanging the domestic currency for the foreign currency in which the debt payments have to be made. A debtor country can make payments in the currency of the creditor country to the extent that it can send out a surplus of exports over imports, or can entertain foreign tourists or can perform shipping services, etc., or to the extent that it can borrow foreign currencies, the latter being of course not a real solution but merely a deferment of the problem.

If there had been adequate freedom of movement of goods from country to country, the debtor countries could have solved this transfer problem by sending out goods. But the existence of the reparations and other inter-governmental debts was a great factor contributing to international fears regarding the movement of goods, and intensified the widespread policy of tariffs and other trade restrictions which the world has been engaging in on an increasing scale since the war. During the period when bank credit was expanding rapidly and foreign loans were placed easily, transfers were made without difficulty. But when there came a sudden cessation of foreign loans and debtor countries were suddenly called upon to pay, the problem of transition was a grave one. Germany herself did make the transition in 1929, and began to send out more goods than she took in, and some other countries made heroic efforts along these lines. But almost immediately a movement began to stop this by further trade restrictions and when we ourselves raised our tariffs still higher in 1930 there came a very general and widespread intensification of trade restrictions throughout the world. Tariffs are not the only, or even the worst, trade barriers. Quotas, vexatious inspections, exchange controls, and many other trade barriers can be even more restrictive. The payment of inter-governmental debts became increasingly difficult, although they were continued down into the summer of 1931.

(3) *High Protective Tariffs*

Our own high protective tariff policy inaugurated in 1922, preceded by some increases in 1921, prevented our foreign debtors from sending us goods in adequate amount to pay interest and amortization on their debts and at the same time buy our exports in accustomed amount. This tariff policy would promptly have checked our export trade but for the extraordinary financial development next listed.

(4) *Cheap Money and Bank Expansion*

The gigantic and unprecedented expansion of commercial bank credit in the United States from the middle of 1922 to early 1928, amounting to 14½ billion dollars in loans and investments and 13½ billion dollars in deposits, accompanied by great expansion of bank credit in many parts of the world.

This expansion was due (a) to gold coming to us from other countries which were off the gold standard, and (b) to cheap money policies of the Federal Reserve Banks, both of which operated to create excess reserves in the member banks, with the resultant multiple expansion of member bank credit.

Perspective on the figures for expansion given above is gained by recalling that the expansion of bank credit required to win the war, from early 1917 to the end of 1918, was only five billions, eight hundred millions in deposits and seven billions in loans and investments.

The vastly greater expansion in the period from 1922 to 1928 was not needed by commerce and was not used by commerce, and went into (1) real estate mortgage loans in banks, (2) instalment finance paper in banks, (3) stock and bond collateral loans in banks, including loans against foreign stocks and bonds, and (4) bond purchases by banks,

including foreign bonds. The consequences of this great expansion of credit, used in these ways, were, of course, excess construction, including road building, real estate speculation on a great scale, over-expansion of instalment buying, and an immense over-issue of securities including many ill-considered securities, but including also many others which would have been good if the total over-issue had not been so great, the rapid multiplication of bond houses, investment trusts and other financial machinery and a progressive deterioration in the *quality* of bank credit. The 25,000 banks of the country were not in a position to prevent this expansion and their managements were led inevitably into many mistakes in policy because of it. The control of the expansion was in the hands of the Federal Reserve System.

Bank Expansion, Foreign Loans and Export Trade

One very important incident of this expansion was the masking of the difficulties of international debt payments, including interallied debts and reparations, and the maintenance of our export trade despite trade barriers. This was particularly true following the Dawes Plan in 1924. The Dawes Plan was accompanied by an immense government security buying programme on the part of the Federal Reserve Banks. Following this came a tremendous volume of foreign loans which offset the influence of the high protective tariffs upon our export trade. We were able to get out, especially following the summer of 1924, a great volume of farm products and raw materials at good prices which restored, in a precarious fashion, the balance between agricultural and raw material production on the one hand, and manufacturing on the other hand, giving us active business while the foreign loans went on.

The following table exhibits the relationship between American exports and foreign loans, and agricultural prices.

**AMERICAN EXPORTS, IMPORTS, FOREIGN LOANS AND
AGRICULTURAL PRICES**

	(In millions of dollars)			New Foreign Security Issues	Index of Agri- cultural Prices at the Farm. Yearly Average 1910-14 = 100*
	Exports	Imports	Excess of Exports		
1922	3,832	3,113	719	630	124
1923	4,168	3,792	376	267	135
1924	4,591	3,610	981	1,047	134
1925	4,910	4,227	683	1,078	147
1926	4,808	4,431	377	1,145	136
1927	4,865	4,185	680	1,562	131
1928	5,128	4,091	1,037	1,319	139
1929	5,241	4,399	842	759	138
1930	3,843	3,061	782	1,010	117
1931	2,424	2,091	333	255	80
1932	1,618	1,323	295	26	57

*Year Book of Agriculture, 1932, p. 902. Crops and Markets, January, 1933, p. 31.

(5) The Three Main Causes of the Depression

In these three factors, then, (a) inter-governmental debts, (b) high protective tariffs and other trade barriers, increasing in severity throughout the commercial world, including high protective tariffs on the part of our own great country, which had suddenly become creditor on a great scale, and (c) six years of cheap money and rapid bank expansion, we have the main explanation of the unprecedented financial boom, the unprecedented financial break and the unprecedented severity of the depression.

(6) Artificial Price Maintenance

An important secondary factor was growing interference with natural competitive markets in the period preceding 1929, partly governmental and partly by private organizations. The efforts to valorize wheat by holding movements proceeded on a great scale from 1926 to 1929. Through the activities of the Canadian grain pool and holding movements under government auspices in Hungary and elsewhere, the world's visible supply of wheat was nearly doubled between the summer of 1926 and the summer of 1929. In the autumn of 1929 our own Farm Board stepped in. The net effect of these efforts to maintain the price of wheat was merely

to defer the facing of facts. Production held up more than it would otherwise have held up, consumption was checked, and surplus was accumulated. A similar policy, with a similar result, appeared in the case of copper, though the business interests responsible for the policy were quicker to recognize their mistake and quicker to change their policy than was our government in the case of wheat.

(7) *Cheap Money in U. S. and in England*

The cheap money policy of the United States was part of a policy of coöperation between the Bank of England and the Federal Reserve Bank of New York. The British believed that cheap money and expansion of bank credit were all that were necessary to get good business going again, and that they could be used as a substitute for industrial re-adjustments, including the scaling down of prices and costs. Without the strength in gold which we had in the United States, they tried to force the policy through anyhow. They failed to get good business by this policy, but they did succeed in getting credit so over-expanded that when the acute pressure came in the summer of 1931 they found themselves in a frozen position and without adequate gold reserves, and abandoned the gold standard.

The last chance the world had to call a halt on the over-expansion of credit and on speculation based on the over-expansion of credit without an unmanageable reaction was in 1927. I am informed that the Bank of France and the Reichsbank in Germany did try to tighten up then, Paris warning London that it was having to buy too much sterling, that easy money in London was financing speculation in the French franc and that the Bank of France, though reluctant to pull gold out of the London money market, would have to convert sterling into gold unless the process stopped.

The conference of the governors of the central banks held in New York in the summer of 1927 had a very momentous

decision to make. Represented there were the Bank of England, the Bank of France, the German Reichsbank and the Federal Reserve Bank of New York. The representatives of the Reichsbank and of the Bank of France are understood not to have made any commitment regarding policy at this conference except a promise to communicate their intentions with respect to taking gold from London and New York in the future. They left the country before the governor of the Bank of England did. Following this conference there came in the early autumn of 1927, a renewal and an intensification of the cheap money policy of the Federal Reserve System. The rediscount rate was first reduced by the Kansas City Federal Reserve Bank, followed shortly by most of the others. Several hundred millions of government securities were purchased by the Federal Reserve System. Bank expansion moved rapidly, and almost all of it went into the securities market, either in the form of bank investments in bonds or in the form of collateral loans against securities. Shortly following this began a very intense speculation in securities, with rising security prices which ran through 1928 and into the late autumn of 1929.

(8) *Gold Exchange Standard*

Beginning in the middle of 1926, there came an extraordinary development in the substitution of balances in foreign banks, for actual gold in the central banks, as reserve money—the so-called “gold exchange standard,” as distinguished from the strict gold standard. In the two years that followed this went very far. In particular, dollars borrowed in the United States through the flotation of bonds were used by foreign central banks as a substitute for gold, and funds borrowed in London in the form of sterling balances in British banks were similarly used as the reserves of Continental banks. This permitted the credit expansion at home and abroad to go much further than if

each bank had carried its own gold. It created a very dangerous situation, the extent of which we realized in the Winter of 1931 and the Spring of 1932.

The Liquidation of the Gold Exchange Standard

Events began to move very rapidly in 1931. First, Austria was pulled down. Then Germany, though repaying gigantic sums to her creditors, was finally obliged to ask for moratorium and Standstill, and then the run on England's gold reserve began. The gold exchange standard on a great scale is only a fair weather proposition. When doubt arises regarding the goodness of balances in foreign markets, and different countries seek to convert their balances into gold and bring them home, a very difficult situation is created. England and Germany were unable to meet this situation. We ourselves were so strong in gold that we did meet it. But the liquidation in 1931 and 1932 of the gold exchange standard, which had been built up by the over-expansion in 1926-28, was one of the big factors in intensifying the present depression and making it as severe as it is. We must never let international short term credit relations get over-extended to this extent in the future.

International Coöperation of Central Banks

This leads me to an observation regarding proposals that there be international central bank coöperation designed to regulate commodity prices or designed to keep cheap money throughout the world in ordinary times, with a view to making world prosperity. The experience of recent years surely justifies grave reservations on this point. Our effort to coöperate with England from 1924 on, and especially in 1927, was very largely responsible for the excess of cheap money which has made us so much trouble. Incidentally, it created a world situation which meant a breakdown of central bank coöperation in 1931 and 1932, when the central banks of the Continent tried, unsuccessfully, to withdraw

their balances from the Bank of England, and did successfully withdraw their balances from us. I firmly believe that the best policy is for each central bank, including the Federal Reserve Banks, to look after its own money market in ordinary times and to reserve international coöperation for special limited purposes, and for times of emergency.

This was the rule in pre-war days, and it was a good rule. Any country, in pre-war days, which was expanding credit too rapidly, was very likely to find its expansion checked as other money markets pursuing a more prudent policy began to take some gold away from it. Booms did not go so far, and set-backs were not so violent.

(9) *Fear Regarding Standard of Value*

The international scare in the Autumn of 1931 and the Spring of 1932 regarding the standard of value itself, the fear lest we and other countries should abandon the gold standard, precipitated the severest of all the troubles. No other fear is so terrible as this. The countries of Europe which during and following the war had such cruel experiences with depreciating and fluctuating currency, reacted to it in an extreme way. Our own people very generally trusted the American dollar, in view of our unbroken record since the end of 1878 in keeping the dollar good as gold, but even they could not escape the pall of fear which pulled down the volume of business in this country by almost one third from the middle of 1931 to the middle of 1932, which brought the greatest percentage decline of all in security values, and which pulled railroad traffic down from the levels at which the railroads' credit was good to levels at which the railroads' credit was gravely shaken, and which intensified the problem of unemployment to an appalling degree. I shall refer again to this point in discussing "inflation" as a possible remedy for the present trouble.

(10) *Broken Equilibrium*

Business life goes on well when different kinds of production are in good balance, different types of goods being produced in right proportions so that the sale of one kind of commodity produces income which can be used to purchase other commodities, so that goods can clear the markets of one another. The gravest effect of the breakdown of international trade, in the United States as in many other countries, is to throw out of balance the different kinds of production. At the present time nearly every country is geared up to do more export business than it can do under existing conditions, and has an undue percentage of its labor resources directed toward foreign markets. Every country is faced with the necessity of a radical shift in its activities, reducing its activities for export and increasing its activities for internal consumption, unless the trade barriers can be reduced and the foreign markets restored.

In the United States, this means especially that agriculture and other raw material production is greatly over-expanded in relation to manufacturing, which has meant so great a break in the prices of agricultural and raw material commodities that the producers of these things cannot buy even the relatively scant present output of the factories at prevailing prices. The balance among industries must be restored, and the only quick and sure way to do this is to restore the export market.

Equilibrium and Foreign Trade

The importance of foreign trade in our economic life has been questioned on the basis of certain estimates by the Department of Commerce, which made foreign trade 9.9 per cent. of the production of movable goods in 1927, and 9.8 per cent. in 1929.

I must say first, that these figures of the Department of Commerce do not seem to me quite correct. In figuring the

total of movable goods they have taken account of agricultural products, mining products, and value added by manufacture, which is right. Then they have added to the totals, railway freight receipts, which I think is wrong when we are seeking a total to compare with exports. If we are going to consider freight receipts at all they should be divided between export business and domestic business and allowance should be made for the longer haul in the export trade. Further, the Department should consider shipping and other items. But I think the simplest and best way is to consider merely goods produced and goods exported. When this is done the percentages rise somewhat, standing at 11.2 per cent. in 1925, 11 per cent. in 1927, and 10.8 per cent. in 1929. Herewith are the Department of Commerce figures with the freight receipts eliminated:

PRODUCTION OF MOVABLE GOODS AND PROPORTION EXPORTED
(Freight Receipts Eliminated)

Year	(Millions of dollars)				Exports	Per cent. of Total
	Agricultural Products	Manu- factures	Mining	Total	United States Merchan- dise	
1899	3,355	4,831	600	8,786	1,253	14.3
1904	4,262	6,179	850	11,291	1,426	12.6
1909	6,472	8,385	1,238	16,095	1,701	10.6
1914	8,165	9,710	1,450	19,325	2,071	10.7
1919	17,677	24,809	3,158	45,644	7,750	16.9
1921	10,268	18,332	2,900	31,505	4,379	13.9
1923	12,382	25,850	4,300	42,332	4,091	9.6
1925	11,968	26,778	4,100	42,851	4,816	11.2
1927	11,616	27,585	4,000	43,201	4,759	11.0
1929	11,911	31,885	4,100	47,896	5,157	10.8

Source: Foreign Trade of the United States, Department of Commerce, 1931, page 11

But I do not rest the argument on this tabulation. Eleven per cent. of our total business is a big percentage, but the percentage of many highly important individual products

is enormously greater. The following table shows the percentage of various important exports exported in 1929:

Cotton.....	55 per cent.
Tobacco.....	41 "
Lard.....	33 "
Wheat.....	18 "
Copper.....	36 "
Kerosene.....	35 "
Lubricating Oils.....	31 "
Gasoline.....	14 "
Typewriters.....	40 "
Printing machinery.....	29 "
Sewing machines.....	28 "
Agricultural machinery.....	23 "
Locomotives.....	21 "
Passenger automobiles.....	14 "

(Source, Moulton & Pasvolsky's "War Debts and World Prosperity," page 409.)

Not even these percentages, however, tell the whole story. For important great areas, the dependence on foreign markets is even greater. Bright tobacco in Virginia, and cotton in Texas, are cases in point. You can prostrate a whole State when the foreign market for its principal crop is cut off. No percentages can take adequate account of the organic interdependence of foreign and domestic business.

REMEDIES

I think that the foregoing analysis of the major causes of the present situation will justify my proposals as to remedies. Some of them I shall list briefly.

1. Prompt settlement of the inter-allied debts.
2. Prompt reciprocal reduction of tariffs and the moderation of other trade barriers.

These two things are basic to the restoration of our export trade, which, in turn, is basic to the restoration of balance in our own economic life, so that our farmers and other producers of raw materials, receiving good prices for their products, may be able to buy the products of our factories in adequate volume, restoring activity and employment in the cities and restoring an adequate volume of traffic for the railroads.

Interim Measures

3. While these basic measures for restoration of normal activity are being put through, I would continue a policy of emergency credit relief, making use of the Reconstruction Finance Corporation. We must face the fact, however, that not all of the existing fabric of capital debt can be maintained in full.

There are important cases where the capital structure is top-heavy, and where it is desirable to scale it down to conform to the existing facts. The Reconstruction Finance Corporation should not be called upon to validate capital structures which cannot be maintained even when we get a moderate business revival. Instead, we should scale down fixed charges in a good many important cases. It is good credit policy to tide over in emergencies solvent institutions whose total assets exceed their total liabilities, but it is not good policy to undertake to validate the really inadequate assets of insolvent institutions. To facilitate reorganizations, the new bankruptcy legislation—that relating

to corporations as well as that relating to individuals—should be enacted as soon as possible.

4. I would extend emergency credit relief to the farm mortgage situation, and also to certain city mortgage situations when, in the judgment of the Reconstruction Finance Corporation, a general financial interest is involved. In connection with farm mortgage relief, I would make every effort to deal with intelligent discrimination in individual cases, seeking to bring debtors and creditors into agreement with one another, seeking to limit the government's financial commitments to what is necessary to persuade creditors to make the necessary adjustments, but still doing the thing in a big enough way to make sure that an honest and competent farmer does not lose his farm. It is to the interest of the country and to the interest of the creditors, by and large, that that farmer who with his family knows the farm, knows its potentialities, knows local markets and has the home lover's interest in the farm, should be able to stay upon it and control it.

Differential Treatment of Debtors

I think we ought to avoid sweeping legislation making a general rule for every farmer. There are some farm mortgages which are perfectly good, where the farm debtor is able to pay interest and amortization, and where he needs no relief. There is no reason why the contract here should be altered. There are other cases where the farmer needs a great deal of relief. The same thing is true in connection with city mortgages and other debts. Such relief as is given should be given to embarrassed debtors and not to debtors as a class. We must protect the commercial morality of the country in the interest of the future giving and taking of credit. We must seek to be fair to creditors as well as to debtors. If we establish a precedent of allowing men who are perfectly able to pay their debts to escape from

them in part, merely because other men are unable to pay their debts in full, we shall strike a severe blow at the fabric of confidence in the future.

My view is that we shall get out of this depression by removing its causes. The chief of these is a broken equilibrium, growing out of strangled international trade. This has made raw materials and farm products pile up unsold in the United States, even though offered at very low prices, and has led to an immense contraction in the volume of manufactured goods, and in manufacturing activity, though the prices of these things have not fallen nearly as much as have farm prices and raw material prices.

I would ease off the situation by giving emergency credit to prevent further forced liquidation of good assets at depression levels. And I would emphasize the necessity of undeviating adherence to sound money and sound public finance as vitally important to alleviate the fears which have arisen with respect to our currency and our government credit.

I am aware that there is another view, or set of views, advanced by men who think that the trouble with the world is simply a shortage of money and credit, and who propose to bring about a revival of business by what they call "inflation."

"Inflation" Has Many Meanings

The word "inflation" is a very unsatisfactory word. It covers a wide variety of meanings, and I believe it best to distinguish among some of these and to talk about concrete proposals. Among the possible meanings are the following:

- (1) The issue of irredeemable paper money.
- (2) The debasement of the standard of the currency—
 - (a) by reducing the gold content.
 - (b) by introducing bimetallism with silver.

(3) Going off the gold standard by suspending gold payments, which gives you practically the same situation as (one)—namely, the issue of irredeemable paper money.

(4) Some men would call a great increase in gold production in the world leading to an increase in gold throughout the world "inflation."

(5) Some have called the concentration of gold in a single country "inflation." Thus Professor Fisher referred to the gold which we obtained during the war as causing "gold inflation."

(6) Some would call any expansion of bank credit "inflation."

Cassel and Keynes

(7) Some would limit the word "inflation" to those changes in the currency and credit situation *which raise commodity prices*. This, for example, was Professor Cassel's view, and he denied pointedly that there was any "inflation" from 1922 to 1928 because commodity prices did not rise. The fact that credit expanded enormously and that we were having great speculative excesses and great price rises in real estate and in the stock market meant nothing at all to him, and he demanded even more credit when commodity prices softened a little. Mr. J. M. Keynes, in his recent treatise on money (Volume II, page 190) says with respect to the years 1926-29:

"Anyone who looked only at the index of prices would see no reason to suspect any material degree of inflation; whilst anyone who looked only at the total volume of bank credit and the prices of common stocks would have been convinced of the presence of an inflation actual or impending. *For my own part, I took the view at the time that there was no inflation in the sense in which I use this term.* Looking back in the light of fuller statistical information than was then available, I believe that whilst there was probably no material inflation up to the end of 1927, a genuine profit inflation

developed some time between that date and the Summer of 1929."

This confession of error on Mr. Keynes' part comes too late to do anybody any good. He was one of the men who were urging cheap money through the whole of the period from 1922 on, and he continued to do it after the stock market broke in 1929.

Quality and Quantity

One very important distinction must be drawn in connection with these various ideas: (1) that of an impairment of the *quality* of the currency itself, and the other that of mere *quantitative* increase either of money or of credit.

But then a further point comes up at once, that an increase in quantity, if it goes far enough, will impair quality. If paper money, redeemable in gold, is issued in such quantity as to raise doubt about the adequacy of the gold reserves on the part of the issuing authority, runs can be started which will either force a great contraction of the quantity, or force suspension of gold payments and damage the quality.

Similarly, an over-expansion of bank credit impairs the quality of credit. We saw this on a great scale, running progressively from 1922 into 1929, bank credit expanding in excess of commercial needs went into capital uses, speculative uses, and consumption loans, taking the form of real estate mortgages, instalment finance paper, stock and bond collateral loans and bank investments in bonds.

Moderate amounts of any of these would have been all right, but the total was so great that there came impairment of quality, and the capital values of securities and real estate which underlay the credit became top-heavy and broke violently. Then there came loss of confidence in the assets of many banks, followed by a loss of confidence in their liabilities—namely, their deposits, which led to runs on banks, which took reserve money out of them and which

forced even strong, solvent banks to contract credit. We thus ran through the scale whereby "expansion" or "inflation" of bank credit forced liquidation or "deflation" of bank credit.

When there is sufficient loss of confidence in the quality of credit, this can generate doubt also as to the goodness of the currency itself, and we saw this on a great scale in 1931-32. Foreign fears regarding the goodness of the American dollar led to withdrawals of hundreds of millions of dollars in gold from us and further quantitative contraction in bank credit in the United States, even though the dollar itself stood sound and strong.

Paper Money

Whatever else we may have in the matter of currency and credit policy, we must at all hazards protect the *quality* both of our currency and of our credit.

Paper money is, after all, a credit instrument—a promissory note. I know of no case where a government has actually issued such paper with an announced intention of never redeeming it. The value of irredeemable paper money rises and falls with the prospect of redemption. There is no mathematical rule relating quantity of issue to the extent of depreciation. Unpredictable events may cause the value to slump or recover violently—as the Battle of Gettysburg, which caused a great rise in the value of the Greenbacks in three days. These fluctuations are disturbing to all business, and only a few reckless speculators gain.

The issue of new paper money currency is futile. If it is redeemable and confidence in the gold standard remains unshaken, the paper will not stay in circulation but will merely pile up in banks. If confidence, however, is shaken, the effect is either forced liquidation, or else the abandonment of the gold standard. In the latter case, you cannot multiply quantity fast enough to keep up with depreciation.

The gold value of the *trillions* in circulation in Central Europe in 1921 was a fraction of the value of the *billions* in circulation in 1913.

Debtors and Depreciation

Debtors are supposed to gain by currency depreciation. But Germany, 85% of whose mortgage debt was wiped out by the disappearance of the mark, showed no gains as a result. Following stabilization, it was compelled to pay such fantastic rates of interest for all new credit that its debt burden was soon very heavy again.

Debasing the Gold Content of the Dollar

With respect to the *quality* of credit and the efficiency of credit in accomplishing economic purposes, it is clear, of course, that there must be *confidence*. But confidence is not a vague general thing. It is a specific thing. Confidence in bank deposits means confidence that the bank will be able to pay cash on demand. Confidence in the currency means confidence that the government or bank of issue will pay gold on demand, and the full amount of gold specified.

Two factors are involved in both these things: (1) belief in the ability to pay and (2) belief in the intention and good will of the bank or government. The latter is of absolutely vital importance.

Good Faith the Foundation of Credit

The preservation of good faith, the keeping of contracts, even though they hurt, are absolutely vital. An honest man can go bankrupt and retain his reputation, if he has clearly done the best that he can and protected his creditors to the extent of his ability. Such a bankrupt can come back again and receive credit again in the future. But the man who has turned sharp corners, who has evaded obligations, whose word is not accepted because he has broken his word, must for the future either pay cash or offer excellent collateral with a big margin.

The proposal that our government should *deliberately debase the dollar by reducing its gold content*, if carried out, would shock credit throughout the world for a prolonged period.

The Good Faith of the American Government

The shock to confidence, at home and abroad, of a deliberate breach of faith of the United States Government with respect to the gold standard of the present standard of value (meaning the present standard of weight and fineness) would be something we could not get over in years. Our government has given its solemn promise on every Liberty bond to pay gold coin of the United States of the present standard of value. The same promise is on the Federal Reserve notes and the laws relating to them. The law defines the standard of value as 23.22 grains of fine gold, or 25.8 grains of standard gold nine-tenths fine. The same promise is printed on virtually all our privately issued bonds and State and municipal bonds, and in a multitude of mortgages. We are bound by every promise.

These gold clauses in the government bonds were put there because of the fears which had risen in investors' minds growing out of our Greenback period and growing out of the silver agitation of the '90s. They were put there to assure our investors that, even if the government should ever get into such a position that it could not redeem its paper money, it would still pay interest and principal on its public debt in gold, which the country did even in the years 1861-79. It could not redeem its Greenbacks in gold, but it could pay interest and principal on the public debt in gold and it did so. For the greatest government in the world, without compulsion, deliberately to break these solemn promises would be an incredible shock to good faith everywhere. Excuse can be made for embarrassed countries like England for going off the gold standard that they

couldn't help it, but no excuse could be made if we did it deliberately.

Destroying Confidence Wrecks Buying Power

The result of an action of this kind on our part, from the standpoint of the volume of credit and revival of gold prices throughout the world in the future, would be demoralizing in the extreme. The actual quantity of circulating money in the world constitutes a very small part of the world's buying power. The great bulk of it is credit. If we should do this thing, creditors, investors and lenders everywhere would for years to come be timid and apprehensive. The experience of the French people with the depreciation of their own currency has already put them in this frame of mind. France with all her gold has done very little in the way of investing since the *de facto* stabilization in the winter of 1926-27, and when she has put out her cash she has done it for the most part on short term, constantly watching, frequently calling it back. The French people are continually apprehensive regarding currency. In the winter of 1931-32 they were hoarding gold. They could not get gold in small amounts from the Bank of France. The Bank pays out only large gold bars, and the French people were consequently paying a premium over the French franc for American gold coin, and were paying a premium on small slices cut from gold bars. If we should deliberately debase our currency, as an act of choice, we should make general this kind of fear. Instead of getting easy and automatic expansion of credit in the near future, we should have a world much more reduced to a cash basis than it is even today.

Effect on Prices of Debasing Dollar

This consideration should make it clear why those who would expect a doubling of commodity prices to follow a cutting in half of the gold dollar would be radically disap-

pointed. The weight of purchasing now carried by gold and credit together would, in that case, be thrown back to a disproportionate extent on gold alone, and the value of gold would consequently undergo a real rise. Prices in terms of gold would fall. Prices in terms of the new 50 per cent. dollar might rise a little, but not at all in proportion to the cut in its gold weight, and not *certainly* at all.

The prestige and the reputation for financial integrity of the American government, of the United States Treasury, and of the Federal Reserve Banks, are two of the biggest capital values in the world and two of the most essential features of world financial organization. Wantonly to destroy them, quite apart from the question of morality, would be an act of economic destruction of fearful magnitude.

The worst of our whole trouble came from the end of September, 1931, into the middle of June, 1932. England's abandonment of the gold standard caused a great scare regarding the standard of value itself. Creditors and investors everywhere called loans, refused new credits and sold investments. In two immense waves, foreigners pulled hundreds of millions of dollars out of the United States. Fear and hysteria drove the New York Times index of production down from 75 to 52 within twelve months. With a demonstration in the middle of June, 1932 that we could meet the foreign drain of gold, and with the magnificent vote of the United States Senate on June 17 against the soldiers' bonus bill, an immense sigh of relief went up. Securities rallied, and then business had its first real upward move in three years. Whatever else we do, we must not invite a repetition of this panic regarding the standard of value itself.

Debasement Could Not Solve Farm Problem

I want to say one further thing with respect to those who would advocate cutting the gold content of the dollar as a

means of raising the farmer's prices. Quite apart from the moral and financial objections which seem to me so vital, I would observe that the plan would not do the farmer anything like enough good, even if it worked out perfectly. Suppose that the dollar were cut in two and suppose that all commodity prices should double. The farmer could then see his hog prices rise from $3\frac{1}{4}$ cents a pound to $6\frac{1}{2}$ cents a pound; but at the same time the prices of everything he buys are doubled. This does not help the farmer much. I would like to see the farmer get nine cents or ten cents for his hogs, and I want the price of his cotton doubled or more than doubled, *without* a rise in the prices of the manufactured goods which he buys. The manufacturer does not need higher prices—what he needs is volume—but the farmer must have radically higher prices. We must get the balance restored between the manufacturer and the farmer. This means that the farmer must get his export market again. I would strike at the export trade—not at the currency.

Silver Inflation

Testimony before your committee, and the cross examinations, have raised questions regarding the possibility of using silver, either under a bimetallic system or in some other way, and I want to make some observations regarding that. First, let me say that, in my opinion, the suggestion that our foreign trade has been primarily damaged by a decline in the price of silver seems to me to have no merit. Our trade with the one great silver country, China, has kept up a great deal better than our trade with the world as a whole, as shown by the following figures:

U. S. EXPORTS, 11 MONTHS ENDING NOVEMBER

	Total	Index	To China	Index
1929	\$4,814,444,000	100	\$114,437,000	100
1930	3,568,494,000	74.1	82,157,000	71.8
1931	2,240,219,000	46.5	84,193,000	73.6
1932	1,481,750,000	30.8	52,165,000	45.6

Silver bimetallism at 16 to 1, or any other ratio than the commercial ratio, would mean the debasement of the currency and the abandonment of the gold standard, but the adoption of bimetallism at the current ratio would still involve breach of contract under the gold standard and undermine confidence and good faith, and, moreover, would accomplish none of the purposes that the silver people have in mind, because what they want to do is to raise the price of silver.

I see no reason to go any further with silver than is proposed by the economic experts who prepared the agenda for the coming World Economic Conference. They rule out the use of silver, even in moderate amounts, as part of the reserves in central banks, saying that silver is unsuitable for such use because there is no fixed price at which it would be received by other central banks in the settlement of balances on international account. They make a few minor concessions to the notion that certain countries might withdraw very small denominations of bank notes and substitute silver subsidiary coins for them, and that some other countries might enlarge the use of subsidiary silver coinage. But they accept none of the main proposals made by the silver advocates, and I think they are right. I recommend their view to your committee, and I submit for your records what appears to be a verbatim account of their recommendations as prepared at Geneva, taken from the New York Herald Tribune of February 9, 1933:

"After keeping relatively stable from 1921 to 1929, the price of silver in gold currencies fell abruptly by more than one-half in less than three years. There is no doubt that this sudden decline must, in the main, be attributed to the same causes as have acted on the general level of prices, and may thus be said to illustrate in a particular case the incidence of the world depression. Some special factors can, however, be found which have accentuated the downward trend, and these were to some extent already operating before the depression set in. Such factors are the demonitization of silver, the

reduction of the silver content of token coins, and also the disposal of surplus stocks.

We have considered a series of proposals which have been discussed in recent years with a view to raising the price of silver, and we wish, in this connection, to make the following observations:

(I) It has been suggested that some form of bimetallism should be introduced.

We would point out that a bimetallic standard, which presupposes a fixed relation between the value of gold and that of silver, could be safely introduced only if the most important countries of the world agreed to such a measure. As the only international monetary standard which is at present likely to command universal acceptance is the gold standard, the idea of introducing bimetallism must be regarded as impracticable.

(II) It has been proposed that banks of issue should be allowed to hold increased quantities of silver in their legal reserves.

On the assumption that no form of bimetallism will prove acceptable, silver is unsuitable for extensive inclusion in the metallic reserves of a central bank, there being no fixed price at which it would be received by other central banks in the settlement of balances on the international account.

(III) It has also been suggested that governmental action should be taken for the purpose of improving the price of silver.

We would, in this connection, refer to the suggestion made in a previous part of this report, to the effect that, in countries where banknotes of small denominations are in circulation, these small notes might be withdrawn and replaced within proper limits by subsidiary coins, and we think that the conference should, in this connection, examine to what extent the use of silver in subsidiary coinage could be enlarged. Whatever sales of government stocks of silver may be deemed desirable it is important to conduct these in such a manner as to avoid any unnecessary disturbance of the market.

The conference should also consider whether, and if so by what methods, the marketing of the metal by producers and currency authorities is susceptible of improvement. The question of developing new and enlarged industrial uses for silver is, in our judgment, also worthy of careful consideration.

From the point of view of commercial relations with silver-using countries, particularly China, trade interests would best be served, not by a rise in the price of silver, as such, but by a rise in the general level of commodity prices. Any action which would tend to raise

that level and in due course achieve its stabilization may be expected to have a favorable effect on the price of silver, and would, on general grounds, be welcome."

"Inflation" by Government Borrowing

Among the many meanings of "inflation" is one that relates to public finance, and here there are many proposals, ranging from moderate notions of necessary government borrowing, which I should favor, to extravagant notions regarding government borrowing which would be dangerous in the extreme. Excessive borrowing by the government can, of course, impair first the credit of the government, and then, ultimately, as the government leans on the Federal Reserve Banks too heavily, threaten the currency.

Sound Public Finance

We must have sound public finance. This means: (a) reduced expenditures and increased Federal taxation. I personally do not like a sales tax applied at a uniform rate to all manufactures. A very moderate tax would bear very heavily on some lines where demand is highly elastic, and a heavy tax would not make much difference in certain lines where demand is very inelastic. Necessities could stand much heavier percentage taxes than can articles which people can easily do without. Taxes could be put on tea and coffee and on such things as spices, of which small amounts are used in the individual's daily consumption, at much higher rates than on articles which make up a substantial part of the day's consumption. I do not pretend to have worked this out with any detail, but I do believe that a series of special sales taxes at different rates, classifying commodities with reference to elasticity of demand, would be less burdensome by far than one uniform flat rate. Of course, taxes should not be pyramided; they should strike production only in one stage and not in successive sales.

I am very hopeful, too, quite apart from reasons of taxation, that you will soon be getting a good revenue from beer and from wines.

Let me add that more moderate tariffs, which will let goods in instead of keeping them out, will be of real help to this problem of raising the government's revenues. In pre-war days the tariff was in fact our main source of federal revenue, down to the time when the income tax came in.

But, in addition, expenses must be cut drastically. The discussion which has already taken place at these hearings has indicated possibilities in connection with the government's outlay to veterans who have no disabilities connected with service in the war, and the possibility of cutting that item very drastically is one which we cannot afford, for political reasons, to ignore. It is my understanding that very great reductions of expenditure can result from reorganization and consolidation of government bureaus, and from the elimination of overlapping functions. The political difficulties of this are, of course, recognized, but, in a great fiscal difficulty, political difficulties must be overcome.

I think, too, that the reduction in prices which has taken place ought to make it possible for us to cut almost every item of government expense except the fixed interest on public debt, and even there something can be done by refunding.

What "Balancing the Budget" Means

The budget ought to be balanced, in the sense that all ordinary expenses are covered by current taxes, and that the borrowings for special and non-recurrent purposes should be covered by additional taxes to the extent of current interest.

The orthodox canons of sound public finance would require, under anything like ordinary conditions, further

taxes to cover current sinking fund on all new borrowings and also on existing debt. I have not consulted other bankers with respect to this point, but my personal view would be that, in a time of great depression such as the present, it is legitimate to borrow for contractual sinking fund requirements and to eliminate this item from the budget proper. Taxes which under existing conditions are adequate to balance the budget in the sense above described would, with any considerable improvement in business, be very much more than adequate for sinking fund requirements. My personal view is that we need not count in the deficit any expenditure which does not actually increase public debt.

If the Congress and the Treasury give definite and convincing evidence of their intention of dealing with this problem with full responsibility, they will strengthen the credit of the government and, in my opinion, the government bond market will take what bonds are really necessary for the meeting of this emergency. If, on the other hand, there is an evasion or failure to grapple with the problem earnestly and courageously, or light-hearted adoption of a borrowing programme without consideration of this point, the government will speedily find its securities sinking in the market and the market wholly unreceptive to new issues except at very high rates. The credit of the government is basic to every other credit, and we must protect it unflinchingly.

Government borrowing is necessary for emergency credit relief and for loans to the States to give direct unemployment relief. I recognize and would emphasize the responsibility of the whole country to the suffering millions who, through no fault of their own, are victims of this great depression.

But we must not overstrain the finances of the government and we must not jeopardize the credit of the govern-

ent by proposals of a great government-borrowing programme for new public works on the theory that this will start a business revival. The government's credit cannot stand a great deal of that in addition to its necessary borrowing.

Further, we do not need government borrowing for new public works to start a business revival. If we move promptly to restore our export market for farm products and raw materials, we shall get a business revival quickly, and such government borrowing will be unnecessary. If, on the other hand, we use government borrowing as a substitute for the restoration of the export market, in the hope that we can force a revival of business merely by spending borrowed money in a country whose industries are badly unbalanced, the borrowing and the spending will be ineffective.

"Inflation" by Forced Expansion of Bank Credit

I should avoid further artificial efforts to force an expansion of bank credit. It was forced expansion of bank credit from 1922 into 1928 that was responsible for a great part of the present trouble. The renewal of government security purchases by the Federal Reserve Banks following the break in 1929, and especially in early 1930, was responsible for the false stock market boom in early 1930, and the renewal of excessive security issues which complicated very much the difficulties in the period that followed.

I strongly sympathized with the Glass-Steagall Bill, and with the government security purchases of the Federal Reserve Banks in the panic of the Spring of 1932, especially when the foreign run on our gold was on, as a means of preventing further forced liquidation. But heavy excess reserves, in the absence of confidence, will not force bank expansion. On the other hand, in times when confidence is normal and when borrowers (especially speculators) are ready to borrow at low rates, and when banks trust the

security offered, excess reserves of 50 to 100 million dollars mean cheap money and rapid bank expansion. Excess reserves of 500 or 600 million dollars, in a period of reviving confidence, would be exceedingly dangerous.

The volume of bank credit in the country does not depend alone on the volume of bank reserves. It depends also on the temper of the business community, which is governed by the prospects of business, and on the movements of goods and on the prices at which goods move. Given the restoration of the export trade and revival of agricultural and raw material prices, credit will expand rapidly. There is no use trying further to force it from the other end by an artificial increase in bank reserves.

Nor is there any use in trying to increase the volume of currency in circulation by paying out more paper money. If the paper money is redeemable and confidence in the gold standard is not shaken by this, it will not stay in circulation but will merely pile up in banks. If the paper money is issued in such amount as to shake confidence in the gold standard, the effect would be forced liquidation and tightened credit.

State and Municipal Taxes and Expenditure

The Federal Government, even though reducing expenses sharply, will still need to have increased taxes in view of the present low returns from taxes and in view of the necessity of providing for interest for additional borrowing. The States and local governments, on the other hand, in many cases can reduce taxes, and this is particularly true of rural local governments, where the tax burden has grown so enormously in recent years, and where the farmer pays the bulk of his taxes. I am told of one farm in an up-state New York county where taxes in the last year have been reduced from \$380 to \$200, due to vigorous action by the county commissioners, who have cut salaries and sharply reduced the county expenses.

Our local government has been a haphazard growth rather than a businesslike adaptation of government to needs. Areas in many cases are altogether too small. They were set in horse and buggy days. There are many places where groups of small counties could be combined into one county, with the elimination of several sets of officers. There are many unnecessary road districts and school districts, each with independent sets of officers. There are immense possibilities for curtailing expenses in the cities. Even with the additional burden of direct unemployment relief which is thrown so heavily upon local government by this great depression, I am satisfied that the possibilities of saving are so enormous in the general field of local government that the total of the taxes can be radically cut. Much is being done in many States looking toward this development, and the Federal Government might very well use some of its existing instrumentalities for the study of what is going on, giving publicity to it, and acting as a clearing house for information regarding it.

International Goodwill

We should move as rapidly as possible and contribute as much as we can toward bringing about peaceful relations throughout the world, so that nations will be willing to go forward for a thorough-going lightening of the burden of armament. I do not think that we shall contribute to this by peremptory demands that other nations disarm, because such demands may even intensify the fears that have led to the excessive armament. In general, it is far more fear than lust for dominion that accounts for excessive armament.

Tying Together Various Remedies

In connection with the programme which I have outlined, the desirable thing seems to me to be to accomplish all of the parts as rapidly as possible. When it comes to doing one thing conditioned upon some country doing another, I would

be thoroughly opportunistic, bringing them together if it facilitates the transaction, and separating them if the effort to tie them together creates difficulties. In connection with tariff revision, I think that there is a great advantage in tying our reductions and the reductions of other countries together by reciprocal tariff agreements. I believe that public opinion on both sides of the water will be much readier to move in this way.

I think it might be difficult to tie together the settlement of inter-allied debts with a disarmament programme. Disarmament will be much easier to achieve when business recovery is already under way and when nations with a new economic hope are forgetting their fears and hatreds. It is noteworthy, for example, that, as between France and Germany, the era of good feeling was also the era of business prosperity, from 1924-25 down toward the end of 1928.

When it comes to international negotiations, it must be remembered that public opinion in every country is sensitive, that there are many points of national pride involved, that no country will accept dictation from any other country, and that public opinion in every country needs to be educated to make the necessary concessions to national pride in other countries.

INTERNATIONAL LABOUR OFFICE

The Course of American Recovery

by

Harold BUTLER

Director of the International Labour Office

6

*(Reprinted from the INTERNATIONAL LABOUR REVIEW,
Vol. XXIX, No. 1, January 1934.)*

X.746.73.N3

97

GENEVA

1934

'The Course of American Recovery

by

HAROLD BUTLER

Director of the International Labour Office

In view of the world-wide interest in the great social and economic experiment now being carried out in the United States, it was thought that an attempt to view it as a whole would be of value at the present time. The Director has accordingly written this article, based not merely on the impressions which he himself gathered during his recent short visit to North America, but mainly on the material collected by Mr. P. W. Martin, who had the opportunity of making a more extensive study in the United States during the last three months and to whom he owes invaluable assistance.

This article does not pretend to cover the whole field. It aims at giving a bird's-eye view of the immense and complex process of American recovery. It omits many important aspects of it, such as the effect of the codes on the position of organised labour, the effect of the gold-purchase policy or the reaction of the recovery measures on the attitude of the United States to international trade. It eschews any endeavour to pass judgments or to trace the detailed working of the steps taken to raise wages, to shorten hours, to stimulate commodity prices, to initiate public works, or to intensify the system of unemployment relief, all of which things it would be premature to attempt at the present time. All that the article does is to give a rough general sketch of the present situation and to suggest the course of events which has brought it about.¹

¹ For a brief survey of the National Recovery Programme and of the machinery and methods being put into operation, cf. *International Labour Review*, Vol. XXVIII, No. 6, Dec. 1952, pp. 759-773: "The Economic Experiment in the United States."

THE measures taken by the United States to promote recovery cannot be judged solely from an economic standpoint. They are essentially measures taken to meet not only an economic but also a social and political emergency of the first magnitude. When President Roosevelt assumed office, it can be said without exaggeration that the country was on the verge of an economic collapse which must have produced serious political and social consequences. This fact has not been adequately grasped outside the United States, and is now apt to be forgotten in the country itself, as panic has subsided and economic activity is gradually reviving. But it is this supreme fact which constitutes the indispensable background to the whole National Recovery programme and in the light of which that programme must be reviewed and appraised.

The extent of the catastrophe which faced the United States last March may be seen by three circumstances. First, the banking system had broken down. The failure of many of the smaller banks had spread a general feeling of insecurity, which finally reached the point when no bank was considered safe and even the position of the great insurance companies, to which the savings of millions of Americans are entrusted, was seriously impaired. The situation was only saved by closing every bank in the United States and by undertaking a drastic overhaul of the whole credit machinery under Government control. Moreover, it was not only confidence in the wisdom of the bankers that had been destroyed, but also in their honesty. Many cases had already come to light in which the trust of the public had been scandalously abused and its money dissipated in personal gambles. The progress of the Senate investigation during the succeeding months brought to light disclosures regarding men of high standing in the financial world which confirmed instead of removing the discredit into which American banking practice had sunk. It is difficult to overestimate the importance of this fact in undermining the old belief in "rugged individualism" and in converting the public to an urgent demand for energetic action by the State.

The second outstanding fact was the existence of some fourteen million people out of work. Unemployment on so vast a scale had never been seen in the United States or in any other country. The traditional system of charitable relief had long since broken down. The treasuries of many of the great cities

had been exhausted by the provision of relief, often inadequate in amount and sometimes vitiated in its distribution by political interferences. Deep distress prevailed in every urban and mining centre. Wages had been drastically cut down, there being in most industries little or no trade union resistance to overcome, and sweat-shop conditions had once more been widely reintroduced. Industry itself had proved completely unable to find a remedy. The competitive system produced by over-mechanisation and reckless reliance on every possible device, legitimate or illegitimate, of salesmanship had sapped the confidence of business in its own future. The introduction of the industrial codes was not so much in response to any demand of labour, as at the instance of the employers themselves under the leadership of the United States Chamber of Commerce. They saw no possibility of restoring normal conditions with the expectation of reasonable profits, unless some regulation was introduced into industry which could only be effected by Government action. In the industrial field, therefore, as in the banking, the individualistic tradition had been rudely shaken. On the one hand, the State was being forced to assume the function of unemployment relief ; on the other, it was called upon to undertake the reorganisation of the whole industrial structure.

The third danger of social and economic breakdown lay in the plight of the farmer. The price of most farm products had reached a point when the farmer could hope for no profit and was no longer able to pay his taxes. In addition, at least 40 per cent. of the farmers were carrying mortgages, while many more were burdened with other debts contracted when times were good. There could be no hope of their meeting these obligations unless farm incomes were increased, the rate of interest reduced, and in some cases the debt itself drastically scaled down. Here again State intervention was imperatively demanded. The farmers' vote, like the vote of the unemployed or impoverished wage earner and of the disillusioned middle class, was cast for Mr. Roosevelt in the expectation that the Government would initiate a vigorous programme to rehabilitate the economic system.

THE "NEW DEAL"

The "New Deal" was not therefore just a political slogan but a political necessity. The President was elected in circumstances which obliged him to discard all the inhibitions of the

past against State interference in the economic life of the country. He was deeply committed to a far-reaching programme of reconstruction by his campaign speeches. That the programme was his personal programme may be readily seen from a few quotations, revealing the principles and ideals which the President set before himself and the country.

First may be placed his criticisms of the social system :

In the years before 1929 . . . the cold figures of finance prove there was little or no drop in the prices the consumer had to pay, although those same figures prove that the cost of production fell very greatly; corporate profit resulting from this period was enormous; at the same time little of the profit was devoted to the reduction of prices. The consumer was forgotten. Little went into increased wages; the worker was forgotten, and by no means an adequate proportion was paid out in dividends — the stockholder was forgotten.¹

As I see it, the task of government in its relation to business is to assist the development of an economic declaration of rights, an economic constitutional order. This is the common task of statesmen and business men. It is the minimum requirement of a more permanently safe order of society. Happily, the times indicate that to create such an order is not only the proper policy of government but is the only line of safety for our economic structure as well.²

As the first necessity for restoring the situation the President placed a restoration of purchasing power and a redistribution of income, which would create a market for the abundant output of agriculture and industry.

Our basic trouble was an insufficient distribution of buying power. . . . While wages rose in many of our industries, they did not as a whole rise proportionately to the reward to capital. . . . I believe that we are at the threshold of a fundamental change in our economic thought. I believe that in the future we are going to think less about the producer and more about the consumer. Do what we may to inject health into our ailing economic order, we cannot make it endure for long unless we can bring about a wiser, more equitable distribution of the national income. . . . In such a system, the reward for a day's work will have to be greater, on the average, than it has been, and the reward to capital, especially capital which is speculative, will have to be less.³

The truth of the matter is that we are in the midst of another turn of the wheel in the economic cycle and that production in most instances has outrun consumption. . . . For example, the trend is distinctly towards the five-day week. This means the employment of more people, or, at least, the laying off of fewer people, as does also the movement toward shorter hours of work per day.⁴

¹ Franklin D. Roosevelt : *Looking Forward*, pp. 28-29.

² *Ibid.*, p. 33.

³ *Ibid.*, pp. 48-49.

⁴ *Ibid.*, pp. 112, 113.

In return for higher wages and shorter hours Mr. Roosevelt insisted on the need for regulating and rationalising production by eliminating internecine competition.

Government ought to have the right and will have the right, after surveying and planning for an industry, to prevent, with the assistance of the overwhelming majority of that industry, unfair practice and to enforce this agreement by the authority of government. The so-called anti-trust laws were intended to prevent the creation of monopolies and to forbid unreasonable profits to those monopolies. That purpose of the anti-trust laws must be continued, but these laws were never intended to encourage the kind of unfair competition that results in long hours, starvation wages and over-production.¹

If all employers in each competitive group agree to pay their workers the same wages—reasonable wages—and require the same hours—reasonable hours—then higher wages and shorter hours will hurt no employer. Moreover, such action is better for the employer than unemployment and low wages, because it makes more buyers for its product. That is the simple idea which is the very heart of the Industrial Recovery Act.²

As the keynote of the whole programme may be taken these words: "The measure of the restoration lies in the extent to which we apply social values more noble than mere monetary profit."³

When he took office, the President was thus under the obligation to carry out a series of heroic measures, not merely to restore economic balance, but to recast the social structure of the United States. To sit down and wait hopefully till the gale blew itself out would have been suicidal. It would inevitably have produced open revolt against the prevailing system within a short space of time. Unless Mr. Roosevelt acted and acted quickly and comprehensively, he was lost. Few of his critics dispute this now. Probably none of them would have disputed it last March. His aim could not be limited to economic recovery alone. He was compelled to assume the task of social reconstruction at the same time, even at the risk that reconstruction and recovery might be to some extent conflicting rather than complementary processes.

It is in the light of this critical situation that the action of the American Government must be viewed if it is to be rightly understood. The considerable measure of improvement already

¹ IDEM : Radio address, 7 May 1933, para. 19.

² IDEM : Radio address, 24 July 1933, para. 18.

³ IDEM : Inaugural address, 4 March 1933, p. 263.

achieved is apt to obscure the critical character of the emergency which gave birth to the programme of national recovery ; but it may be suspected that the forces which the emergency let loose have only been tamed to the extent that social and economic evils have been courageously and successfully gripped. Any attempt to revert to the old system would be likely to provoke fierce opposition and to invite a bitter political struggle.

After an experience of seven months, during which some of the measures adopted have hardly begun to operate and others have not yet been fully tested, it is impossible to embark upon final judgments. Recovery measures designed to cure a depression of such unprecedented depth cannot be expected to succeed in so short a span. Measures aiming at permanent reconstruction will necessarily require some years of practical experimentation and adjustment before their benefits can be fairly measured. It is not too soon, however, to hazard a first estimate of the progress made up to date, based though it must be on incomplete evidence.

THE BANKING SITUATION

In the banking field it is clear that an immense improvement has taken place, though there still remain dark spots in the picture. The President's radio address of 12 March produced a remarkable psychological effect on the nation and by itself constituted a great step towards the revival of confidence. Banks which could produce evidence of soundness were reopened with Government sanction and two important measures have been taken to ensure their future solvency. The first consists in the setting up of the Deposit Liquidation Board, which, through a network of committees throughout the country, is proceeding to liberate frozen deposits by lending to banks on those assets which may be regarded as sound. The second is the authority given to the Reconstruction Finance Corporation to purchase the preferred stock of banks in order to increase their liquid assets, and to place them in a better position to engage in credit operations. As from 1 January 1934 a further important step will be made, when the measure comes into force guaranteeing deposits in banks of approved soundness.

The general effect of these various measures has undoubtedly been to restore in a considerable degree the faith in the banking system which had so completely vanished in March. They obviously imply its functioning for the time being under Govern-

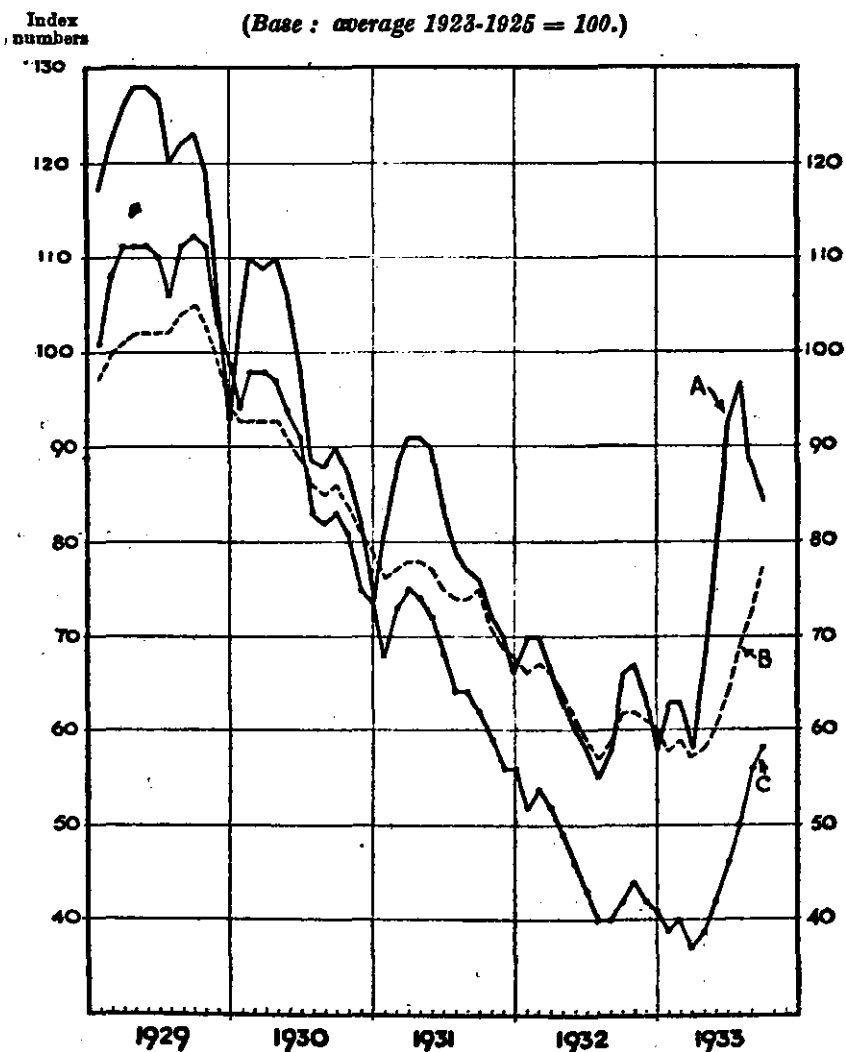
ment tutelage and supervision, but it had ceased to function in any other way. Further measures of permanent reform will no doubt be required. Many of the smaller banks are still believed to be insolvent. The task of liquidating or of reconstructing them will probably be difficult, delicate and expensive, but it may fairly be said that at least a start has been made towards banking recovery.

THE INDUSTRIAL SITUATION

The industrial situation is necessarily complicated by a number of interacting and conflicting factors. Attention tends to be concentrated on the consequences of the National Industrial Recovery Act and of the codes promulgated under it ; but it has to be remembered that the first codes adopted under this Act only became operative in July and that its economic effects cannot be readily disentangled from those of other forces affecting production and consumption. Before the Act came into effect, the departure of the United States from the gold standard caused anticipation of inflation, which accentuated the slow rise in prices already apparent. The expectation of higher prices as the result of the shorter hours and increased wages provided under the NRA further stimulated this upward swing and generated an optimism which the circumstances hardly justified. A minor boom set in, with the result that the index of industrial production (manufactures and minerals), which stood at 60 in March and 67 in April, had risen to 96 by July. Similarly, the department stores index of retail prices moved up from 69.7 to 76.1 in the same period and that of farm products from 50 to 76. During this time many retailers bought on a large scale in the expectation of higher prices and the general public was inclined to purchase ahead of its normal requirements for the same reason. There had also been a marked improvement in the volume of employment and of factory payrolls. Between March and July the factory employment index moved up from 57 to 69, while payrolls increased from 37 to 50 (cf. Figure 1).

This upswing was too rapid, however, to last. The increase of purchasing power had not kept pace with the increase of production. An inevitable reaction declared itself. Industrial production had dropped back to 85 in September and the price of farm products fell away to 70, but as the result of shortening hours employment continued to improve until it had reached 77

FIGURE 1. INDEX NUMBERS OF PRODUCTION, EMPLOYMENT, AND PAYROLLS IN THE UNITED STATES, 1929-1933.



A : Production (manufactures, unadjusted). B : Factory employment (unadjusted).
C : Factory payrolls (unadjusted).

Source : Federal Reserve Bulletin.

for manufactures in September, while similar gains were apparent in bituminous and anthracite mining, public utilities and retail trade. By October it seems probable on a cautious estimate that between 3,000,000 and 4,000,000 persons had been re-employed since the Recovery programme was initiated in March, or about 25 per cent. of the total, a not inconsiderable achievement in the space of six months. In spite of the recession, the same

upward movement continued in payrolls, due no doubt to the wage provisions of the codes. In manufacturing industry the payrolls index rose by nearly 8 points between July and September, in anthracite and bituminous mining by 22.5 and 10.5 points respectively, in power, light and water undertakings by 1.8 points and in retail trade by 11.1 points.

It may be noted that the figures of weekly earnings had risen but little, while hourly wages showed a considerable advance. In other words, the effect of higher wages was not so much to "fatten the pay-envelope" of the average worker, as generally to maintain the same earnings for a shorter working week. At the same time, however, the reduction of hours inevitably increased the volume of employment and thus enhanced the aggregate purchasing power of the wage earners as evidenced by the payroll totals. Nevertheless, this added volume of buying was not enough to sustain the volume of retail sales at the higher prices which came into play, partly no doubt as the result of the higher labour costs in industry. The sales of department stores (adjusted for seasonal variation), which had appreciated from 70 in July to 77 points in August, declined again to 70 in September, while retail prices of department store articles rose by nearly 10 points in the two months. It must be remembered, however, that there had been abnormal buying in the summer months, which absorbed much of the normal autumn improvement and was bound to presage some falling off in the July volume of sales.

THE WORKING OF THE CODES

As soon as the National Industrial Recovery Act came into force, its application was pressed with great energy by the Government, aided by a great deal of good will from many of the industries. In the space of four months over one hundred codes had been elaborated, discussed by all parties concerned at public hearings, signed by the President and brought into immediate operation. Machinery was set up for administering them, for ensuring compliance and for dealing with disputes, particularly those arising in connection with the rights of trade union organisation and of collective bargaining which they guaranteed.

The working of the codes may best be illustrated from the experience of two important industries—steel and cotton textiles.

On November 16 the Administrator of the Steel Code issued a report, in which he stated that between June and September the volume of business had declined by 10 per cent. He continued :

The increase in number of employees and total wages in the face of this decline of business is remarkable. The number of employees increased approximately 73,000 or 22 per cent. The total wages paid increased approximately \$6,500,000 per month, or 21 per cent. . . . The average hours per employee per week decreased from 39.2 hours to 32.8 hours. . . . The average earnings per hour for all employees increased from 52.8 cents to 63.6 cents, or an increase of 20 per cent., and, excluding salaried workers, increased 20 per cent. from 47.2 cents to 56.7 cents. The average earnings per employee per month showed substantially no change. The total hours worked by all employees per month showed a slight increase. Again it must be emphasised that the foregoing figures must be read in the light of a decrease of 10 per cent. in operated ingot capacity and, therefore, show not merely a maintenance, but a decided improvement from the standpoint of labour, despite the reduction in business.

In order to complete the picture, it should be added that the variation of the prices of steel and pig iron was slight. Between 15 August and 14 November the quotations for finished steel showed an increase of 1.8 per cent. and those for pig iron of 4.2 per cent. It is also important, however, to notice that in spite of the depression the composite prices of iron and steel products had undergone comparatively little reduction, the monthly average for the first nine months of 1931 being \$31.35 per long ton and for the same period in 1933 \$29.09. Nevertheless, production, which averaged 83 per cent. of the 1923-1925 average in September 1930, fell as low as 21 per cent. in March 1933. In July it rose to 100, but by September it had fallen back to 66.¹ Owing to the inactive demand for capital goods, which still persists, the industry is suffering particularly from the depression.

The experience of the cotton industry is equally remarkable as illustrating the improvement in employment and wages effected by the codes. In this industry there had long been an excess of capacity, with poor prices and low wages as a result. The basic provision of the Code was the limitation of machine-hours to 80 per week and of working hours of the individual worker to 40 per week. Some mills had previously been operating 144 hours per week at certain seasons, while 110 hours were common. The employment of women at night was usual in many of the Southern mills. The Code, which was backed by 80 per cent. of the manufacturers in the industry,

¹ *Survey of Current Business*, Nov. 1933, p. 16.

sought to restrict and to equalise production automatically, thus "putting a bottom into the industry". It also aimed at maintaining an output adapted to the consuming market by prohibiting the installation of new machinery without the sanction of the Code Administrator. It has further resulted in abolishing child labour under sixteen, in eliminating the so-called "grave-yard" shift, in expanding employment and in raising wages. The reduction of working time resulted in a considerable decrease in unemployment. At the end of August the number of persons on the mill payrolls had increased by 140,000 or 40 per cent. as compared with the first week in March.

The establishment of minimum rates of wages entailed a general rise in wages for all grades, as it was stipulated that the existing differences in the rates paid to the various classes of workers above the minimum rates should not be decreased. As a result the average remuneration of seven occupational groups whose earnings exceeded the Code minimum increased from 34.9 cents per hour in 1932 to 43.9 cents per hour in August 1933, a rise of 25 per cent. Both in fixing the minimum and in establishing rates above the minimum the general principle followed is that a worker shall receive at least as much for a full working week of 40 hours as he previously obtained for 48 hours. This increase of cost naturally involved serious financial problems, but the industry expects to meet them partly through the elimination of cut-throat competition, partly by raising prices.

The wholesale price index of cotton goods rose from 50.0 in March to 80.2 in July when the Code came into effect, and stood at 91.3 in September. A part of the increase was due to the contraction of stocks in July during the temporary boom. On the other hand, prices had been so low that they could not provide a decent living wage for many of the workers. As for production, it had attained a figure of 100,479,000 yards at the peak in June. With the collapse of the short-lived boom output fell to 57,471,000 yards in September, a slightly higher figure than in September 1930. There is no doubt that the Code has already conferred considerable benefit on both employers and workers. In Mr. Sloan's words addressed to the Cotton Institute, of which he is President :

Over-capacity had reduced this industry to a condition of chronic depression, from which even the boom times of 1929 could not relieve it. To bring capacity into reasonable balance with the demands of consumption, it was essential that the available facilities be limited and be uniformly limited without exception. . . . That provision in

this Code has been its most important achievement. It is an accomplishment that it can defend . . . that it has and will use every effort to preserve.¹

THE REINFORCEMENT OF PURCHASING POWER

In addition to this shoring up and reshaping of the banking and industrial structure, the Government is straining every nerve to reinforce purchasing power. The whole programme of recovery and reconstruction as it at present stands depends upon business activity taking an upward turn. One thing alone can bring this about, and that is an increased volume of buying, both of consumers' goods and of capital goods. How to secure this increase in the volume of buying is the central problem before the Administration.

In previous depressions a revival of the investment market has frequently proved a powerful factor in setting purchasing power once again in active circulation. The present situation in the United States is characterised by an almost complete lack of new investment. For this various causes are assigned, all of which have probably made some contribution. The uncertainty as to the future value of the dollar stands first. As long as the fear of inflation persists, fixed-interest bearing securities have little attraction for the investor and the flotation of new issues is discouraged. Hence the demand for stabilisation is rapidly gaining strength. Again it is claimed that the rigours of the Securities Act are a deterrent to industrial venture. It may well be that in some respects this measure imposes irksome and unnecessary restrictions, but, on the other hand, complaint against a curb of which American finance has no experience was inevitable.

These bars to investment arising out of Government policy are strengthened by two natural obstacles. The autumn recession was bound to produce a discouraging effect. Until a new upturn occurs, investors' prospects will remain dubious. A more formidable factor is the admitted over-equipment in many industries, particularly in those producing capital goods. There seems little likelihood that the demand for new machinery will again become active for some time to come. Several of the codes aim at restricting its installation, and even without the codes the bitter experience of over-mechanisation gained in the depression must have acted as a serious check on new mechanical development.

¹ George A. SLOAN : *Address to Cotton Institute*, 18 Oct. 1933, p. 4.

In the normal course, the increased absorption of consumption goods will no doubt revive the demand for capital equipment, but some of the prime industries, notably building and the railways, have reached a point where any rapid expansion is beset by great difficulties. The tremendous building activity of the boom period has satisfied existing demand in most directions for some time to come. Rents have fallen sharply. Many houses stand empty. Many office buildings and hotels are in the hands of the receiver. The index of construction contracts awarded fell from a high point of 135 in 1928 to a low point of 14 in March 1933. The index has since crept up to 30 (September 1933), but there seems small prospect of a great building revival, except in the construction of workers' houses to which the Government is now turning its attention. As for the railways, only one new locomotive was built in the United States in 1932. Traffic receipts have fallen very low, partly owing to the competition of road transport, and so many of the companies are in financial straits that they cannot undertake any extensive programme of renewal or development with their own resources.

To promote a revival of activity the Government has had recourse to a multiplicity of measures, all tending directly or indirectly to reinforce purchasing power. Among the most important of these are the huge programme of public works, the increase of unemployment relief, and the reduction of indebtedness.

Congress voted a sum of \$3,300 million for public works, but inevitable delays have occurred in preparing the programme, which often involves complicated negotiations with State and municipal authorities. Great efforts are now being made to overcome these obstacles, and in the next few months a marked increase of activity may be expected, which will stimulate not only consumer buying, but also the demand for capital goods. Mr. Ickes, Secretary of the Interior, has announced that the total of those directly and indirectly employed on 25 November on the public works programme exceeded 1,462,000, not including some 347,000 employed under the Civilian Conservation Corps which is financed by the Public Works Administration. As 86 per cent. of the funds voted by Congress have now been allocated, a further substantial increase in the numbers engaged on public works may be anticipated by the end of the winter.

The second main item in the programme for restoring purchasing power is the extension of the Federal Emergency Relief

system. Around \$40,000,000 a month was being spent for relief out of Federal funds. On 8 November the Civil Works Administration was set up to deal with this problem along new lines. For this purpose the Federal Government has provided, in all, some \$500,000,000, while it was expected that State and local authorities would contribute a further \$200,000,000. With this money 2,000,000 men and women in receipt of work relief were to be transferred to regular work at fixed rates of wages. A further 2,000,000, drawn from the unemployed registered with the Federal Employment Offices throughout the country, were to be restored to work on the same terms. By 25 November over 1,180,000 were actually employed under this arrangement.

Alongside these direct measures for increasing purchasing power, the Government has undertaken the refinancing of a huge volume of indebtedness. Provision has been made for taking over farm mortgages and mortgages on homes to a total of \$4,000 million. By these means not only will the debt burdens of the individuals concerned be lightened to some extent, but the holders of these mortgages will be placed in a much more liquid financial position which will permit them to expand their purchases and to make investments. These and a number of other measures designed to the same end may be expected to bear fruit in the coming months and gradually to bring a greater volume of buying power to the support of industry, always assuming that no uncontrolled inflationary movement destroys the foundations of credit and business.

THE AGRICULTURAL SITUATION

It remains to give a brief survey of the measures taken to rehabilitate the farming population, which constitutes so large a proportion of the purchasing public of the United States. A passage from President Roosevelt's pen places the agricultural situation in its relationship to the general problem of recovery.

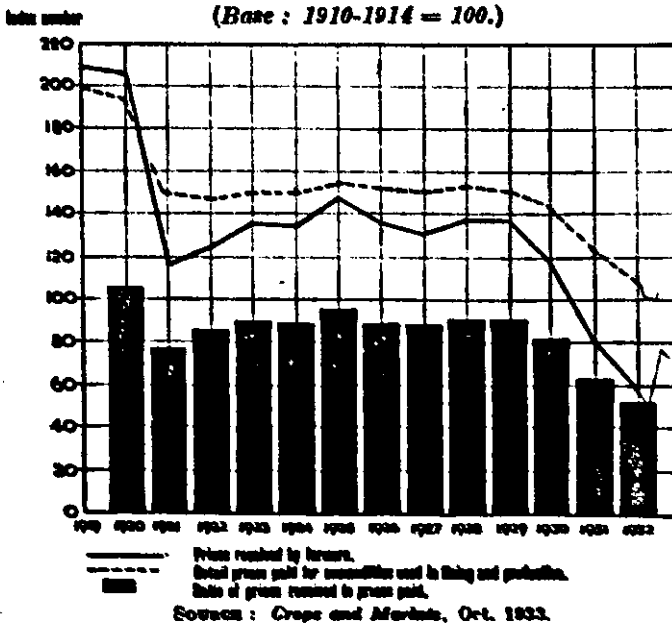
The farmers of America . . . six and a half million farm families . . . represent twenty-two per cent. of the population of the United States. In 1920 they received fifteen per cent. of the national income, in 1925 eleven per cent., in 1928 about nine per cent., and in some of the recent estimates based on figures of the United States Department of Agriculture the farm income has dropped to about seven per cent.

Fifty million men, women and children immediately within our borders are directly concerned with the present and the future of agriculture. Another fifty or sixty million people who are engaged in business and industry in our large and small civic communities are at last coming to understand the simple fact that their lives and their

futures are also profoundly concerned with the prosperity of agriculture. They realise more and more that there will be no outlet for their products unless their fifty million fellow Americans who are directly concerned with agriculture are given the buying power to buy city products.¹

The position of the farmers at the beginning of the year may be summed up in four words : unremunerative prices, unpayable debts. During the World War agricultural production was greatly expanded, so that for a whole series of basic agricultural products the United States was equipped to meet far more than the home demand. The period following the war saw the virtual shutting off of immigration. As a consequence the home market for agricultural products failed to expand as it had done in the past. The post-war years were likewise marked by the rapid growth in tariffs and other barriers to international trade. This had the double effect of closing foreign markets against the American farmer and making the products of protected industry more costly for him to buy. In these circumstances a farming crisis was inevitable ; and when upon it was superimposed the acute depression of 1929-1933, farm prices, in terms of the prices of goods that farmers buy, sank to only half their previous value (cf. Figure 2). Energetic measures to meet the emergency were

FIGURE 2. INDEX NUMBERS OF FARM PRICES RECEIVED AND RETAIL PRICES PAID BY FARMERS IN THE UNITED STATES, 1919-1933.



¹ *Looking Forward*, pp. 127-128.

indispensable, aiming first at restricting agricultural production until supply was brought down to the point where the farmer would receive a reasonable price for his products, and secondly at relieving the intolerable burden of debt which oppressed him.

It is not possible to enter here into the intricacies of the Agricultural Adjustment Act, the Emergency Farm Mortgage Act and the Farm Credit Act of 1933, which together deal with the agricultural problem. The more important of the actual steps taken may, however, be very briefly summarised. In the wheat-growing areas farmers representing 80 per cent. of the total wheat acreage have agreed to reduce their sowing by not less than 20 per cent. during 1934 and 1935. Benefit payments totalling \$100,000,000 will eventually be paid to them on this account, of which \$70,000,000 will soon become available. In the South more than 10,000,000 acres of cotton have been taken out of production, reducing the estimated crop from 17,000,000 bales to rather over 13,000,000. By this means the price of cotton has been prevented from collapsing completely, while the \$110,000,000 now being paid away in benefits has already had a salutary influence upon the conditions of cotton growers. The production of corn and hogs has also been restricted, and of the total of \$350,000,000 that will be paid in benefits on this account, some \$180,000,000 will find its way into the hands of farmers within a short time. Tobacco growers, dairy farmers, rice growers and the raisers of fruit crops have likewise been assisted along similar lines. Furthermore, in addition to the benefits on account of restriction of production, the recently created Commodity Credits Corporation is making loans to cotton farmers and to corn producers on their stocks in hand, with the double objective of enabling them to hold their products for better prices and to give an immediate impulsion to farmer buying.

Parts of the agricultural programme undoubtedly present an easy target for criticism. The reduction in acreage sown, and in some cases the actual destruction of food and other basic commodities necessitated by the restriction schemes, are of course shocking to the imagination at a time when millions of people in the United States and elsewhere are undernourished. The Administration has endeavoured to avoid this actual destruction as far as possible by organising the Federal Surplus Relief Corporation to purchase surplus products for distribution among the indigent. Other more detailed criticisms are directed against the methods employed in carrying through the restriction

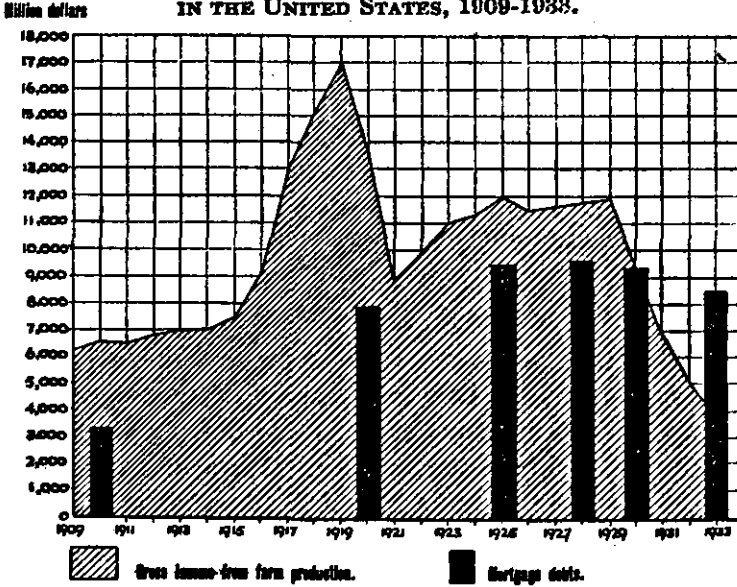
programme. Thus the tax upon the processors of agricultural products, by which the benefit payments to farmers are financed, would appear to be open to objection in certain cases. Particularly is this so where the burden of the tax is liable, at least in the beginning, to be thrown back upon the farmers. But while these and many other complexities render the farm situation singularly difficult to unravel, the fact remains that action to remedy the situation of the farmer was imperative, and no other quick-acting method suggests itself for bringing agricultural production into balance in such a manner as to afford a modicum of justice to the agricultural community.

The restriction programme in its present shape is a purely emergency measure. It is only a stop-gap arrangement pending a complete revision of American agricultural policy in the light of the future economy of the country. It is at this point that the attitude of the United States towards international trade will have to be determined. The choice before the nation has been sharply defined by Mr. Wallace, Secretary of Agriculture. Speaking on November 14 he said :

If we follow the international programme (i.e. the exportation of the agricultural surplus) we absolutely must receive great quantities of goods from abroad, and must not be disturbed by the clamour of the people who are hurt thereby. If we follow the national programme, we must resolutely plan to keep 50,000,000 acres of land out of use, no matter how loud may be the outcry of certain carrying, handling, processing and exporting interests.

Unremunerative prices constitute only half of the agricultural problem. Unpayable debts contracted in times of relative prosperity, and now representing a vastly larger proportion of agricultural income than when they were originally incurred, constitute the other half of the farmer's burden (cf. Figure 3). The Farm Credit Administration set up as part of the "New Deal" has achieved one highly salutary piece of organisation in bringing all the agricultural credit agencies under one central administration. This body is now taking active measures to refinance farm mortgages and put the whole agricultural debt upon a basis more favourable to the farmer. This major operation, however, has demanded a great deal of preparatory work, as for instance, the appointment of a far larger body of farm property appraisers than was formerly required, so that here also the concrete effects of the measure cannot be fully appreciated for some months to come.

FIGURE 3. GROSS INCOME FROM FARM PRODUCTION AND MORTGAGE DEBTS IN THE UNITED STATES, 1909-1933.



SOURCE: *Crops and Markets*, May 1933; *Year Book of Agriculture*, 1933.

CONCLUSION

In surveying the whole field of financial, industrial and agricultural problems and remedies thus very roughly sketched, it is evident that the measures taken fall into three main groups, which may conveniently be labelled "relief", "recovery" and "reconstruction". The relief measures include those for meeting the immediate emergency: to re-open the banks, to feed families on the brink of starvation, to give some support to an agricultural population whose hardships were becoming unbearable. The reconstruction measures, at the opposite extreme, aim at a permanent re-organisation of finance, industry and agriculture with the object of creating a social and economic structure which is at once more equitable and better calculated to withstand the shocks of business fluctuations in the future. Between these two types of action are the recovery measures proper, having an increase in business activity and employment as their immediate aim.

It can hardly be disputed that a very substantial measure of achievement has been realised in all three fields. It is futile to ask whether the United States is in sight of complete recovery. Nothing could have brought the country out of the profound

depression into which it was plunged in March within view of renewed prosperity in a space of eight months. The right test to apply is to compare the economic and social position of December with that which existed in March. Viewed from this standpoint it is incontrovertible that immense progress has been accomplished. Whether one looks at the number of persons employed, the care of those still out of work, the volume of production and sales, the movement of farm prices and the economic standing of the farming community, the stability of the banking system or the soundness of the great insurance companies, a marked improvement has taken place as compared with the first months of 1933. Because recovery has in fact taken place to a considerable degree, it is now being said, particularly by those who prophesied the abject failure of the Roosevelt programme, that it has occurred in spite of it as a result of the general improvement in business activity which has been observable in most countries in the later months of 1933. Such a view entirely ignores the social and economic circumstances which confronted the President on assuming office. A triple programme of relief, recovery and reconstruction was imperatively necessary at that time, and it is impossible to believe that without that programme the United States could either have avoided a much greater catastrophe or have achieved the measure of recuperation which has already taken place.

Of the future no one can make any confident prediction. There are still dark shadows as well as sunlight in the picture. A series of complicated and perplexing problems remain to be solved in every field of economic and financial policy. At the present moment the most urgent question is whether purchasing power can be stimulated so as to enable sales to expand. The Administration is bending all its energies to this task by large subsidies for relief, by the public works programme, by the programme of civil works, by refinancing indebtedness, by putting additional purchasing power into the hands of farmers in the form of benefits and commodity loans, by direct purchases of commodities and by increasing wage rates under the codes. This massive increase in purchasing power has not yet had time to come into full effect. Only a relatively small proportion of it has so far actually found its way into the hands of potential buyers. Furthermore, such purchasing power as does become available is still necessarily used in large part to pay off debts, and so loses much of its efficacy. The considerable volume of deposits still

unavailable in closed banks is a further check upon buying. The low level of investment activity and the sluggish progress of the capital-goods industries are yet other handicaps to business revival.

In the wider field, also, the problems with which the Administration's path is beset are many and serious. There is the cost to Government and the demands upon its credit which are involved. There is the great question how far the higher labour costs which industry is now carrying will in practice be offset by economies derived from the limitation of competition, or can be covered by higher prices without checking the growth of consumption. Lastly, there is the great problem of the stabilisation of the currency. All these and many other problems remain to be solved before the path to prosperity can be finally cleared, but no impartial observer can resist the conclusion that in the course of 1933 considerable strides towards recovery have undoubtedly been made and that the prospects for the new year are incomparably brighter than those with which the United States faced the fateful months of 1933.

10 December 1933.

PRINTED BY SONOR S. A. — GENEVA

⑦

Theory of Economic Equilibrium

Theory of Economic Equilibrium

(A study of marginal and ultramarginal phenomena).

By

ATTILIO DA EMPOLI

Privatdocent at the University of Naples.
Fellow of the Rockefeller Foundation, 1929-31



CHICAGO, ILL.
CHRISTIANO & CATENACCI PUBLG. CO.
1025 Blue Island Avenue.

X:7:(E:0)

51

Copyright 1931

by Attilio da Empoli

Printed in U. S. A.

**TO MY UNCLE
GIOVANNI CIRAULO
SENATOR OF THE KINGDOM OF ITALY
HONORARY PRESIDENT OF THE ITALIAN RED CROSS
WHO, AS FOUNDER OF THE INTERNATIONAL RELIEF UNION
UNDER THE AUSPICES OF THE LEAGUE OF NATIONS
IS A NOBLE APOSTLE OF BROTHERHOOD
AMONG PEOPLES**

This book is dedicated with affectionate devotion.

By the same Author:

“Teoria dell’incidenza delle imposte”.

Reggio Calabria, 1926, Vitalone (Out of Print).

“Riflessioni sull’equilibrio economico”.

Reggio Calabria, Vitalone, 1926.

PREFACE

This book is above all constructive. The author presents a static theory of value and of distribution of wealth which is different from the current theory.

Though of a static character, this work tries to approach nearer to the reality of the concrete phenomena than the current theory, and the writer sincerely believes that his scientific construction will lead to a better understanding of the complex economic phenomena.

The main purpose of this book is to bring to light the fundamental influence on the economic phenomena of the ultramarginal (potential) elements, the lack of understanding of which has given rise to a simple but erroneous and misleading theory.

But other economic problems are treated here because they help to give a better understanding of the central point being treated for themselves. This for Chapter I to VIII inclusive.

The main points of the theory are developed from Chapter IX on. It is suggested, however, that the last chapters be read after the preceding part.

The present treatment is concerned with long-run equilibrium phenomena, but will also help in the understanding of short-run equilibrium and dynamic phenomena.

The method of approach followed here differs from that followed heretofore in static theory. Variations are considered finite when the assumption that they are infinitesimal causes appreciable errors in the results obtained.

Economists often know that they fall into error when they consider as continuous the variations which in the concrete are discontinuous. But they are led to consider these as continuous because of the greater difficulty in the study of discontinuous phenomena, and because of the mistaken opinion that the error made in assuming variations as infinitesimal is inappreciable.

Pareto argues: "In order to approach more closely to the concrete, it should be necessary to consider finite variations".

"But there is a technical difficulty. The problems having as their object quantities that vary by infinitesimal degrees are much easier to treat than the problems in which the variations are finite" (1).

As a matter of fact, the technical difficulty can justify the treatment of finite variations as infinitesimal when the error committed in doing so is really negligible; however the error is not generally inappreciable and especially in the case of variations in the output of commodities the results obtained may be misleading.

The difficulties of the investigation must not and cannot dismay the scientist imbued with the earnest desire to reach the truth. Science must progress, and the road to that progress is the overcoming of difficulties and obstacles, not the avoiding of them.

In this way only will we have theories nearer the truth, and tools which, though perhaps more difficult to handle, will

(1) Speaking of variations of quantities of consumption. See Pareto's "Manuale di Economia Politica", p. 169.

help us to obtain a more exact and complete insight into the economic phenomena.

*
* *

I wish to thank Mr. C. E. Bovet for having helped me to translate the original manuscript which was mainly in Italian. I also wish to acknowledge my appreciation to Miss S. Van Biesbroeck, Mr. B. Caplan, Mr. S. I. Posner and Mr. A. Duncan, each for having read part of the manuscript, helping me to prepare it for the press. Moreover, I wish to thank Lucille Barron Clack and Mr. Antonio Chiuminatto for having corrected the proofs.

CHAP. I.

Static Curves of Production

When dealing with the tendency of costs to increase or decrease according to the different quantities of production, one generally uses a single curve to express the series of costs for the different quantities of production and the different sizes of the firm. Successive curves, however, are better adapted for this purpose (1).

Take as an example a simple hypothetical case of a given concern. We may suppose that if operating under decreasing costs, it wanted to produce only a few production units, it would have to carry a very high average cost, e. g. 50A: to produce a determinate number $X/4$ which would enable it to use to fullest advantage the complete plant since the establishment of the firm, the average cost would rapidly decrease until it reached A. If at that point the producer, without expanding his plant, wanted to increase the production by a determinate quantity, the marginal cost would rise rapidly for every appreciable quantity of output added; whereas if he increased the size of his plant utilizing fully the new additions and obtaining, e. g., a production of $X/2$, the average cost would drop to A-1. If at this point the producer wished to increase his output without however increasing the size of his plant, the marginal cost would again rise rapidly for every

(1) For successive curves of this type see specially pages 204 and 205 of "Outlines of economics" by Richard T. Ely, Thomas S. Adams, Max O. Lorenz, Allyn A. Young. Macmillan, New York 1930.

appreciable quantity of increased output; whereas if he should wish to increase the size of the plant to produce X units of merchandise, the average cost would decrease to A-2 (always provided that the new production utilize completely the increased productive capacity of the firm).

We can also suppose that if at the point where X units are produced, the producer should want to increase his output still further, to a quantity Z and always with the same plant and equipment, the marginal cost would again rise; should the plant be enlarged and the new plant fully utilized, the average cost would drop again but not as low as the preceding average cost A-2 for X units (supposing that at X output, given the necessary adjustment in size of plant, the average cost is at the minimum).

The various points showing the unit cost can be drawn by means of successive static curves.

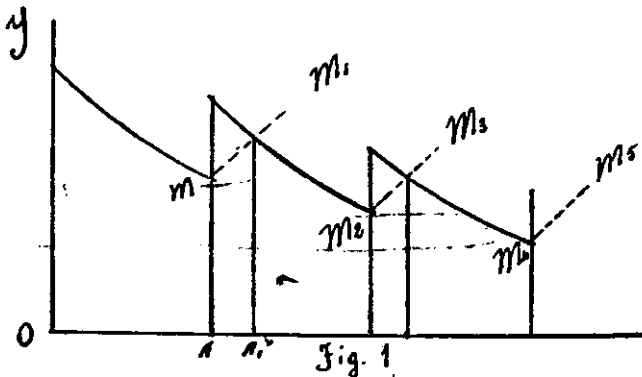


Figure 1 will give an approximate idea of this process in a concern with decreasing costs. The third curve will supposedly be the last one whose terminal point shows a decrease in average cost; in other words, from the point M4 an upward tendency towards increasing cost is noticeable.

The dotted curves M, M1 etc., show the marginal costs when the plants are used beyond their full capacity. The undotted curves show the average costs in relation to enlargements in the size of existing plants or to the construction of new plants.

The dotted curves are made for the purpose of showing the contrast between the building of new plants or the enlargement of the existing plants and the further utilization of the existing plant or plants; but each of these dotted curves represents in reality different smaller curves which must be taken into consideration. Even the addition of a new machine gives rise to a single curve. The employment of a new laborer or the addition of an hour of labor may also give rise to a single curve for itself.

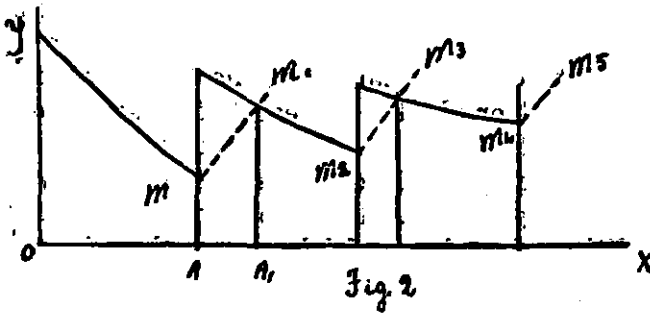
That is why even if we are not concerned with the case in which large amounts of output must be produced in order to increase the production economically, we should always consider successive curves, every time we take into consideration an appreciable increase in production.

•
•

In the same way if we take for example a concern under increasing costs we will observe a similar phenomenon. If few production units are produced, we will notice a very high average cost which will slowly and gradually fall with every increase in production, until it reaches a point beyond which the average and marginal cost will again rise, slowly at first and then more and more rapidly, forcing the producer to invest more capital and labor, both however less productive than the preceding investments. These new energies, if incompletely utilized, will raise the marginal cost considerably, but if used to full advantage, they will lessen the upward tendency of the marginal cost. In this wise, therefore, new successive curves may be obtained until the point is reached where any further investment of capital and labor will offer no compensation. This point is the limit point of costs. Here there are no more costs, as there is no reason why there should be any.

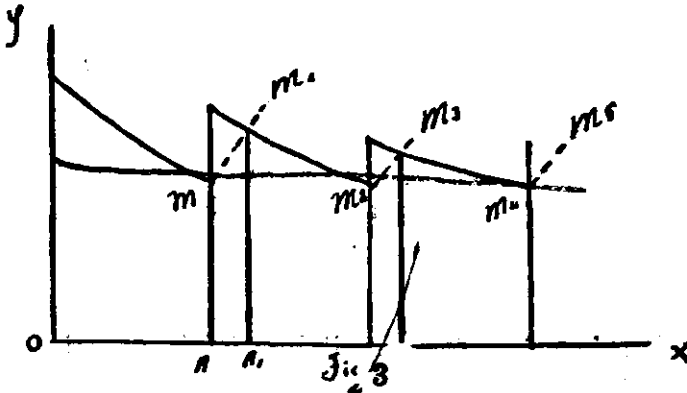
Figure 2 represents the successive curves of a firm with increasing costs. The terminal points of the curves rise as the output increases. M is supposedly the economical point of costs.

The series of curves from M to the right, in fig. 2, is



similar to the series following M_4 in fig. 1. The curve $Y M$ could also be represented by a series of curves like that preceding M_4 in fig. 1.

In the same way, for firms subject to constant costs similar curves can be shown. In these firms, as we can theoretically imagine them, the simple tendencies of increasing and decreasing costs balance one another at the terminal points of given successive curves, until we reach the economic point of costs at which the tendency to increasing costs begins to prevail.



In fig. 3 which represents the successive curves of a firm with constant costs, the terminal points of the curves are shown by a horizontal line up to M_4 from which point the costs definitely begin to increase, giving rise to a series of curves of the type shown to the right of M in fig. 2.

In the case of firms under constant or decreasing costs,

starting their activity from the economic size shown at M4, we can draw a single curve decreasing towards M4; but always after M4 we shall have to take into consideration successive curves of various types (1).

•
•

The simple tendencies of increasing and decreasing costs which balance one another in the manner above indicated in the firms under constant costs (in my opinion it is not correct — even theoretically — to speak of constant costs in any other sense) are always intertwined, even in firms under decreasing or increasing costs.

Also in the production subject to the law of increasing costs one notices immediately the relieving influence of the opposite law of decreasing costs. True, this latter tendency is relatively very weak in certain industries. In many agricultural industries the terminal point of its influence is very close to the initial point, but in any case the tendency exists. Also in the production subject to the law of decreasing costs, the negative influence of the single tendency to increasing costs is manifest.

In the case of those industries which are subject to the law of decreasing and constant costs it happens that in addition to certain maximum dimensions which firms can attain by reducing the unit cost, the tendency towards decreasing costs is lessened, whereas the opposite tendency towards increasing costs is intensified. This latter tendency always ends by prevailing over the former.

(1) What we need to know, concerning the equilibrium price, is what Amoroso calls "virtual cost" (*costo virtuale*) which is "equal to the average cost if this is greater than the marginal cost and equal to the marginal cost if the marginal cost is larger than the average cost". (See "Lezioni di economia matematica" pag. 1700 segg. Zanichelli, Bologna, 1921).

In explaining the above diagrams we have used the different terms marginal cost and average cost to express Amoroso's "virtual cost". We shall however call this with the term "marginal" or "unit" cost in the following analysis because this is what acts really in the margin.

*
* *

Here I must add that I have called simple tendencies the single tendencies intertwined and leading to the decreasing and increasing costs, only to distinguish them from the general tendency that we find as a result of that intertwining.

As a matter of fact, however, this tendency that we have just called a single tendency in the case of increasing costs is composed of single tendencies of various types, and similarly this also refers to the tendency of decreasing costs.

If we consider every decrease in unit costs as an economy of the firm, and every increase as a diseconomy, we can briefly state that tendencies towards increased costs resolve themselves into diseconomies, and tendencies towards decreasing costs into economies.

And according to whether these tendencies develop within or outside of the firm, or within the industry or outside of it, we will call these tendencies — and consequently these economies and diseconomies — as internal or external to the firm or to the industry.

The distinction between economies external to a particular firm and external to the industry as a whole can be made (1).

*
* *

Returning now to our study of successive curves, it can be said that any firm expanding to a certain point must meet the curve of increasing costs, but it may happen that a firm may satisfy all the available demands of a given market before reaching this curve (2).

(1) Prof. Robins in "The Representative Firm" (*Economical Journal*, 1928) p. 398, says "....if we restrict the term external economies to economies external to a particular firm but internal to the industry as a whole..... and I submit that any extension of the term beyond that is illegitimate in this connection, since it assumes to be a function of one variable what is really a function of many...." The reason as stated does not seem correct. Can we really assume to be a function of one variable what is not really a function of many?

(2) As we shall see later this does not necessarily result in a monopoly.

Successive curves can be different, not only for different industries and for the various concerns forming part of an industry as a whole, but also in any individual firm, not only for the different quantities of production but also for the same quantities produced for different markets.

It is not necessary here to go into lengthy details regarding all the kinds of economies and diseconomies of the individual concern. It is nevertheless well to remember how, from one same source, we can obtain economies or diseconomies according to the various points of the curves of production.

For example, many internal economies arise from the ability of the entrepreneur, but it is also true that many internal diseconomies after a firm has enlarged beyond a certain size, derive from that same entrepreneur whose ability, beyond a certain determinate point, becomes incapable of organizing and directing his enterprise without non-economic systems of control.

Thus, given plants, if operated at full capacity, will bring about considerable economies, whereas if operated at less or more than full capacity they will bring about diseconomies.

The most important source of diseconomies is the tendency of natural resources towards increasing costs. These diseconomies can be considered as internal to and special to a firm in those industries under increasing costs (agriculture, mining, etc.) and external to and general in an industry or group of industries under decreasing and constant costs.

When it is convenient to remind the reader that industries commonly known as under decreasing and constant costs sooner or later meet the curves of increasing costs, these may be called industries at increasing costs of second degree, to differentiate them from industries at increasing costs of first degree. This terminology seems proper for not only it reminds us that all the enterprises are at increasing costs, but it also reminds us that between the two categories of industries there are differences that must not be disregarded (1).

(1) In my book "Riflessioni sull'equilibrio economico" I have called attention to the fact that all industries are substantially at increasing

*
* *

In a study of the equilibrium price under competitive conditions it is necessary to consider it in relation to concerns which can develop their activities normally in competition with other firms (1).

We can take a representative firm as a typical enterprise for every industry. This will simplify the explanation of some phenomena. But when, as generally occurs, this simpler explanation is not necessary, we can go deeper into the study of different types of normal firms, chiefly on account of differences in their managerial ability.

For, even admitting that all normal producers have a certain degree of business knowledge, and are in a position to avail themselves of the advantages offered by the progress of their industry, there are differences in the natural gifts with which each is endowed that cannot be disregarded, and which create differences between one normal firm and another.

Now, we can consider, even in theory, the various types of ability that the entrepreneurs normally possess in cases of free competition.

An entrepreneur with less than a minimum normal ability, is bound to be replaced normally by a more capable man, possessing at least a minimum of that ability.

Aside from this minimum necessary to keep a concern going, we can also conceive a maximum normal ability, that

cost. I added that the current terminology is not proper, though sufficient to express the different characteristics of the different industries. In a more recent paper, Prof. Amoroso, absolutely rejects the current terminology, for the same reasons that I had given. However, it still seems to me that a differentiation between the different cases should be made. See Luigi Amoroso: "Curva statica dell'offerta". *Giornale degli Economisti*, January 1930.

(1) Our term competition is not restricted to the case of unlimited competition which will be considered as a particular and limit competitive case. The term competition in the present analysis includes all the cases in which the competition (of many or few producers, latent or actual) influences the price. The different competitive types will be analysed later.

is, the highest normal ability that entrepreneurs can normally possess under competition. Thus we have, normally, entrepreneurs of a varying degree of ability who can be enclosed with two limits, of maximum and minimum ability (1).

The maximum normal ability is the maximum ability compatible under conditions of competition, beyond which point there is no more competition, but monopoly.

The maximum and minimum normal ability in every industry depends, at a given time, on the quality of the industry, its prosperity as compared with that of the other industries, the size of the markets, the relations between the different markets, etc.

(1) In my book "Riflessioni sull'equilibrio economico", I have used this system of differentiation of normal firms. The concept of the representative firms, as is well known, has sometimes been criticized. More recently, however, some economists have upheld the convenience of considering in theory the different ability of the entrepreneur. Prof. Robins especially, in "The Representative Firm", develops this thesis along broad lines; a thesis with which I am in accord only within the limits of my earlier and present discussions.

CHAP. II.

Ultramarginal Phenomena

Let us now turn to another important point. It is not possible to know the exact nature of actual phenomena if we do not know the potential or ultramarginal phenomena. And we can not speak of equilibrium production if we do not know the conditions of ultramarginal production and consumption. Beside the study of marginal phenomena which are at the points beyond which they cannot develop without becoming non-economical, we must study the ultramarginal phenomena which are those immediately beyond the margin, that is, which are not economical but follow immediately after the marginal phenomena, so that if these latter, at a given time, should become capable of development, the ultramarginal phenomena could leave their latent state and become effective phenomena. When these ultramarginal phenomena, which by definition are non-economical, through some error in estimate or other cause, become effective, there arises immediately a tendency towards elimination. And one cannot speak of economic equilibrium if all ultramarginal phenomena are not effectively beyond the margin, that is, if they are not latent. This also occurs when intramarginal and marginal phenomena become ultramarginal.

Ultramarginal phenomena are not less important than marginal ones, and it seems to me that the above classification of phenomena makes their study clearer and easier.

Marginal production is that which is on the margin of production, and beyond which it is not normally economic to

continue producing. This marginal production, as will be seen, can in a position of equilibrium be remunerated with a return greater than a profit barely sufficient to keep the production or output from decreasing.

Ultramarginal production is, after marginal production, the most convenient, and consists of that minimum quantity of commodities which would be produced under best advantage at a given period if the production could be increased.

This minimum output can be represented normally — as we shall see — by one or more successive curves of production of the individual firms. The ultramarginal cost would be the marginal of this potential output, if it would become actual. The ultramarginal price is that which would be obtained if the ultramarginal output became effective.

The ultramarginal utility of a given commodity is that which would become marginal if the ultramarginal output became marginal. Knowing the conditions of supply and demand in a given industry we know the curve of supply and demand and we can therefore study the relation between ultramarginal supply and demand in the same way as the relation between marginal supply and demand.

Ultramarginal production can be divided into internal and external. Internal ultramarginal production is that which corresponds to firms already in existence which could work towards expansion. External ultramarginal production is that of firms which would come into existence if conditions were more favorable.

Similarly we can distinguish between an internal ultramarginal income, cost, price, etc., and an external ultramarginal income, cost, price, etc. To be rigorously correct, according to the definition given, one should speak in every single case of an internal ultramarginal cost or of an external one, as necessarily only one of these can be nearer the marginal cost in a given situation, granted no change of any kind take place.

We can, however, for the sake of easier exposition, speak of internal and external ultramarginal costs for every single case, stating which of the two is more economical and which, consequently, would be the cost to take into consideration in

a study of a given economic equilibrium and in a industry where no changes of dynamic character occur.

*
* *

Obviously the ultramarginal phenomena have been and are often, and in a certain sense, always, implicitly considered. But their consideration does not go very far.

We have, however, some notable examples of explicit consideration of potential or ultramarginal competition in agricultural industries. For example, already in 1833, Mountifort Longfield, lecturing in the University of Dublin, pointed out that "the highest limit, beyond which the price of corn cannot permanently rise, is determined by the fertility of the next inferior soil, not yet under cultivation, or by the cost of forcing the richer soil to yield permanently a more abundant produce" (1). Independently from Longfield, Antonio Scialoia (2) in 1840, developed this argument, emphasizing especially what he thought was a difference between his own theory of rent and Ricardo's. Scialoia added that the same argument could be applied to mining. Other authors, with more or less partial analyses, as Piperno (3), Tangorra (4), etc., considered the influence of potential phenomena in the agricultural industry, almost always independently from one another. These discussions have been mostly forgotten or have passed unobserved.

To the present writer himself, these more or less important discussions had passed unobserved when he published his first book dealing with ultramarginal phenomena.

The influence of the ultramarginal phenomena of produc-

(1) See "Lectures on Political Economy delivered in Trinity and Michaelmas Terms, 1833, by Mountifort Longfield". Dublin: William Curry, Son & Co., 1834. Lecture VII, pp. 133 & ff.

(2) Antonio Scialoia: "I principi dell'Economia Sociale". 1st Edition 1840, 2nd Edition 1846.

(3) Piperno: "Elementi di scienza economica". Torino 1878 — mentioned by M. Pantaleoni in "Teoria della traslazione dei tributi".

(4) Tangorra: "Tre saggi di Scienze economiche". Assisi, 1890.

tion in the case of industries, different from agriculture or mining, has been dealt with in regard to monopolistic cases as applying to the external competition (1).

*
* *

We shall see now what sizes the concerns tend to reach normally. We can make a distinction between absolute economic size and relative economic size.

(1) Absolute economic size is that in which the unit cost is the lowest to which it can descend and the quantity produced at that cost is the largest.

(2) Relative economic size, on the other hand, is that which is most profitable to the producer considering the price of the commodities ruling at the time, as compared with the price if he increase or decrease the output.

The absolute economic size is not the same for all industries, nor for all individual firms of the same industry. Generally the relative economic size is also different.

(1) See specially: J. B. Clark, "Control of Trusts". Also J. M. Clark's *Studies in the Economics of Overhead Cost*. Also interesting observations on this subject by other authors, among which: Amoroso, "Lezioni di Economia Matematica", vol. 1. Roma.

CHAP. III.

Decreasing Costs and Equilibrium

An important question is this. Do all the firms at a given time tend to reach the point of minimum cost, i. e., do they all tend to reach what we have already called the absolute economic size?

All the entrepreneurs tend to reach the relative economic size. But it also happens that in their tendency to do so they may reach the absolute economic size, thus touching the curve of increasing costs. At times, too, they can ascend one or more curves of increasing costs, even in the case of firms at increasing costs of the second degree, when the market allows it. In this case the relative economic size would be higher than the absolute one.

But as I have already shown in my work mentioned above the contrary may also happen. In some cases, because of a restricted market in which the commodities can be sold, the absolute economic size is not economic in a relative sense. This phenomenon depends on the fact that the expansion of the firm, because of the restricted market in which it can operate, would cause a decrease in price that would injure the producer. (1).

Supposing that a firm can operate in a large marketing field in which many producers are competing, the firm will reach the lowest point of unit cost because any decrease in price caused by every increase in its production will be less than the advantages obtained through its expansion up to the absolute economic size. But whether the firm passes beyond

(1) Da Empoli — "Riflessioni, etc." pp. 40-65.

that size, or not, will depend principally on the possible development and cost of the firms already operating, and of those that might come into existence if the firm raised somewhat the curve of increasing costs.

If instead, we consider a firm operating in a market or markets too small in proportion to the quantity of commodities that the firms should produce, we can conclude that the firm will be obliged to restrict its expansion before reaching the point of minimum cost because the minimum possible increase in production, under those conditions, would cause the price to drop below the same minimum cost. (1).

In other terms, it may happen that the internal ultramarginal cost, which is higher than the marginal, is greater than the ultramarginal utility (which is, as must be remembered, the marginal utility of the ultramarginal production) and consequently, greater than the ultramarginal price, thus making any increase in production uneconomical.

And it may further happen that the internal ultramarginal cost, which is less than or equal to the marginal cost, is greater than the ultramarginal utility, and consequently, than the ultramarginal price, making an increase in the output uneconomical.

The problem as to whether the firms at decreasing cost always tend to reach the point of minimum cost when in a position of equilibrium, has lately been treated at length in an article, "A Symposium" which appeared in the *Economic Journal*. (2).

(1) This is said only to simplify the phenomenon and in a first approximation. We will see, in fact, that the ultramarginal price can even be higher than the ultramarginal cost of the producer already operating on the market, without being economic, if it entailed a decrease in profits.

(2) *Economic Journal*, March 1930. "Increasing returns and the representative firm: A symposium" D. H. Robertson, G. F. Shove and P. Sraffa. The editor presents this article to his readers with a personal introduction in which he defines Robertson's views as "a partial rehabilitation of Marshallian orthodoxy on conservative lines"; Prof. Sraffa's as "some negative and destructive criticisms" and Mr. Shove's as "constructive suggestions".

The discussions of Robertson, Sraffa and Shove are praiseworthy, but both their discussions and conclusions need some comments.

Mr. Robertson says: "There is no identifiable entity, with a continuing will and purpose of its own, which has both the power and the inducement to expand its output". He also says: "Messrs. Smith and Robinson are at the moment a representative firm — they have all the concrete properties — normality of size, efficiency, etc., commonly thought of as belonging to the representative firm; but they have not the latter's quality of being able to expand their output indefinitely at a lower cost per unit. That quality belongs to no firm whose name is to be found in the directory. If we may risk another metaphor, Messrs. Smith and Robinson are a collection of water-drops at this moment forming a part of a wave — its color, saltiness, present location in space, etc., — but not its continuity of existence with the wave of five minutes later".

What Mr. Robertson says does not prove that while the firm operates under decreasing costs it will not tend to increase its output. And it does not prove Mr. Robertson's point that a firm can be in equilibrium under decreasing costs. (1).

The distinction between "a representative firm" and "the representative firm" may be useful for other effects, but it does not help us to know if the single firms can, in equilibrium, stay on the curve of decreasing costs.

On page 92, Robertson, answering Sraffa, adds: "He allows me to picture the representative firm rushing down the road of the individual decreasing costs, while demand price rushes down the road traced out for it by diminishing utility. Does it not require something like a special interposition of Providence to ensure that the exact point at which these two roads (built by independent firms of engineers) cross is also the point at which the first road turns uphill?"

Now there is some truth in all this. In fact, as we have already explained, it may happen that the decreasing utility of the commodity, that is, a too low ultramarginal utility, may

(1) Robertson, loc. cit.

prevent the complete development of the curve of decreasing costs. There is certainly no special interposition of Providence required for the opposite to happen. It is only necessary, as has already been said, that the advantages obtained by the entrepreneur with the increased production be greater than the disadvantages of the decrease in price to the point of minimum cost; that is, that the market or markets to which the firm has access are sufficient to absorb at a price not inferior to the minimum cost (including profits, of course) the total output of absolute economic dimension of the firm.

Sraffa's reasoning in opposition to Robertson's arguments does not seem quite exact when he says that "it is just because internal economies are regarded as one of the forces which make for equilibrium that they must cease to act at the point of equilibrium"; neither is it right to restrict the meaning of "the point of equilibrium" to the "point at which those forces cease to act being exactly counterbalanced by equal and opposite forces (in our case the disadvantages of increasing size balancing internal economies)". That is, at least, if "cease to act" is to be interpreted in Sraffa's sense, that the ceasing to act depends on equal diseconomies of the firm which will affect the cost, and not in that which is common to any factor in any position of equilibrium in which, in a certain sense, all forces of all kinds cease to act.

Sraffa's reply to Robertson, that "the demand price is assumed to be constant with respect to variations in the output of an individual firm in a competitive market, (this is merely the definition of free competition)" is too easy an answer and misleads because in case of decreasing costs, the assumptions of perfect competition are not the best adapted for the approach of the phenomenon.

Sraffa also says: "The firm is in equilibrium when the internal economies due to an additional unit of product are exactly balanced by the disadvantages of expansion — and this happens at point of constant returns". It is difficult here to reconcile the contradictions though it is so common. If one refers to the fact that "the demand price is assumed to be constant with respect to variations in the output of an individual firm in a competitive market", how can one at the

same time affirm that the firm is in equilibrium at that point of constant returns? If indeed we suppose that an increase in the production of the firm find a demand price that is constant, how can a firm be in equilibrium at that point?

It would seem more correct to say that given the above hypothesis, the producer will not be in equilibrium at that point because he will continue producing, and with the same profit, since we suppose the commodity price and the cost to be constant.

The remarks of Mr. Shove, like Robertson's and Sraffa's, are also interesting. Purified of the inexactitudes that we shall now see, they confirm our conclusions on the matter exposed above (1).

Mr. Shove proposes the adoption of the terms "economies (and diseconomies) of large scale industry" and "economies (and diseconomies) of individual expansion". By the first he means "the effect which the expansion of an industry as a whole has upon the productive capacity of the resources employed in it" and by the second "changes in the efficiency of an individual firm consequent upon an increase in its output while that of the industry as a whole remains unchanged".

Going to the heart of the subject, he says: "The obstacles which check the growth of a firm's share in a trade are familiar, and their nature has already been indicated. The two most important types for our present purpose are the increases in the cost of transportation and of marketing (competitive advertisement, etc.) which a firm is liable to encounter as it advances further into its competitors' territory or markets: the first arising from the necessity of delivery at a greater distance from the producing plant, the second from the fact that the further the invasion proceeds, the greater will be the buyer's preference to be overcome in order to detach an additional increment of custom. Singly or together, these diseconomies may offset the economies of mass production in the process of manufacture. The second type is likely to be especially prominent in the case of specialties, i. e., when the goods

(1) See also: Da Empoli — "Riflessioni, etc."

made by each firm are slightly different from those produced by the others — substitutes, but not perfect substitutes (e. g., motor cars). Where such a situation exists, a firm's average or marginal cost might be lowered if it increased its own output and left that of its rivals intact (thus increasing the aggregate output); raised (or left constant) if it increased its output by invading the territory or market of its competitors (so that the aggregate output remained as before). For in the former case it would avoid the increased charge for freight and for competitive advertisement, and the advantages of mass production would have free play".

It seems that this method of reasoning is not very enlightening as to the theory of the phenomenon considered. For a firm may increase its own output, leaving that of the other firms unchanged, and its cost can either increase or remain constant. Take for example, a market in which no other competitor has yet appeared, but in which a given firm should bear that cost of transportation and marketing (competitive advertisement, etc.) that would carry the curve of the firm to a point of increasing or constant costs; or its own market without any increase in transportation nor any competitor, that would demand a certain amount of advertising to make the firm's products more widely known.

It is possible only to distinguish clearly between the case in which the demand for a commodity increases on the market or markets in which the firm operates, and that in which the demand does not increase. When the demand increases, it is easier to market an output which would be harder or impossible to dispose of when, other things being equal, the demand is stationary either in its own market or in the competitor's.

It is also possible to distinguish between an increased demand in a market which will cause the unit cost of the product to rise, and a market which will not cause any increase in the unit cost of the product.

But it is necessary to point out the difference in the importance between competitive advertisement for the capture of a rival's market and trade, and the cost of transportation. It is necessary here to discriminate between the cost of adver-

tising necessary to capture a market and that of maintaining it. One cannot rightly say that the former cost has the same importance as the latter, since the second is continuous and, other things being equal, constant; while the first is borne only until the market is captured, so paid once only, and therefore redeemable slowly.

Furthermore, one must add that when a firm invades a market, not only do the advertising expenses of the invader increase, but probably also those of the invaded. If those of the invaded should be less, and how much less, cannot be determined exactly, a priori, for this is based on the particular tastes, on the extent to which the consumers have been satisfied by the existing producer, etc.

It is therefore necessary to agree that in the long run the advertising expenses to maintain the market, and which are common to both the new and the old producer, are of more importance than the expenses to capture it.

When it would seem that the special advertising expenses for the capture of the rival market would hinder an expansion of the firm, one will see that — always given Mr. Shove's assumption that the aggregate output of the industry as a whole remain unchanged — in the long run the fundamental obstacle is due to the fact that the efficiency in the rival's market of the firm which should invade (and this may be caused also by increased costs of transportation) is not greater than that of the firm whose market is being invaded.

If the firm is more efficient in the case of substitutes, the obstacle to the partial or total invasion is the difference of the demand curves of the two products which by being "substitutes but not perfect substitutes" have different requisites and correspond to different tastes and necessities.

It may be convenient to differentiate theoretically the competitive advertisements into 1) those that are necessary only to instruct the customers actual and potential as to the merits of the commodity and 2) those that are necessary to change, by various means, the demand curve of a determinate commodity, tending thereby to modify the taste of the consumers.

The second case must be left aside in a study of phenomena

in which it is presumed that the curves of demand remain unchanged, and can be dealt with more appropriately in a dynamic study of values.

The first case is the one that interests us. It is evident that if things are in this condition, when one wants to capture a competitor's market, if the invading firm is more efficient the advertising costs to make its own product known are not an unsurmountable factor, in the long run, because the advertising expenses to maintain the market are paid by all, and at the moment of the attempt to capture the market even the firm whose market is being invaded must generally defend itself and increase its own advertising costs, and the difference between the expenses necessary to capture the market of the adversary and those to maintain that market are paid only once and can be amortized through a long period of time, a thing which a firm can easily do if it is more efficient than its competitor.

If we consider two substitutes when the consumers will have become acquainted with the new product just brought on their market, the curves of demand of the two substitutes will fix the equilibrium at those prices.

A firm must consider the necessary advertising costs — that is, those that go to make known the advantages of its own product and the advisability of purchasing it in preference to others, at a certain price — as different in different markets. And therefore if a firm wants to extend the sale of its products to other markets, the advertising costs of each one of these may be greater or less, or in some cases equal to the expenses in the first market. All depends on the strength of the competitors, of the greater or smaller satisfaction of the consumers for the product they are using at the moment, etc. It is therefore impossible to state in absolute terms that in capturing a new market the unit cost of the commodity should be increased by the increased unit expenses of competitive advertisement.

On the other hand we must also consider the possibility that a firm widening its field of action may reduce its unit cost of transportation, not only because its greater total supply of commodities can in some cases enable it to obtain better

transportation facilities (1) when this increase of output does not permit the firm to furnish its own means of transport, but also because it may reduce the distance between the place of initial production and the markets, if before its expansion it was not strong enough to fight competitors well entrenched in neighbouring markets, and found it more convenient to carry goods to a greater distance where it met with less opposition; whereas after expansion it can cope with, and beat, neighbouring rivals.

On the other hand, the freight charges can sometimes even be less over a greater distance carried if the carriers are economically different.

If we consider the case of products that are similar and not imperfect substitutes (it does not seem correct to examine together, in general lines, the two cases of similar products and imperfect substitutes, because in the two cases conditions are different and consequently also the solution (2) the question is undoubtedly simpler) it is always the greater or less efficiency of the invading firm which will tend to decide as to the convenience of expanding under those conditions. And in the greater or less efficiency, the transportation costs to the various markets are, obviously, a factor that plays an important part.

It is here necessary to remember how the advantages obtained by a firm through expansion can be such as to allow it to sell its products, even in new markets, which have greater diseconomies of location, at a price below the average unit cost of production of those markets, if the sale in its former market or markets allows the firm a fair compensation. And it is to be noted that the producer does nothing that might be anti-economic for the consumers on the latter market, who on the other hand can even find an advantage in this below-cost

(1) Better advertising facilities may also be obtained.

(2) Aside from Shove's interesting remarks, it is to be regretted that the phenomena of substitutes have often been disregarded. The importance of the argument, however, has always been recognized. Recently the subject has been treated at length by Prof. Fanno in "Teoria dei beni succedanei", 1926.

sale on other markets if this should be the only way in which the producer can increase his output and reduce the costs. The consumers of the first market will derive neither advantage nor disadvantage if, to compensate for the sale at less than unit cost (in which of course are included transportation and competitive advertising) it is necessary to maintain the former level of prices. They can find advantages if the producer can also lower the price in the first market, but always so as to compensate himself for the sale below cost elsewhere. Similarly, of course, they could also suffer if the producer availed himself of a privilege at his disposal to increase the price finding it convenient to do so only after expansion of the firm. (1).

*
* *

We must now point out some contradictions in Shove's ideas.

We have seen his system of classification (to which he always refers in his paper, and which he considers important and helpful) of economies (and diseconomies) of large scale industry and economies (and diseconomies) of individual expansion.

He supposes that the economies of individual expansion are derived from "changes in the efficiency of an individual firm consequent upon an increase in its own output while that of the industry as a whole remains unchanged"; and that the economies of large scale industry are "the effects which the expansion of an industry as a whole has upon the productive capacity of the resources employed in it". (2).

To consider the economies of individual expansion in this

(1) See specially: E. R. Seligman: "Principles of Economics", 1905. Pareto. "Manuale di Economia Politica", 1906. Clark: "Studies on the economics of overhead costs". *Riforma Sociale*, 1914; articles by Loria, Iannaccone, Cabiati, Ridolfi. Viner: "Dumping: A problem in international trade", 1923. Theodore O. Yntenna: "The influence of dumping on monopoly price", *Journal of Political Economy*, 1928.

(2) *Loc. cit.*, p. 103.

way, implies that the economic resources must be used with the same productivity in all the enterprises, or that the conditions of the industries are such as to make the output of a single enterprise inappreciable as compared with the output of the industry as a whole. But the first assumption is misleading when one allows, as Shove does, for entrepreneurs of different ability and different economies of position among the different enterprises. It is one aspect of the problem of constant and variable coefficients of production (1).

On the other hand, the second assumption, (made by Pigou in his analogous distinction between marginal additive costs and marginal substitute cost) is out of place when one supposes, as Shove does, that the expansion of the enterprises is checked also by the cost of marketing necessary to invade a rival's market.

If the output of an individual firm were inappreciable as compared with the output of the industry as a whole, no firm would be obliged in order to enlarge its business, to capture a competitor's trade. If indeed an increase of output by one individual producer does not affect materially the price, no one will find it advantageous to capture the competitor's trade, but will find it easier to throw his commodities on the markets.

It seems, then, that Shove's classification is inexact or incomplete, and at any rate misleading and in contradiction with his own analysis.

•
•

Mr. Shove argues: "The solution of this problem turns, as Marshall saw, on the element of time.

It may be true — to take an extreme case — of every firm in the industry, that its average cost would be lower if, other things being equal, its share in the aggregate output were larger. But expansion takes time, and further, time is required before the newly installed equipment can yield all its

(1) For which see: Pareto's "Cours d'économie politique" and Manuel. Cfr. also Schultz's "Marginal Productivity and prices process", in *Journal of Political Economy* 1929.

fruit. During this interval other things are not likely to remain equal. A firm's efficiency depends on many other factors besides the scale of its operations. By the time Smith and Robinson have enlarged their output so as to get an advantage over their rivals in the matter of "internal economies", or before their new equipment is used up, their luck may have deserted them, and/or they may have lost their leadership in skill, with the result that on balance their advantage in efficiency now rests with Doe and Roe. The internal economies open to Smith and Robinson may still be so great that, other things being equal, they would lower their cost per unit by enlarging their output further, but the speed at which they can take advantage of this is limited by the speed at which they can expand and reap the fruits of expansion, and it may be so far outstripped by the rate at which their luck and ability are deteriorating that expansion now offers them no net gain: their progress then is at an end and they are likely soon to lose ground. Meanwhile Doe and Roe are forging ahead and will continue to do so until for them in turn the growing advantages of large scale operations are offset by declining ability or a downward trend of fortune. The lead will then pass to others, perhaps to Smith and Robinson again, perhaps to Brown and Jones.

In such ways as these, the continual fluctuations in luck, ability and other factors affecting the cost prevent the advantages of mass production from enabling a single firm to absorb the whole output. If a firm could enlarge its output to any required size (and consume the additional equipment) instantaneously, then indeed the predominance of internal economies would, on our present hypothesis, be incompatible with competitive equilibrium, but since it cannot, the two conditions can be reconciled". (1).

It does not seem as if the conclusions reached by Shove are authorized from all his reasoning.

The fact that Smith and Robinson may be deserted by luck, or that they can lose their leadership in skill by the time

(1) Shove, loc. cit.

they have enlarged their output so as to get an advantage over their rivals in the matter of "internal economies" or before the additional equipment is used up, just proves that only assuming that conditions are unvaried during this time, Smith and Robinson are under decreasing costs; whereas if we suppose that these conditions change in a certain direction, the firm then is not, at that point, under decreasing costs because "its costs do not decrease".

If Smith and Robinson know that a change in that sense will happen in all certainty, if for example they know that the enlargement of their factory will take two years whilst they suppose that for that period of time any cause whatever will make the firm unable to use the economically enlarged plant, they know that in their business the costs would increase instead of decreasing, if the production increased. There is therefore in this case no predominance of internal economies.

If Smith and Robinson cannot foresee the events that will lead to the decline of their plant or factory before it is utilized, they will try to increase the production, because the trend of their action is determined not by phenomena in themselves but by the impressions they derive from these phenomena. By acting in this sense they fall in any case into an economic error deriving from the difficulty of knowing and foreseeing the complex phenomena that can either directly or indirectly affect the efficiency of their concern in the time considered. In other terms, if a firm must be actually at a decreasing cost it is not enough that at a given moment it have the necessary requirements for it, but it must be endowed with these requisites during the period necessary to bring it about. If there are to be no real decreasing costs, but the producers only think so, either through personal lack of skill or because of the difficulty of economic previsions, even on the part of the ablest business men, there would be no equilibrium at that point because the output would tend to increase until the lack of a curve of costs really showing a decrease becomes evident.

The same reasoning holds good for Doe and Roe who take the leadership, in Shove's example, after the decline of Smith and Robinson. If their luck and skill, as Shove says, decline

before their firm really produces at decreasing costs, it is a sign that there are really no decreasing costs in that firm. In any event, if these phenomena are foreseen an increase in output does not take place and the firm under these conditions is not at decreasing costs. If the phenomena are not foreseen there will be a tendency to an increased output, and certainly there will be no equilibrium at that point.

So even here, in Shove's picture, we can see one of the causes which prevents a firm from absorbing all the output, but it does not follow that "the predominance of internal economies" is compatible with competitive equilibrium, because in this case there is really no "predominance of internal economies".

Concluding our analysis we are able to confirm the results already discussed.

When studying the enlargement in size of an enterprise at decreasing costs, if we confine our analysis to a marketing field in which the unit costs are really decreasing until the enterprise reach the point of minimum cost, we shall see that whether the firm is in equilibrium or not before that point, depends on the diminishing utility which may make the ultramarginal utility such as to non-remunerate the ultramarginal cost. This can happen when the available demand in the marketing field is not very large as compared with the output of the enterprise. (1). This phenomenon will be discussed later.

If, however, we want to consider a firm at decreasing costs in relation to markets where the firm cannot operate because its unit costs would increase, we are then not treating with a firm at decreasing costs, since for those markets the costs are increasing. This reminds us of what we have already

(1) If in its expansion the firm should replace another, or more, less efficient firms in one or more markets, the situation will be considered also in relation to the output replaced and the output replacing it. It is evident that in this case the producer is helped in the expansion of his firm, other things being equal, with respect to the contrary situation in which he has no producers of a lesser efficiency to replace.

said, that the curve of costs for an individual firm is different for different markets. Thus on the whole we can conclude that a firm can be in equilibrium either because the unit costs are increasing with an ultramarginal cost greater than the marginal, or because the utility is diminishing with an ultramarginal utility inferior to the marginal, or through a combination of both of these phenomena.

It would be useless to explain at length how in practice there are obstacles to the above tendencies in the real world. The world is dynamic, everything changes, progresses or retrogrades.

One of these obstacles is obviously the difficulty to foresee future events. This gives rise to an uncertainty which could hinder the expansion of a firm with a remunerative ultramarginal cost.

The slow transformation of capitals from one field to another is another great obstacle, because it may cause firms to subsist for years selling under what should be the normal cost (1).

Indeed, "all capitals are transferable, that is, can pass from one field to another, changing their form, because all act in the production, consuming themselves more or less rapidly" (2). But this transformability is, in many cases, as slow as the consumption of these capitals is (3), and this may often be a great obstacle to the reaching of a minimum cost point for an extended period of time.

Another obstacle can also be a lack of necessary capital, not only because insufficient to foster and develop good economic initiatives, but also because of a careless distribution, through errors of valuation, by industries and men whose

(1) A description of a phenomenon of long and continued activity not normally remunerated is found in "Trasformazione degli impieghi d'intraprese" by Angelo Fraccacreta, Naples 1920.

(2) See the first systematically constructive work on the subject: "Teoria della trasformazione dei capitali", by Camillo Supino, Turin 1891.

(3) *Ibid.*

business is, in the economic mechanism, to distribute among the various producers the savings. (1).

And in this way we might go on. But it is evident that these are obstacles which do not generally contradict the existence and development of the tendencies of a stationary state, according to the theory.

(1) "The errors collectively committed by the banks in the distribution of savings between the various lines of production mean, from time to time, over-capitalization in some branches of industry and under-capitalization in other branches". (R. Bachi: "Che cos'è la Banca", *Rivista Bancaria*, Milan, April 1930.)

CHAP. IV.

Markets

Before going into the aspect and conditions of Economic Equilibrium, it is necessary to define the idea of market. Cournot clearly expresses himself as follows: "On sait que les économistes entendent par marche, non pas un lieu déterminé ou se consomment les achats et les ventes, mais tout un territoire dont les parties sont unies par des rapports de libre commerce, en sorte que les prix s'y nivellent avec facilité et promptitude" (1).

Jevons, who in the chapter "Definition of Market" describes in a masterly manner what must be understood by market, judges Cournot's neat definition with these words: "I find that Cournot has long since defined the economical use of the word market with admirable brevity and precision, but exactly to the same effect as the text above" (2).

Jevons's definition of the market, it is known, is followed by his Law of Indifference which is summarized in these words: "in the same open market, at any one moment, there cannot be two prices for the same kind of article".

Marshall, after referring to Cournot and Jevons, adds: "...of course if the market is large, allowance must be made for the expense of delivering the goods to different purchasers, each of whom must be supposed to pay in addition to the

(1) "Recherches sur les Principes Mathématiques de la Théorie des Richesses." Paris, 1838.

(2) Jevons — "The Theory of Political Economy". London, 1879.

market price a special charge on account of delivery" (1). And in the following paragraph: "The whole western world may, in a sense, be regarded as one market for many kinds of Stock Exchange securities, for the more valuable metals, and to a less extent for wool and cotton and even wheat, proper allowance being made for expenses of transportation, in which may be included taxes levied by any Customs houses through which the goods have to pass. For in all cases the expenses of transport, including Custom duties are not sufficient to prevent buyers from all parts of the western world from competing with one another for the same supplies".

"Commodities for which there is a very wide market must also be such as will bear a long carriage. They must be somewhat durable, and their value must be considerable in proportion to their bulk. A thing which is so bulky that its price is necessarily raised very much when it is sold far away from the place in which it is produced, must as a rule have a narrow market. The market for common bricks, for instance, is practically confined to the near neighbourhood of the kilns in which they are made; they can scarcely even bear a long carriage by land to a district which has any kilns of its own. But bricks of certain exceptional kinds have markets extending over a great part of England". (2).

What Marshall says may let the reader think that the concept of a market refers to the whole field in which a firm can extend its activities. This idea, however, is misleading when we deal with the problem of economic equilibrium. When we speak of a market we must refer to that point in which the curves of demand and supply meet, or to various points when the difference in transport charges between the different points do not affect materially the price. So that at all these points there will be only one price for the same commodity at the same time.

(1) "Thus it is common to see the prices of bulky goods quoted as delivered free on board vessel in a certain port, each purchaser having to make his own reckoning for bringing the goods home". Marshall — "Principles".

(2) Marshall — "Principles", pp. 325, 326.

If the freight and Customs duties do not prevent consumers in every part of the western world from competing in the purchase of British cottons it does not mean that all the western world is a single market; it only means that what can be called, according to Jevons, the "trading body" of British cottons, is scattered all over the western world.

But if we define the market with a view of investigating the ratio of exchange in an economic equilibrium, it will be necessary to distinguish between a "trading body" which, as Jevons says, signifies "any body either of buyers or sellers that represents the supply and demand of a certain article in a market" and the "trading point, or points" which are those in which the collective curve of demand and the collective or individual curve of supply meet. And it is correct to restrict the definition of market only to the trading points in which the economical distances among them are not such as to cause in practice any difference in price.

Let me explain here that by "trading point" I mean a collective meeting point of the curve of supply and demand, because in carrying the commodities from the trading point to the using point, the cost of the article to the consumer will generally increase. The reason is that the articles traded are not ready for use until the commodities have been delivered to the individual demand points. If I buy a book and carry it home with me, I complete the productive process begun at the printing press and continued through various steps till the book reached the trading point where I acquired it (1).

A woman who pays wages to a servant to purchase daily the sundry goods that she may require, continues by means of

(1) Since we are concerned with a problem arising out of the supplementary process of carrying the goods from the trading points to the individual demand points, it would be out of place to go further into the analysis of supplementary costs and consider, e. g., the productive labor made in the act of consuming, for example, cutting the leaves of the book page by page, turning the leaves as I read along, etc.; or a productive process consisting in a different kind of transformation of goods as a transformation of a material into a dress, etc.

this paid servant the productive process necessary to take the economic goods into the place adapted to their transformation and consumption, and the wages paid increase in a certain proportion the cost she must bear in the acquisition of these economic goods, which means that for her the total price of these goods, when delivered in her home, is higher than that which she paid when she acquired them at the trading point.

These considerations suggest that if we want to eliminate some of the apparent contradictions in the law of indifference, we must restrict the idea of a market to the trading points which must be similar in the mentioned requisites and which are points of collective meeting of supply and demand.

This supplementary process of production is analogous — though different in other respects — to the supplementary process of production of a purchaser buying goods f. o. b. in one country or locality, to be sold in another. Though the shipment of the goods is made by the seller, the real entrepreneur for this supplementary process of production is the buyer. And similarly, the cost of this supplementary service increases the price paid for the goods.

We must distinguish between the supplementary process of production within the limits of a territory in which there is only one price and identity of other conditions at the different meeting points of collective supply and demand, which we have called trading points, and the second supplementary process which is completed within territories in which, at the trading points, the conditions of equilibrium vary. The first of these is completed within a market; the second among several markets in which the economic equilibrium is different.

Indeed it is not enough that consumers from all over the world should compete in purchasing the goods X produced in a country A, to state that the whole world is one single market for X, if between A trading points and other points the conditions of the economic equilibrium of the goods are different.

And one cannot make a general statement to the effect that, when a firm progresses, extending its sphere of activity to other markets so that the costs of transportation increase

sensibly, the firm adds the exact costs of transportation to the price of the commodity.

But let us suppose for a moment that this should happen, even in the simplest case, which would seem to be less in contrast with the thesis which considers a single market with different prices at the market points because of the difference in transportation charges; that is, let us suppose, where it is not only possible to add the exact transportation charges to the cost of the commodity, but also where the reciprocal relations of the various competing producers do not change from one point to another, which could only happen if we suppose that the firms under consideration are all established in the same zone so that they all have the same economies and diseconomies of location.

If the price at one point in the market, for example in the city where the commodity is manufactured or produced is, say, 5, in the neighbouring city it will be 6 because the transportation charges are 1 per unit. Can anyone say that the markets are the same, or that the market is imperfect?

The only correct answer is that both markets are clearly different. Not only has the marginal cost changed, but also the price and the marginal utility, and the ultramarginal phenomena.

In fact, the conditions of the equilibrium are different, giving rise to different problems for the two cases, and one would not be justified in calling two localities which give so different solutions in the study of the conditions of equilibrium a single market.

But this is not enough. The phenomenon is rarely so simple. Generally when the transportation charges from one territory to another have an influence on the price, not only do the conditions of equilibrium change in the manner indicated, but the competitive aspect of the various territories is also different.

For example, in one territory a firm may have to compete with ten competitors, in another with five, in yet another with one or none, and so on according to circumstances. If we consider now a firm selling its products in a vast territory, we shall probably see it in a given locality as a very flourishing

pre-marginal firm, whilst in another locality it will perhaps be marginal; we shall perhaps also see that in a certain place it will add to the original unit cost all the transportation charges, and in another locality it may add only a small part — or none at all — of these transportation charges, whilst yet elsewhere it may add to the original cost an amount superior to the transportation charges. All depends on the different aspect of the competition in different localities, in which naturally the various economies and diseconomies of position of the different firms in different territories play a very important part.

In this case, even more than in the first example given, the conditions of equilibrium in different territories are different, and therefore the markets, even if in free intercourse with one another, must also be considered as different. Another point to be noted, especially in this case, is that not only do the marginal and ultramarginal demands in different territories have a different tendency to behave, but also the marginal and ultramarginal production. This also happens in the first example described, because the curve of costs in different territories where the transportation charges are notably different, are not the same.

*
* *

There has always been a tendency to confuse the marketing field of a concern with the markets of a concern. This is not correct, however, as we have briefly stated.

In fact, every concern having a certain marketing field may have different markets, with very different problems to solve.

J. M. Clark has duly shown how overhead costs tend to price discriminations different from the adding of transportation costs between one locality and another, for goods delivered to customers in the same form and at the same time (1). But in these cases the different localities represent different mar-

(1) "Economics of Overhead Costs". Chicago University Press, 1923.

kets and not one market, as J. M. Clark says. The meaning of the term "market" must therefore not be interpreted too broadly, but should be given a more restricted and correct meaning, not in contradiction with the law of indifference.

Regarding the discrimination in prices, there is something to be said about the possibility that (materially) identical goods may be sold at different prices, even in places in which transportation charges among trading points have no importance in the fixing of the price.

J. M. Clark gives numerous examples of discrimination, but we must consider that those commodities sold at the same place at different prices, are economically different.

If the commodities A and B, for example, are materially identical, but the trade mark of A inspires more confidence in the consumer, it means that the marginal utility of A is different from that of B. This also applies when the difference in price depends only on the ignorance of the requisites of the goods. For if the consumers do not know that A is absolutely the same as B, and think that A is more suitable than B, and are willing to pay more for A goods, then A and B will have a different utility for those consumers, and can be considered as non-perfect substitutes. And this is legitimate, as well as the fact that we do not include in wealth much material whose usefulness is still unknown to us.

If the commodities A and B are substantially identical but offered in a different form, or at a different time, and the consumers want them with a different degree of intensity, they too are, economically, non-perfect substitutes (1).

(1) The large number of these cases in actual life is not only attributable to the above mentioned ignorance of the consumer, but also to a phenomenon similar to the one pointed out by Clark in "Economics and Modern Psychology" (*Journal of Political Economy*, 1918): "We carry some wants to complete satiety because it takes less effort than would be required to calculate accurately the most desirable place to stop when this point would be near to the absolute satiety limits..." Now, it also happens that in many purchases, an accurate investigation to know if, in effect, it is the same commodity that is being offered under a different form will not for certain consumers, compensate the results

One can certainly not deny the importance of the phenomenon set forth by J. M. Clark, that small differences in quality between commodities produced by different concerns place each one of these producers in the position of a monopolist of that given quality (1).

But on the other hand, one must add that although these goods are slightly different, it can happen that their price is not different.

Indeed, one can imagine that even considering commodities of a different quality, and with large categories of consumers willing to pay more for the commodity A than for B, the class of marginal consumers of A may think differently and with a small difference in price may prefer the commodity at a lower price. In this case it happens that if one producer raise his price above the others, although he will not lose all his customers, or even if he keep a fairly large number of them, he will see many switch over to his rivals. All depends, of course, on how large is the class of marginal consumers in question. This happens likewise when at first sight it would seem that a producer could, at a certain trading point, sell at a price above the price at which other producers sell in nearby trading points, because this would be allowed by a category of consumers living at places nearest to his trading point. If he cannot discriminate his prices, and must set a uniform price for all, it may happen that marginal consumers who live furthest away will oblige him to maintain a lower price.

If we imagine, for example, a producer in the center of a circle, all the consumers near the center will perhaps prefer to buy his goods even at a higher price, but if this preference

obtained. But both these causes are more valuable from a dynamic point of view. A certain number of these cases is also caused by the consumer's impatience, and by the clever practice on the part of the producers to incite the richer classes to differentiate them from the poorer classes.

(1) See "Economics of Overhead Costs", p. 418. Sraffa has later on and well taken up this point in *Annali di Economia*, 1925 and in *Economic Journal*, 1926, loc. cit.

is only due to the transportation charges, and the distance between the trading points of the various producers is not so great, the consumers at points a little further away from the center who represent the marginal demand, may oblige the producer — taking for granted that he does not want to lose them — to keep a price at the same level as the nearby producers.

In fact, it is the marginal consumption that generally equalizes the prices in practice.

CHAP. V.

Note on Ultramarginal Concerns

What has been said concerning the equilibrium of an individual concern, or of an industry in relation to concerns already in existence, also applies to potential or ultramarginal concerns.

In a general way, one can say that the output of an industry as a whole does not increase through the appearance of new concerns if the external ultramarginal price is lower than the external ultramarginal cost. This can happen in two ways:

1) Because the cost at which a new entrepreneur could produce is greater than the unit price at which the existing output is sold, or 2) because the cost at which a new concern could produce is equal to or less than the unit price of the existing output, but the increase in the output of the industry as a whole brought about by the appearance of the new concern would cause such a decrease in price as to render the ultramarginal production non-economic. (1).

The ultramarginal concern, if it could become effective, could under certain circumstances cause appreciable modifications in the costs of the already existing producers.

Indeed if the external ultramarginal cost were greater than the marginal only because the ability of the ultramarginal entrepreneur was inferior to the marginal producer's normal

(1) Small number of producers.

ability, his higher cost would not bring about any cost increase in the existing production. This would also be the case if the ultramarginal producer were of greater ability than the marginal and thought that his work would not be sufficiently remunerated. The cost at which this entrepreneur could produce would be higher than the current price.

If, however, the external ultramarginal cost were greater than the marginal only because the factors generally used in the production, or one of them, were more costly, the cost for the concerns already operating might be on the increase.

Again, if the external ultramarginal cost were less than the marginal because the ultramarginal production caused a decrease in the cost of one or more of the factors of production, it would entail a cut in the cost of the existing producers. But the external ultramarginal cost could never be less than the marginal because the ability of the ultramarginal producer was greater than that of the marginal producer or because of the exclusive use of a more productive agent of production, since in that case there would be no equilibrium.

But leaving aside for a moment the efficiency of the producer, let us see how the cost may increase in ultramarginal production.

If we first consider an industry at increasing costs of first degree, it is easy to see that, given a state of equilibrium, the external ultramarginal cost must generally be greater than the marginal.

In fact, the appearance of a new enterprise could only take place with the exploitation of new mines, new lands, etc., which must, since we are considering a state of equilibrium, be less productive than those already in operation.

Passing to the external ultramarginal cost in the industries with constant and decreasing costs which we have called increasing costs of the second degree, we will see that if the appearance of a new concern causes an increase in the cost of a factor of production, we will have on the one hand a tendency towards an external ultramarginal cost greater than the marginal. If it causes a decrease in the cost of a commodity agent of production, we will have on the other hand a tendency

to an external ultramarginal cost smaller than the marginal.

Probably, the various agents of production will be subject to different tendencies in the cost, at the equilibrium points of the individual curves.

If the new demand of the ultramarginal concern, for an instrumental commodity produced by an industry at increasing costs of the first degree, was supplied from the enlargement of concerns already existing, there might be an increase or decrease in the cost of the said commodity, though the first case would be more probable. (1).

If this new demand could be supplied by a new concern, it would probably cause an increase in cost of the assumed factor.

On the other hand the new demand on the ultramarginal concern, of an agent commodity produced by an industry at constant or decreasing costs, could be filled either by an increase in one or more concerns already in operation, or by the appearance, for example, of a concern which was not previously economic (2). In both cases there may be an increase or a decrease in the cost of the agent commodity of production.

Moreover, if the ultramarginal concern could increase appreciably the output of the industry as a whole, there might perhaps be a possibility of greater external economies of another kind. In any case when these various simple tendencies intertwine, it is evident that the tendency of the unit cost for the commodity considered will be obtained from the resulting average.

(1) However one may think that in a general way the internal ultramarginal cost will always be greater than the marginal cost, in the case of increasing cost industries of the first degree, it may also happen that it is equal or less, if in a given position of equilibrium, a concern has gone beyond the initial point, without however having reached the terminal point of one of the successive curves of production, because the demand does not permit it.

(2) The agent commodity of production here considered could naturally be produced either by a monopolist or by competing producers.

CHAP. VI.

Monopoly and Competition

Before beginning the study of a situation of equilibrium under conditions of monopoly or competition, we must define our meaning of these two terms. It is well known that opinions vary as to what must be understood by monopoly and competition, and that this has often been a source of misunderstanding in the discussion of economic phenomena.

A new interpretation of these concepts has lately been given by Professor Amoroso in an interesting article published in the "Giornale degli Economisti" (1).

Under the heading "What is the characteristic difference between monopoly and competition" Professor Amoroso says: "The two extreme cases of Cournot and Ricardo correspond respectively to the hypotheses that there is a sole producer and that the producers are unlimited in number. The first is a case of monopoly, the second of unlimited competition. A monopoly can be a reality; unlimited competition is always an abstract state to which reality approaches more or less".

"Should intermediate cases — which are by far the most frequent — be classified as monopolies or competition?"

"Even on this point ideas are generally confused. Indeed, it is thought that when concerns are few in number there are cases of monopoly, and on the other hand, that there are cases of competition when they are many. This is an error. In the

(1) January 1930. — Luigi Amoroso "La curva statica dell'offerta". See specially pp. 8-9-10.

same field, the problem presenting itself in the concrete can have a monopolistic character when the firms on the market number one hundred, and likewise, can have a character of competition when they number only ten. It is necessary to consider not the quantity of firms, but the possibility or non-possibility that this number varies with differences in price. If the firms number one hundred and if however much the prices may increase the firms still number one hundred, there will be a state of monopoly. If there be only ten firms, but as prices increase new firms enter the field, there will be a state of competition" (1).

"Monopoly is therefore characterized by the fact that the number of firms operating on a market is fixed, independently of the price. But in competition, the number of firms varies with variations in the price" (2).

I must confess that this excerpt, from such an eminent economist as Professor Amoroso, has given me food for thought. At first sight the distinctions he makes seem plainly paradoxical. If one would assume as a requisite, even as the sole requisite of monopoly, that the number of producers operating on a market be a fixed number, independently of the price, or however the price might increase, the conception of monopoly rather than being broadened or amplified, as Professor Amoroso intends to convey, would be restricted not only in the sense of not being able to include the numerous intermediate cases between Cournot's monopoly and unlimited competition, but of absolutely excluding cases of monopoly where an only producer, under the conditions stated above, could fix either the quantity to be offered or the price.

One could think, however, that if "however the price might increase" was applied to a given stationary situation in which the demand remain unchanged, and that under those conditions there be a limit beyond which it would not suit the producers to go, then the paradox would disappear.

We might then try to interpret the above mentioned ex-

(1) Amoroso *loc. cit.*

(2) Text is in italics.

cerpt by Prof. Amoroso in the sense that there might be the phenomena of a monopoly when the producers existing in a market at a given moment had the faculty to fix the price in competition between themselves, but without fear of any outside competition (1) because the price they would thus set would not be such as to attract new producers on the market. (2).

But even with this interpretation one could not justify his statement "the number of firms operating on a market is fixed independently of the price", nor explain why Professor Amoroso would base his distinction "on the possibility or non-possibility that this number (of firms) vary with variations in the price".

Indeed, we may either attribute these price changes (to which Professor Amoroso refers) to a stationary state in which each producer acts so as to render him the maximum profit; or we may attribute these variations in prices to dynamic changes of different kinds, such as changes in the curve of demand, in the technical conditions of production, etc.

But in the first case, whilst it would be difficult to find this immutability in the number of producers during the time indicated, and always impossible to state or affirm that the number of producers on the market was fixed, independently of the price, one could not even then see the reason to define the characteristics of monopoly and competition on the basis of what would be a period so transitory and so negligible in a stationary situation or condition. Furthermore if Professor Amoroso's definition refers to a situation of equilibrium already attained, still less would we understand the advantage of a distinction between monopoly and competition according to changes in the prices, which do not occur.

And hence, if "however the price might increase" refers solely to the actions of the producers in a stationary situation,

(1) This would be a case of competition which we shall study later.

(2) In this connection however, we must call the reader's attention to Prof. Amoroso's interpretation of "homo oeconomicus" which is Cournot's.

as we have already said, it would be a contradiction to speak of increases in price or producers, either in monopoly or in competition.

Since we have seen that a distinction between monopoly and competition, in a stationary situation, cannot be made on the lines of Professor Amoroso's remarks, let us see if it can be justified when considering dynamic changes, or even perhaps the hypothetical increases in price in a stationary situation.

It is here easy to see the paradox which Professor Amoroso's definition seems to contain. We can, for the sake of clearness, take a hypothetical and simplified example.

Let us imagine only two producers who produce a given product A. Suppose, too, that both producers deal on the market X, whilst on the market Y only Primus has the opportunity to trade after having eliminated from Y the producer Secundus who would operate under heavy disadvantages (of position, let us say). That consequently Primus could set a higher price in Y than in X where he has to bear the competition of Secundus, obtaining the maximum profit possible under those conditions, and having the faculty of fixing the price at the point in which he gets the maximum net profit (characteristic of the monopolist), but not beyond that point, since Secundus would then be in a position to compete with Primus in Y.

In the market Y, if in a given situation the price fixed at Cournot's point be increased, the number of producers, according to our hypothesis, would increase; in the market X, however, in which both Primus and Secundus compete, with a consequent inferior price to that ruling in Y (1), regardless of any increase in price, the number of producers would remain unchanged. Now, according to the definition of Professor Amoroso, we would find competition in Y and monopoly in X, whereas what really takes place is exactly the contrary, since in Y you have a monopolist who fixes his price at Cournot's point, and in X you have two producers competing with one

(1) According to Cournot's assumption.

another, with a resulting price inferior to the monopoly price of Y.

Let us also imagine an example of 10 producers competing in one market in a privileged position, and 100 producers competing in another market, under conditions strictly competitive. Let us suppose that the number of the producers would increase if the high price fixed in the first market were increased, while the low competitive price in the second market, if it could be increased, would not attract other competitors, so that the number of the producers would not increase with an increase in price.

According to Amoroso's definition the first case would be competition, the second monopoly, while the effects of competition would be obviously much more noticeable in the second case.

If we take the case of a single, isolated market, the results would be the same.

Supposing that, say, ten producers could produce the goods X on that market, whatever the price, but that the competition among these ten producers brings the price below Cournot's point (for example, to a level equal to the marginal cost), whilst the goods Y be produced by a single producer who can fix his price at Cournot's point, though not beyond it because one or more producers, potential or ultramarginal, would enter the market.

The former would be a clear case of monopoly, according to Professor Amoroso's definition, the latter one of competition. The contrary, however, is evident, because the goods Y are sold by a producer who fixes his price at Cournot's point, whereas the goods X are sold by producers competing with one another, whose price is below Cournot's point. (1).

Regarding these changes of price, we must also add that although Professor Amoroso says "in competition this number (of firms) varies with variations in the price", from what he states before, one must imply that in this case also he admits

(1) Obviously the preceding example of 10, and 100 producers can as well be applied to this case.

a given increase in price, in which eventually even in case of competition the number of producers cannot increase. Because Professor Amoroso examines intermediate cases between Monopoly and unlimited Competition, one can exclude the idea that he refers to the latter, whereas in the preceding pages (1) he gives a general statement of the relation between price and cost (which we will discuss later) in which he includes also cases of competition, and in which he admits "a difference between the price and the marginal cost" (2).

On the other hand, it must be added that although Professor Amoroso may be right in not accepting any distinction between monopoly and competition, according to whether the producers be few or many, he does not take into account that any interpretation of the idea of monopoly would refuse to accept cases like those in which, however fixed the number of producers, the output of each individual producer would be in such relation to the total output of the industry as a whole, that any one of them, in a stiff fight for the existence of their firm against the actual competitors, would in every case produce the maximum output at a minimum cost, realizing only his salary as manager of the firm.

Resuming what we have stated above, in my modest opinion it is not possible to make general distinctions between monopoly and competition based on the criterion of Professor Amoroso.

He is of course right, when he complains that in the classification of those intermediary cases of which he justly says that they are "by far the most numerous", the ideas are generally somewhat confused.

It seems to me that in a preliminary classification we could distinguish and clearly separate those cases where a potential or effective, partial or total competition exists, from those in which competition does not make any of its effects felt. The former should all be considered cases of competition, though different, whilst the latter should be treated as cases of monopoly.

(1) Amoroso, *loc. cit.*

(2) This view, as stated by Prof. Amoroso, will be examined later.

The effects of competition are nil (1) when a producer can fix the unit price of the merchandise produced at Cournot's point without fear of competition on the part of the other producers.

If there are ultramarginal producers or not, in this condition, it does not affect the monopolist until these conditions continue to subsist.

All other phenomena can be considered as cases of competition, because in all are manifest the minor or major effects of competition. Evidently, some cases of competition are very close to pure monopoly, but they are not the same, because they feel the effects of ultramarginal or effective competition; other cases are considerably further apart (2).

A distinction between cases more or less close to the monopoly case cannot be made until we further examine each phenomenon, including the psychology of peoples. However, after an accurate analysis in this sense the results will be obvious.

In a primary classification of the phenomena of competition, we can distinguish between:—

1) Cases of complex competition, in which competition develops among a number of producers, whose number can

(1) Competition in this case refers only to competition between producers of a given product. Because, as a matter of fact, products of all possible kinds are in competition with one another, either because of the phenomena of production or of consumption. From this point of view it would not be possible even to conceive of a monopoly in the sense indicated.

(2) The term "monopoly" has been used in connection with phenomena of very different natures, among which, especially, are cases of limited competition and sometimes in a manner to create a self contradiction. Edgeworth, for example, speaks of two monopolists of an identical product in competition on the same market (See Edgeworth's "Teoria pura del monopolio" in the *Giornale degli Economisti*, 1897, vol. XV, serie 2, translated from the Italian in "Papers relating to political Economy, vol. I). Pigou also speaks of "Monopolistic Competition" (Pigou's *Wealth and Welfare*). Perhaps Pareto used the term "monopolists in competition" for the first time when referring to Cournot's treatment of duopoly.

increase or decrease. 2). Cases of internal competition, in which there is competition among a determinate number of producers which cannot increase under the actual conditions in a way which will allow the price to reach a point of equilibrium without being influenced by external ultramarginal production.

3) Cases of external competition, in which there is on the market a single producer, who cannot raise his price until Cournot's point is reached, being prevented therefrom by the latent competition of new producers who might appear (1).

In the phenomena of the first and second types, is included as a particular case, that of unlimited competition, mentioned by Cournot. (2) Cournot has treated extensively two types of competition: limited and unlimited. In the first type he discusses the case of producers restricted as to number, and which cannot be increased, developing his analysis of the price only as a function of the advantages to the existing producers without considering the possibility that the price fixing be in any way influenced by the latent competition of the product.

In the second type he studies the case in which the effects of competition have reached their limit, that is, when the output of one producer is inappreciable in reference to the total output, so that the output of a single producer could be subtracted from the total output without any appreciable variation resulting in the price of the commodity (3).

Evidently in the case of limited competition, Cournot endeavors not only to analyse the case of a fixed number of producers, but also the case wherein a number of producers is so situated in relation to the output of the industry as a

(1) See the chapters "Complex competition", "External competition" "Internal competition".

(2) For the necessary conditions to a state of strictly perfect competition see also Prof. Iannaccone's keen "Dumping e discriminazione dei prezzi", in *Riforma Sociale*, Torino 1914.

(3) Cournot: "Researches into mathematical, etc". New York 1897.

whole that the output of any single producer is an appreciable part of the entire production of the industry. Cournot however has failed in considering these phenomena only in a particular case, that is, in which the producers would be limited in number and could fix the price in competition among themselves, but without any fear of external competition.

Moore has the merit of having strongly emphasized the importance of this phenomenon. He enumerates briefly the hypotheses implied in the term "perfect competition": "1) Every economic factor seeks a maximum net income.... 2) There is but one price for commodities of the same quality in the same market.... 3) The influence of the product of any producer upon the price per unit of the total product is negligible... 4) The output of any one producer is negligible as compared with the total output.... 5) Each producer orders the amount of his output without regard to the effect of his act upon the conduct of his competitors...

"Where 3 and 4 co-exist, 5 is a simple corollary, otherwise it is an independent and inadmissible hypothesis. In approaching the problem of actual industry which, to a large extent, is in a state intermediate between perfect monopoly and perfect competition, the economist hurls the inquirer into a state of doubt with the assurance that static standards will tend to prevail. In this intermediate state between perfect monopoly and perfect competition, hypotheses 3 and 4 are never true, and hypothesis 2 is frequently untrue" (1).

Regarding hypothesis 2, I hold that it can be considered as true, and adapted to the theory. This point of view has been explained in a preceding chapter. The points which we are now interested in considering are the third and fourth hypotheses, and also the fifth.

Not only are these hypotheses never true in what Moore calls "actual industry", but neither are they always true in the preceding industrial states, nor always in agricultural industries. As a matter of fact, the possibility that the total

(1) See "Paradoxes of Competition", Quarterly Journal of Economics, 1906.

output of each producer is not negligible in fixing the price begins with the division of labor itself (1).

Prof. Amoroso, also, in an article mentioned in the preceding pages (2) calls attention to the insufficiency of the hypothesis "that the price is independent of the quantity which the firm produces at that price", especially in connection with modern industry. He says: "This hypothesis applies fairly well to what is happening in Agriculture, where the number of producers can be considered as practically unlimited and every firm, even if it is a very large property, produces but an insignificant part of the total output. It also applies, though not as well, to what happened in the manufacturing industry in the times of Ricardo. But it does not apply to what happens in the large modern industries".

I agree with Professor Amoroso, but not entirely.

Beginning with agriculture, there are some limitations and this hypothesis cannot be theoretically considered as general. The farmers have sometimes to send to their market or markets a quantity of produce which cannot be considered as infinitesimal in relation to the whole quantity that can be offered or sold in their marketing field, although it might be considered as infinitesimal or negligible in respect to the total world production. This is often true of agricultural commodities with a limited and isolated local market.

But principally this hypothesis cannot represent completely, either the facts of modern industry or those of the manufacturing industry in Ricardo's times.

(1) Which is, obviously, the fundamental of every economic phenomenon in any economy of trade. With reason, Prof. Loria calls attention to the deep intuition shown by A. Smith in beginning his study of economic organism with the division of labor, an intuition superior to that of Ricardo and of Marx who begin their investigations with the phenomena derived therefrom.

See the brilliant preface by Prof. Loria in the new reprint of the Italian translation of "An enquiry into the nature and causes of the wealth of Nations", Turin 1927.

(2) Luigi Amoroso: "La curva statica dell'offerta", in the *Giornale degli economisti*. January 1930.

In all economic stages, this hypothesis may well be used in special cases, but it can never be generally true. It is not enough to consider the size of the firms of today or yesterday to judge of this, as Professor Amoroso does, but it is necessary also to compare this increase in size with the widening of the marketing zone of the single firms, and with the capacity of absorption of this zone.

Now if it is true that the size of the manufacturing firms in Ricardo's times was much smaller than actually, it is also true that their marketing fields were much smaller than those of the modern firms.

If in a wide marketing field, A , there be 10 firms of a size $A/10$, or if in a wide marketing zone, $A100$, there be firms of the size $A100/10$, the proportion between the quantity produced by the singly firms and the total output of the industries as a whole in the given marketing field will be the same.

Now, how the relation between the sizes of the firm and of the marketing field varies in modern times as compared with preceding periods, can only be explained after an accurate examination of the various situations in the single firms and single marketing fields in modern times and in the preceding periods. It will at once be manifest that a complete and general answer to the query is not correct.

*
* *

Now, before we examine the various cases of competition in a situation of equilibrium, let us say a few words about the general and the partial equilibrium.

The theory of general equilibrium in which the interdependence of the economic phenomena is shown in a stronger light, is of great help. But the general formulae of economic equilibrium very seldom admit of practical application to concrete phenomena (1). On the other hand, however, the

(1) Prof. Umberto Ricci in an interesting analysis of the conception of partial and general equilibrium in *Giornale degli Economisti*, 1924,

Walras-Pareto theory advises us to broaden our field of analysis when it is possible.

Let us consider the partial equilibrium of a merchandise A. Let us imagine that the whole economic mechanism be in equilibrium (1). Supposing then A to be in equilibrium let us also suppose implicitly, an equilibrium everywhere. Now, when we suppose that in the partial equilibrium of A there happen a modification, we must consider it as a function of the general equilibrium up to the point where there are certain relations not negligible between one phenomenon and an-

says: "We feel that the theory of economic equilibrium is more true than the theory of partial equilibrium, but we must limit ourselves to draw a lesson of generic importance, and we cannot abandon the other theory (of the partial equilibria, Marshall), which is less complete but easier to handle.

We must in fact maintain both the one and the other; we glance at the horizons beyond the theory of equilibrium, and maybe we can also somewhat describe them. We must nevertheless keep ourselves within a safer zone, limiting our explorations to the depth" (Umberto Ricci: Pareto and Pure Economy, in the *Giornale degli Economisti*, 1924, page 44. See in the same number of January-February 1924, other articles in memory of V. Pareto, by Professors Pantaleoni, Barone, Amoroso, F. Spinedi's added.

"The equilibrists, says Prof. Schultz, are wont to dwell on the resemblance between economics and mechanics, but they overlook the fundamental differences between the two sciences. The general formulas of mechanical equilibrium nearly always admit of practical application by a series of approximations. The general formulas of economic equilibrium very seldom admit of application to concrete phenomena". See *American Economic Review*, December 1928: Rational Economics, by Henry Schultz, page 64. This is a critical review of a French translation of the notable de Pietri-Tonelli's work: "Lezioni di Scienza Economica Razionale e Sperimentale". See also "Sull'Economia Paretiana" an interesting article by Ugo Broggi in the *Giornale degli Economisti*, 1924, page 332.

(1) The difference between Clark's and Marshall's ideas of equilibrium has been clearly shown by Knight (see *Risk, Profit and Uncertainty*, pp. 142-143). Later on, Robbin has treated this point extensively (see *Economic Journal* 1930).

other (1). If we suppose, for example, that the cost and the unit price of A increase, we must see, in order to know the new position of equilibrium of A, what changes, and where, may occur in the cost and price of the other products and services; what changes, wherever they may occur, take place in the demand for A and of the other products, following the increase in the unit price of the different goods; again, what consequences (2) these last changes have on the cost of A and other

(1) Incidentally one may remember that to know the economic system it is necessary also to know the social system. "It must be remembered that in several regards an exchange system is incapable of standing alone; many economic functions have to be carried on or controlled by society as a unit, that is, by government. Hence, public policy in its various phases (which need not be enumerated — the whole political, legal and moral system is involved) must be included among the constants of the economic system". Frank H. Knight "Statik und Dynamik" in *Zeitschrift für Nationaleökonomie*, 1930.

Pareto, in a letter written in 1922 (to an Italian economist, Prof. Lello Cangemi) and made public only recently, spoke of his intention to develop "the conception of economics, as part of the social phenomenon, interdependent of the other parts thereof". See "Economia" (*Rivista di Scienza Corporativa e di Scienza Sociali*), Rome 1930, December, "Lettera inedita di Vilfredo Pareto".

(2) The expression of cause and effect can help when dealing with dynamic phenomena, to express the fact that the presence of a phenomenon X (in harmony, of course, with all other phenomena present), causes a verification of the phenomenon Y (which, in turn, will influence X, modifying it into X1). A phenomenon X is the first to appear, followed necessarily by Y. For different reason Prof. Knight holds legitimate the use of the expressions "cause and effect". "The relation between price and cost illustrates an adjustment which is mutual as to direction of movement, but with such a difference in speed and range that it is generally justifiable to say that cost of production "determines" the price, and not inversely. Changes in the cost of any one commodity reflect the relative movement of all competing industries using the same resources in production and hence are likely to be small in comparison to the change in price in the process by which the two are brought to equality. It seems inevitable and correct to speak of the relatively fixed magnitude as cause, as we say the level of the water in the ocean controls that in the bay, or that the earth attracts the falling apple, or that we moor the boat to the bank, even though the relation is mutual". See "Statik und Dynamik", *op. cit.*, p. 8.

goods produced in the economic system, and so on until a general point of equilibrium is reached, in which the partial equilibrium of A is a necessary part of the whole system in equilibrium. The analysis is complex but more complete (1).

*
* *

Hence, studying the economic equilibrium, one cannot suppose a simple curve of supply and a simple curve of demand independently of the other curves of supply and demand.

If we suppose that the goods X are in equilibrium, we know that they are in harmony with all the other phenomena of the general system in equilibrium; but supposing something should influence X changing in a first instant the forms of demand or supply we must see how the new position of X will

(1) Prof. Sraffa, in discussing the law of normal values, says:—
“an essential condition is to isolate perfectly the industry which produces the goods under consideration from all the other industries; now, for increasing costs, one must take into consideration the whole group of industries which use a determinate factor of production; for decreasing costs one must consider the whole group of industries which is benefitted by certain external economies. These variations of the cost, most important from the point of view of the general equilibrium must perforce be considered negligible in the study of the particular equilibrium of an industry. From this point of view, which is only a first approximation to the reality, one must admit that the goods in general are produced in conditions of constant costs”. (See Sraffa, “Sulle relazioni tra costo e quantità prodotta”, *Annali di Economia*, 1925, p. 328.) Also in “The Laws of Returns under Competitive Conditions”, *Economic Journal*, 1926, pp. 540-541: “in normal cases the cost of production of commodities produced competitively — as we are not entitled to take into consideration the causes which may make it rise or fall — must be regarded as constant in respect to small variations in the quantity produced”.

How erroneous this manner of inquiry would be if it were followed, can be seen at once from an accurate examination of the problem. The cure would be worse than the disease. And it is just the contrary of the best way to be used.

influence the other elements of the general equilibrium, and in its turn be influenced thereby (1).

Discussing however, theoretically, the value of a given commodity, it is possible to include implicitly a consideration of all this complex phenomenon, if we suppose that the homo oeconomicus is looking at the ultimate results to be obtained in the long run. When a contrary assumption concerning the individual policy is made, this implicit consideration is not possible in the same way. But it is always possible and often useful to isolate a problem and then to pass on to a second approximation.

The term "marginal utility" must be considered as meaning only the marginal desirability of a commodity compared with all the other commodities to be bought in a given system of price. In this way is it used by the writer.

(1) This method of analysis has already been used by the writer, though only partially, in the analysis of various phenomena of shifting of taxes, and obtaining results more accurate than those reached by the other writers. See my book "Teoria dell'incidenza delle imposte", Reggio Cal. Vitalone 1936.

CHAP. VII.

Duopoly — a Critical Discussion

Passing now to the analysis of the price of equilibrium for the various phenomena of competition, we shall begin our study with the phenomena of internal competition, that is, where there is competition between a number of producers not increasable under the given conditions until a point is reached where the price of equilibrium is fixed by the action of the producers already existing, without their economic actions being influenced by the danger of competition from new producers who might appear on the market.

Let us begin with the hypothesis of two producers, which is one of the arguments most disputed in the economic theory, and which has given rise to the most varied results. It is well known how Cournot's analysis has been criticized by Bertrand (1) and later by Edgeworth (2), Marshall (3), Pareto (4) and others. The solution obtained by Edgeworth has had more

(1) *Journal des Savants*, 1883, p. 503.

(2) *Giornale degli Economisti*, 1897, "La teoria pura del monopolio" translated in "Papers relating to political economy", vol. I under the title "Theory of Monopoly". See also Edgeworth's "The mathematical Economics of Prof. Amoroso". *Economic Journal*, 1922, p. 400, also Pigou's "Economics of Welfare", etc.

(3) Marshall, "Principles", 1st ed., pp. 435-486, note.

(4) Pareto, "Principes d'économie politique," p. 67. Also Manuel d'économie politique, 1909, pp. 595-602. "Economie mathématique", *Encyclopédie des Sciences Mathématiques*, Tome I, Vol. 4 (1911), paragraph 14, pp. 604-608.

success than Cournot's, which latter has been ably defended by Professor Amoroso (1). "We believe" says Edgeworth "that Professor Amoroso is alone among high authorities in siding with Cournot in this matter. The view that in monopolistic competition the output is indeterminate is now commonly accepted, says Professor Pigou, and he adds "it appears to me to be the correct one" (2).

Moore, better than anyone else, has called attention to the real nature of Cournot's error. (3). It is evident that the hypothesis with which Cournot begins his analysis, that each producer fix the output of his product without any regard as to the effects his action will have on the behaviour of his competitor, is only admissible when the influence of the product of each competitor on the unit price is negligible (4). And as this last condition is not part of Cournot's hypothesis, the assumption which is basic to his inquiry does not rule, and is absolutely inadmissible (5). On the other hand, the hypothesis from which Edgeworth starts in his study of Cournot is, it seems to me, equally wrong, since it is just as inadmissible that each producer is always changing his price and consequently the quantity sold, taking it for granted that the other producer keeps his price unchanged.

(1) See also: Wicksell, Knut — "Mathematische Nationalökonomie", Arch. f. Sozialwiss, u. Sozialpol., 1927, pp. 252 ff.

Schumpeter, Joseph — "Zur Einführung der folgenden Arbeit Knut Wicksells". Arch. f. Sozialwiss, u. Sozialpol., 1927.

Schumpeter — "The Instability of Capitalism", Economic Journal, 1928, pp. 369-70.

(2) In Edgeworth's critical review of Amoroso's "Lezioni di Economia Matematica", Economic Journal, 1922.

For one of the first criticisms of Edgeworth's analysis, see A. Loria's "Marshall and Edgeworth on value". Economic Journal, 1906.

(3) See Moore "Paradoxes of Competition", p. 219. Quarterly Economic Journal, 1906. Pareto's criticism of Cournot in "Economie mathématique" loc. cit. does not seem convincing.

(4) But even this, as we shall see, only in a given hypothesis regarding the policy of the rivals.

(5) See Moore's statement (already mentioned) of a general order, p. 214, op. cit.

In a final analysis this is nothing but a different aspect of Cournot's error. Unless we suppose that the change of price by each producer entail only insignificant changes in the demand from the other producer it is inadmissible to suppose that each producer would act as if the price fixed by his competitor were fixed.

A description of phenomena of such a nature may complement a dynamic treatment of the problem, but it can never take the place of Cournot's treatment.

In Cournot's treatment, as well as in those of Edgeworth and Bertrand, it is assumed, under different aspects, that each producer acts without considering the effect his movements will have on the conduct of his competitor; but since not only do the producer's actions affect the conduct of his adversaries, but affect it markedly, this assumption can only be justified by the fact that each producer is unaware (and will always continue to be unaware) of how his action will force his competitor to modify his conduct.

The premises used by Edgeworth and Cournot could be applied equally as well and with the same reason in the theory of value, in a complex case of monopoly and perfect competition. Let us suppose, for example, that we wish to demonstrate the equilibrium of an economic system consisting of some industries in a state of monopoly and some in a state of competition. For the sake of clearness, let us limit the field whose equilibrium we wish to determine to two industries, one of which, A, is in a state of monopoly, the other, B, in a state of competition. The monopolist A begins by fixing a price 10 with an output of 100, and then studies the way to modify either the price or the quantity offered, having in view always the immediate advantages of these movements. With a price 9 the monopolist A sees that he can sell 125 with a greater profit, and decreases his price to 9.

But with the consequent increase in the demand of A, the consumers, let us suppose, are obliged to reduce the demand of B (produced in conditions of free competition) in proportion to the increased expenses of A from 1000 to 1125, since the consumers spend for A at a price 10 the total sum of 1000, and at a price 9 the total sum of 1125.

In the latter, let us suppose, either because the lowest limit of profit, salaries, etc., or because the competition eliminates the higher cost producers, reducing thereby the marginal cost, the unit price of the goods produced will be reduced from, say, 5 to 4. This allows the consumers to acquire more goods produced under free competition, and consequently to reduce the consumption of goods produced in conditions of perfect monopoly from 125 to 110. It is obvious, given the above premises, that it now suits the monopolists to return without more ado to the price of 10. And once he has gone back to this price of 10, the industry of perfect competition will also return to its original position. Then, according to the assumed hypothesis, the monopolist will not have anything better to do than to again lower the price to 9, when the cycle will begin all over again. This description could of course be made more complicated by using successive variations in price or cost, returning to the initial position by other ways, etc.

On the other hand, if Cournot's hypothesis were true as regards the duopoly, it should also be true for the other parts of the economic theory, as Professor Amoroso is obliged to reason. And in this case the consequences would likewise be disastrous for the theory. If every producer should turn out a certain definite quantity, assuming that the quantity produced by the other producers remain invariable, we will be facing a theoretic system in which, with perfect mobility of the factors of production, the abler and more productive producers could operate in less productive industries. Conditions under which the principle of substitution would operate would be that the most productive producers would figure that their competition would force the less able producers to shift their field of operation to another more economical one, that is, more economical after, though not before, the advent of the competition of the more able producers. But if these abler and less remunerated producers are the economic men of Cournot and Professor Amoroso, considering the output offered by the others, that is, reckoning only the immediate effect that their appearance on the market will have on the price, they will not think it convenient to change their field of operations.

The difference of remuneration, therefore, could be in

inverse ratio to the degree of their ability without challenging the action of the principle of substitution.

At this point one might object: But would Cournot and Amoroso reason in this manner? I answer, No, but this reasoning is a consequence of their premise.

To foresee that the rival has an advantage in transforming his concern into another of a different kind, or to foresee that the rival finds an advantage in reducing or increasing the production, are two things that may present the most unlike characters and difficulties (and this occurs even between the same cases of the first or second instance, according to the different cases); but between the two types of phenomena there is theoretically not such a difference.

In this respect I must also add that Amoroso, with deep insight, had already stated: "... the monopolist, in setting his sales price, cannot avoid taking into account the influence that a variation in the monopoly price will have on all the other market prices, and consequently the modifications deriving therefrom in the curves of demand of the consumers and in the cost curves" (*Giornale degli Economisti*, 1911 p. 208).

To this I add with greater reason, that when two producers, whom Amoroso considers as two monopolists, as we have seen, find themselves on a same market, neither one should avoid taking into account the influence that a variation in his price or in his quantity offered will have on the price or quantity offered by his rival.

— G. Arias, in a notable book which Edgeworth has well praised (see *Economical Journal*, 1918, p. 327) writes an unconvincing criticism of this keen passage of Amoroso. (See Arias, "*Principi di Economia Commerciale*"). —

On the other hand, returning to Edgeworth's analysis, if we suppose as he does, that the conditions of demand, and the curves of cost, do not change, the conclusions he arrives at are absurd.

Each producer who, at a given moment, obtains the maximum net gain X , at a price equal to that of a monopoly, at another moment (when the maximum limit of descending prices has been reached) will see that his net earnings have now decreased to $X-Y$ and that his efforts to increase X have

ended, causing his rival producer to react, with the decrease of X.

We may also suppose that the error in initiating the decrease in prices be made, in two dynamic cycles, first by the producer A and then by the producer B. At this point both producers must perforce be aware of the effects which their actions have on their competitor, unless they should be suffering from chronic amnesia. It is impossible to explain, therefore, why after both have experienced the consequences of an attempt to increase X, they should still continue along that line.

To decrease or increase the output of one's business is no inexpensive matter, and these changes always involve more or less onerous transformations which the producer will not bear so lightly.

It is likewise equally wrong to suppose that two producers who have hardly any common sense would act as Bertrand imagined. "Dans cette hypothèse, Bertrand says, aucune solution n'est possible, la baisse n'aurait pas de limite; quelque soit en effet le prix commun adopté, si l'un des concurrents abaisse seul le sien, il attire à lui, en négligeant des exceptions sans importance, la totalité de la vente, et il doublera sa recette si son concurrent le laisse faire" (1). The final condition "si son concurrent le laisse faire" is candid, to say the least.

Each producer knows that the other will not "laisser faire", and it is useless to suppose that in theory this could happen. Even if we wished to suppose that hard experience were necessary to make the producers behave economically, after the first reduction in price by one of the producers, followed necessarily by a reduction on the part of the other producer, each one will know that by reducing the price, instead of seeing his output nearly doubled, he will only see his profits reduced, since the rival producer will not "laisser

(1) In the critical analysis by Bertrand of the "Théorie mathématique de la richesse sociale" by Walras, and "Recherches sur les principes mathématiques de la théorie des richesses" by Cournot, in the *Journal des Savants*, September 1883, p. 503.

faire" (as he himself would not permit his rival to). But even if we supposed that these mistakes were to happen again, the time would come when they would have a clearer idea of the situation, and they would understand that their struggles to win away customers from their competitor could not but bring about disastrous results. The painful experience would accustom them to act more rationally, and the time would come when one of them would take the initiative of limiting the supply with the purpose of raising the prices which had fallen to a ruinous level. The other producer, having to choose between increasing his clientèle or reducing it, would probably understand that he too must decide on the latter, for if he increased the supply, the object of the first producer in restricting his own offer would absolutely be defeated and his rival would be obliged again to increase the supply, bringing it to the original level.

There is no doubt however that Bertrand's solution is very different from the one reached by Edgeworth. Bertrand's reasoning should lead to the conclusion that the balance is possible though at a different point than Cournot's. To begin with, however, one must remember that the thesis that there is no limit to the depth to which the price can fall, is not to be taken literally. It may be legitimate to exclude the cost of a product when it will make the problems clearer, but not when the solution thereby becomes absurd. The lowest limit to which the price can normally fall is the cost of production, and however low this may be, it must include a minimum profit for the producer, otherwise there would be no reason to produce the goods.

Now the price cannot fall below the cost of production since if it did it would entail a loss to the producer.

At this point, however, one must remember that Bertrand, differing therein from Edgeworth, supposes that the quantity produced by each producer is sufficient to fill the wants of the market. In this case, if the two producers should keep on, as Bertrand says, in the opinion that the price of the rival could remain fixed when his own varied, there should be an equilibrium at a price equal to the cost of production. At that point, no one could reduce the price,

neither could anyone raise it, because everyone would think that if the competitor maintained a fixed price, with a production sufficiently elastic, all his clients or customers would pass to the rival. Hence there would be a determined equilibrium in the conditions given by Bertrand.

A determinate equilibrium would also be reached in every other case in which each producer though unable to supply the market by himself, can still at a certain point increase his production, at constant cost, in such a way as to prevent his rival from getting any advantage from the increase in price or reduction of the supply.

Edgeworth, to show how the equilibrium is indeterminate must introduce the other condition, that when the price is at the lowest level both rivals will have already offered all the quantity they can produce, so that each producer can, from the minimum level, increase his own price without fear that his own customers will go over to his competitor, and this notwithstanding his assertion that his demonstration holds good in general for decreasing returns and that, accepting as he does Marshall's criticism in the case of increasing returns, and Bertrand's in the case where there is no cost of production, he reaches the general conclusion — that is, not limited to any particular law of returns — that the equilibrium is indeterminate. But even if Edgeworth's conclusions could be accepted in a particular case of a production so limited (and which it does not seem to me adequate to define as an "extreme case of decreasing returns" since it cannot logically be a case, even extreme, of decreasing returns, a case in which the decreasing returns do not exist) one could not, generally speaking, assume them as true in all cases of limited production or in all cases of decreasing returns.

First of all, let us remember, the same case studied by Edgeworth shows a confused reasoning. He begins with the supposition (1) that two producers start off with a price equal to the price of monopoly $\frac{1}{2}$.

(1) *Giornale degli economisti*, pp. 23-24. Paper cit. pp. 119-120. The symbols used in this part of our discussion are taken from Edgeworth's treatment in order to make clear the criticism.

At this point, it will be in the interest of one of the monopolists to reduce the price to $\frac{1}{2}\delta p$. Here the rival producer follows his example with a still lower price until by succeeding gradations they both arrive at the minimum price $\frac{1}{4}$ at which all the possible production is sold.

At this point, says Edgeworth, it is in the interest of each of the producers to raise the price. Neither one of them has any fear that his rival might hurt him, because each one has used up his entire stock. But to what point is each producer going to return? To $\frac{1}{2}$, says Edgeworth. Now if the first one raise his price to $\frac{1}{2}$, it is hard to understand why, supposing his competitor's price is fixed, the other monopolist has any interest in following him, as Edgeworth says, right up to $\frac{1}{2}$, from which point he originally started. If at first, as a matter of fact, supposing the price of his rival to be fixed each producer has interest in carrying the price to $\frac{1}{2}-\delta p$, one cannot understand why at the end of the cycle, supposing the rival's price to be at the same point $p=\frac{1}{2}$, each producer would want to bring it up to $\frac{1}{2}$, and not to $\frac{1}{2}-\delta p$.

Of two producers, if it is convenient for each one to fix the price at $\frac{1}{2}-\delta p$, when the second rival's price is at $\frac{1}{2}$, this is valid as much in the first case as in the second.

This however would not be enough to prove that Edgeworth's general conclusion is wrong, that the equilibrium is indeterminate.

We are now about to show how in cases of limited supply or of decreasing returns, the equilibrium can be determinate.

Edgeworth supposes that the daily supply of each monopolist cannot be more than $\frac{3}{4}c$, whilst the individual supply corresponding to the price of monopoly $\frac{1}{2}$ is $\frac{1}{2}c$.

If when the price is $\frac{1}{2}$ a monopolist will take away the customers from his rival, he must reduce his price by a small but sensible amount (otherwise the two prices will be practically the same). Edgeworth calls this quantity δp . But if, given the figures above mentioned we could assume that this reduction in price would be convenient, they could not be accepted generally when Edgeworth's figures changed.

Supposing, for example, that while the offer corresponding

to the price $\frac{1}{2}$ is $\frac{1}{2}c$, the maximum supply of each monopolist is less than $\frac{3}{4}c$ or slightly above $\frac{1}{2}c$, say $\frac{1}{2}c+1/100c$.

Can we assume, even in these cases, that the convenience of each of the two producers to reduce the price in order to steal the customers from his rival, is general? Where an increase in the trade must perforce be very limited it would be hard to make up for any reduction in the price on all the units. In cases of this kind, even supposing that the supply were limited, the equilibrium can be determinate at a price $\frac{1}{2}$.

But yet in the case of a limited supply, let us bring in the element of increasing costs, and we shall see that it is easier that the equilibrium be determinate. In fact, if the smallest reduction in price equal to δp causes not only an increase in trade from $\frac{1}{2}c$ to $\frac{3}{4}c$, or $\frac{1}{2}+1/10$, or $\frac{1}{2}+1/100$, but also an increase in the unit cost, the probability will be greater that at the price $\frac{1}{2}$ the reduction in price will not be convenient. Let us suppose for example — to remain nearer Edgeworth's example — that whilst the first producer reduces the price from $\frac{1}{2}$ to $\frac{1}{2}-\delta p$ and raises the production from $\frac{1}{2}c$ to $\frac{3}{4}c$, the unit cost increases by a given quantity X . This increase in cost will represent a still more noticeable loss that has to be added to the loss derived from the reduction in the price. In this case it may not suit either monopolist to reduce the price, and the equilibrium will be determinate at the price $\frac{1}{2}$.

The reduction in price, alone, could be enough, under given conditions, to render the reduction in price non-economic, even supposing that the price of the competitor remains fixed; the same applies to an increase in cost, alone. But the two phenomena together increase the probability that the reduction in price will not be convenient. All depends on the greater or lesser rapidity in the increase of the costs, on the necessary reduction of price, on the greater or smaller quantity of products of which the producer can dispose, etc. So much for the case of limited supply.

Let us now study a case of decreasing returns without limitation of the supply. Let us suppose, for example, that at the monopoly price $\frac{1}{2}$ with which Edgeworth opens the series of cycles, each producer bears a cost $\frac{1}{4}$ and each producer could supply with his products the whole market, or the

greater part thereof, bearing the cost $\frac{1}{2}$ for the added portion produced (we suppose that for a smaller increase in production the cost would be still greater (1)).

In this case, each producer reducing the price, even if he could at that cost double his trade, from $\frac{1}{2}c$ to $1c$, would have a smaller gain; because if in producing $\frac{1}{2}c$ his net gains were $\frac{1}{4}$, he would, when producing $1c$ and selling at $\frac{1}{2}-\delta p$ lose δp and would not realize any gain on the additional part.

But let us suppose, too, that at a monopoly price $\frac{1}{2}$ from which the two producers would have to begin their cycle, it were convenient for each of them to reduce the price, presupposing that the competitor's price is fixed. Supposing, for example, that from the unit cost $\frac{1}{8}$, the two monopolists reduce the price, increasing successively the cost to $\frac{1}{8}+\frac{1}{16}$, $\frac{2}{8}$, $\frac{3}{8}$, $\frac{1}{3}$. Supposing at that point that $\frac{1}{3}$ be the price and $\frac{1}{3}$ the cost, let us suppose that to further increase the production (in a notable way, that is, in a measure that would annoy the rival if he increased his price) the unit cost increase to $\frac{1}{3}+\frac{1}{8}$.

At this point, however, a new problem may arise. How would the two producers behave if they acted in accordance with Edgeworth's assumption? How would each producer regulate himself at that point? Would he recognize the fact that by raising the price to more than $\frac{1}{3} + \frac{1}{8}$ his rival would force him off the market?

In Edgeworth's analysis the assumption is implied that each producer knows the quantity that his rival can produce. When he tries to explain why at the limit price of $\frac{1}{4}$ the equilibrium has not yet been reached, and each producer has every interest in raising his price to $\frac{1}{2}$, Edgeworth says "he did not fear the competition of his rival, since that rival has already done his worst by putting his whole supply on the market" (2). In the same way, then, that each producer, according to Edgeworth's example, knows the quantity that the other can produce, in our case he will know that his rival

(1) See the first chapter: Static Curves of Production.

(2) See Papers relating to Political Economy, vol. I, p. 120.

can increase his output just as well as he himself can. Primus therefore will try to avoid placing Secundus in a position to increase further the output at Primus' expense, and vice-versa. If each producer knows that the other can increase his output, but does not know that this can be done only at an increasing cost, neither one of them will dare increase the price beyond $1/3$, and therefore at $1/3$ there will be the equilibrium.

If on the other hand, each one knows (1) that the costs of the other producer are increasing from $1/3$ to $1/3 + 1/8$, neither one of them will dare, at that point, to increase the price above $1/3 + 1/8$.

Neither one of them, if he finds it convenient to increase the price beyond this point, can do so beyond $1/3 + 1/8$ without being certain of being beaten by his rival.

Will each one of the producers however find it convenient to raise the price to that level or to a lower level? No definite answer can be given a priori. If they do not find it advantageous the equilibrium will be determinate at $1/3$.

With an increase of price equal to $1/8$ or less than $1/8$, there may be a decrease in demand proportionately greater than the decrease in demand at a price increase from $1/3$ to $1/2$ which we have taken as the price of monopoly.

(1) One can raise the objection that in this way neither producer would consider the price of the other as fixed. But I do not think that in this case one could suppose that each producer would act as if the price of his rival were fixed. The cases in which Edgeworth supposes a fixed price are those in which a reduction in price would allow a producer to take most of the consumers from the rival, and it is not possible to apply the same reasoning to the present case. In any way, if each producer knowing the rival's possibility to increase the quantity offered on the market, thinks that his rival could maintain a fixed price, the equilibrium will thereby be reached, as we have already said, and there would be no more indeterminate state.

One could also assume that Primus assuming at this point that his rival's price is fixed, and knowing that the cost would increase $1/3+1/8$ with an increase in production, he would consider it impossible for his rival to effect any increase in his output at a fixed price ($1/3+1/8$) not remunerated at his price $1/3$ even if Primus himself were to increase his own price to $1/2$. But Edgeworth would never have fostered such a reasoning.

The demand is not always a continuous function of the price. At an increase of X one can exclude from the trade a whole category of consumers; at an increase $3X$ one can exclude together with the X consumers only an additional restricted category of consumers.

Now, if we suppose that the reduction in the supply, consequent on the decrease in price entail a reduction in the unit cost, other things being equal, there is more probability that there may be an advantage in raising the price to $1/3 + 1/8$ or to remain at that price before falling to $1/3$.

Even in that case the equilibrium could be determinate at the price $1/3 + 1/8$ if a reduction in price did not suit any of the producers, because such reduction and the increasing cost would not compensate the gain through a greater trade.

But let us suppose too, that the reduction in the supply following a reduction in price does not entail a reduction in cost, or that from the price $1/2$ to the price $1/3$ the cost has remained constant (that is, $1/3$ unit cost when the production is $1/2c$ and $1/3$ unit cost when the production is $3/4c$). In other words, let us suppose that the increase in cost takes place only after the quantity produced by each producer is $3/4c$. In this case it is more likely that, the price having reached $1/3$ and each producer being unable to return to $1/2$, none of the producers would find it convenient to reach the price of $1/3 + 1/8$ or some other intermediate price. If this were so, the equilibrium would be determinate at the price $1/3$.

It is also possible that, the producers having reached the price $1/3 + 1/8$ in the period of falling prices, none of them would find it convenient to drop lower because any reduction in price, with the small quantity they could still add at the cost $1/3$ (since if they wanted to increase their output still more, the cost would increase, as stated before, to $1/3 + 1/8$), would not be compensated sufficiently by an increase in trade.

All this shows that Edgeworth's conclusion concerning the cases of limited supply and those of increasing costs - though more correct than Bertrand's concerning cases which can be applied to constant costs (accepting for the time being their premises, though not admitted as legitimate) since Edgeworth's results (assuming his own assumption as valid) can

at least be applied in given cases - is nevertheless wrong as a general conclusion, because though in some cases the equilibrium would be indeterminate, in other cases it would be determinate.

But also in the cases of indeterminate equilibrium, the sphere of indeterminateness would often be narrower than that maintained by Edgeworth.

Passing on now to Pareto, his criticism of Cournot in the "Cours d'économie Politique" is equally erroneous (1). He maintains that, in a general sense, the price will fall until all the output has been sold. Since no outside competition is considered, it means that each producer, according to Pareto's hypothesis, will act regardless of the influence which his increase in supply will have on the price.

Now this is inadmissible if one does not assume that the output of each producer is negligible as to the total production. This assumption cannot be made in the case of two producers (2).

Nor is Marshall's criticism of Cournot correct. Marshall says that "if the field of sale of each of the rivals were unlimited, and the commodities which they produced obeyed the law of increasing returns, then the position of equilibrium attained when each produced on the same scale would be

(1) For Pareto's thesis, that the problem may be too determinate (see the Appendix in the "Manuel d'Economie politique"), see "La curva Statica dell'offerta" by Amoroso in the "Giornale degli Economisti". January 1930. See Pareto's — Manuel d'économie politique, 1909, — "Economie mathématique", Encyclopédie des Sciences mathématiques, Tome I, Vol. 4, Fascicule 4 (1911).

(2) See "Cours d'économie politique", pp. 67-68. Pareto, evidently referring to the conclusions of Bertrand (criticized in the preceding pages), that in the case of two monopolists competing with each other there would be no limit to the fall in price, says also: — "Il ne faut pas pourtant croire que la baisse n'aura pas de limite. Cela arriverait seulement si, même à un prix très bas, supposons zéro pour aller à la limite), le marché ne pouvait absorber plus de marchandise que la quantité existante". But at the zero price (though considered as limit case) there would be no reason to sell, and the so-called goods would not be wealth. The abstraction must not include a self contradiction.

unstable. For if any one of the rivals got an advantage, and increased his scale of production, he would thereby gain a further advantage, and soon drive all his rivals off the field (1)

If Marshall does not attack Cournot's thesis except as regards the case of decreasing returns, it means that his criticisms do not refer to the assumption made by Cournot but only to the generality of his conclusions. But even if we reason in the light of Cournot's assumption, the instability of the equilibrium is not necessary.

A concern operating under conditions of decreasing costs can reach the equilibrium before reaching the minimum cost, as we have already shown in a preceding chapter, when the ultramarginal utility is such that it does not compensate the ultramarginal production. If a concern, increasing its own size, can continue to earn the net profit it earns on the present output, as well as a sufficient compensation for the new production, the concern is not in equilibrium because it has a tendency to increase the output.

If however, an increase of production is such as to decrease the earnings of the concern because the ultramarginal utility (2) is such as to make the ultramarginal production non-economical, then the concern is in equilibrium.

Let us now suppose two concerns, A and B, which are at a point of decreasing costs. Supposing that the marginal cost be 4 and the ultramarginal $4-\frac{1}{4}$ (3). If each one think that the quantity of the other is fixed, let us suppose that one of them think of increasing his production. Given the output 100 for each of them at the unit price $4+\frac{1}{2}$, and the quantity still producible at decreasing costs 25 (after that point the curve of increasing costs would be reached), if A throw on

(1) See Marshall, loc. cit.

(2) See in Chap. II, pp. 21-22, the definition of ultramarginal phenomena: The ultramarginal utility of a given commodity, as I have said, is that which would become marginal if the ultramarginal output became marginal.

(3) As already stated, "internal ultramarginal production" is referred to the potential production of an existing firm. See Chap. II.

the market 125 instead of 100, always supposing the quantity produced by B remain unchanged, the price that he will calculate for the global quantity 225 can be, let us suppose, $4+1/3$, $4+1/4$, 4 or $4-1/4$, etc., according to the ultramarginal utility, Now if the ultramarginal price be 4, this would not be economical, because by reducing the price $1/2$ more than the reduction in cost $1/4$, the enlargement of the firm would entail a loss of $1/4$ on 100 units and an added profit of $1/4$ on 25 units produced.

At this point, then, which we shall call X, it does not suit either A or B to disturb the equilibrium. If A makes a mistake and produces 125, it may make it convenient for B also to produce 125 if he supposes the production of the other to be fixed, or it may be that B does not find it convenient to produce 125 instead of 100, always if he assume that the supply of the other is fixed.

Now if A by an error in calculation has increased his output to 125, and B does not find it profitable to do the same, it means that the point of equilibrium X is a point of stable equilibrium, and A will again return to X at least in the long run. If, on the other hand, B find it necessary to increase his own production to 125 it means that, given the assumption that each producer suppose that the quantity produced by the rival is fixed, the point X was an unstable equilibrium, because with both producers producing 125 each, neither one finds it convenient to return to 100. In fact, if when A is at 125, it does not suit B to remain at 100, neither one of them will find it convenient to return to 100 when the rival is at 125.

Let us suppose now that there are two firms, of which A produces at a unit cost 4, and B at a cost 3. The ultramarginal cost of A is $3+1/4$, of B $3+1/4$. The price, let us say, is 4. The firm B has reached the curve of increasing costs and produces 200 units of goods; the firm A is on the curve of decreasing costs and produces 100 units of goods. Both firms can be in a state of stable equilibrium. If when A produces 200 units the price falls to 3, A can never increase its output, whether B keep its own output unchanged or not. If by mistake A increases his production, B can still sell, though with less profit than before, but A will not be able to do so normally

and will have to reduce his output until he reach the terminal point of the preceding successive curve.

Let us now take a different example. Let A be a concern that at a price of 4 produces 200 units at a unit cost $3+\frac{1}{4}$. The ultramarginal cost of A would be $3+\frac{1}{2}$. A given concern B on the other hand, produces at a marginal cost of $3+\frac{1}{2}$ and at an ultramarginal cost of 3.

Let us suppose that the only reason B does not increase his output is because, A's output remaining fixed, B reasons that by increasing the existing production by another 100 units (which are necessary to reach the terminal point of the ultramarginal successive curve of the concern) the price would drop to 3. If the supposed ultramarginal price is 3, B at that price would lose $\frac{1}{2}$ of net profit on 100 units and would sell the additional 100 units at barely cost price.

Even yet, if the two concerns happened to be in these conditions, the equilibrium would be unstable, because if B, through error or for any other reason, should really increase the production to 200, this would force A to reduce his output, since at a price 3 the latter would have to sell below cost, since his marginal cost is $3+\frac{1}{4}$; neither could he in his turn increase the output because his ultramarginal cost, as stated above, is $3+\frac{1}{2}$.

So that Marshall's statement is not exact, even supposing that each producer acts in accordance with Cournot's premises. The equilibrium could be stable or instable, according to the cases, as we have seen.

Let us now turn briefly to a keen recent elaboration of the problem by Harold Hotelling (1). Referring to cases (that had before been mentioned by J. M. Clark (2) and Sraffa) (3) in which each producer has to deal with consumers who gradually pass from one producer to the other when changes occur in the price, he believes that the objections raised by Edgeworth and Bertrand could not apply to these cases.

(1) *Economic Journal* 1929, pp. 41 and fol.

(2) Clark: "Economics of Overhead Costs", 1924.

(3) Sraffa. in *Annali di Economia*, 1925, and *Economic Journal* 1926.

He tries to show how for the same commodity there may be different prices in the same market. As an illustration, he supposes that "the buyers of a commodity will be... uniformly distributed along a line of 1 length, which may be Main Street in a town, or a transcontinental railroad" (1). He supposes that "no customer has any preference for either seller except on the ground of price plus transportation costs" and that "the point of division between the regions served by the two entrepreneurs is determined by the condition that at this place it is a matter of indifference whether one buys from A or from B" (2).

It is evident that in the case examined by Hotelling we find ourselves in the presence of two distinct markets, and hence in the presence of two producers who act on two different though communicating markets (3). The problem is different from Cournot's, but Edgeworth's objections, if legitimate in the case studied by Cournot, as Hotelling seems to think, can be applied to this case in the same way. If the two regions are so divided as to give rise to a possibility that there be two prices, as Hotelling says, each producer can, if the unit cost of the commodity that he sells will allow it, redouble the sales, leaving the price unchanged in his own market or his own section of the market — if it pleases one so to call it — and, sending merchandise into the territory of his rival at a price barely (but appreciably) lower than his rival's.

If each producer can do this, even taking into consideration the increase due to transportation charges, it might give him a profit more immediate than the one examined in Cournot's case. Whereas in Cournot's case it would be necessary to sell the whole output at a reduced price, in this case only the ad-

(1) Hotelling: "Stability in Competition". *Economic Journal* 1929, p. 45.

(2) *Loc. cit.*

(3) This "point of division" between two regions of a same market is nothing else than the line of division of the two markets. See the analysis by Prof. Fetter: "The Economic Law of Market Areas" in the *Quarterly Journal of Economics*. See also my chapter on Markets.

ditional part would have to be so disposed of. The increased transportation charges which must be added may be less, equal or greater than this difference in the earnings between this case and Cournot's. If they be equal, the profits in both cases will be equal (other conditions being equal).'

If the transportation charges should be less, in the case of the two markets, the immediate profit will be greater. If the transportation charges be greater, the profits will be smaller than in Cournot's case. Consequently, if in the case of the duopoly the equilibrium in Cournot's example should be considered indeterminate according to Bertrand and Edgeworth, it should also apply in Hotelling's example of two producers selling identical commodities on communicating territories.

If we consider a case in which neither producer is in a position to bear the transportation charges from one territory to the other, we will find ourselves in a case more correctly of non-communicating markets. But a case such as this is not taken up by Hotelling for consideration, neither is it one to be opposed to Cournot's case of two producers.

Hotelling uses the same process to treat the case described above and the one of two rival commodities, regarding which he says: — "Edgeworth gave a variety of examples, but nowhere took account of the stabilizing effect of consumers placed so as to have a natural preference for one seller or the other. In all his illustrations of competition, one merchant can take away his rival's entire business by undercutting his price ever so slightly" (1).

Edgeworth however is not as wrong as Hotelling seems to think. And, in fact, his illustrations (not all of them) dealing with identical goods are shown by him as limit cases. For example, on page 120 (2) he says: "...the matter may be put in a clearer light by taking.... co-ordinates representing the prices of the articles which are in the limiting case now considered identical, but in general only rival". And later: "it will be readily understood that the extent of indeter-

(1) Hotelling, loc. cit., pp. 43-44.

(2) Papers relating to Political Economy.

minateness diminishes with the diminution of the degree of correlation between the articles.... In the limiting case of no correlation between the commodities the locus of maximum advantage for each monopolist becomes a line parallel to one of the axes". (See diagram on pag. 122 loc. cit.).

So Edgeworth had already clearly explained the difference between identical and rival articles, and if he believed that the equilibrium can exist only in limiting cases in which there is no correlation between the two articles, it is due to an error of the same kind as in the case of identical goods which we have been concerned with in the preceding pages. But the indeterminateness of equilibrium is possible both in the case of rival goods as in the case of identical goods.

It must be understood, however, that the possibility, that the phenomenon takes place in the manner which we have examined is less, other conditions being equal, in the case of rival goods, and according to Edgeworth's exact observation, that the extent of indeterminateness is more or less inferior in the case of rival goods, according to the different degrees of correlation between the two articles.

And there is no doubt that in a great many cases of rival goods, the conclusions of a reasoning based on the assumptions of Edgeworth are not very different from the conclusions arrived at in the case of identical goods.

An error into which Hotelling falls is to consider the case of two identical goods sold at different prices in sections of different territories and the case of non-perfect substitutes as substantially identical. On the contrary, whoever has followed our discussion will readily see that they are different. In the first case the radius of indeterminateness of the equilibrium, if there was one, could be greater than in the second case. Again, in the first case, as we have seen, the probabilities that the equilibrium may be indeterminate are, according to cases, greater, inferior or equal to those of Cournot's case.

In the second case, the probabilities are always less, other conditions being equal.

Not only does Hotelling confuse the two cases, but what is more important, he errs in believing that in the case of rival

goods or of identical goods sold at a different price, Cournot's analysis would resist the criticisms of Bertrand and Edgeworth, whereas in the case of identical goods sold at identical prices the observations of these two would be valid.

Another inexactitude of Hotelling's is that even in the constructive part of his work he, as well as so many others, supposes that the two producers generally reach a point of stable equilibrium, considering only the direct effect of their own action and forgetting the indirect effects.

Let us consider now a case of rival goods and let us see how the indeterminateness of the equilibrium — following Edgeworth's assumption — is possible, though not necessary (1). For example, let us suppose that of two producers producing 100 units at the unit cost 4 and at the price 5, if each one reduced the price of a quantity X he would take away not all but only $1/10$ of his competitor's customers. Supposing that the price of his competitor is fixed, one of them may find it convenient to reduce the price, or he may not. If neither of them find it convenient to do this, that point will be a point of equilibrium. If they both find it convenient to lower the price (2) there will then be a reduction in the price or a series of reductions in the price. The equilibrium may be determinate or indeterminate; it is enough to apply to his case the reasoning already made in the case of identical goods, remembering what has already been said regarding the difference between the cases of identical goods and rival goods.

Returning now to Amoroso's treatment of this matter, we must remember that Edgeworth has criticized it practically along the same lines as he did with Cournot's treatment. But Edgeworth's criticisms do not seem convincing, and this alone, perhaps, explains how such an economist as Amoroso can have again recently confirmed his own thesis.

As we have already said, this thesis suffers from the

(1) For the sake of brevity, we leave it to the reader to apply the reasonings made regarding Edgeworth's theory, to the case of two monopolists who sell in different zones.

(2) The problem has many points of contact with Edgeworth's case of limited supply.

error of Cournot's assumption regarding the action of each producer; however accepting this assumption Amoroso develops it in a very acute analysis.

*
* *

To all that has been said so far about the different assumptions made, one must add that there are cases in which when one examines what the productive phenomena are (1), the differences in Cournot's and Edgeworth's assumptions are of less importance than those previously noticed. We must remember that increasing and decreasing costs are much more frequent than constant costs (not however as constant costs are most commonly understood, i. e., as constant costs for each unit of production added, since no production could produce under these conditions, but as understood and shown in the diagram in the first chapter of this book) which, however, it is necessary to study accurately, especially for the completeness of the theoretical investigation.

In general, concerns are either at increasing or decreasing costs. As we have seen, at a point of equilibrium, when the trading zone is sufficiently large, the concerns at decreasing costs which we have also called concerns at increasing costs of second degree, stop at a point where either an increase or a decrease in price would increase the unit cost (2). This happens tendentially whenever there is a relatively large number of concerns, but it also happens when there are only a few concerns, or even a single monopolist.

It may happen that when two or more concerns on one market are in competition, they will stop at the point of minimum cost, and that point can be a stable point of equilibrium, whether the special assumption regarding their conduct is Cournot's or Bertrand's. The reason for this is that the price would be fixed at a point in which, either by supposing the rival's supply unchanged, or by supposing the rival's price unchanged, it would suit neither of the two producers either to increase or decrease the output. Whether they go by

(1) See the chapter on "Static Curves of Production".

(2) See diagrams on pp. 12-14.

Cournot's assumption or by Edgeworth's, they will arrive at the minimum cost, if the size (1) of the market permits. When they have arrived at that point, neither of the two will have an advantage either in increasing or decreasing the output if the price is at all below the internal ultramarginal cost (that is, the cost of the output as represented by the cost (that is, the cost of the output as represented by a curve of production following the point of minimum cost), and also below the intramarginal cost, that is, the unit cost for a reduced output. Since the price could be above the cost of production, provided it be less than either the cost of a reduced production, which we have called intramarginal, or the cost of ultramarginal production, the equilibrium is stable, whether the assumption be Cournot's or Bertrand's.

In fact, if each producer works on the supposition that the rival's price is fixed, it will not make him want either to increase or decrease his output, since for any increase or decrease he would find himself with a loss. On the other hand, if each producer work on the supposition that the rival's price is fixed, it will not help the change from that point of equilibrium since any decrease or increase in production would, as in the former case, not be compensated.

Let us now consider a case in which the price is above the ultramarginal cost, but where an increase in production would place it on a very low level, that is, a case in which the price would either become lower than the ultramarginal cost — or, in general, would cause a decrease in the net gain, though still leaving the price above the ultramarginal cost — as soon as the ultramarginal production became effective. In the same way, there would be no advantage in increasing the output, neither in one assumption nor in the other. Thus if the price be above the same intramarginal cost (that is, of the unit cost for the most convenient among the reductions in size of the firms), but for any reduction in the output, adding the increase in the unit cost to the decrease in trade, the net gain of each be less, there will be no advantage in reducing

(1) In the economic sense, i. e., in the sense of the purchasing capacity.

the production, if we follow either Edgeworth's or Bertrand's assumptions. The same happens in the cases of increasing costs of the first degree, if the point that the concerns can reach is the terminal point of a successive curve of production which is the minimum cost point (1).

But let us imagine that the concerns have climbed another one or more successive curves. In this case, while the convenience to increase the production is identical in both Cournot's and Edgeworth's assumptions, the convenience to reduce it may be different. If each producer considers the output of the other as fixed, neither of them will reduce his own output if notwithstanding the decreased unit cost, the size of the decrease necessary to reduce the cost (below which the unit cost would increase instead of decrease (2) would carry the price to a level which though obviously higher than the preceding one, would nevertheless reduce the earnings of the concern, since the increase in price could not make up for the decrease in sales.

If each producer should consider his rival's price as absolutely fixed, assuming for a moment that this is one of the interpretations that might in this case be taken from Edgeworth's assumption, in this case the solution would be identical in every case in which a supposed absolutely fixed price, when at that price the supply was limited, would practically signify that the rival's quantity produced would be fixed.

But as already seen, given Edgeworth's assumption itself, the hypothesis that each producer knows that, with a certain increase in price, the rival may increase his production, as he himself could do it, must be considered more plausible. In this case there may be a point of equilibrium analogous to the preceding one, in which, that is, a decrease in price by anyone would not be convenient, because it would decrease his earnings; but there could also be a different point of equilib-

(1) See diagram in the first chapter.

(2) See diagram in first chapter. The advantage in reducing the production can obviously happen also in the preceding case. Only it is less probable, other things being equal.

rium. If a decrease in production were at first convenient, but would carry the price to a level above the ultramarginal cost of the rival producer in such a way as to make it immediately advantageous for the latter to increase his output instead of reducing it, neither producer would decrease his own output.

Suppose that A and B both produce at a marginal cost 4, with an ultramarginal cost 5 and an intramarginal cost 3. If A knows the conditions under which B is producing and which are the same as his own, he will govern himself, if he consider B's price absolutely fixed, as if the quantity offered by B were fixed, and therefore the point of equilibrium, if any, will be identical to the one in which the assumption made was Cournot's. If instead, less incoherently, A (and B) suppose the price 4 of B as fixed, until he himself (A) raise the price to $5+X$, he will not dare reduce the output, even if it were to his immediate advantage to do so, since B at a price barely though sensibly lower than $5+X$, but not less than 5, can take away all the customers of A.

This interpretation is perhaps better adapted to Edgeworth's premises, as already stated, because Edgeworth himself takes it for granted that each producer knows the conditions of production of his rival.

On the other hand Edgeworth has never established a rigid premise that each producer considers the price of his rival in every case as fixed; his demonstration is based entirely on the fact that in the cases in which a small reduction in price can temporarily greatly increase trading, the producers tend to reduce the price (a tendency which is generally real when the number of producers increases, in which cases however, conditions are such that a decrease in production, on the part of the individual producer, is not advantageous; and that is why the indeterminateness of the equilibrium does not exist in those cases).

Hence, if in the aforesaid case neither producer may conveniently increase the price without going above 5, neither one of them will increase it even if it were immediately convenient to do so.

If the price of B is supposed rigorously fixed by A (and vice-versa), who may have an advantage in increasing the

price only to $5+X$ (we have already said why) there will be a place of indeterminateness of the equilibrium. This may also happen if it is the quantity offered by the rival that is supposed fixed, according to Cournot's hypothesis. Suppose that A increase the price, with a profit, to $5+X$, supposing fixed the quantity offered by B, and that B considers it more advantageous (while supposing fixed the quantity offered by A) to increase the output than to reduce it, if the increase in production by B does not suit A because it brings the price to a level where it will be more convenient for him to increase again the production to the primitive level, it will oblige B to decrease his production too, since this will lower the price below the original level. When they have once more reached the initial position, they can begin all over again.

The radius of indeterminateness of the equilibrium would continue indefinitely if we had to apply in this way Cournot's or Edgeworth's reasoning to this case.

If we deal with a case of constant costs in which the concerns have reached the terminal point of the curves of constant costs, since the market allows it, we will find ourselves in a case almost identical to the preceding one. However we must remember that with a reduced output (intramarginal) the unit cost does not increase as in the case of increasing or decreasing costs at the point of minimum cost and that it does not decrease, as in the case of increasing costs, if we consider changes in output from M_4 to M_2 , or from M_2 to M as in diagrams of pag. 14.

In conclusion, a more careful consideration of the phenomenon of duopoly may lead one to the conclusion that in many cases the difference may not be so striking, whether each monopolist considers the output or the price of the other as fixed.

With this we consider it opportune to wind up our critical analysis of this so much debated problem, and proceed more constructively with the doctrine of the phenomenon of values in the duopoly, and in the other less debated cases of competition.

CHAP. VIII.

Internal Competition — Preliminary Treatment

Professor Achille Loria, in a keen criticism of Edgeworth's assumption, pointed out that in a case of two or a few producers, they will establish a price at a point of maximum profit for all (1). We could obviously have this result, as A. A. Young pointed out later, even if the producers do not combine. It is indeed obvious that the assumption more compatible with the hypothesis that the phenomenon takes an extended period of time to develop is that in the case of two or however few producers, each one of these will eventually understand that his action will oblige his competitor to modify his own action, and he must consequently take it into account.

In a review of Bowley's "The Mathematical Groundwork of Economics" in which the author gives as his opinion that the problem would be indeterminate in the case presented by Cournot, Allyn A. Young says:

"Another assumption, quite as reasonable, leads to the conclusion that, if the cost curves of the two producers are alike, the price, without combination will be fixed at the point where it would be put by a monopolist who could produce $2X$ units at just twice the cost incurred by either competitor in producing X units." (2).

(1) See *Economic Journal*, 1906, loc. cit. See also Loria's "Stellon-eini critici" in *Riforma Sociale*, 1919 and "Isidoro Edgeworth" by Achille Loria in *Riforma Sociale*, 1927.

(2) *Journal of the American Statistical Association*, 1925, p. 134.

E. H. Chamberlin has shown how this assumption is the one which, in preference to most other possible ones, answers best to the hypothesis that each seller acts so as to render his profit a maximum (1). Yet it seems that he does not take into account A. A. Young's accurate premises regarding the cost curves of the producers, and like the solution of other writers, his solution could leave in the reader's mind the impression that when two producers act rationally the price would always be the one which would be established if only one producer were on the market.

"If sellers have regard to their total influence upon price, neglecting no phase of it, the price will be the monopoly one, unless their number be very large" says Chamberlin (2). We must add that, given the assertion that each producer also considers the indirect effects of his own action, the price will be stabilized at a point where each producer will obtain the maximum net earnings; but this does not always imply that that price will be the monopoly one.

If, in fact, the problem is the one presented by Cournot, who considers that the market in which two monopolists operate, (which number may be increased) is always the same, and the demand unchanged, then the price in general will be different according to whether the producers be 1, 2 or 3, etc. It is the unit cost that changes, with variations in the number of producers, and it is only by accident that it can coincide in different cases.

Indeed, Cournot states that in a case of monopoly the cost is always less than in a case of competition. But it is obvious that the phenomenon is much more complicated than Cournot says. In fact, it can as well happen that the cost of the same output is less in the case of a monopoly, as that it is greater. It would be enough, to mention the case in which the production of a commodity in the hands of a monopolist would reach a point above the minimum cost (beyond which the difficulty in operating the different plants increases continually)

(1) E. H. Chamberlin "Duopoly-value where Sellers are few", *Journal of Economics*, November 1929.

(2) E. H. Chamberlin, *loc. cit.*

while divided between two competing producers who could handle it with a greater mastery, would reach the point of minimum cost where they would find a point of equilibrium.

Without in any way contradicting Cournot's special assumption regarding the policy of each producer, the cost at this point will be higher in the case of a monopoly, even if we consider that the output under conditions in a state of monopoly is identical with the production in a state of competition. Cournot explains it thus "... to satisfy one's self of this, it is only necessary to consider that any capitalist, holding a monopoly of productive property, would operate by preference the plants of which the operation is the least costly, leaving the other idle if necessary; while the least favored competitor will not make up his mind to close his works so long as he can obtain any profit from them, however modest. Consequently, for a given value of P . or for the same total production, the costs will always be greater for competing producers than they would be under a monopoly" (1). This concerns only a particular case. Cournot supposes that a monopolist would not have to operate plants that are more costly, and which otherwise would be operated by the producer less efficient in competitive conditions.

In that case, of course, if the less efficient producer could maintain his place on the market, though with a minimum of profit, the production would be greater than that of a monopoly in which the less efficient plants could be eliminated. But it might be convenient even for the monopolist in that case, and given these premises only, to operate the more costly plants. If he can get a minimum profit from the least productive plant, (this will be more probable if he can discriminate his prices), he will find it convenient to use also those more

(1) Cournot, *op. cit.* p. 87. Obviously, Cournot himself would not have accepted the logical conclusion of his statement. For were it true that under monopoly conditions a given output can always be produced at less than competitive costs, then in the long run all production would always tend toward monopoly. In our discussion however we consider monopoly and competition unit cost for the different total productions that would have place.

costly plants which give supplementary earnings, however small. On the other hand, Cournot does not mention in his explanation the case of plants of equal efficiency.

But even when the different firms could be of equal efficiency, the unit costs would be different in cases of monopoly and competition. According to the different cases, the cost of the same output in a state of monopoly can be greater or smaller than in a state of competition.

For instance, suppose that an individual producer on a given market finds it to his advantage to produce until he has reached the minimum cost on the market. If to this producer we add another, will it be of advantage to both of them to stop with the quantity formerly produced by only one producer? It may be so in a particular case. More likely however, it will not happen. Probably it may be to the advantage of both producers to stop at a different point from the one marked by an output for each producer equal to half the monopoly production.

For example, if the ability of the second producer is equal to that of the first, if each one produced a lesser quantity than that necessary to obtain a minimum cost their unit cost would be greater than the unit cost of the monopolist who previously produced all the output.

They could reduce their cost to the primitive level, under certain limits, only when each one of them reach the most economic size for the concern which would have been reached by a monopolist. The problem therefore would be different, and it would be impossible in this case to say that the two producers, knowing the direct and indirect effects of their own action, would generally stop when they reached the price established by one monopolist.

On the other hand, as we have already seen, if a monopolist found it convenient to pass beyond the point of minimum cost whilst the producers in the same place could just reach that point, the situation would be quite different. Let us suppose for instance that there are four plants of mineral water, and let them be of the same or different efficiency. If a monopolist has control of all the plants, it may happen that the last two, and especially the last one, will

produce for him at a rather high cost. The difficulties of control and organization would reduce the efficiency of the two last plants as compared with the first two, though it would still be convenient for the monopolist to operate them.

Let us suppose now that these same four plants be divided between two competing producers; the first of these will produce now at a lower unit cost, and if the second producer has sufficient ability, he will get better results from the two plants in his possession than the monopolist who could not manage them so well. In general, when the policy of the two producers is rational, but they are not combined, the unit cost will probably be different, chiefly because their resources are not united and the productive combination of a monopolist would be different from the productive combination of two competing producers. But what if the two producers combine? Will the problem be brought to the same terms as for an individual monopolist?

If the two producers combine, but their agreement is limited to the fixing of the price and supply at a rational point (1), the results will be obviously the same as reached in a case in which the two producers follow a rational policy without any explicit agreement.

And what if two producers combine with a view to obtain advantages not limited to the fixing of the price and output of each individual firm? A rather important point to consider, from a practical point of view, is whether the two producers combine after each has built up his own plant or plants, or not. Now supposing that each has already put up his factory until he reached the maximum absolute dimension, before the agreement, the problem might arise for them of using only one of the plants, completing it if necessary, and of leaving

(1) One can observe that if the two producers foresee the consequences of their actions, and with a joint management are able to reduce their costs, they will end by combining. But this can be excluded before going any further if we presume that each producer wants to retain his own individuality distinct and separate from that of the other producer. On the other hand, this observation should be more general. See the sharp analysis of F. H. Knight, *loc. cit.*

the other aside without utilizing it. But then the unused plant must bear the loss of depreciation of the capital that cannot be used, or used only through a costly process. This transformation or depreciation cost would be a charge on the only remaining concern, and might be such as to prevent the fusion into one firm only for a period of time that might vary according to the consumption of the capitals, the farsightedness of each manufacturer, etc.

But let us suppose also that both manufacturers find it to their advantage to meet the expenses of the transformation and that they end by forming one concern; will they, in the long run, be in equilibrium at that point in which the individual monopolist was formerly in equilibrium? Here also the problem changes.

First of all, the cost is not the same. If indeed, we correctly include in the concept of cost the minimum profit that each producer could obtain from another field, we will find that two minimum profits, not one, will weigh on the single concern as overhead costs (1); furthermore, the physical productivity of the concern may be different.

It is of course well known how the greater or smaller ability of a producer, will make a concern more productive, or less so.

Probably then, unless the business loses its energy and its efficiency through dissensions on the part of the two producers, the physical productivity of the concern will be increased, and whilst formerly, when only one monopolist was in the field, the point of minimum cost seemed to have been reached, now a still lower cost could be reached, or at least the production can be increased beyond the original point of equilibrium, without any increase in the unit cost or with a smaller increase in cost. On the other hand, it may happen, that when instead of one producer, two producers rule a given firm, the productivity of the second producer would be negligible.

On the whole, however, we can say that the conditions of

(1) Excluding the possible result of an extreme case in which each producer has an advantage in transferring one half of his energies to another field.

the phenomenon change even when there is a combination between two producers, and even in that case one cannot say that the price would always be fixed at the same point that it would be with only one monopolist on the field. It might be added that if there are decreasing costs, one of the two producers, when they do not combine, could drive the other out of the market.

But the limit of decreasing costs can be quickly reached; moreover, even admitting that that limit would never be reached for a given market, neither one of the two producers could reasonably hope to force the other to withdraw from the market if they both were of equal productive capacity. In fact, if they act foreseeing the indirect effects of their own actions, a hard fight would be useless between them.

Returning to the above general discussion, we can conclude that only in the case which may well be confined to the limit cases, in which the cost curves are those accurately supposed by Allyn A. Young, the price would be the same as that fixed by an individual monopolist.

But can it be said that when few producers act foreseeing the ultimate results of the move, the price would be the same as that which would rule if there were as many monopolists as producers? This is a very different problem, and a positive answer could, in a sense, be considered correct.

Even here we must ask: Is the situation such as to allow different prices for different producers? If the answer is positive the problem is that of different monopolies and is quite different from the above.

But suppose that the price must be one only. In this case, if the producers under consideration are all of equal efficiency, the above conclusion would be exact; each producer, if he was alone in a proportionately restricted trading zone, would stop at the same level. But even here it is considered that the phenomenon generally acts in a different way.

The various concerns are generally of differing efficiency; hence, if they operate in conditions of a perfect monopoly they will probably stop at different price levels. Then if the individual producers are really monopolists, the results of their operations can also be different.

It is now necessary to see how far the actions of the producers, in order to foresee exactly the indirect consequences of their individual moves, can be considered possible, as the number of the producers changes.

One important point, as has already been shown (1), is to what point the actions of the individual producer can force the rival producers to modify their own actions.

Chamberlin has dealt with this phenomenon in a very interesting though not altogether convincing manner. He agrees that "if there were a hundred sellers, a cut by any one which doubled his sales, would, if his gains were taken equally from each of his competitors, reduce the sales of each of them by only $1/99$, and this might be so small as not to force them because of the cut, to do anything which they would not do without it. At whatever point this becomes true, the barrier to the downward movement of price from the point which will maximize the joint profits of all, is removed. No one seller will look upon himself as causing the dislodgment, since he secures his gains with comparatively little disturbance to any of his rivals.

Under these circumstances there is no reason for him to withhold a shaving of his price which is to his advantage, and which has no repercussions. Nor is there any reason for the others not to do likewise, and the price becomes the purely competitive one" (2).

It is to be observed how the case in which the increased sales of the producer who reduces the price are taken equally from each of his rivals, is not so general as to limit the treatment of the phenomenon to this case only. More often, the earnings of the producer who reduces the prices are obtained differently from the individual rivals. For example, Primus reduces the price. If he similarly reduced the sale of the other 99 producers, these 99 producers would not be forced, because of the price reduction of Primus, to reduce their prices. But the reduction of Primus is felt more strongly only in a zone

(1) Chamberlin, loc. cit. We must remember that we are discussing a case in which, as has been said, there is no external competition.

(2) Chamberlin, loc. cit. p. 86.

from Primus to Decimus. This is quite possible even supposing that there be no important differences of locality for the trade of the individual producers, so that the trade increase of Primus must necessarily be obtained at the expense of the nearest producers; that is, even supposing that there are no imperfections in the localization of the trading points, or in other words, supposing that the trading of all the producers is done in practically the same place. Even in this event, one cannot say that the reduction in expenses must be uniform for all. All the producers have marginal consumers, but some have more than others. And it depends on whether they have more of the poorer consumers in the different classes, some having more of the poorer, others of the richer element, etc. Now when the reduction by Primus takes place, it is principally the marginal consumers who pass from one side to the other.

By marginal consumers must be understood those for whom there is a smaller margin between the purchase cost and the value acquired. From a certain point of view, indeed considering the tendency toward maximum earnings, all the customers of the other 99 producers would be inclined to pass to Primus, but not all of them will succeed in doing so, since Primus limits himself to doubling his sales. Other conditions being equal, it may be that those marginal consumers will succeed, in competition with the other consumers, to buy Primus's goods (it is supposed at a lower fixed price). And obviously, other hypotheses in this connection could be made.

Now as these marginal consumers are irregularly divided as regards the individual producers, some of the latter will have a greater, some a smaller decrease in sales. Supposing then that Primus's price reduction be felt mostly by ten or twenty of the hundred producers, they might be forced to reduce their price because of the reduction by Primus. The reduction in price of these ten or twenty producers would then force the remaining ones to do the same.

Naturally, if Primus's reduction in price should take customers away from all the 99 other producers in equal proportion, this reduction would more likely — other conditions being equal — cause no changes in the policy of the other producers if they were only to consider their movements as a

consequence of a reduction in sales caused by Primus's reduction in price, and furthermore, this result would be more likely than Chamberlin observes. As a matter of fact, he supposes that the hundred units which represent the increase in the sales of the producer who reduces his price are taken in an exact proportion from each one of the other producers who would have reduced their sales by $1/99$. This however can happen only in a limit case.

What is obvious is that in the general case the increase in sales of each producer through a reduction in price would be had partly from old customers taken away from the other producers and partly from new customers obtained through the reduction in the price. So that, in the case discussed by Chamberlin, each one of the 99 producers would have to lose less than $1/99$.

In another limit-case, which might be opposed to the one considered by Chamberlin, one can imagine that in the reduction in the price by Primus with an increase of sales to 200 units (taking 200 units as the maximum quantity that he can produce) these new 100 units would be acquired by new consumers without taking a single customer away from the other producers.

In any event, the general case is that even when the number of producers is very large, the effects of a reduction in price by one of them are not felt uniformly by the other producers.

But we still have to see whether all the producers are of the same capacity and ability, or not. The first case that may be considered as one of the possible cases when there are only two producers becomes always more difficult as the number of producers increases, until they reach the point where, having reached a very large number, this first case passes into the category of the limiting cases.

Now if the concerns are of different efficiency at the point which is supposed to show the maximum profit by all, will the sale of each one of these producers be the same? This is not possible. At least within certain limits the sales must be proportionate to the efficiency of the individual concerns. Now in this case, even when we consider that the reduction in price of one would make itself felt as a decrease in the sales,

in an equal degree, of all the other producers, it might happen that even where there was a considerable number of concerns, the decrease in the sales might be of importance to some of the producers, and quite insignificant for the others. In this case the reduction in the price of one producer could cause a reduction in the price of several others, which would constrain all the remaining producers to follow suit.

But even if one imagine decreases in sales proportionate to the efficiency of each individual producer, the effects of the price reduction would not be the same for all. The importance of a reduction in customers by $1/100$ may vary according to whether the customers are, for example, 100 or 1000. And this only as regards the different quantity of products offered by individual firms on the market.

But what can we say of the different technical conditions in which the various concerns might find themselves? Every decrease in consumption must naturally signify a decrease in the production, and this latter will be more or less onerous, depending on the particular technical conditions of the different concerns.

But let us also imagine a case in which there are several producers, whether of equal efficiency or not, and where a price cut by each one of them causes a decrease in consumption, equal or not, for the other producers; then we find a situation in which a price cut by one producer will cause no appreciable reduction of sales in each of the other producers.

Let us suppose, for the sake of clearness, that many producers find themselves with a price such that it gives them the maximum profit. Each one of these, if he knows the conditions of the phenomenon, as we suppose in theory, will ask himself why the other producers do not cut their price. The conclusion he will arrive at will be one of the following:

1) Because they do not find any immediate advantage in a price cut (either because the costs are increasing or because the slope of the utility curve descends too rapidly (1)).

(1) This latter phenomenon becomes less frequent as the number of the producers increases from two, upward.

If this is the conclusion, and some of the producers have not yet increased their output when there was an immediate advantage to do so, it is obvious that they will do so now.

2) Because even with an immediate advantage to cut the costs, they are afraid of spoiling the market, which means at the same time, that they have a certain confidence in the rational actions of the other producers.

We shall limit our analysis to the second case, as the first is more obvious.

In the second case, then, each one knows that if he cuts his price, sooner or later the other producers will also cut theirs. The individual producers could maintain their price at the most advantageous point only if they had in mind that all the others would do the same; as soon as one of them shows that he thinks only of his own immediate gains, every one of the producers, or at least some of them, will act immediately, under the impression that the rival policy has, as its object, immediate earnings. Then, even if they have not sustained a sensible loss of sales from the price reduction of a first producer, since this reduction would be a modifying element of their knowledge of the conduct of the rivals, each producer knowing that the most favored ones are the first to effect a reduction, other conditions being equal, or at least a part of them, if not all (to take into account a class of optimistic producers), will hasten to cut their price, obliging the most stubborn to follow suit. So therefore a price cut by one producer, from the point of maximum profit, could at once cause a tendency to reduction by the other producers even when a decrease in sales was hardly sensible for each rival; because even a price cut by one producer only would give rise to the opinion of other producers that the rivals, or some of them, were acting or were going to act in view of an immediate gain.

And it must be noticed that this change of opinion in each producer, or some of them, could happen also only because each one thinks that the other producers or some of them are influenced by the first reduction.

Hence if we suppose that the prices are at a level which allows each one the maximum profit, granted that it be necessary for each producer to cut his price in order to extend

his sales, we will find that if each one of them could foresee the direct and indirect effects of his own actions and acted with the idea that the other producers were equally intelligent, the prices would not be cut, because each one would know that his own price cut would, in one way or another, cause a price cut by the others.

If, instead, some producers act in view of an immediate gain, or each one of them (or some of them) think or doubt that from the point of maximum earnings these will fall because the other producers (or some of them) are shortsighted, then the price cut is made either in the case in which the producers are few in number (two or more) or in the case in which they are many. In this case all the other producers as soon as they are convinced that their competitors act in the aforesaid manner, would tend to reduce their price, enlarging their output in order not to suffer from the reduction in price of the others.

Certainly as the number of producers gradually increases, it becomes more difficult for competition to become rationalized and for each producer to be sure that all the other numerous rivals act rationally according to the indirect effects of their own operations.

But after making this distinction in probabilities, we now have that:

1) In the case that each individual producer could exactly foresee the indirect effects of his own operations and think that his competitor regulate his operations in the same way, the solution will be the same either in the case of few producers or of many;

2) In the case that each individual producer think that his adversary regulates his movements in view of his immediate profit, the solution will be the same either if the producers are few or if they are many.

In the first case the price would remain at the point of maximum earnings. In the second case the price would be set at a point of competition on the type of classic theory. The phenomenon is possible in the case of two or a few producers, and practically certain in the case of many if they do not combine. Indeed, in the case of two producers, if each one reduce the price thinking that the other might do so first, he

will be followed by the other, and if neither has any occasion to change his opinion of the conduct of his competitor, a point of stable equilibrium will be reached.

The fundamental impulse towards a reduction in price comes from the fact that every enterprise can be enlarged only in a given period of time, more or less extended according to the various cases.

If in fact an extension of sales by one producer could be so quickly followed by the other producers that the phenomenon is identical with a simultaneous extension of production and price cuts by all, none of them would take the initiative of the reduction (1).

Even supposing that each producer, (or some of them), looks only to his immediate gain, or that each one or some of them thinks that his rivals look to their immediate gains, since a simultaneous extension of sales and price cuts by all would bring a general decrease in earnings, nobody would lead in a general extension of production and reduction in price. It would be better to await the initiative of the others, even when it were supposed that this would happen. Since the extension of production and reduction of price being contemporaneous for all, and neither hurting nor benefiting any one more than the others, none would fear that his rivals might take this initiative nor have any interest in doing so himself. Every delay would mean a net gain for all. Therefore if any extension in sales were followed so quickly by all the others, the price would not be lowered from the point of maximum gain.

Professor J. M. Clark, the eminent American theorist, in his book on overhead costs, says: "If all the competitors followed suit instantly the moment any cut was made, each would gain his quota of the resulting increase in output, and no one would gain any larger proportion of his previous business than a monopoly would gain by a similar cut in

(1) We presuppose, therefore, that all producers would be in a condition to cut the price and increase their business.

prices. Thus the competitive bidding of prices would naturally stop exactly where it would if there were no competition (1).

Chamberlin, in his notable work above mentioned, referring to this statement of Professor Clark, says: "This agrees with my conclusion when competitors are relatively few in number; but as has just been shown, it does not apply when their numbers are large. The result of perfect competition and of monopoly are not identical" (2).

The criticism of Chamberlin does not seem well founded. On the other hand, the incompleteness of Clark's statement has not been pointed out by Chamberlin, whose treatment of the subject is equally incomplete. Indeed, the question if the producers are few or many is highly important; but there is another question that Clark does not consider in his statement and that Chamberlin does not consider in his analyses of the above mentioned work. The question is whether the number of producers can be increased, that is, if there is any danger of a potential outside competition.

We have carefully distinguished between these two cases, and we are here confining ourselves to that case where there is no potential competition, leaving the other case to be dealt with later on, when we shall discuss the case of external and complex competition.

It may be, however, as we shall see later when discussing the other cases of competition, that "if the competitors followed suit the moment any cut was made, each would gain his quota of the resulting increase in output", and the increase in output would be of advantage to the producers, as otherwise other producers would enter the field (3).

Neither does Chamberlin take this possibility into account when he says: "prices move together when there is a

(1) J. M. Clark: "Studies in the Economics of Overhead Costs". 1923, p. 417. Though the first edition of this book is of 1923, I would call the attention of the reader to a recent keen appreciation of this book by Professor Giorgio del Vecchio: "Le odierne tendenze dell'economia politica," in the *Giornale degli Economisti*, 1930, pp. 127 ff.

(2) Chamberlin, *loc. cit.*, p. 86.

(3) See Chapter on "Complex competition".

generally recognized price leader — a dominant competitor to whose prices all others adapt themselves, recognizing that therein lies their greatest ultimate gain. In this event, it makes no difference how many competitors there are or what percentage of the total each produces: the price established is identical with that which would be set if there were no competition at all", (1).

At this point, however, it is well to look further into the bases of Clark's discussions. He goes on to say: "The distinctly competitive type of gain comes from getting more than one's quota of business; getting all the new business which the reduced price bring forth, or getting business away from one's competitors. This gain takes place chiefly in the interval after the customers know of the reduction in prices and before they become aware that competition has followed suit.

This rests on a further condition, namely, that it takes an appreciable time for the customers to transfer their trade. If they all moved at once, the first competitor would have all the trade, provided he could handle it, leaving nothing for the others.

Often he does get all he can handle, and the others, for the time being, content themselves with what is left over. This is in cases where goods are standardized and 'competition centers in prices', so that a slight differential is decisive" (2).

It seems to me here that Professor Clark lays too much stress on a relatively secondary and unimportant circumstance, namely "the condition that it takes an appreciable time for the customers to transfer their trade". This is not necessary, neither need the time necessary for the transfer of their trade be generally considered of importance for the theory. On the other hand, in the above reasonings of Professor Clark, the concept is implied that the other producers, in order to reduce the price, must first increase the size of their own business. If this were true, his conclusion that if "they (the consumers) all moved at once, the first competitor would

(1) Chamberlin, *op. cit.* p. 89.

(2) J. M. Clark, *loc. cit.*, pp. 417-418.

have all the trade, provided..." would also be true. But this is not necessary. Rather than lose all their customers, or even only a part of them, the concerns having the possibility of remaining in competition after increasing their size, would be interested in reducing their prices immediately, and at least keep their actual customers while waiting for the opportunity, with the increase in size of their business, to increase their sales. Also the time necessary for the producers to know the decrease in the price of their rival, can in general be considered negligible. On the other hand, what is more important, as we have seen before, is the difference in time between the increase in production on the part of the producer who starts an increasing movement and the increase on the part of the others, namely, the time necessary for the other producers to increase on their part the size of their business as soon as they become aware of the fact that one of them has increased his sales or is about to do so.

If the increase in sales by Primus were foreseen or known at the very beginning of his move, he might get no profit from it. But, supposing that this does not happen, or does not happen completely. The profit of Primus who leads the reduction would be proportional, other things being equal, to the time necessary for the others to follow suit.

If the others are not obliged to retire from the market, and they see themselves in danger of losing all their customers to Primus, their immediate reduction in price will follow the reduction by Primus who will have to content himself with the old customers and the new business.

Even in the very special hypothesis that the rival producers know Primus's movements as soon as all the consumers have gone over to him, the reduction in price by all the rivals to the level of Primus's price, or even slightly below, would regain for them their erstwhile consumers, giving Primus only a generally insignificant interval to enjoy their trade.

Professor Clark goes on to say: "Thus the retarded action of the market which permits different prices to prevail at the same time is not really an 'imperfection', as theoretical economists have been inclined to regard it. On the contrary, it

is an essential requirement, without which it could not produce its characteristic effects" (1).

According to Chamberlin this "is not a valid criticism of theoretically perfect competition. Large numbers are a sufficient requirement for the market to produce competitive results, without retarded action or any other type of imperfection". (2).

The assertions of both economists, though different, are not exact.

If, after a first cut, it is advantageous for the other producers they can reduce the price immediately, and the difference in price is not necessary to allow the first producer increasing his sales to obtain a differential profit. This differential profit may be obtained through the greater number of sales at the same price as that of the other producers (if these reduce their price). And when a difference in price exists until the other producers enlarge their business, this difference in price is a phenomenon derived from the difference in time between the first enlargement and the others.

Therefore a difference in price would not be necessary, but there must be a difference in time between one enlargement and the others, in order to have a tendency towards a price lower than that which would give a maximum profit to all.

And what Chamberlin says, that a large number of producers is enough to get results of perfect competition, is not true. If the number of producers was very large, as we have seen, and all of them were in a position to follow instantly the first to increase his sales, there would be no reason for any of them to increase their own sales, or to fear this step on the part of the others.

But that the difference in price is a phenomenon derived from the above mentioned difference in time, and not necessary for the drop in the price from the point of maximum profit for all, can more easily be seen (Clark seems to give a general character to his criticism) in the case which is called

(1) Clark, *op. cit.* p. 418.

(2) Chamberlin, *op. cit.* p. 87.

of perfect competition, to which Chamberlin also, as we will see, refers in an inexact way.

Now it is known that the so called case of perfect competition is obtained when, among other necessary conditions, the output of each producer is an inappreciable quantity both as regards price and total output, so that if the output of an individual producer be cut or added to, the price will not change, and the total output is to all intents and purposes identical.

In a case of perfect competition then, the individual producer does not have to cut his prices in order to increase his business. His whole output is insignificant in the light of the total output of the whole industry; and with greater reason, a fraction of the output of each producer must also be insignificant. No producer wishing to increase his production will have to cut his price. All he will need, to find a demand for his goods, will be to throw them on the market, since the quantity offered by a producer could not make any appreciable difference in the price. No difference in price can take place between producer and producer, hence, Clark's criticism is still less indicated; but it is still the fundamental phenomenon of the difference in time between an increase in a concern and an increase in another which produces the competitive effects in the case of internal competition.

We must here add that Chamberlin does not take into account the fact that when there is perfect competition a producer who wishes to increase his sales should not need to cut his price. In fact, Chamberlin always speaks of individual price cuts and confines his analysis to these cases. For example, he argues: "If the numbers are fairly small, any one seller can be certain that his incursions upon the others by a price cut will be large enough to cause them to follow suit; and therefore no one will cut. If they are very large, he can be certain that his incursions will be a negligible factor to each other seller that no one will follow suit (i. e., cut because he did) and therefore everyone will cut". (1).

Undoubtedly, Chamberlin refers to the last of these cases

(1) See all his discussions, *loc. cit.*

when he says "large numbers are a sufficient requirement for the market to produce competitive results, without retarded action or any type of imperfection." This also results from the fact that after speaking of the price cut by the hundredth producer in an example referred to above, he says, in reference to Clark's statement that we have already seen: "This agrees with my own conclusion when competitors are relatively few in numbers; but, as has just been shown, it does not apply when their numbers are very large. The result of perfect competition and of monopoly are not identical". (1).

But the case considered by Chamberlin is not one of perfect competition. In a case of ideal competition it would never be advantageous for a producer to cut the price himself. Even if we wanted to admit that his increased offer should cause some price cut, it would still be convenient for the producer to offer his goods on the common market. The reduction in price would be general and of minor importance.

When we admit that a producer has an advantage in reducing the price, thus having a direct influence on the price, we are far from perfect competition. In fact, if we admit that at a certain moment a producer finds it convenient to increase the sales, and the others not, we shall have the following results: — To the increase in sales with a price cut by Primus, a reduction by the other producers must follow, either before or after, if the increase in sales by the first producer to cut his price takes many customers away from the rival producers.

If instead, Primus's price cut reduces the sale of the others by a quantity "so small as not to force them, because of the cut, to do anything which they would not do without it" (as in Chamberlin's case) (2), the reduction by the other producers will not follow in the hypothesis made (if the conditions are as given by Chamberlin), and there could be, on the same market, and with a very large number of competitors, occasion for a permanent difference in price, which would not be possible generally in cases of few producers.

(1) Chamberlin, *loc. cit.*

(2) Chamberlin, *loc. cit.*, p. 86.

But let us see instead how the case of perfect competition should be considered. Taking for example a number of producers so great that the output of each one of them is insignificant as compared with the total output; let us suppose, for the sake of simplicity that all the producers be of equal efficiency and that at a given moment their price is one that will give each one the maximum profit. Then each producer who could increase his output with an immediate gain, watching his competitors, will think that they will increase their output in view of the immediate gains they would obtain, or that they will not increase their output in view of their immediate gain. In the first case he will hasten to increase his output because of the fact that if the others increase their own output and he has not done so yet, he will be at a disadvantage in relation to his rivals, but if he does so before they increase their production, he will have the advantage over them.

In the second case, each producer should think that the other producers do not in fact increase the output because they operate with the idea that all the others are able to cause a phenomenon of perfectly rational competition. In this case, each one of them knows that if he reduce his prices, all the others will do the same, because at least a part of them will increase their business thinking that their rivals or some of them, act in view of the immediate gain; and the others perforce would follow suit.

But in the first case, if it were not possible for those producers who first increased their business to draw an advantage from the time required by the others to follow suit, to obtain a gain at the expense of the others; if, that is, with the first increases in his production the others were able to follow suit immediately, without leaving a moment of respite to the first producers to effect the enlargement, no one would be in a hurry to increase the production, since losses would arise from any individually increased output that would instantly cause an increase in all the others, and no one would fear the initiative on the part of the others to increase their production more than his own, since, at least to the point to

which they wanted to, they also could instantly increase their own production.

But, to conclude, also in case of the so called perfect competition, if each producer could know the direct and indirect effects of his own operations and acted with the idea that all his rivals were fully aware of them, we will find ourselves confronted with a phenomenon of perfectly rational competition, with the prices on a plane of maximum gains for all. If instead, each producer thinks that his competitors (or some of them) act only in view of an immediate gain, the phenomenon will be one of competition along the lines of classical theory.

But let us see how the phenomenon works out in reality. When the producers are two or a few, it is quite possible that after a certain period of time they succeed in reaching an equilibrium of rational competition, and stop there.

If the action of the producers be such as to cause something similar to the indeterminateness of equilibrium according to Edgeworth (and we have seen how much his conclusions in this respect must be taken in a narrow sense) it is possible that, having reached for the second, third or fourth time the point of maximum gains, they succeed in stopping there.

If the two producers are on the market at a certain time with a price of maximum gain, and have sufficient intelligence, they will not have to pass through the irrational competition before reaching the rational. They can act in this way even if they are not certain of the wisdom of their rival and without any agreement between them, and prefer to run the risk of being preceded in the cut rather than ruin the market and preclude the possibility of a good profit. If this risk be lessened by means of an exchange of ideas with the competitor, if the agreement limits itself to that, namely, to the guarantee of a rational policy by the rival, whilst both concerns keep their own independence in every other particular, we shall have a case not different in the ultimate result from the case in which the producers act most independently foreseeing exactly all the effects of their moves.

We may distinguish the two cases by calling one rational

individual competition and the other rational collective (1) competition.

We may suppose instead, that two producers are of the opinion that the competitor follows the policy of immediate gain; this can happen for several reasons, arising, for instance, from the reciprocal attempt to eliminate the rival from the market until each one convinces himself that this is impossible, or from the fact that the two producers regulate themselves blindly in a first moment in which they perhaps do not know the conditions of demand and the capacity of development of the rival, etc.

It goes without saying that when we say that each one supposes that his competitor operates in view of an immediate gain, this is to be understood *cum grano salis*. Each one knows that his rival is brought more easily to an increase than to a decrease of his supply, and that he will try in every possible way to keep his position in the market.

Each producer, when he thinks the other only sees his own immediate gain, has the idea that when his rival finds it possible to increase his gains, will not hesitate too much, and will easily decide to act for the immediate gain in the hope of maintaining his new position.

But each producer thinks, too, that the other will not so easily allow himself to be thrown out of the market, nor be easily induced to submit to a cut in sales if he does not consider it quite necessary. Each one thinks that if he reduce his own sales it would be interpreted by his competitor as a reduction in efficiency, but that if he increase his own sales, his competitor will be ready to fight in order to keep his own position as against his rival, in proportion to his own efficiency.

Hence the opinion that each producer thinks that his rival operates in view of his own immediate advantage must be interpreted in the sense that each one sees in the other an individual ready to accept an opening made by his competitor to get the upper hand, or perhaps ready to take the initiative

(1) Limited to the field examined.

in that direction, but not an individual who operates with his eyes shut. If there was an industry with a limited number of producers, for example 5, and all of them acted like Cournot's individuals in view of the immediate profit, a sixth producer knowing this could possibly, with opportune manoeuvring, throw on the market a quantity of goods sufficient to force his competitors to make way for him and give him a predominant position, even if his business were less efficient and produced at a higher unit cost. At that point where the five producers, considering fixed the quantity offered by the other four plus the newcomer, thought that an increase in production would not be convenient, and that either with a decrease in production or a stationary policy they would not receive the minimum profit, they would decide to abandon the industry. Naturally the first ones to leave the field would give a respite to the others who would end by staying there if the quantity produced by Sextus was not sufficient in itself to supply the wants of the market.

Now we shall see that it is possible to distinguish between these two cases of competition; 1) cases in which from the first adjustment to find the position of equilibrium, the producers find themselves in a position which will not belie their opinion that the adversary is trying to get, in the abovesaid way, the maximum immediate profit; 2) cases in which, in the first adjustment of what they believe to be the equilibrium, the producers find themselves in a situation contradicting this opinion.

Let us suppose, for instance, that if in the first period the two or more producers are producing 100 units each, and a reduction to 75 units on the part of one of them was advantageous, supposing the output of the rival fixed, then it may happen, according to the cases that: 1) none of them may decide to make this change because he will think that the rival will take this occasion to increase his profit in view of the immediate gain, or will take that occasion to get the upper hand; or 2) that each one will make the change thinking that the other producers will find it advantageous to follow suit

for their immediate gain. In the second case the equilibrium may be at 75 units produced by each one (1).

But in the first case, each one will ask himself why the other producer or producers who should follow the policy of immediate earnings does not do so (2); this will urge both or all of them to revise their own opinion of the rival policy. From this can be derived either the conviction that the mistrust of the others comes from the fact that each one of them awaits the occasion to take the advantage, in which case the equilibrium will be stabilized at that point (100), or the conviction of some that the others would be able to follow a more reasonable or rational policy; if one of them therefore decides to reduce the quantity to 75, the number of producers being very small, it is possible that all the others follow suit rationally and the equilibrium will be at 75; if however one of them (or all the others) assume that each one, or some one of the other producers will sooner or later increase the production, he or they will hasten to do so first, in order to benefit from the difference in time between his increase and that of the others. In these cases the producers will again return to 100 and stay there if nothing happens to modify their psychology.

However, as the number of producers increases, this decreases the possibility that the manner with which the various producers act, after the first process of adjustment on the

(1) It is understood that the various producers can reduce and increase their output within a certain time and costs of transformation. And they will try to avoid the reduction in sales after having incurred in general expenses. That is, they will endeavor to reach the equilibrium as far as possible, without reaching the point from which they will have to turn back.

(2) The contradiction contained in the assumptions of Cournot and Edgeworth is worthy of notice. If Primus thinks that the quantity offered by Secundus in the first operation is fixed, as supposed by Cournot, it is a contradiction to think that he still believes it when Secundus shows that he changes his offer time after time. And the same refers to Bertrand and Edgeworth; if Primus considers the price of Secundus as being fixed in the first operation, one cannot understand why he still believes this, even after Secundus shows that he acts differently.

market, will modify the competitors' opinion that each one looks after the immediate maximum profit. So that when they have arrived at a certain point, thinking that their rivals look for an immediate maximum profit, everyone will act in just this manner himself, within certain limits, even if he does so cum grano salis and always, tries to know his numerous rivals' movements and efficiency.

As the number of producers increases, when each one has increased his production to the point where an increase in the output would not be advantageous because the ultramarginal utility would be less than the ultramarginal cost, that is, where the price would be less than the cost, it will always be more difficult for a single producer to have an individual interest in reducing the output, and consequently he could not create the possibility that the rivals modify their opinion of his own policy if he does not reduce the output fearing that the rivals or some of them increase their output at the expense of his customers.

Furthermore, as the number of producers increases by degrees the possibility also increases that an increase in price may exclude them from the market, even if the other producers do not increase their production (1). For example, if a producer increase the price from 6 to 7, his customers would turn to the other producers. But one can say that not all of them will do so, because for some of them even a price of 7 will be advantageous. But as the producers, as also the consumers, always look for the maximum utility with the least expenditure, they will not buy at 7, from Primus since the other producers are selling at 6.

Throwing Primus's consumers on to the other producers the demand at 6 will be greater than the supply. But through a raise in price the more capable producers will succeed in the exchange. A category of marginal consumers will be eliminated. For example, if the price rise to $6 + 1/6$, all the consumers below $6 + 1/6$ will be excluded from the change. From that

(1) In a case of unlimited competition the rivals would not increase their output for a decrease in the sales of one of them.

point, supposing that Primus could come back on the market, he must bring his price back to 6 if he still want to produce, whether he do so gradually or if he prefer to do so at one stroke. Likewise, if that producer reduce his output selling it at the market price, it will be gradually more difficult for the operation to be profitable to him as the number of producers increases.

But there are many reasons why, as the number of producers increases, the possibility becomes greater that the point of equilibrium will be different than that under the competition that we have called perfectly rational. As we have just seen, when the producers are many, and long before they are so numerous that the changes of one of them will bring inappreciable consequences in the sales of the others, the conditions will favor the permanent belief of each one that the rivals are operating with their own immediate profit in view. Very long before the number of producers is so large as to remind us of the conditions of ideal perfect competition, there are cases in which a rational policy would not be possible in the sense that each one could act with the certainty that all the others know the indirect effects of their own actions. The first phase of the struggle that each one must exercise to remain on the market is sufficient to convince them that the rival producers look for the immediate maximum profits.

The greater the number of producers, the easier it will be that the reduction in the business of one producer will be considered by all or some of the rivals as a sign of reduced efficiency rather than a sign of the initiation of a rational competition. On the other hand, even supposing that all the producers would really follow a rational policy, and the price was at a point where each individual producer would find an immediate gain in the increase of his business, they could hold themselves in that position for fear of ruining the market, but the moment one of them, with a smaller business than any of the others, were to try to reach the common level, or as soon as one of them try to sell a quantity greater than his former quantity because the difference in sales between him and any other producer might seem to him out of proportion with the different capacity of development of the two

concerns; the moment, then, that these or other phenomena of the increase in business, on the part of individual concerns, took place, a race for a reduction in price would probably take place, because every one would see in his rivals economic subjects on the lookout for immediate gains; and they know that the last would get the least.

If the concerns were all equally efficient, it would be easier to establish a rational policy for all the concerns, and therefore also easier, other conditions being equal, that producers of equal intelligence succeed in keeping themselves in a privileged condition.

But concerns are of different efficiency, and except in cases of extraordinary economic ability on the part of all of them, only an agreement could stabilize the quantity of goods that each one of them could sell according to the efficiency of his own concern. It is possible to find two men of more or less equal ability, it is impossible not to note relevant differences in ability among producers when they are twenty or a hundred. Furthermore, as the producers increase, the possibility increases that one or some of them would think that the others, or some of them, will only consider their immediate gain. And the greater the number of producers, the greater the possibility that there may be some pessimists among them. One of these would be enough to lead all the others astray, as we have already seen.

There is no doubt that the favorable position in which the first producer or producers who increase their production would find themselves, is a decisive factor in view of the time necessary for the others to follow suit. We have seen that if this was not so, since every producer knows that when he reduces his price the other producers are led to do the same, nobody would cut the prices.

However, as we have already said in the case of a few producers, the main obstacle in reaching results of rational competition, is an incomplete knowledge by the producers of their rivals, their concerns, policy, etc.; if they combine, and the combine limits itself to enabling each one to know the conditions and policy of the rivals, thereby making each one trust the others, whilst the individual concerns keep for all

the other sides their liberty and independence, we will have a case of rational collective competition, the results of which will be the same, as all the producers could foresee the exact effects of their movement and believe that all the rivals were able to follow a perfectly rational policy.

But the price cuts also happen in the selection of the producers. Not all of them will follow immediately the first producer who cuts his prices. A few of them, or many, will not be able to produce at the new price. This will happen when competition is such that the individual output of each is inappreciable in respect of the total output of the industry. By degrees, as the producers, following the first producer or producers, increase their business, and the price decreases, a few or many of them will be eliminated from the market.

But this case would fit better in our discussion of complex competition, as we shall see later.

In conclusion, we have seen the following phenomena of equilibrium:—

1) Equilibrium resulting in a field in which all the producers follow a perfectly rational policy, foreseeing thoroughly the actions of their rivals, with a certain confidence in their rational policy.

2) Equilibrium in a field in which all producers are led to believe that their own policy, in the belief that the other producers look for their own immediate interests, is rational. In this case one cannot say that the policy of each one is not rational. But the difference between the first and the second type of competition is that the first is rational in its totality, whereas the second may be rational in the individual manifestations since it is logically derived from the opinion regarding the policy of the competitor, but in its totality it is not rational.

CHAP. IX.

Internal Competition — Equilibrium Price

To begin with the first case (1). When all the producers foresee exactly the movements of their rivals, the form of equilibrium which will result therefrom will be at a price that will give to each one the maximum earnings arising from those conditions. In general, the price will be different from the one that will rule if instead of several producers the market is governed by a monopolist.

Let us now consider the marginal cost of these producers. This cost must be economical, by which we mean only that it must at least be remunerated in order that the production may normally follow its course. A price that includes a minimum profit and the expenses of production is the minimum price possible. The maximum equilibrium price possible is given as the price beyond which an increase in production would not be economical. In other words, the price could be above the minimum price possible but only up to a certain level, beyond which an increase in the production would not be advantageous.

If the price goes beyond that point, the equilibrium is disturbed. In the case under discussion, if we imagine that an increase in production would always be simultaneous or nearly so for all, or would otherwise not take place for anyone,

(1) At this point we suggest that the reader refer to the pages discussing the concept of ultramarginal production, price, utility, etc.

we can suppose that the price would always suffer some decrease for every increase of production. The fact therefore that the ultramarginal utility is appreciably inferior to the marginal, always has an influence on this phenomenon. It goes without saying that, when to the decrease in the utility one adds the increase in unit cost in the ultramarginal production, the phenomenon becomes more noticeable, and the distance between the minimum and the maximum price can be larger when the other conditions of the phenomena allow for it (1).

Let us suppose for example that the ultramarginal cost is 4, while 4 is the marginal. The ultramarginal utility must be at least inferior to 4, for example $4-x$ (2). If instead the ultramarginal cost is 5 while the marginal is 4, the ultramarginal utility must be at least inferior to 5, say $5-x$.

If we suppose that from the marginal to the ultramarginal production the utility decreases by $\frac{1}{2}$, we shall find that in the first case one can have an equilibrium at a highest price $4+\frac{1}{2}x$ (and in the second case at a price $5+\frac{1}{2}x$). A price $5+\frac{1}{2}x$ in the first case would not be a price of equilibrium; in the second case it would. The marginal cost in both cases, however, is 4, by hypothesis.

But it is possible to imagine the widest differences in the decreases, either along absolute lines or in reference to the various sizes of ultramarginal production.

One can also suppose for instance, that in the first case the marginal utility be 5 while the ultramarginal utility be $4-x$, while in the second case the marginal utility is 4 and the ultramarginal is $4-x$. The equilibrium would then be at the price 5 in the first case, and in the second case 4.

The difference between the minimum price (equal to the

(1) Needless to say that for the purpose of the present analysis our concepts of the maximum and minimum price are relative to some elements of the phenomenon. In fact, if we were to consider the concept of maximum and minimum price as a function of all the elements of the phenomenon, the maximum price would at the same time be the minimum price, and would also be the price of equilibrium.

(2) x being an appreciable quantity, that is, a quantity which can affect materially the phenomenon.

marginal cost) and the effective equilibrium price will be a function of marginal and ultramarginal costs, marginal and ultramarginal utility. Of course since we are still in the case of internal competition, the ultramarginal cost considered is the internal one.

In the cases we have examined, the economic value of the ultramarginal production is judged by each producer in the form and manner discussed above. So that when he thinks of the disadvantage of his ultramarginal production, he does not stop to think of the effects that an increased offer on his part will cause on the price and on the cost, but his thoughts embrace all the consequent phenomena. If for example, at the point of equilibrium, a quantity equal to his ultramarginal production could be profitably thrown on the market, but by so doing it made the ultramarginal production of the rival producers advantageous, ending by an eventual decrease in his profits, he will think that his own ultramarginal production is not economical.

In conclusion, the equilibrium price in cases of rational internal competition is a function of the marginal and ultramarginal phenomena (1).

It is well to remember that in our concept of marginal cost it is not necessarily assumed that the marginal production must be the one at the extreme limit of advantage so that, for example, a very small decrease in price must bring a tendency to reduce the quantity offered by all the producers.

We suppose that all the producers reach a margin which is a region lying between the ultramarginal and the intramarginal productions.

With regard to one market we consider marginal for a concern the unit cost of the production at the highest cost when we consider a concern fixed at a point of increasing costs; and the average unit cost of the whole output of the concern when we consider a concern at the end of a successive curve which is not beyond the absolute economic dimension.

(1) As well, of course, as a function of the intramarginal phenomena. This analysis can be applied obviously to the monopoly case.

The margins of the individual producers can be different according to the varying efficiency of the concern corresponding to the different normal dimensions of the concern that, in our theoretical simplification, go from the minimum normal ability of the producer to the maximum normal ability (1).

We can therefore distinguish between the margin of the concern and the margin of the industry.

Marginal in respect of the industry is the concern or concerns which operate at a highest marginal cost.

But the margin of the production may derive not only from the production expenses, or in general from the expenditure of energy greater than for the other parts of the product, but also from the greater profits given up through the economic energies used in that given production, that cannot be used for others (2). Between these two categories of margin, there is a certain difference that can be called when necessary by another term. It is possible to call absolute margin of a concern or industry that which is so because the expenses or energies used are greater; and relative margin of a concern or industry that which is so because the best occupation for the producer, apart from the effective one, offers a greater profit (3).

Among the elements calculated in the cost of the producer are included his work and expenses (including those for risk (4) and the higher remuneration that he might obtain

(1) See our preceding treatment of normal firms.

(2) See Davenport's "Value and distribution" and "Economics of enterprise." Also Clark's *Economics of Overhead Costs*.

(3) Mauro Fasiani uses properly the terms "absolute" and "relative" margin. The meaning attributed to these terms in the present work however, is different from Fasiani's. See: Mauro Fasiani "Elementi per una teoria della durata del processo traslativo dell'imposta". *Giornale degli Economisti*, 1929, p. 692.

(4) We must remind here the distinction between risk and uncertainty. See: F. H. Knight, *loc. cit.* For the influence of risk and uncertainty in the economic life the reader may consult, profitably, among the others, Cassola's "Il rischio e l'organizzazione dell'industria moderna" (Napoli Sandron 1926) and Chessa's "La teoria economica del rischio e dell'assicurazione" (Padua 1929).

transferring part or all of his energies to other occupations).

When we speak of the margin we refer to the margin of all the margins, hence, to the production which is at a higher cost, including in the concept of cost all the elements possible: effective expenditures and profits and loss of profits as compared with the consumption of spared energies.

For example, a producer would not produce A with a profit of 10, if by producing B he earned a profit of 11. He could also estimate that to produce B he might be forced to a greater amount, or more arduous work than to produce A, preferring therefore to earn 10 by producing A than 11 in the production of B.

Contrarywise, he may prefer to increase his activity or use it in a more arduous field of work, preferring a profit of 11 by producing B than 10 in the production of A. On the whole, the minimum profit is more a question of a total minimum income than of a minimum rate. It is an overhead cost. The problem of the producer is whether by dedicating a part of his activity, or more often, by giving himself entirely to the production of a commodity, he can earn more or less than in another community, and with more or less efforts and work.

But one cannot affirm that the minimum profit of each producer, i. e., the one that we must include in the cost of production, is the greatest profit that he might earn in any other occupation. Because it may be that even with the possibility of earning more, the extra effort, etc., (or a lesser moral satisfaction, as in the case where he should go and work for others) would not be sufficiently compensated. But other conditions being equal, that would be the minimum profit.

In general, the producer must take into account a complexity of different elements (1). He will, in general, place a value on material and moral satisfaction, monetary expenses and waste of individual energies. From this valuation of different elements arises for each producer an estimate of the minimum profit below which it would be to his advantage

(1) See Davenport's "Value and Distribution".

to transfer his energies. This estimate may be different than the one he would form were he to consider only the profit that he would lose by not changing to some other occupation. It has been sometimes pointed out that a producer could, losing his individual independence and taking a position, say, as Assistant Manager of a more efficient business, earn more with the same or less effort, he might perhaps still prefer to remain where he is. (1).

In general, for the sake of theoretical simplicity, the minimum profit may be defined as the profit which includes any adequate compensation for the lost earnings from a more economic occupation, and a compensation for the harder work, loss of social standing, etc.

This will be enough for the present. Later on, the relation between relative and real cost and their relations to value will be taken up and discussed.

We must now pass on to the study of the second phenomenon of competition, (this one too, for the time being, limited to internal competition), according to which the equilibrium is stabilized in a field in which each producer thinks that all the other producers or part of them look more especially to their own immediate gains. Let us examine various different cases to see how the study of ultramarginal phenomena is equally as necessary as the marginal phenomena in order to determine the normal value of the commodities.

In the first case, let us suppose that two producers acting in the manner we have studied, should arrive at a position of equilibrium in which each one of them produces 750 units of a certain commodity.

Let us suppose that the ultramarginal production for each is an additional 250 units and that these can be produced at a unit cost equal to the marginal cost. In this case, in order to be in equilibrium, it is necessary that the ultramarginal utility (that is, the utility which would be marginal

(1) Among the numerous discussions on "minimum profit" see specially a limpid analysis in Gobbi's "Trattato di economia". Milan, 1919.

if the ultramarginal production were offered on the market) is less than the marginal utility so that the ultramarginal sales turn into a loss of profit.

In a first approximation, let us suppose that in order to have an economical ultramarginal production, the ultramarginal price must be at least equal to the ultramarginal utility. Let us suppose that the two producers are of the same efficiency, and that the marginal cost (since the two concerns are supposed equal in efficiency the marginal cost of every concern would in this case be equal to the marginal cost of the industry; and hence the ultramarginal cost of each concern would be equal to that of the industry) be 5 and the ultramarginal cost also 5. If the ultramarginal production is not economical (which always happens in a position of equilibrium) it means that by adding the ultramarginal production to the existing production, the price will fall to $5-x$.

Of course, in order that the decrease in the utility to $5-x$ make the ultramarginal production at a unit cost of 5 uneconomical, this decrease must not be an unappreciable quantity for the producer, otherwise there could be no equilibrium at that point, because the producers would take no account of the decrease in the utility. But if the ultramarginal utility, that is, of the last fractions of the total ultramarginal output of each producer (250 units) is $5-x$, it does not imply that the marginal utility of those goods must be equal to the marginal cost 5. The marginal utility can be $5, 5+x, 5+x+y$. What the distance may be between the marginal and the ultramarginal utility depends on the greater or lesser rapidity in the decrease of the curve of utility of the given goods, and of the greater or lesser size of the ultramarginal production in comparison with the size of the marketing field.

In that case, therefore, with a marginal cost of 5 and an ultramarginal cost of 5, the normal value or price of equilibrium might be 5 or $5+x$ or $5+y$, according to the marginal utility. If the marginal utility is $5+x+y$, this will be the price of equilibrium. The marginal cost of production therefore represents only the minimum equilibrium price possible. But the real equilibrium price, that is, the normal value, will be

a function of the marginal and ultramarginal costs and of the marginal and ultramarginal utility.

As, however, I have already noted (1), it is not enough in that case that the ultramarginal price (the one that would rule if the ultramarginal production was offered) be equal to the ultramarginal utility in order to make it advantageous for each producer to increase the production. The price cut, if it includes the units of goods previously sold at a higher price must be sufficiently compensated by the increase in sales.

If we suppose for example, that the units actually produced by the firm at a unit marginal cost of 5, are 750, and he obtained a unit price of $5+x$ with a total income of $750x$, the ultramarginal price, in order to be economical, should be such as to give him, besides the minimum remuneration for each unit of ultramarginal commodity, also the extra earnings of $750x$ that he is getting.

If, for example, the ultramarginal production (at a cost of 5 equal to the marginal cost of 5) is of another 200 units, the ultramarginal price 5 would not be economical, though equal to the ultramarginal cost of production, because the price 5 would not give the entrepreneur exact compensation for the new units plus the profits $750x$ for the preceding quantity produced.

If the two given producers, both of equal efficiency, were at a point of decreasing costs in equilibrium (and the cost decrease were appreciable, naturally, otherwise the case would practically be one of constant costs) it could be one of the cases of rational competition, more or less perfect, of which we have already spoken. But we can also imagine a different case of competition. Suppose for example that each producer consider that the policy of his rival is determined by the immediate profits and that each one of them produce at a marginal cost 5 and an ultramarginal cost $4+\frac{1}{2}$.

If in reality neither of the producers increased his sales,

(1) Cf. our discussion on the tendency to equilibrium of concerns with decreasing costs, and "Riflessioni etc." pp. 65, 66, 67.

and reduced the cost to $4\frac{1}{2}$, thinking only that his rival would be obliged to follow suit after his profits had declined with respect to the initial position to a marginal cost of 5, we will find ourselves in the presence of a case of more or less perfect rational competition.

But we can suppose that of the two producers who we supposed were of equal ability, neither one increase his sales, because he believes that even supposing that his competitor maintain fixed the quantity offered, knowing that he himself has no power to oblige the rival to yield ground, the decrease in the ultramarginal utility would be greater than the gain caused by the reduction of the unit cost and the increase in sales. If, in fact, the marginal cost was 5, and 6 the unit price of 200 units produced, and the ultramarginal price for a total production of 300 added to the actual production of the rival producer were 5, with $4\frac{1}{2}$ as ultramarginal cost (which would be the unit cost for the total production, according to our concept of marginal cost for decreasing costs) each producer who, on the one hand, increased the production would lose on the units already produced the unit net profit 1 for a total of 200 units, and on the other hand, would gain a net profit of $\frac{1}{2}$ on all the 300 units produced by the reduction in cost to $4\frac{1}{2}$ with a total gain of $\frac{1}{2}300=150$ less than the net gain previously earned.

It is possible to imagine that of the two producers neither one would find any advantage in extending his trade, even if he thought it possible, rightly or wrongly, to exclude his competitor from the market.

Other conditions being equal, in order to have these results, we should have a greater ultramarginal production than in the first case, or a more rapidly decreasing utility curve, or a curve of slower decreasing cost, or all these phenomena together. In other terms, it would happen that the ultramarginal production of each producer would be such that even by substituting the activity of the rival producer, the reduction in ultramarginal utility would not be compensated by the decrease in cost and increase in trade.

Suppose now, that the two producers are of different efficiency, so that one of them produce at a marginal cost of 4

and the other at a marginal cost of 5. The marginal cost of the industry is 5. We can make different hypotheses. We may suppose, for example, that both Primus and Secundus are at a point of decreasing costs (different points since the efficiency of the two concerns is different) when the phenomenon would be very similar to the case already shown, or that only one of them be at a point of decreasing costs. For example, it might be supposed that Primus, more efficient than Secundus, has reached the point of minimum cost, while Secundus has not been able to reach it.

In this case Secundus could for example, by increasing his trade, reduce his cost to 5-X but he could never hope to exclude Primus from the market as he must consider that the quantity produced by Primus, when he himself must increase his trade, would not decrease (1).

We can also suppose that the second producer has reached this absolute economic dimension, which is by far inferior to Primus's absolute economic dimension, who must remain at a terminal point of a curve preceding the point of minimum cost; and notwithstanding this, Primus produces at an equal or inferior cost to Secundus. This is because the ultramarginal production would be such that even by excluding Secundus from the market, the profits of Primus would decrease (2). To this can be applied the reasons already given.

And, obviously, the results can be extended to cases with a larger number of producers, until the conditions become those of perfect competition.

It may also happen that with a number relatively not too great of producers on the market, so that the ultramarginal production causes a noticeable decrease in utility, the producers may be in equilibrium at points of increasing costs. In this case the distance between the marginal cost of production and the equilibrium price may be greater, other conditions being

(1) See my book "Riflessioni etc.". Reggio Cal. 1926, pag. 65-70.

(2) A particular example of this kind is given by Prof. Cabiati in an interesting paper "Sull'influenza della elasticità della domanda nella produttiva crescente" in the *Giornale degli Economisti*, April 1980.

equal, when the marginal utility allows it. In this case the equilibrium could be determined only as a function of marginal phenomena, since the ultramarginal phenomena equally determine the position of the equilibrium.

The normal value, or equilibrium price will be stabilized as a function of the marginal and ultramarginal costs, and of the marginal and ultramarginal utility.

Up to the present we have presupposed that the ultramarginal production consists of one of the successive curves derived from an enlargement in size of a firm, and we have considered its possible consequences on demand.

However, we may remember, as we have already said, how it may happen that there be an ultramarginal production in which the producer uses the plants already operating beyond the point which gives the minimum cost, and produces a quantity of ultramarginal production which, though an appreciable quantity in itself, does not influence the price appreciably, even in the case in which there are not many producers. But in this case this ultramarginal production can really be non-economic only if the ultramarginal cost is superior to the marginal cost and the price. And this difference would not be inappreciable, otherwise it would not be taken into account by the producer, and no equilibrium would be possible at that point.

In the case therefore where the cost of ultramarginal production refers to a production of this sort, the equilibrium price would be fixed as a function of the marginal cost and of the ultramarginal production cost in harmony with the marginal utility. The equilibrium would be determined at one of the points which, beginning with the marginal cost, would go to the point of ultramarginal cost, in harmony with the marginal utility.

Let us now refer to a case of producers so numerous as to reach the conditions which Cournot calls "unlimited competition". This is a case in which the effects of competition have reached their limit, that is when the output of one producer is inappreciable in reference to the total output, so that the output of one producer could be subtracted from the total output without any appreciable variation resulting in the price

of the commodity" (1). Cournot noticed the fact that when the costs at which a commodity is produced are decreasing, nothing would limit the production of that commodity if there is unlimited competition.

The same can be said, and with the same reasons, in my opinion, of constant costs. And it is hard to understand the contradiction existing in the concept of neutral equilibrium.

Amoroso says: "... in the intermediate case, in which the costs are constant..... an increase or a decrease in production entails no changes in the system of prices, the equilibrium is indifferent". (2).

"A system" says Pigou "is in stable equilibrium if, when any small disturbance takes place, forces come into play to re-establish the initial position; it is neutral equilibrium if, when such a disturbance takes place, no re-establishing forces, but also no further disturbing forces are evoked, so that the system remains at rest in the position to which it has been moved" (3).

In this concept of neutral or indifferent, equilibrium, it is supposed that the costs are constant, and that the price is constant in respect to the quantity produced by an individual firm. If, in fact, the price being equal to the marginal cost, the demand price was not constant, but was decreasing with an increased production on the part of the individual firms, the equilibrium would be stable.

In fact, taking an equilibrium for granted if the production is temporarily increased, the reduction in price will provoke the return to equilibrium. But let us suppose now a position of neutral equilibrium. Supposing that the marginal cost of industry is 5, and 5 also the ultramarginal cost, and that the price remains practically unchanged for the individual firm if the actual production was increased to include the

(1) Cournot "Researches into the mathematical principles of the theory of wealth". Translated by Nathaniel T. Bacon with a bibliography of mathematical economics by Irving Fisher, New York, The Macmillan Company 1897.

(2) Amoroso's "Lezioni di economia matematica", vol. 1, p. 187.

(3) See Pigou's "An Analysis of Supply", pag. 244.

ultramarginal production. In other terms, to the marginal cost, equal to the ultramarginal cost, would correspond a marginal price equal to the ultramarginal cost.

At that point of the equilibrium, the economists would say, if the production is increased, there will be no tendency to return to the initial position, nor will any change take place in the system of prices.

But it is absurd to call a position of this kind equilibrium. If the relations between cost and price are equal in the marginal as well as in the ultramarginal productions, there is no reason for the equilibrium of whatever kind, nor any limit to an increase in production.

In other terms, if the price must at least be equal (by hypothesis, since we are in equilibrium) to the marginal cost of production, and at the same time, at least equal to the ultramarginal cost (by hypothesis, since demand price and cost are supposed constant), this presumed ultramarginal cost which should be non-economical is not so, but is an economical cost of a production that there is no reason to leave in a potential state (1).

If therefore there can be no equilibrium in the case of unlimited competition when the costs are constant, the concept of equilibrium must be restricted only to the case of increasing costs.

This means that the industry will not be in equilibrium unless it be at a point of increasing costs, and that no individual firm will be in equilibrium if it is not at a point of increasing costs. In this case the ultramarginal production is non-economical because of the increase in the unit cost.

But this increase in costs must not be inappreciable for the entrepreneur, otherwise he would find an advantage in an

(1) Theoretically, and only theoretically, one might say that the decrease in the marginal utility of money could produce an equilibrium of the type the economists call neutral. But that is not the meaning of the economists who use this concept. On the other hand, if this did happen, it would not be a case of neutral equilibrium any more, but of stable equilibrium, since any small disturbance under these conditions would be followed by a tendency to return to the original position.

ultramarginal production as well as in a marginal production. (1). In fact, if the ultramarginal cost is greater than the marginal cost by an amount which to the producer is negligible, he will consider the marginal and ultramarginal costs as two equal entities, and the position will be the same as the one we have already seen for constant costs.

If therefore this increase in costs must be an appreciable quantity in order to have equilibrium, there will be, between marginal and ultramarginal costs, a certain difference which will allow the normal value to be greater than the marginal cost in a situation of equilibrium if the marginal utility of the commodity allow it.

If, in fact, the marginal cost is 4, and the ultramarginal cost is $4+x$, the normal value can be 4, $4+\frac{1}{4}x$, $4+\frac{1}{2}x$, $4+\frac{3}{4}x$, etc., according to a marginal utility 4, $4+\frac{1}{4}x$, $4+\frac{1}{2}x$, $4+\frac{3}{4}x$, etc., up to a height of $4+x$ (or $4+x-y$, where y is negligible as regards x , and each producer considers $4+x-y = 4+x$) at which point only there would be no equilibrium because the ultramarginal production would tend to become marginal.

In cases then of unlimited competition, the normal value will be determined as a function of the marginal cost and of the ultramarginal cost in harmony with the marginal utility.

(1) Prof. Amoroso, in a review of my book "Riflessioni sull'equilibrio economico" in the *Giornale degli Economisti*, 1929, p. 315, says: "If I have well understood the difference between marginal and ultramarginal cost, according to the author (the present writer), it is the following: marginal cost is the unit cost of the particle produced, ultramarginal cost is the unit cost of the particle immediately following. The first is to the left, the second to the right of the point in which the production stops. If this is so, marginal and ultramarginal costs theoretically coincide when, as is implied in the definition, it is supposed that the two particles, at the right and left, respectively of the stopping point, are infinitely small". To which I must reply that in my definition of ultramarginal cost, I have never presupposed an infinitesimal increase of production. This is clearly seen in all the pages of my book. Besides, if the ultramarginal cost were theoretically equal to the marginal cost, and the demand price remained constant, there could be no equilibrium.

CHAP. X.

External Competition

Let us now briefly study the case of external competition in which only one producer is on the market, and the competition can come from new producers only. In this case, as we have already shown, the producer cannot reach Cournot's point (otherwise it would be a case of monopoly), on account of the ultramarginal competition, which does not allow it.

Here also the solution depends on the opinion which the producer has of the eventual movements of the ultramarginal producers.

If the producer should think that his competitors follow the principle of immediate gains, he will behave accordingly; if instead, he should think that his eventual competitors look further ahead, and consider the ultimate effects of their movements, he will behave in a different way. In the first case, he will fix the quantity offered and the price, in such a way that the ultramarginal producer though imagining the quantity produced by the actual producer fixed, would not think it convenient to become an actual producer himself. In this case the price of equilibrium will become stable at a point which will be a function of the marginal cost and marginal utility, and of the ultramarginal cost and ultramarginal utility (1).

(1) The ultramarginal utility naturally will be of more importance if the ultramarginal production is such as to cause a sensible decrease in utility, such that the marginal utility will be greater than the ultramarginal. If instead, the external ultramarginal production is such as

Let us take now, for example, a market Y and producer A who must face only the external ultramarginal competition.

Producer B might eventually appear on the market if the ultramarginal price was 5, since 5 is its cost. Naturally if A does not produce at a cost higher than B, and thinks that B operates for immediate gains, he will fix the quantity offered and the price at a point where, if the ultramarginal production be added, the price would be $5 \cdot x$ (x being an appreciable quantity).

In this case of a single producer, the decrease in utility from the marginal to the ultramarginal external point is always an appreciable quantity.

If the ultramarginal producer B must bear a higher cost than the actual producer A, he will be driven out of the market Y if he operate with a view to his own immediate profit. Hence, if he operate with an eye to the direct and indirect effects of his own actions, he would not decide his move only in that given moment on account of the price nor of the quantity offered by A. He would observe the demand curve for the given commodity, the efficiency, the eventual convenience, and capacity for development of A, as compared with those of his own concern.

Suppose now that A, believing that B acts with a consideration of the effects of his own operations, fixes the price

to have only an inappreciable influence on the price, we can then consider only the influence of the marginal production, as in the case of external unlimited competition. But this will in no wise signify that, in effect, the ultramarginal utility will not have any influence in determining the equilibrium which may be fixed at that point because the ultramarginal utility has the special requisites of being equal to the marginal utility.

The same happens in the case of ultramarginal cost. If it is equal to the marginal cost, this does not signify indeed that the ultramarginal cost does not really have an influence on determining the equilibrium, which may also be fixed at that point because the said ultramarginal cost presents the special requisites of equality with the marginal cost.

But it is evident, also as regards all we have said above, that the ultramarginal cost or utility or both of them, must differ from the marginal cost or utility, otherwise there would be no equilibrium.

and the output at a point where if B look after his own immediate gains only, he will enter into competition with A.

Suppose that B is mistaken and enters the market. A increases the production if he is more efficient than B and frees himself from B who is thereby forced to withdraw. But the thing is not as simple as it seems at first sight. The struggle between A and B will mean a destruction of income for both, and it is not sure that A will withdraw immediately. The struggle, unless A decides immediately to come to an explicit and tacit agreement with B, may be prolonged. B may even operate for many years with a profit below what would be a minimum profit for a man of his ability. The application of capital to fixed uses, which cannot be transformed without heavy losses, might suggest to him the advisability of using this depreciated capital to the best of his ability. He could moreover immediately adapt himself to reduce profits even if at first he had thought that his ability deserved a greater compensation, or even if he had lost an opportunity for profits lower than those expected in X but greater than those actually realized. And that is why A may act in the same way as the ultramarginal producer B were he following a policy of immediate gains.

Naturally, if capital could flow from one use to another without any appreciable interval of time and without transformation expenses, this phenomenon would be different. If there should be no place for B on the market, he would be rapidly driven out and would not be inclined to come back to compete again with A. In this case A would take the risk of the coming of the ultramarginal producer.

And as the latter would not come, A would modify his opinion of the rival's policy. This means that if there were a free and costless transformation of economic resources from one employment to another, a very small period of time would be sufficient to give to individuals a complete knowledge of the economic phenomena thus making a rational policy possible for all.

But in this case, too, supposing that A should not only keep one ultramarginal producer out of the market, but a

given number of them, the case could be different and, in any case, more complex.

However, the concrete phenomenon is not so simple, as we have seen, and it is possible that A will not consider it convenient to run the risk of an error on the part of B if this were harmful to both of them, even though in a different degree.

But it may also be that the difference in efficiency between A and B (if B is the only potential producer to worry about) are such as to make it easy for A to drive B off the market, in which case A will be in a condition of monopoly and will work toward the good of maximum gain.

But, even supposing that the transformation of capital is expensive, as we know that B in his turn would not act in view of the immediate gain, but would consider the effects that his movements would have, A would similarly act as a monopolist knowing the effects of his moves on the ultramarginal rivals.

But in this case it may happen, too, that the ultramarginal producer has a real opportunity to enter the market if the output of A is limited to a certain amount, because he would bring on the market a far greater output at a lower cost, and would take advantage of the time necessary for A to enlarge his business.

In a similar case, even acting rationally, it would be convenient for A to choose a price under the monopoly price.

CHAP. XI.

Complex Competition

Let us now pass on to an examination of the phenomenon of complex competition. So far we have studied a case in which the producers, in a determination of the equilibrium, had no need to worry about any external ultramarginal competition, and a case in which the only producer on the market had to consider the external competition only. We must now examine a case in which the producers operating on a market must think of either the internal or the external ultramarginal competition.

To begin with the case of two producers. Let us see their psychology and that of the ultramarginal producers.

Let us suppose that both producers know the direct and indirect consequences of their movements, and act rationally. But it is not enough that they act rationally between themselves; they must also act rationally with regard to the ultramarginal producers.

Supposing that the two or more (a few) existing producers were rational and that they consider the ultramarginal producers rational, they would not always act as in the parallel case of internal competition.

The case could be more complex. In fact, if they fix a price that will give them the highest net profit, the ultramarginal producer could enter the market, whereas if they follow a different policy, the ultramarginal producer may not find it convenient to come in and compete with them.

Suppose that two producers, A and B, produce a commodity X on the market Y. If they can act rationally without fear of

any potential competition, the price will be fixed at that point which will give them the maximum net profit, for example, 100 for each.

But suppose that the potential producer C were able in that case to come on the market with a notably larger production and a very sensibly lower unit cost, taking advantage of the time necessary for A and B — in order that they might enlarge their business — to get the upper hand on the actual producers (whilst he could not do so if they followed a different policy). A rational policy in this case would require that A and B find a point of equilibrium below the point that would give them the maximum profit, independently of the premarginal producer. And the equilibrium point should be such that the ultramarginal producers could not find it convenient to enter their market.

Naturally in this case, unless that equilibrium point be the same that they would have reached following a policy of immediate gain, it is still more unlikely than in the case of internal competition that two producers could really reach that point without coming to an agreement, though it does not make it impossible that with an adequate knowledge and a certain psychology on the part of A and B this could happen.

However, if the producers agree only to fix the price at the most economic point for them, it is nothing else than a means to attain the results of a rational competition, and the results of a combined rational competition are no different from the individual rational competition (provided the agreement does not go beyond fixing the price and quantity offered on the basis referred).

When therefore the producers follow a rational policy of this kind, the equilibrium price will be fixed as a function of the marginal cost and marginal utility, and of the ultramarginal cost and ultramarginal utility, either internal or external, as the case may be.

An increase of the production beyond the point which would be that of maximum profits if there were no ultramarginal competition in sight, is considered convenient because it prevents a much feared extension of the production: that due to the appearance of the new producer.

As in the case of internal competition, if the transfer of economic resources could be effected instantaneously, the phenomenon would be different. In fact, if the actual producers could enlarge their production at the same moment, should they find it convenient to do so, no ultramarginal producer in the cases above mentioned would enter the market, and A would act accordingly.

And naturally, if the ultramarginal producer had no opportunity to enter the market, notwithstanding the possible difference in time necessary for the actual producers to follow suit, the price would be fixed as in the case of internal competition.

An intermediate state between the perfect rational competition and the competition in which every producer acts in view of the fact that actual and potential rivals (where there are some) follow their immediate gain, is that in which the actual producers know that each of them acts rationally but think differently than their ultramarginal rivals.

In this case, if the movements of economic resources could be instantaneous, the phenomenon would be different. But in cases of internal competition, as we have already pointed out when treating that problem, the tendency of the phenomenon is not always the same as in the case of external or complex competition.

In both these last cases it is not enough to suppose that the actual producers (or producer) could instantly enlarge their business at the very moment they wish it, in order to conclude that the price would be that of maximum gain in the shape of a monopoly price.

In fact, in case of internal competition, when one producer enlarges his business, if the other can follow suit at the same moment, everyone would leave the initiative of enlarging the business to the others, because if he himself does this before the others, the result will be a loss to him.

In case of complex (or external) competition, the problem would not be the same, unless we introduce the further condition that the new enterprise could retire with the same rapidity. But suppose that an increase in production can be effected more easily than a decrease because of the applied

fixed capitals, the coming of a new producer or producers could be, under certain conditions, considered harmful if it reduced the profits of the actual producers for a certain period, after which perhaps the danger to other ultramarginal producers would appear.

So that if this were judged convenient, they could fix a price which would protect them from a shortsighted policy on the part of the ultramarginal producers, unless during some dynamic adjustment they had occasion to change their opinion of the intramarginal producers' policy.

But it is still possible to add that even supposing the ultramarginal concerns can retire as rapidly as they appear, the equilibrium price could be below the maximum gain of internal competition. If the actual producers think that the ultramarginal producers look to their immediate gain and though they would retire rapidly after a very short period, they are so numerous that their coming on the market would be nearly continuous, the actual producers might find it convenient to prevent the ultramarginal ones from coming in, and if nothing happened to change their opinion about the latter's rival policy, an equilibrium price below that which would give a maximum profit in the case of internal competition, would be permanent.

If all the actual producers think that all the competitors (actual and potential) follow the policy of immediate gain, and everyone could enlarge his business at the same moment if he judge it convenient to do so, no one would be afraid of the enlargement of the business of the actual rivals, but they could, under given conditions, be afraid of the coming of ultramarginal producers which could be followed by a general enlargement of business.

As the number of producers increases, it becomes more difficult to have a perfectly rational competition as we have seen in the case of internal competition. For before the case is reached in which the producers are so many that the production of an individual producer is negligible in respect to the output of the industry as a whole, the phenomenon is practically impossible, as in the similar case of internal competition. Here, too, the result of a perfectly rational competi-

can be reached with the fixing of the price and output of the individual concern by means of an agreement between the various producers. If the agreement is limited to bring about the price of equilibrium produced through a perfectly rational competitive process, it is nothing but a means to carry into effect a form of competition, and the difference between a case in which the equilibrium price reached that level by a rational individual policy and a case in which these same results are reached through a combined rational policy, is only a difference in the exterior form of the phenomena.

In the last analysis, the agreement between the various producers is useful because each one of them helps the others to know what theoretically is often supposed they should know: — that is, the internal conditions of the rival concerns, their capacity of development, etc., and assures them concerning his own policy, being in his turn paid with the assurance that the rivals follow the rational policy of those who know full well the effects of their own actions and the trend of operations of their rivals.

In the case of many producers, too, the rational process of complex competition could logically differ from the case of internal competition. In the case of two producers, as well as in the case of many, the ultramarginal competition can reduce, even to a great degree, the profits of the several producers, and it could happen that their ultimate rational policy was equal to that of the producers who produced as many more goods as possible, each one independently of the others.

But this last case can happen for other reasons in both cases of internal and complex competition.

That is, either if the producers follow a policy in which they keep a strict and exact account of the effect of their operations, or if they start from the premise that the actual competitors are working in view of their immediate gains, the point of equilibrium of the concerns is at the point of minimum cost, that is, at the absolute economic size. Here, too, the equilibrium price will be fixed in function of the marginal and ultramarginal elements of the phenomenon.

If instead, it were not convenient for the producers to come to the point of minimum cost because their profits would

be smaller, then notwithstanding the reduced cost, the question becomes more complicated.

At this point we must add that two types of rational competition can be imagined. If it is supposed that in a field there is room for all the producers who can produce a certain reduced quantity of goods according to certain calculations, we may suppose that if a new producer find the price and policy of the others convenient, he will not cause any reaction. In this case however, the number of producers could increase to a point at which it would suit a certain class of producers to follow the policy of immediate gains. If, instead, we imagine that rational competition must be developed among those producers who have a place in the industry, even when they all act in view of immediate profits, then the case is different.

In this case, within certain limits, the ultramarginal output, to be non-economic, should be produced at a minimum cost which would be greater than the price if each producer follow the policy of his own immediate gains.

If the actual producers think that the danger of an ultramarginal competitor is serious, they will try to find a way to keep him out of the market, unless the output of the new producer is negligible in respect to the total output (and he adapts himself to the policy of the others).

For if the producers act independently of each other they will not have to modify their own opinion of the policy of their adversaries, neither will they be urged to increase their trade as a reaction to changes in the price. If they all are combined within the above said limits they may perhaps think that a struggle to remove a competitor who does no harm to anyone would be at a cost greater than the gain they would derive thereby.

If however the first new producer is followed by a second, and a third, it will not be long before the effects on the price will make themselves felt, and then all or some producers (these latter followed necessarily by all the others) would consider it more convenient to follow the policy of immediate gain so that the last producers would end by being again driven out of the market. In all these case the equili-

brium price must be a function of the marginal and ultramarginal phenomena in different ways, according to the psychology of the producers.

We have already seen how in the case of few producers it may happen, and in the case of many producers it does happen, unless there is a case of rational collective competition, that each producer acts on the understanding that the others watch especially after their own immediate profits or at least that they act considering that their rivals (all or an appreciable part of them) look or will look to their immediate gains.

Following what has been said regarding internal and external competition, it is easy to state briefly the case of complex competition.

Let us first take the case of two (or a few) producers, each one of whom, thinking that the rival's policy is that of immediate gain, will act so that the equilibrium will automatically stabilize at a point in which the internal and external ultramarginal costs are both non-economical. If the internal ultramarginal cost is more economic than the marginal, the limit of the equilibrium value is shown by the point in which the internal ultramarginal cost becomes economic (1); if the external ultramarginal cost is more economic, this is the one that marks the limit of the value of equilibrium (2).

If the first case takes place it means, as we have already said, that either the ultramarginal internal (3) production entails a cut in the price that cannot be made up by a greater extension of trade (even when joined to a reduction in cost) or that the reduction in price together with an increase in cost makes an increase in production non-economic. In this case the normal value will be at any point between the marginal

(1) The same limit which we have seen in the case of internal competition.

(2) A limit different from that of internal competition.

(3) Of course this uneconomicity is verified in this case in a greater measure for the external ultramarginal cost. But we are examining the internal one which sets a limit to the equilibrium. The contrary phenomena of course happens in the second case.

cost of production and a point beyond which the ultramarginal internal production would become economic; and will be a function of the marginal and internal ultramarginal cost, and marginal and internal ultramarginal utility (the marginal utility of the internal ultramarginal production, as distinct from the external, because the two quantities of productions, though referring to the same goods, are yet different entities). If the second case take place, the conclusions are analogous.

The external ultramarginal cost must be non-economical in order to have equilibrium. Either because the reduction in price, alone, caused by the ultramarginal concern makes the ultramarginal price inferior to the ultramarginal cost, or because the ultramarginal cost, greater than the marginal cost, together with a cut in the price, makes the external ultramarginal cost greater than the external ultramarginal price.

In the case of a few producers one can always suppose that a new concern entering the market would reduce the price; that is, that the ultramarginal utility would be sensibly inferior to the marginal.

In this case, the ultramarginal cost can be less than, equal to, or greater than the marginal.

If it is less, a marked decrease in utility from the terminal point of effective production to the terminal point of ultramarginal production must make the ultramarginal production non-economic.

Let us suppose that the marginal cost be 5 and the ultramarginal cost 4, (1). This means that by increasing the production through the appearance of the new concern, the price would fall to $4-x$.

Now if the ultramarginal price is $4-x$, it does not mean that the marginal utility of the production must absolutely be 5 equal to the marginal cost (it cannot, by hypothesis, be less, since we suppose that there is equilibrium).

If in fact the utility of the last fractions of the total ultramarginal production is $4-x$, and the marginal utility must be

(1) Supposing obviously that the decrease in unit cost would be general for all producers.

at least 5, this is only the minimum height of the marginal utility, which can be 5 as well as $5+x$, $5+x+y$, etc. And as long as the ultramarginal utility does not rise to 4, making the ultramarginal cost of production 4 economic, the equilibrium will not be disturbed on that side.

The marginal cost of production, as in all the cases we have seen so far, represents only the minimum equilibrium price possible.

Supposing now that the external ultramarginal price be equal to the marginal; that for example, the marginal cost be 5 and the ultramarginal cost 5. This ultramarginal cost must be non-economic in a position of equilibrium. This means that by an increase in production through the appearance of the new concern, the price would fall to $5-x$ (1). Also here, if the utility of the last fraction of ultramarginal production is $5-x$, it does not signify that the marginal utility could only be 5; it might be 5, $5+x$, $5+x+y$, as the case may be. And here too, the equilibrium price would be 5, $5+x$, $5+x+y$, etc.

Also in these cases then, the normal value or equilibrium price can be any, according to the marginal utility, of the points that go from the minimum price equal to the marginal cost of production, to a maximum point beyond which the ultramarginal cost would become economic.

Referring always to the case of few producers, let us now consider the case in which the external ultramarginal cost is greater than the marginal cost.

Supposing for example that the marginal cost is 5 and the external ultramarginal cost is 6 (2); in an examination, even superficial, it is seen, first of all, that if the price of the commodity under consideration is not less than 5 and is below 6, the production tends neither to increase nor decrease; that is, it will be in a position of equilibrium. Proceeding along in our analysis, it will appear that when the price is equal to 6,

(1) As in the preceding case x is an appreciable quantity.

(2) It will be remembered that we have supposed the external ultramarginal cost to be more economic than the internal, after having considered the opposite case.

we shall be in a position of equilibrium, in the case under review.

If in fact the marginal utility of the commodity produced is exactly 6, it does not mean that the ultramarginal cost 6 is economic. The marginal utility being 6 only means that if the ultramarginal cost 6 at that moment is the cost of marginal production, it would be remunerative. As a matter of fact, in order that the ultramarginal production be at that cost it is necessary to produce a quantity of goods such as to render economic the production arriving at the limit point of one of the successive curves.

Now if the marginal utility is 6 for a production of 200, it will, other conditions being equal, be inferior to 6 for a greater turnover, say 300 (100 being the least quantity producible by the ultramarginal concern). We will see then that the new amount of production, corresponding to the ultramarginal production, will cause a decrease from the price 6 to $6-x$ which would render the new production non-compensated, since 6 is the normal minimum price for the ultramarginal production. As in the preceding cases, it is also possible here that the ultramarginal cost (in this case greater than the marginal cost) may be less than the marginal utility and the price.

So if the utility of the last fractions produced by the ultramarginal production is $6-x$, the marginal cost being only 5 and the ultramarginal cost 6, the marginal utility may be 5, $5+\frac{1}{2}$, 6, $6+x$, etc. The reduction in price in question presents a different aspect in the economical mechanism.

The number of enterprises, their size in respect to the enlargement of the marketing zone or of the market considered, the possibility of life of small concerns alongside of the large ones, the ratio at which the utility diminishes, the special technique of the several industries, etc., are all elements that influence the determination of the phenomenon.

In industries such as agriculture, for example, in which the small concerns can live and prosper alongside of the large ones, the decrease in utility from the terminal point of the existing production to the terminal point of ultramarginal production, is smaller, other conditions being equal (supposing

the ultramarginal concern is small), than in the case in which only large concerns find it convenient to operate (1).

We now come to a case in which there are many producers and in which, albeit without reaching the abstract case where the output of a producer is negligible in respect of the output of the industry, each one of the existing producers finds himself always in such a condition that it will be economic for him to increase the business until he reaches a point of increasing costs. Which means that if there is room on the market for his own concern, each producer will find himself in a situation in which every increase of production, notwithstanding its being accompanied by a cut in price, will be convenient, up to a point in which the costs will increase.

In this case, in which competition is developed so completely, by hypothesis, the internal ultramarginal cost must be greater than the marginal. If it were smaller or equal (or greater by a negligible quantity), there would be no equilibrium.

If therefore the internal ultramarginal cost was the nearest to the marginal production and marked the limits of equilibrium, the equilibrium price could be, according to the analysis made so far, any one of the points going from the marginal cost up to the point in which the ultramarginal cost became economical.

But let us imagine that the external ultramarginal cost be the most economical. Let us suppose, too, that an ultramarginal concern caused a sensible decrease in price but not sufficient to make by itself the ultramarginal production non-economic when accompanied by a reduction in cost (2); so that the ultramarginal concern could produce at an equal or greater cost than the marginal cost. If it produce at an equal cost, to be uneconomical means that the minimum quantity necessary for the producer to produce at that given cost is such that, when thrown on the market, it will cause a sensible reduction in the price.

(1) Da Empoli "Riflessioni etc.," pag. 53 and seq.

(2) See the preceding analysis.

If, for example, the marginal cost is 4, and the ultramarginal cost is 4, since the ultramarginal cost is non-economic, it means that the ultramarginal utility is $4-x$. Now the utility of the last fractions of goods produced by the new concern is $4-x$, which does not mean that the marginal utility of the existing production must absolutely be 4 (by hypothesis it cannot be inferior to 4 since 4 is the marginal cost). The marginal utility can be 4, or $4+x$, $4+x+y$, 5, etc. The equilibrium will therefore be, according to the marginal utility, at one of the points going from the marginal cost up to the highest point, beyond which the ultramarginal production would become economic.

The equilibrium price will therefore be here also a function of the marginal and ultramarginal cost, and marginal and ultramarginal utility. If the ultramarginal concern produces at a greater cost than the marginal, and if it has for example a marginal cost of $4\frac{1}{2}$ and an ultramarginal cost of 5, one will see at first sight that the equilibrium price could be, according to the marginal utility, any one of the points between $4+\frac{1}{2}$ inclusive and 5, exclusive.

Moreover, since we have supposed that the ultramarginal quantity of production caused a sensible reduction in price, we will also see that, $5-x$ being the ultramarginal utility, the marginal utility can be 4, $4+\frac{1}{2}$, 5, $5+x$, $5+x+y$, etc.

In this case, as in the preceding ones, the equilibrium price will be determined as a function of the marginal and ultramarginal cost, and marginal and ultramarginal utility.

Let us now see the limit case of unlimited competition (1), in which the quantity produced by an individual concern is negligible in respect to the output of the industry as a whole.

In this case the ultramarginal cost, whether internal or external, must be greater than the marginal, which means that the individual concern as well as the industry as a whole is at a point of increasing costs.

If the internal ultramarginal cost is the most economic

(1) Somewhat similar for internal ultramarginal production to the case just seen.

one, this will be the limit for the equilibrium price; as we have stated in a similar case, the increase in costs must be appreciable otherwise the production would be increased (since we suppose that the demand price remains unchanged or decreases inappreciably). In this case there must be a sensible difference between marginal and ultramarginal cost, and the equilibrium price will be, according to the marginal utility, at one of the points going from the marginal cost up to a point at which the ultramarginal production would be economic.

If the external ultramarginal cost is the most economic, the phenomenon is equally clear. In order that the ultramarginal cost be not economic, when the demand price supposedly is practically unchanged for the ultramarginal production, the ultramarginal cost must be greater than the marginal, otherwise it would be sufficiently remunerated and there could be no equilibrium at that point.

If for example the marginal cost is 4 and the ultramarginal $4\frac{1}{2}$, the equilibrium price may be one of the points going from the marginal cost to the ultramarginal cost, according to the marginal utility.

And as long as the marginal utility is not $4+\frac{1}{2}$, the equilibrium remains.

The ultramarginal utility affects the phenomenon, presenting the special requisites of equalization with the marginal utility (since the difference is considered inappreciable). Hence also in the case of unlimited complex competition, the normal value or equilibrium price is a function of the marginal and ultramarginal cost and marginal and ultramarginal utility (1).

(1) In a theoretical case of positive demand in which the effective demand would increase with an increase in price, there would be equilibrium if the increased price that consumers (actual or potential) would be willing to pay, were inferior to the increase in cost required for a larger amount of production. The equilibrium price would be a function of marginal and ultramarginal elements.

Appendix

After publishing my book: "Riflessioni sull'Equilibrio Economico" (1926) (in which I already showed, though very briefly, that the normal price is a function of the marginal and ultramarginal cost and of the marginal and ultramarginal utility) one of the most distinguished among contemporary mathematical Economists, Professor Amoroso, in his recent "Curva Statica dell'Offerta" (Giornale degli Economisti, January 1930), attempts to give us a formula which should substitute Ricardo's formula (tendency of the price towards marginal cost). Amoroso argues: "Ricardo's formula is ... inadequate to represent the facts of modern industrial concentration. This deficiency explains the attempts which have been made of late, especially in England (by Marshall, Pigou, etc.,) to extend in the abstract the Ricardian scheme in order to embrace the new facts".

"It does not seem to me", Amoroso continues, "that we can say that these attempts have been successful. The reason for this is to be found, in my opinion, in the fact that no one has tried to overcome the difficulty in its origin, eliminating the hypothesis (which no longer corresponds to reality) that each firm acts as if the output that it throws on the market does not influence the price".

We have already seen in preceding discussions how Amoroso's remarks, limited to modern industrial phenomena, are not exact. On the other hand, the difficulty of which he speaks had already been overcome in my book.

I had then already assumed that the output of an individual firm influences the price (2).

(1) Reggio Calabria, Vitalone.

(2) I did not consider the limit case of unlimited competition which would have made my treatment more complete.

The formula which according to Amoroso should be substituted to Ricardo's is the following: "For every individual firm the percentage of divergence between the price and the marginal cost is directly proportional to the quotient between the output of the firm and the output of the industry as a whole, and inversely proportional to the elasticity of demand (1)".

After all our discussions on value, we do not need to discuss at length Amoroso's formula (2) in order to see the errors which it contains. Amoroso's formula, which claims to be nearer the concrete, assumes a constant coefficient of production among different firms leading us away from the concrete.

But what interests us still more, is that he does not take into account the ultramarginal phenomena — as I have done in my book "Riflessioni, etc".

The inadequacy of Amoroso's formula could seem less striking if applied to Cournot's case of "limited competition" only (3).

But even in this case his formula is completely inadequate, as it will be obvious for whoever has followed our preceding analysis.

(1) Amoroso, loc. cit.

(2) Prof. Amoroso's claim is to embrace all the possible cases from Ricardo's unlimited competition to Cournot's case of monopoly.

(3) That is, if applied to those cases that Amoroso considers, as we have seen, of monopoly.

CHAP. XII,

Equilibrium of Markets and Industries

So far we have considered the various cases of competition regarding isolated markets. We can now imagine that the case of simple external competition refers not only to one market but to several, that is, in which the transportation expenses between trading points, or groups of trading points, is such as to allow differences in the unit price of the same commodity.

And here we must remember Cournot's words, that "by cost of transportation must be understood, not only the price of necessaries and the wages of the agents by whom the transportation is mechanically carried on, but also insurance premiums and the profits of the merchant who ought to obtain in his business the interest on the capital employed and a proper return for his industry" (1).

In case of internal competition, if in a marketing field consisting of different markets, one supposes that the reciprocal position of the various producers is equal in the different markets, the difference in price between the trading points of the various markets will amount to not more than the cost of transportation. It may however amount to less if the producers consider a discrimination of prices convenient.

If one supposes that the various producers are so situated that the aspect of the competitive phenomenon differs between market and market, the equilibrium will be stabilized for each individual market in such a way that none of them

(1) Cournot: *Recherches etc.* New York 1897, p. 117.

could get more elsewhere; and supposing, by hypothesis, that none finds it convenient to transfer his trade from one or more markets to other markets (1), the economic equilibrium will be stabilized in every individual market as a function of the marginal cost (of the market), of the internal ultramarginal cost (which may be that of an existing producer on the same market or on a different market, according to the cases) with the marginal and ultramarginal utility.

One can suppose in this case that the ultramarginal production, which entity is generally of at least one of the successive production curves (2), might be distributed among one or more markets, according to circumstances, as in the preceding case (that is, in which the reciprocal position of the producers is the same in all markets), could be distributed among all the markets under consideration.

In the case of simple external competition under consideration, one can imagine that the only producer considered may find a stronger obstacle in the competition of the other markets, and that it follows a lower limit than that shown in the ultramarginal cost at the price of equilibrium. This would obviously become one of the cases of complex competition among rivals operating in different markets.

Speaking of simple external competition, one can further imagine that the producer under consideration has a trading zone divided in sections (markets) in which the ultramarginal competition and the limit price beyond which the ultramarginal production would become economic, are different.

In these cases the equilibrium price may vary in its different points as a function of the diversity of the ultramarginal phenomena.

Finally we must suppose that in the case of complex competition which we have examined, there is not only one but several markets. If the individual concerns have access to

(1) Taking for granted a complete mobility of the capitals of production.

(2) Except in particular cases taken into account in our preceding discussion.

the whole trading zone in question and their reciprocal position is the same in all the various trading points, the differences in price between the different markets cannot be greater than the transportation expenses. They may however be less, either because of a policy of discrimination of prices between the different markets, or because of greater or smaller pressure by the ultramarginal competition.

If the producers are irregularly situated, so that their reciprocal position is not the same in the various markets, the equilibrium at the individual points will be stabilized so that no producer will have an advantage in transferring his activities from one point to another, as in the case of internal competition previously considered.

The value of the equilibrium at the trading points of the various markets will then be a function of the marginal cost, internal ultramarginal cost (of the market or industry) and of the external ultramarginal cost, in harmony with the marginal and ultramarginal utility.

Naturally, we could here call attention more specifically to cases of few or many producers, and to the influence of the different types of policy of the producers, but it is easy for the reader to reason out, by analogy, the different cases and to qualify better the differences existing. It is well to add that the price may sometimes differ between one market and another by a quantity greater than that which would represent the cost of transportation (in the sense mentioned by Cournot). This could occur when there is a minimum quantity of goods to be transported necessary to reduce the transportation expenses to a minimum (in such a way as to divide among a greater number of units that part of the expenses mentioned by Cournot, which show, even if only partially, the character of overhead costs). This quantity of products can be such as to affect in a sensible degree the price of the market to be invaded.

We must now briefly call attention to the conditions of the general equilibrium of the different commodities. Here too, in order to have an equilibrium, the situation must be such that no producer has any advantage in passing from one industry to another; that is, he must earn the maximum profit

possible, even supposing that he is able always to transfer his energies from one field to another. In other words, the opportunity cost of every individual producer (as well as towards all the factors of production) must be sufficiently compensated.

In the profits of the producers of same ability there may be differences according to different cases. For example, in the industries that have reached a point of equilibrium because, although the ultramarginal cost does not tend to increase, the ultramarginal utility is not such as to compensate the cost, the profit of the producers (considered as a complex total and rate of profit in relation to the energies spent by the producers) might exceed that of other industries whose producers, passing to the former, would find the same or about the same obstacles that the ultramarginal producers would find; unless a decrease in the production of the second industry were to cause a correlative increase in consumption in the first industries.

In the industries in which there was an equilibrium because the costs in the ultramarginal production were increasing, even if this increase in costs derived from reductions in the physical productivity of ultramarginal natural agents, the profit earned by the producers could be greater than in others unless these did not use those natural agents which transferred from one field to the other would avoid the increases in costs.

If indeed we were dealing with industries using in equal measure the natural agents responsible for the increase in cost, the possible profits of every individual producer in either one industry or the other would be equal, and the industries could be considered, in a certain sense, a part of the same industry.

One can imagine two industries in which a new concern caused the price to fall to a non-economic level, but when the change from one industry to another entailed a passage of the consumers from one field to the other so that a sensible difference in profits which could be obtained by one producer in the two fields would not be possible (always, of course, taking for granted that economic resources can be transformed in the long run and that no ultramarginal producer

could take the empty place in the industry of emigration without being thrown out sooner or later).

In the same way, we may take the case of two industries in which the passage of productive energies from one field to another is not accompanied by a proportionate emigration of consumers. In these two industries the profits that the same producer may obtain in the two fields may be different.

So we can imagine two industries in which a passage of the factors of production from one field to another does not cause any increase in cost in the second industry, and vice-versa, two industries in which the passage of one producer from one point to another may provoke an increase in cost in the second industry (industries of commodities cultivable in different regions, minerals of different sorts, etc.). In this latter case the profits may be different in different industries in a situation of equilibrium.

The difference in price can derive from a decrease in utility united with an increase in cost. Naturally in the world-wide markets, other things being equal, the influence of the decrease in utility is felt less than in the local markets. So for example, in the case of producers of hay, they may be in equilibrium at a point in which the unit cost would not increase if they intensified the production, and the equilibrium could be found because the ultramarginal utility was markedly inferior to the marginal, according to our analysis.

On the other hand, a producer producing only corn to be sold on a world-wide market could reach a position of equilibrium only when his ultramarginal cost was greater than the price, since he would think that this supply would not affect the price of demand.

But in any case, excluding the convenience of passing from one field to another, they may be in equilibrium for each individual production because the ultramarginal production is non-economic, either because of the sensible decrease in utility, or because of a sensible cost increase, or for both reasons.

And the equilibrium will be stabilized for each individual industry and market as a function of the marginal and ultramarginal phenomena.

CHAP. XIII.

On the Cost of Production

At this point we must add a few words on the concept of opportunity cost.

First of all, we must premise that we may imagine an opportunity cost in relation to the different trading points of a same market. In that case, however high the price may be on a market, the opportunity cost and the price must be identical. This concept of the cost would remind us only that the prices on a same market are identical.

Again we may imagine an opportunity cost in relation to the different markets. This would tell us if the prices of a commodity in different communicating markets are, or are not, in equilibrium.

We can further consider an opportunity cost in relation to the different industries. If some industries are in such a relation as we have seen, that the profits that can be obtained in an industry must be equal to the profits obtainable in another industry by the same producer, here too the opportunity price and cost are the same, however high the price, even supposing that the real cost is constant.

If instead, there occur differences in profits, as we have seen, then the opportunity cost here shows if the various industries are in equilibrium or not, and also shows the relation between the profits and prices of the various kinds of industries.

Again, we can suppose that the connections between the various industries are known, and that in the case of a situation of general equilibrium one wishes to find the relative

height of the profits, in regard to the remunerations that the given producers would get by working as salaried agents.

If we consider a situation of equilibrium we shall see precisely that we must refer to this cost for the external ultramarginal production (1).

Let us see now the problem faced by the producers who are in equilibrium in respect to the other industries (i. e., who have no interest in changing their activities). If they are in equilibrium with respect to the other industries, their problem will not be whether to change the application of their energies from one field to another or not, but if they should increase the energies applied in the productive field or not. In this case their non-compensated ultramarginal internal cost will be made up of an adequate compensation for the risk and a salary proportionate to the increased labor. This therefore is a true real cost.

In fact once we know this opportunity cost we shall still be far from knowing the marginal cost of the various producers unless we also know at the same time the real cost of production.

Supposing for example that the opportunity cost in a field A is X for the producer P because he would earn X in B if in this field he developed his activity as a producer; this would be the same as saying that in B the producer P would consider it convenient to develop his activity and bear the weight of labor up to a point where his compensation would amount to X; hence the cost of substitution would be based on a real cost; naturally the cost in B could be considered in relation to the profit obtainable in other industries apart from A and B, but any comparison should finally be in terms of a real cost.

(1) We have said before that the obstacles to the transfer of the producers in the economic field from certain industries to others, in given conditions, are equal or almost equal to the obstacles of the ultramarginal producers. We really only referred to the particular consideration of the decrease in utility of the commodity, or of certain increases in cost, but we would not be correct in general in considering the two cases as equal, because the opportunity cost would have a different influence in the two cases.

But this is not enough. Supposing also that the opportunity cost of P in A be represented by X profit obtainable in B, we do not know yet at what point P will consider that his work and troubles in A will be compensated. Perhaps his labor in A will be greater because he will consider it sufficiently compensated, or it may be less.

Hence, when we know that the opportunity cost of P in A is X, we know only that until P gets X in A he will not move to B, but we do not know yet the marginal cost of A in X.

And we may also suppose that even if P gets less than X in A, he will not move to B if the difficulties to be surmounted in A (i. e., all the trouble and work) are less than in B.

But all this does not tell us what the marginal cost of P is in A.

In order to find out the marginal cost of P, we must see up to what point the expenses and trouble found in A are at least exactly compensated. This is a real cost.

Let us take for example P in A who could earn X in B with a concern of a given size, the construction and maintenance of which entailed a given real cost. Beyond this point he would not consider himself exactly compensated either because the ultramarginal utility was decreasing sensibly in regard to the marginal or perhaps because the ultramarginal cost tends to increase. When P is in A we may imagine that the profit X would constitute the minimum profit included in his production cost.

Even yet we will not have any idea of what is the cost of marginal production of P in A. Suppose for example that in B the troubles of the producer are more or less approximately constant for the various phases of production and that in B the marginal unit cost would be equal to the total cost divided by the quantity of units, and would be equal for example to M, if instead, the troubles of the producer in A were increasing, the first fractions of units produced could have a real cost M-m whilst the other fractions would have a higher cost, say M+m, which would be the marginal cost.

But there can be differences still more notable. For instance, P could consider his activity beyond a certain point not remunerated in A because of the difficulties met with in

the work of organization or in the increasing cost of some raw commodities or in the decreasing utility of the given commodity, and therefore the cost of his activity would be estimated as X; but if in B the difficulties met with are different, he may consider, that his activities, even at increasing cost, might be compensated beyond that point, and hence the cost of his activities at the marginal point might be greater than it would have been in A; and the marginal cost in B might also be smaller than in A if notwithstanding this supposed increased pain of labor, it would be compensated by a more than proportionate productivity and P could dispose of the profit X plus an adequate remuneration for his additional trouble on a number of units sufficiently greater. And if necessary, an infinite number of examples of this kind could be given.

Furthermore, if the minimum profit, too, which is part of the marginal cost in A, were equal to the minimum profit included in the marginal cost in B, we could not even then know the marginal cost unless we also know the real cost of P's activities in A or B.

Consequently, the opportunity cost in itself does not give us the minimum profit included in the marginal cost which interests us in the determination of equilibrium; it only tells us, not without limitations, if there is, or is not, the equilibrium among the existing industries at a given moment. No more does it tell us, obviously, if there is equilibrium between effective production and latent production; in other words, if the production tends to increase or not.

It is evident, in fact, that each producer generally chooses the field which offers him most advantages, but once he has chosen that field, it is the real cost of the application of his energies which marks the limit beyond which he will not go, because his labor would not be compensated.

In other words the opportunity cost gives us a very vague and uncertain concept for the determination of the minimum profit included in the marginal cost of production. It really tells us what the compensation is that the producer would receive for a stated activity of given intensity and extension, of which we will not know the equilibrium margin if we do not first know the real cost; but it cannot tell us how or in what

measure to the entrepreneur's activity, which differs according to the diversity of the problems and difficulties to be met, a different remuneration is due, nor tell us the difference between the intensity and extension of the activity which in the two cases can be considered remunerated.

The internal ultramarginal cost, also, for each producer is generally a real cost; even supposing he applies his activity in two different ways, when the equilibrium is reached, it means that the real cost which he should bear would not be remunerated beyond that point.

For the external ultramarginal cost, one can apply, *mutatis mutandis* our reasonings concerning the opportunity cost in general; but in this case the elements furnished by the opportunity cost in regard to dependent work, are still more vague and uncertain.

On the other hand, in any concept of real cost, a concept of relative cost is implied, in such an obvious manner that one does not need to mention it. When for example one asks if the price is such as to remunerate new producers appearing on the market, it is already obviously implied that the profits should be such as to discourage them from other occupations.

But again, the point which would be marginal in a new concern, when it has been proved that this new occupation is the most convenient, can be known only as a function of the real cost, to see how far the work of the producer would find adequate compensation.

It is clear too that any real cost can be calculated in a relative way, as lost leisure, limited rest, etc. But these are concepts always so obviously implied in any concept of pain cost that it is not necessary to mention.

The conclusion, in brief, is that whether in fixing the marginal cost of the producers or in the marginal cost of the industry, or whether in fixing the ultramarginal cost of the individual producers, or in the ultramarginal cost of the industry, the opportunity cost and real cost both have their influence.

But if we suppose that each of the effective producers has chosen the most profitable occupation, then until the conditions of equilibrium change, we can reason through

functions of the real cost; and however we consider the cost, the conclusion at a point of equilibrium is identical. The equilibrium is found at a limit point in which the real cost borne by the producer (fatigue, expenses,) in the best application of energy that he can make, is remunerated; whereas beyond the point of equilibrium this real cost will not be remunerated, either because the costs increase or because the utility decreases, or because of both these phenomena, according to the analysis made.

The equilibrium will be determined as a function of the marginal and ultramarginal elements.

When the external ultramarginal cost is that which marks the limit of the equilibrium, this cost is non-economic because in the ultramarginal production new producers would not find adequate compensation for their trouble. This will depend on an increased cost or diminished utility, or both. The equilibrium will be determined as a function of the marginal and ultramarginal elements, according to the preceding analysis.

CHAP. XIV.

International Trade

We must now look briefly into the theory of equilibrium in international trade (1).

Let us first consider the problem of collective trading of merchandise between one nation and another.

The concept of opportunity cost is also helpful to us here, to enable us to see what occupation is most advantageous in a situation of equilibrium. Every nation will choose the ap-

(1) Time and space oblige us to limit ourselves to the most general outline of the theory of value in international trade, and of the theory of distribution of wealth. In a second volume we shall take up in greater details the analysis of these problems. So we leave aside now any criticism of the classic theory of comparative costs, among whose most brilliant supporters in America is Professor Taussig, and which is the basis from which the most subtle and delicate analyses have been developed.

However we must remember that recently one side of the classic theory of comparative costs has been shaken by the acute criticisms of Alberto Breglia. In a short essay ("Divisione del Lavoro e Scambi Internazionali", *Giornale degli Economisti*, May 1929, pp. 221-254) in which some of the profound contributions to the theory of Pareto and Graziani are well recalled to our attention, Professor Breglia demonstrates with original and convincing arguments that the difference of comparative costs which is fundamental to the classic analyses, is a condition neither necessary nor sufficient for the economicity of the trade between nation and nation.

plication of energies most remunerated, that is, in which the profit obtained will be greater than that obtained elsewhere.

Supposing for example that P produce A and B at a real cost of 2 and 4 respectively, and P1 produce A and B at a cost of 4 and 5.

P will produce A only if this will reduce the cost 4 for B. If in fact he should pay for one unit of B two of A, he could produce by himself both A and B. If P produced for his own consumption two units of A and one of B, he would now produce four units of A if the income that he obtained otherwise with the cost 4, that is B, were increased so as to make the business convenient; i. e., if at a cost of 4, he obtained $B + \frac{1}{2}B$.

Thus if P1 produced for his own consumption two units of A and one of B, he would produce instead $(2 + \frac{1}{2})B$ at the unit cost of 5 if the $1 + \frac{1}{2}$ unit added to B, which cost him $7 + \frac{1}{2}$, enable him to obtain, for example, two units of A which would cost him 8.

The output that P could obtain by producing directly B and A is 2A and 1B at a cost of 8; by producing directly only A, P would obtain at a cost of 8, 2A and $(4 + \frac{1}{2})B$. Thus, P1, producing directly A and B gets at a cost of 13, 2A and 1B; producing only B he gets at a cost of $12 + \frac{1}{2}$, a product of 2A and 1B.

P therefore gets an increase in production and P1 a decrease in cost.

In order to have the equilibrium of distribution of economic resources between the two merchandises in the two countries the price of each commodity (reckoned in terms of the other commodity received in exchange,) must be not inferior to a marginal cost (in which the opportunity cost may be reckoned in quantity of the other goods that could be produced with a given quantity of energy applied, etc.,) and of the ultramarginal cost, internal and external, in harmony with the marginal and ultramarginal utility.

But here too, if we want to know the quantities of output, the marginal costs and the opportunity costs themselves, we must refer to the real costs. We can consider, on the other hand, the international trade from the point of view of the

individual producers who buy the trade (1) between one nation and other.

As in the case of internal trading, each producer will apply his energies in the best possible manner, in an equilibrium position.

If instead of producing 2A and obtaining a profit of 10, he can with the same pain produce 3B, obtaining thereby the equivalent of $2+1\frac{1}{2}A$ for example $12+1\frac{1}{2}$ he will produce 3B.

However, as in the former cases, here too the opportunity cost gives us a rather vague idea of the marginal cost: either because we deal in a kind of production whose technique is different and the difficulties to be surmounted are different, or because the opportunity cost itself must refer to a real cost, or because once the most convenient occupation has been chosen, it is the real cost which must stabilize the margin of each producer and the margin of the industry.

Since, generally, in a regime of division of labor, the activity of a producer must be considered as applied in a single direction, whichever occupation he may choose, he will increase his production till he reaches a point in which the decrease in utility or increase in the real cost, or both, will make the ultramarginal (2) production uneconomic.

Then in this case also, the normal value or equilibrium price will be established as a function of the marginal and

(1) On the characters of identity between the barter that is taken as the starting point of international trade and the internal trade, see G. Valenti: "Principi di Scienza Economica", Florence 1918, vol. II. pp. 195 and fol.

(2) Also when a producer divides his activity among several branches, having distributed his energies in a measure proportionate to the productivity of these various branches, and consequently these various applications will be in equilibrium; at each one of the individual points of equilibrium in the different branches, he will be found to have continued to produce up to the point beyond which the real cost of his activity would not be compensated either by an increase in cost or by a decrease in utility, or both.

ultramarginal (internal and external) cost, and of the marginal and ultramarginal (internal and external utility).

The price may be at one of the points which from the marginal go to a point beyond which the ultramarginal production would become economic.

CHAP. XV.

Distribution of Wealth

Let us now speak with the same brevity of the equilibrium price of labor, or capital, of land, all of which will be discussed more at length in another volume.

Let us imagine a situation of equilibrium in which the population is stationary, as well as the capital and the conditions of technique.

It is not necessary that there be no abstinence in order to maintain equilibrium. But if there is a pure spirit of saving on the part of some, it must be accompanied by a waste of economized wealth by others.

It is an artificial compensation, but less so than a system in which the spirit of thrift is, by hypothesis, nil (1). The ultramarginal production of new capitals should not be economical.

(1) In a masterpiece "Effetti delle variazioni del potere d'acquisto dell'oro" (which is a report to the League of Nations and is published in the "Giornale degli Economisti", 1931, February). Prof. Giorgio Mortara shows how savings may be independent from its price.

On the theory of saving the reader will find acute theoretical remarks in recent discussions by Italian economists on the opportunity of taxing savings, by Einaudi with his excellent work "Contributo alla ricerca dell'ottima imposta" in *Annali di Economia*, 1929, by Loria, Ricci, Fubini, Fasiani, etc. For complete literature on the subject, see Einaudi, loc. cit., and recent years issue of *Riforma Sociale*, *Giornale degli Economisti* and *Rivista di politica economica*. See also writing of Fanno, Flora, Graziani, Griziotti and others.

The supply of labor, other things being equal, is a function of the height of the incomes.

Indeed it would seem that one could not study theoretically an economic level of equilibrium beyond which an increase in population would not occur. That is, until we do not isolate the tendency whose influence we want to know.

But if we suppose all the other conditions fixed we can imagine an equilibrium of the population when the different remunerations are sufficient for the procreation and maintenance of a constant number of individuals which would always keep the population at the same level.

Suppose now, in a situation of this kind, a general increase in incomes. If this is accompanied by a proportionate increase in wants, it will not produce any increase or decrease in population.

The same thing occurs if a general decrease in remuneration is accompanied at the same time by a reduction in the standard of living, which obviously only means that the population would be stationary, whilst the economic equilibrium would be different.

If instead we consider the knowledge, tastes and psychology of the population as fixed, we will find that if in a given position of equilibrium the various remunerations increase, the population will tend to increase.

It happens however that the continually increasing knowledge gives the individuals an ever greater possibility of reacting to the burdens imposed by nature; that with the increase of remunerations, the needs of individuals (among which are to be included the increasing needs of a more complete education for the new generations, often increase in a measure more than proportionate, whilst the old morals of the individual and of the nations always go down the high scale that the economic progress climbs.

From this we derive the fact that, given a position of equilibrium, which implies a stationary population, even excluding the results of an increased or decreased remuneration, an increase in the degree of education of the individuals, or part of them, or a modification of opinion about what is moral

or not, or any increase in wants, etc., might cause a decrease in population.

This would not necessarily imply a continuous decrease. There might be a position of equilibrium at a different point.

For the same reasons, obviously, one might pass from a progressive population to a stationary or regressive one.

At the other extreme of the case of stationary population, one might pass to progressive population, supposing that the old morals take a stronger hold than before on the conscience of the individual. But if we take for granted an unchanged level of morality, an unchanged education, and an unchanged standard of living, we can then imagine that a certain level of income of the population is the necessary and sufficient condition to maintain the population at the same level.

Given, then, a position of equilibrium, what would be the law of interest, wages and rent? The analysis is important because it gives an idea of the real law of distribution.

We must first examine the equilibrium of the existing economic resources, and then the equilibrium between existing resources and ultramarginal resources.

We assume a concept of value productivity; this is the result of two different forces, physical productivity and curve of utility of the commodity. When from the marginal to the ultramarginal points the utility of the commodity remains practically unchanged, the physical productivity and value productivity are not terms in opposition. When also in the ultramarginal point, the ultramarginal utility of the commodity produced is markedly less than the marginal, then it is the value productivity which is of importance in determining the phenomenon, and the consideration of the physical productivity only, would mean that only one side of the problem was being considered.

Let us now see how the producer will consider the productivity of the individual factors. If he considers the price of labor and of his work as fixed, as well as the price paid for the rent, he will consider the productivity of capital a function of the margin which exists between the fixed expenses mentioned

and the value obtained by combining all the economic energies mentioned, including capital.

The same in the case where the producer consider all other expenses, except the wages, as fixed.

But to say how all these various remunerations must be stabilized, is a different problem.

In fact, the productivity of the various resources could not be ascertained for each productive combination until we have first fixed the remuneration of all but one of these resources. What we do know is that a combination of capital, land, labor, managing energy, in an economic mechanism, produce a certain product having a certain value.

On the other hand, it is certain that the various factors of production, labor, land, capital at the margin (the marginal dose may be one of the successive curves of the concern, or a smaller dose if one wishes to consider a brief extension of increasing costs without any new enlargement at the terminal point of a curve, or a complete new concern, as the case may be) are not remunerated by the producer with a comprehensive amount greater than he can dispose of after deducting an exact compensation for his organizing and executive labor.

This is the maximum that the individual factors of production can receive as compensation.

The minimum limit is represented by an ultramarginal productivity of substitution. In fact, there cannot be any equilibrium if the price of the factors of production is such as to cause a demand by ultramarginal producers who at that cost would find it convenient to produce; or if they are such that existing producers find it convenient to attempt to take these economic resources away from other producers because at that cost this ultramarginal production would be economic.

When we say that the highest average of wages, interest and rent of natural agents is stabilized as a function of the marginal and ultramarginal productivity of substitution, we only know this in respect of the comprehensive level of these earnings. But we already know that there is a maximum and a minimum level of the prices of factors of production.

The difference between marginal and ultramarginal productivity of substitution varies according to cases, but it always

exists. We know, in fact, that the marginal productivity of the factors of production must compensate the producer for his expenses and labor; we know then that the individual ultramarginal production for him is non-economic. And this difference in productivity (in value) must be noticeable, otherwise it would be overlooked by the producer. There is therefore a noticeable difference between marginal productivity and ultramarginal productivity of substitution. As functions of these two different terms, the returns for capital, labor and land can vary.

The differential rent from all the natural resources is also a function of the productivity of ultramarginal production of substitution. Let us suppose, in fact, that the rents of land of any quality are fixed; let us say that the Ricardian rent for every land is a function of the decreasing productivity of the different doses of capital and labor applied, up to the most costly and yet economic one of these parts.

But this productivity of land itself is a function of the different ability of the producers. Because for an equilibrium to exist, none of the existing land owners must find it advantageous to offer a higher price than that paid by others in order to increase their concern. In other terms, the rent paid by even the least efficient must not be so low as to make economic the ultramarginal production of the more efficient producers.

But supposing that there be an equilibrium between all existing producers, the differential rents paid have a maximum limit in the efficiency of the various producers operating the lands, and a minimum limit which is at a point above the point where the actions of potential or ultramarginal producers would become economic, because at that point they would find it convenient to bid for lands at a price slightly higher than the current price.

It must be recognized that the competition for the lands is very often limited to people living in the proximity of those lands; among those limits the ultramarginal producers have an influence on the determination of the equilibrium, theoretically in accordance to their ability, practically according to their technical education, available capitals, etc., joined to their natural ability.

We know then that rents, wages and interests are functions of their marginal and ultramarginal productivity of substitution.

We have also said that the individual productivity of labor, capital and land cannot be discovered in an individual productive combination.

But this does not mean that on the whole the various remunerations of land, capital and labor are not remunerated in proportion to their specific productivity.

Because the general demand of all who use capital, labor and land causes a tendency to remunerate the various factors of production in proportion to their specific productivity. And since that remuneration on the other hand, cannot be greater than the marginal productivity, we may assume that the various factors of production are remunerated in function with their specific marginal productivity. Though we can correctly suppose, in all the productive fields, not only one ultramarginal concern but a class of them, the differences in value productivity among them being unappreciable, it does not mean that the marginal productivity of capital and labor and land, in a given field, will be at the same time the productivity at the margin of all producers. It may be that the margin of given producers belonging to the same industry or to different industries might be the same, but it may also not happen, and it generally does not happen.

This however would always happen if the producers could increase or decrease the size of their concern by infinitesimal quantities. But this is not possible.

We have seen how, in general, the output can be increased by quantities represented by one or more successive curves of production. That is the reason why all margins are not the same, and the marginal productivity of capital, labor and land in a concern (or concerns) working under the worst possible conditions among all the existing concerns can be different from the marginal productivity of the factors of production in the other concerns. So that even when the individual producers compensate the factors of production on the basis of their marginal productivity (the lowest productivity in the whole field in which there is competition), they might pay a

price less than proportionate to the marginal productivity of the above-mentioned factors in their concern.

For what concerns each existing producer, it is necessary that the compensations for land, labor and capital be not such as to make the internal ultramarginal production economical. Which means that the producer can be in equilibrium by paying to land, labor and capital somewhat less than their marginal productivity, provided however that the prices are not such as to make their ultramarginal production economical.

It cannot be postulated, that the marginal producer must always remunerate the factors of production, as a whole, according to their marginal productivity. This remuneration, in fact, is only the highest that he might be willing to grant.

For him, as well as for all other producers, the ultramarginal productivity (in value) of the factors of production, is less than the marginal, otherwise the ultramarginal production would be economical. And the difference of productivity in the ultramarginal productive combination of substitution (which may also derive, as we have said, from the increase in cost of the labor of administration making non-economic the use of the other factors of production) and in the marginal productive combination must be noticeable otherwise it would not be taken into account.

If then the marginal producer pays for the various factors of production, a remuneration less than their marginal productivity, provided the ultramarginal production is not yet convenient, the equilibrium remains.

The reader has already understood the nature of what we call the ultramarginal productivity of substitution.

It is a production ultramarginal for some elements which are potential (for instance, a new producer, or any increase in activity of an actual producer, etc.), but at the same time it takes into account the possible subtraction of a quantity of given economic resources (1), of which we want to know the equilibrium to the actual producer.

(1) A part of the above discussion could be applied to the problem of value.

Obviously, we must consider generally an amount of the given economic resource sufficient to give life, with the other available resources, to a new firm, or to allow an increase in size in a way that the relative economic dimension is reached.

Provided that the equilibrium is not such as to render economic the ultramarginal productivity of substitution (and though we are not giving here a complete theory of distribution but only a general outline) we must speak of the ultramarginal production also in which new economic resources should be used.

The productivity of ultramarginal resources, that is, capital to be created or land not yet economical for cultivation (1) or increase in labor of the actual population, or increase in the long run of population must be inferior to the marginal, in a position of equilibrium, otherwise the ultramarginal production would be economical. The difference must be appreciable.

So if the prices of actual economic resources are below their marginal productivity but not low enough to render the productivity (in value) of ultramarginal resources convenient, we shall have a position of equilibrium.

The equilibrium price, then, of capital, labor, land, is a function of their marginal and ultramarginal productivity.

(1) So, obviously, for mines, hydro-electric and water power, etc.

INDEX

Preface	Page	7
Chap. 1 — Static Curves of Production	“	11
“ 3 — Decreasing Costs and Equilibrium	“	25
“ 4 — Markets	“	41
“ 5 — Note on Ultramarginal Concerns	“	51
“ 6 — Monopoly and Competition	“	55
“ 7 — Duopoly - A Critical Discussion	“	71
“ 8 — Internal Competition - Preliminary Treatment ..	“	97
“ 9 — Internal Competition - Equilibrium Price	“	127
“ 10 — External Competition	“	141
“ 11 — Complex Competition	“	145
Appendix	“	159
Chap. 12 — Equilibrium of Markets and Industries	“	161
“ 13 — On the Cost of Production	“	167
“ 14 — International Trade	“	173
“ 15 — Distribution of Wealth	“	177

From two eminent Economists' reviews of the author's "Teoria dell'incidenza delle imposte" (to be translated into English in a revised and enlarged edition).

ACHILLE LORIA says: this work "throws not a little light on the most vexed question of Public Finance, to which several innovations introduced by the author, especially his theory of oblique shifting, which is undeniably true, will prove useful. It often happens that a producer of a certain merchandise does not reimburse himself for a tax on a given merchandise by raising the price of this commodity but of another; or that the consumer of a taxed commodity does not reduce the demand for this but for another. In these cases arise phenomena of oblique shifting which the author analyses with great penetration and keenness". (*Echi e Commenti*, December 5, 1926, Rome).

CAMILLO SUPINO says: "L'ouvrage du Docteur Da Empoli est de caractère purement théorique et d'une théorie parmi les plus abstraites et les plus abstruses. Cet ouvrage démontre que l'auteur est un jeune homme exceptionnel, d'un esprit puissant et ayant des aptitudes des plus brillantes aux recherches économiques les plus difficiles. Il est possible comme on le sait qu'un impôt appliqué à la production d'une richesse ou d'un service soit payé finalement par le consommateur ou que, vice versa, un impôt grevant la consommation d'une richesse ou d'un service reste à la charge du producteur; on sait aussi que sur la possibilité ou l'impossibilité de transférer la contribution, une théorie complexe et subtile a pris naissance qui embrasse tous les phénomènes considérés par les économistes. Or, l'auteur partant de la conviction que beaucoup d'effets des impôts leur ont échappé, entend, par son ouvrage, compléter l'exposé en réexaminant le sujet, le développant sous des aspects nouveaux et originaux et arrivant souvent à des conclusions qui représentent d'importantes conquêtes pour la Science. Son oeuvre sérieuse, pondérée et de grande valeur sera accueillie avec une grande faveur par tous les érudits". (*Scientia - Internat. Rev. of Scient. Synthesis* - 1927 - Milan).

Price of this volume:

\$3.00, with paper cover.

\$4.00, with cloth cover.

THE WORLD ECONOMIC DEPRESSION

A PLEA FOR CO-OPERATION

BY

SIR J. C. COYAJEE

Head of the Department of History, Economics and Politics, Andhra University



PRICE Re. 1/- or 1s. 6d.

WALTAIR

1932

X:742
G2

TO THE MEMORY
OF
M. ALBERT THOMAS
THE LIFE-LONG ADVOCATE AND EXPONENT OF
CO-OPERATION

PREFACE

The remedial potentialities of Co-operation (in its various forms) as regards the present Economic Depression form the main thesis of this little book. It can be shown that an important corrective of the existing maladjustments of production and demand is the development and proper co-ordination of Producers' and Consumers' co-operation. But co-operation has other forms, and works on other planes besides the national one. Besides the field of co-operation between individuals there is the region of International Co-operation. It is through International Co-operation alone that we can hopefully attempt to remove many other maladjustments which are important contributory factors of the present depression. On this side there is a wide range of problems and policies to discuss. There are for examples problems of international management of currency and of the co-operation of Central Banks. Not less important are the topics of economic disarmament, of commercial reciprocity and of international industrial agreements. Above all comes the question—how far can Co-operation help to prevent Capitalism from crumbling and dissolving? It is proposed to present in these pages brief accounts and analyses of these problems and potentialities.

No apology is required at the present day from a teacher of Economics for selecting as the subject of his first contribution to the studies of his new university the subject of the World Economic Crises. For obviously any one who attempts to offer something like a clear presentation of the causal and remedial aspects of the present unprecedented depression, and to analyse and appraise the numerous suggestions and theories advanced about it, is rendering a public service. Only by a great co-operative effort on the world scale can this depression be overcome; and the first phase of such co-operation must be the creation of clarity of thought upon the subject. We in India have been doing our "bit" in this direction; thus, in the year 1930 it was the Indian Delegation which had the privilege of moving the Resolution before the Assembly of the League of Nations which led to the authoritative inquiry into the course and phases of that Depression by Prof. Ohlin. Last year, too, the Indian Delegation intended to propose an extension of that inquiry and only the inexorable necessities of finance led to a temporary postponement of that idea.

But it is not only the League which should prosecute inquiries into that great and all-engrossing subject, of which the issue seems plainly to be whether the world is to continue its economic existence under the present system of capitalistic production or is going to transfer its allegiance to

some variety of Communism. Next to the League—if indeed next to it—the Universities seem to be the best institutions for discussing the subject. It is certainly worth suggesting that if the most distinguished holders of Economic chairs in different countries carried on propaganda for creating the right public attitude towards the subject, and discussed the remedial aspects thoroughly among themselves, an immense amount of good can be done. Those of us however who do not command that international status, can still make a useful contribution by helping in the popular discussion of the subject and in provoking thought. Such a review of the main opinions and proposals advanced on the subject is being offered here as a starting point for discussion; for in view of the growing literature on the subject even such a *coup d'oeil* might not be without some use. References have been given in the footnotes in order to induce and enable the reader to examine the ground for himself.

I wish to express my appreciation of the valuable assistance given by my colleague Mr. M. Venkatarangaiya in seeing these pages through the press.

J. C. COYAJEE.

SUMMARY OF CONTENTS

CHAPTER I

A CONSIDERATION OF THE CAUSES OF THE DEPRESSION

The World Economy and the Potentialities of Co-operation, pp. 1-5—
"Monistic" theories of depressions, p. 6—Maladjustments on the side of
Production and of Demand, pp. 7-16—Contributory causes of the mal-
distribution of gold, pp. 16-19—The problem of the shortage of gold,
p. 19.—Hindrances in the way of international capital movements,
pp. 20-22—Banking policy, price levels and disequilibrium on the capital
market, pp. 22-24—Inelasticity of the price system, pp. 24-26—Reduced
plasticity of wage-rates, pp. 26-28—The tariff barriers, pp. 28-31—The
problem of Reparations, pp. 31-34—The psychological factor, pp. 34-35—
Application of the theory of trade cycles, pp. 35-36—Summary, pp. 37-38.

CHAPTER II

DISCUSSION OF REMEDIAL SUGGESTIONS

Signs of the growth of international co-operation, pp. 40-41—On the
road to the abolition of Reparations, pp. 41-44—Methods of remedying the
maldistribution of gold, pp. 44-48—The proposed Sterling *bloc*, pp. 48-50—
Improvements in the currency system and need for international manage-
ment, pp. 50-55. Scope and objectives of banking policy as regards the
price level; the criteria available for guiding such a policy, pp. 55-58—
Potentialities of, and lines of co-operation between, Central Banks,
pp. 58-60—Proposals for the reinstatement of silver, pp. 60-62—
Work of the World Conference and the League of Nations on the
tariff problem; how it is to be supplemented and continued, pp. 62-64
Rationalization, its methods and true character, pp. 64-67—The contro-
versy as regards the benefits to be derived from International Industrial
Agreements; the problem of their regulation, pp. 67-71—Consideration of
the recommendations of the Report on the Agricultural crisis, pp. 71-75—
High remedial value of the development and co-ordination of Producers' and
Consumers' Co-operation, pp. 75-76—Actual progress made in these direc-
tions, and the work of the International Committee for Inter-Co-operative

SUMMARY OF CONTENTS

Relations, pp. 76-79—Effects of the Depression in India, pp. 79-80—Potentialities of development of Co-operation in India, pp. 80—Value of India's financial co-operation to the world, pp. 83-85—Potentialities of the policies of Reciprocity and of preferential arrangements as methods of International Co-operation, pp. 86-91—Role of Co-operation in the progress and development of our Economic system, pp. 91-96.

THE WORLD ECONOMIC DEPRESSION

CHAPTER I

A CONSIDERATION OF THE CAUSES OF THE DEPRESSION

The point of view developed in the present study of the Depression is that of the convinced believer in the great potentialities of Co-operation. The central line of reasoning is that, while Co-operation was always necessary to the world, its development is now most vital and essential, in view of, and in step with the process of integration and solidarity of world economic interests. Alike in the field of national and of international economics the method of Co-operation must be developed if we are to avoid debates like the present one or, indeed to save capitalistic society itself. How close the solidarity of international economic relations has become and how rapidly it has developed, can be judged from the universal character of the present depression—as contrasted with even the worst of its predecessors. While one important and basic fact is that technical progress in its largest acceptation has gone ahead by leaps and bounds, the other essential factor is that as yet there is no regulator of this great dynamic movement—either on the side of production, or consumption; of distribution or exchange. Hence the breakdown of our world economy in all these aspects simultaneously. The main instrumentality for the adjustment of production to consumption, as well as for the adjustment of the supply of the medium of exchange to the demand for it is, it is submitted, Co-operation; that is we must have co-operation as between producers and consumers, amongst bankers and currency authorities and between states as regards commercial policy. It is in the absence of the development of this main adjusting and regulating factor that there have appeared so many and such serious economic maladjustments.

It is remarkable that amongst the various, excellent studies of the present depression which have appeared no comprehensive account of the remedial potentialities of Co-operation has been developed. In most of these studies of the World Crisis formal lists are given of the causes of the Depression as well as of the remedies. It has been forgotten that what was wanted besides the adoption of these quite useful lists of the remedial suggestions was the introduction of a new spirit and mentality in which the great economic problem of the world is to be approached. For Co-operation alone can fulfil the two-fold function—that of securing joint and common action (which is indeed very necessary) and also of supplying the great psychological stimulus which is the most necessary thing to combat the depression. True, we want a planned economy for the future, but not any sort of planned economy. Right before us lies the immediate problem to be solved but, behind it there is not only a conflict of methods but a conflict of ideals as well. It is when we take the point of view which Co-operation has established that we are able to distinguish between palliatives and local remedies, on the one hand, and real remedies of the general economic system on the other.

It is a narrow view of the principle of Co-operation which is content to assume that its range is limited by the activities of producers' and consumers' Co-operation or even by the inter-trading implied in the existence of these two aspects of the general principle. The function and potentialities of the Co-operative principle are indeed far wider. As has been well put by a writer on the subject "the ultimate aims of Co-operation are concerned as much with Social Economy as with commerce. It seeks to expand till it has transformed the whole of society to its own ideal economical and ethical form. In this social character the movement can admit no irreparable division in the interests of mankind nor any economic problem which co-operative principles and co-operative technique cannot solve."¹ It might have been added that Co-operation is at least as permeating a phenomenon as competition—the former re-

¹ Margaret Digby, "Producers and Consumers", p. 195.

presenting the complementary aspects of productive factors and persons, while the latter emphasises their relations as rivals. It is a mistake to consider competition as either the more important or permeating principle. A study of the evolutionary aspect of Institutional Economics would show that the rise and working of co-operative and competitive institutions have formed important and alternating aspects of Economic History. The last century or two have marked the high water-mark of competition. But we are now witnessing the harm done by an excess of that factor of Economic progress. We are at present being often reminded, for instance, that Natural Science has done her share for man and that now it is for the Economic Science to guide the national economy properly. Such statements only mean that the guidance of production by uncontrolled competitive influences has upset the economic equilibrium, and that it is time now to invoke Co-operation to improve matters and so to adjust Production and Distribution as to give us something like Maximum Satisfaction.

The principles and practice of Co-operation are indeed capable of immense development. The co-operative movement has, it is well known served as a stabilizing factor in the great economic troubles which have overtaken so many countries of the Continent. The system can impart an elasticity to national production and distribution which alone can do much in adjusting methods to great changes on the side of demand and supply. For an actual record and witness of the potentialities on this side, a reference might be made to the publication of the Carnegie endowment on the work of the Co-operative movement in Jugo-slavia, Roumania and North Italy. We learn there how Co-operation has been the only instrumentality which has been able to deal with marked success against such formidable factors as the breakdown of distributive systems, the upsetting of inter-national trade, rapid and fundamental changes in the institution of landed property and the spread of revolutionary and communistic ideas.¹

¹ Cf. D. Coffey, "The Co-operative movement in Jugo-slavia, Roumania and North Italy during and after the War."

Economic theories are obviously best tried and tested under the pressure of inexorable circumstances and hard facts. Thus the small States of Europe which are hard pressed by the Depression and which must watch the shadow of Bolshevism stealing nearer to them, have been forced to realise the strong support which the adoption of co-operative principles and practice affords to our present system of economy. The history of the last decade has shown that we must not lean too much on the competitive principle. The same decade has taught mankind that Communism too has its great deficiencies. Had Karl Marx been alive to-day he would have rejoiced at the weakness shown by the capitalistic system: but he would have been no less disappointed at the shortcomings of the great Bolshevik experiment. What mankind requires is a synthesis giving us the best of the two antagonistic systems. We want neither the thesis nor the antithesis. We desire the synthesis, which is to be found in Co-operation.

So far we have spoken of co-operation in the ordinary sense. But co-operation has before it another and a larger aspect and a bigger field of application. It is obvious that most of our present troubles are due to the unchecked development and pushing of "national" policies, and we can remedy them only by an adoption of International co-operation. Eminent economists have been studying the possibilities of co-operation, and, indeed, a literature is growing up on the topic of International Co-operation on the economic side before our eyes. Take a valuable work like Prof. Patterson's on "the World's Economic Dilemma." It deals mainly with "the series of economic influences that make for strain in the modern world" and "the reasons why there is so strong a tendency for them to act on national lines." The remedies prescribed by Prof. Patterson consist of international co-operation between states, of which the League of Nations is the symbol, as well as between bankers and business men.

As a result of the emphasis being placed on International Co-operation we have a broadening of Economic Science and Art and new developments in Normative Economics as well. We are freely discussing "World Economics"—not however in the spirit of the old

"Cosmopolitan" or competitive economics. Under that system the weakest was left to go to the wall without any compunction; but we now find that the economic troubles of any nation inevitably react on the rest. So also there is a tendency to be critical of the doctrines of the National School of Economics founded by List and his followers. In fact both on the political and on the economic side, the shortcomings of the national method of approach are clear. The point of view of International Co-operation is being developed as regards the control and utilization of raw materials, in the matter of foreign investment and loans as well as on topics like tariffs and cartels. Even a critic of the idea of World Economics shows its influence. Thus an eminent critic of that notion observes: "World prosperity seems more attainable if sought through the prosperity of its parts—nations, empires or continents—*properly co-ordinated in harmonious co-operation*, rather than by viewing the world prosperity as an antithesis to national prosperity." But it is scarcely just to emphasise the idea of such an antithesis—except perhaps as a caution for the future. Meanwhile we are well content with the idea of a "harmonious co-operation between nations;" and many of the best works of the day on Economic science expound the methods and ways of such harmonious co-operation. Take for instance a monumental work like Keynes' "Treatise on Money," and compare it with the leading works on currency which were published before the War. When thus compared one of the most important features of the work is the International point of view—especially in the chapters dealing with "International management of money" and "the International Gold Standard." Take up another important work like Prof. Donaldson's on "International Economic Relations." That is avowedly a "treatise on World Economy," so is Elemer Hantos' work on the "Economic Mondiale." Prof. Patterson's excellent work has already been referred to. We thus find the economic science of the day laying increasing emphasis on the world point of view, and as a corollary its precepts are being based on the idea of International Co-operation on a scale and in a way unknown to the economists of pre-War days.

It is proposed to discuss the problem of the Depression both in

its causal and its remedial aspects, but in either case, in the interests of exposition, the problem has to be broken up into its various constituent elements. True, the factors of the problem are closely inter-related and it is difficult to unravel their separate effects. Nevertheless that difficulty pervades the whole sphere of economics, and the economist is always attempting the hard task of what Prof. Carver calls "unscrambling eggs" with tolerable success, though of course the isolation of economic factors can never be quite complete. In any case, long period tendencies like that of relative overproduction which made their appearance some decades ago will have to be separated from more recent phenomena like those of abnormally higher rates of interest or maldistribution of gold. Monetary and banking causes too are in many respects autonomous, though they need not be given the unique and dominant position that sometimes has been assigned to them. Above all in any study of the subject, we have to take particular account of the true time perspective so far as possible and without losing sight of convenience and facility of treatment. With this object, in our study of the causal factors we may divide them into four main groups—the first dealing with maladjustment of production and of demand; the second consisting of difficulties on the monetary and banking side. Finally, we shall take up the question of tariff barriers and the problem of reparations. When, however, we approach the remedial programme, the order will be somewhat different, since their urgency of the measures required is an important consideration.

In the light of the antecedents and the course of the present great depression, the former "monistic" theories of the business cycle have little chance of surviving. If any formula of this type—emphasising some single cause—had any chance of success it was that formulated by Mr. Keynes which attributed credit cycles to the failure of Savings and Investment to keep step; for that formula can through its implications rope in quite a number of factors. Nevertheless, even so, it cannot cover the whole range of factors which have led up to the great Depression. And when using such formulæ, we have to give their due to quite a large number of maladjustments in this connection, while at the same time the real im-

portance of the implied factors is unduly minimised by their being ultimately brought in as it were through the back door. Economists cannot but agree that whether we are suffering from the "long wave" or are in the throes of a Juglar cycle or the "forty-month cycle" or are afflicted by all three simultaneously, we must take full account of powerful contributory factors like high tariffs, reparations and currency policy.

This reminds us of Wagemann's remark that "most of the theories (of the business-cycle) maintained in these days are of a compound character, especially as many of them wander off into other strata of the economic system in search of the causes of the causes themselves" (*Economic Rhythm*, p. 253). A similar view is expressed by W. C. Mitchell in his great work on "Business Cycles," to the effect that "many writers also show how the changes produced by their chosen causes affect other processes, and in so doing, they are likely to find use for the work of men whose distribution of emphasis differs from their own." (p. 12). The fact is that Economics is gradually becoming fully conscious of the real complexity and close inter-relations of economic phenomena. To take but a single example—the Quantity theory, as recently formulated, takes account of a very large number of factors which were quite neglected in the earlier formulations. The same tendency towards a greater realisation of the inter-relation of the relevant factors is manifest in most other developments of theory and in this way, not only in the theory of the business-cycle but in other portions of economics.

At the very threshold of our subject, we are in the regions of volcanic controversy. On the one side, are eminent authorities like Mr. Snyder, Sir H. Strakosch and Mr. Hawtrey who have thrown their weight on the side of dominance of monetary causation. The main contention on this side (on the ground of certain statistics of Mr. Snyder and Mr. Kitchin) is that world production has been growing at the rate of about 8 per cent per annum for a long time in the past, and yet the crisis has declared itself during the last quinquennium only. Another point which has been made is that even those articles of which the production has not increased markedly

have also fallen in price.¹ Without entering the controversy at great length, it might be pointed out that this argument does not suffice to dispose of the maladjustment on the side of production, for we must have regard to the *cumulative growth of surplus capacity*, of which the volume was exaggerated by growing rationalisation on a purely national scale; nor should the important changes on demand side be lost sight of in studying the maladjustment. As long as consumers' demand naturally grew in proportion to the increasing production or could be kept up to the mark by methods like instalment selling, prices could not fall; but once the demand flagged, all articles of production were involved in the general fall of prices. It might also be pointed out that the development of the theory of long-wave movement points to "differential rates of increase of technical progress" as the main cause of depression. We shall therefore be justified in giving their due weight to both factors—the growth of production and the monetary influences—in our account. In a word the productive situation was too dynamic to allow any time for adjustment either between the rapidly growing volume of production and demand, or to the equally necessary adjustment and co-ordination between different branches of production. There is much in the view propounded by M. Schuller the great Austrian Economist: "Any artificial manipulation of currency values may create or aggravate an economic depression; but all these difficulties were in existence before the question of distribution of gold ever arose."

There can be no doubt of the high value of the contribution of Sir H. Strakosch on the subject and of his attempts to show a sort of correlation between the distribution of gold and the phases of the Depression. Nor can any student of economics fail to be instructed by the attempts of Mr. Hawtrey to represent the trade cycle as a purely monetary phenomenon in his very interesting work on "Trade Depression and the Way Out." Nevertheless there are serious gaps in a line of reasoning which ignores the disequilibrium on the sides of production and demand, or the steady increase

¹ Cf. Selected Documents submitted to the Gold Delegation, p. 22; "American Economic Review," Supplement, 1931, p. 177.

of stocks or the piling up of industrial and agricultural equipment. Nor can deflation account for the Depression adequately especially in view of the fact of the considerable credit expansion in various countries within the last three or four years.¹

MALADJUSTMENTS OF PRODUCTION AND DEMAND

Thus it seems desirable to begin our study of the causal factors by first mentioning maladjustments on the production side. Here the conditions have been so rapid, and so great have been the revolutions of production both on the agricultural and manufacturing sides, that by themselves they might have endangered the economic equilibrium. Those who are tempted to over-emphasise the monetary factors, profess scepticism regarding the undue growth of production in the case of a great number of commodities. But one is on firmer ground when one regards the constant improvement of technique and increase of area cropped on the agricultural side and the steady growth of mass production and better methods on the manufacturing side. We have been having, in fact, a series of industrial and agricultural revolutions all comprised in course of a single generation, and in the race between population and production the latter has been winning decidedly, thanks to the continuous progress of science, invention and methods of transportation. In the case of some countries, as Prof. Seligman put it recently "instead of population pressing upon food supply, food supply is pressing upon population." The growth of the *per capita* wealth in the world is an undoubted fact and it is this which gives rise to the painful contrast so often drawn between increasing wealth and unprecedented depression; but obviously such *per capita* growth of wealth implies rapidly growing production. It might be remembered that a much smaller measure of industrial progress made its contribution to the great depression of the eighties of the last century. Finally, it is this *crescendo* growth of production and even more of productive capacity that inspires visions of future like that of Mr. Keynes contained in his recently

¹ For the Second Memorandum by Sir H. Strakosch on the Crisis, and for some comments on it, see "Economist," 9th January, 1931.

published collection of essays in which he foretells an unprecedented rise of the standard of living in the fairly near future. He calls the present unemployment "technological unemployment" and adds that "in quite a few years—in our own life time I mean—we may be able to perform all the operations of agriculture, mining and manufacture with a quarter of the human effort to which we have been accustomed."

On the manufacturing side, it will suffice to indicate the general growth of mass production and of the "heavy pressure on a large industry to maintain continuous operation," as well as the resulting surplus capacity in industry generally. This surplus capacity is being increased by the cumulative action of quite a number of factors. When we talk of the influence of large-scale production we are summing up a great number of tendencies—the influence of overhead costs, of every increase in demand whether temporary or permanent, the influence of new systems of salesmanship, the ambition of business magnates are among a few of them. The surplus capacity explains the keen struggles for raw material, and the dumping policies and movements in the direction of monopoly. Some very useful figures of the rapid march of production have been furnished by Prof. Ohlin in his Report on Depression. Among other easily accessible sources might be mentioned Prof. Patterson's "World Economic Dilemma," Prof. Loveday's "Britain and World Trade, Hamlin's "Menace of Over-production" and the valuable memoranda of the League of Nation on Production and Trade.¹ But quite apart from these statistics we can appeal to the facts of a marvellous age full of economic revolutions. We have to deal with and compare not only the percentage increases of production and gold but also to take into account the great changes in technique coming one on the top of the other, to give their due to the conditions and psychology of demand on which this vast growth of supply impinged, and further to consider the radical changes in the methods and powers of salesmanship.

¹ Patterson, "World Economic Dilemma," pp. 71—72; Loveday, "Britain and the World Trade," pp. 53—54; Ohlin, "Courses and Phases of the World Economic Depression," pp. 54—57.

The valuable Report of the Economic Committee of the League of Nations on the present Agricultural crisis has now become the *locus classicus* on the subject; and in its pages we can trace the effect of technical improvements, of new scientific methods and of the bringing into cultivation of new lands upon the volume of agricultural production. Indeed in some directions the results of progress have been most embarrassing. Thus we read that "from certain stocks a really excessive harvest has been obtained which has become a danger for the wine-growing industry." But let us turn to the fundamental problem of the over-production of cereals. Taking Argentina as a representative country of overseas production, we find that the area under wheat has increased during the last three decades by about 165 per cent. No wonder the delegate of the Argentina Government commented as follows on these figures: "There can be no doubt that the seriousness of the depression is principally due to the over-production of cereals, which are most suitably grown in overseas countries where large fertile tracts of land can be extensively tilled by mechanical methods, and where it is difficult to rationalise production by substituting other crops for cereals."¹ The same authority adds that "an ideal solution of the problem would be to avoid this over-production; but as regards countries with extensive agriculture, the difficulties in this respect may be regarded as insurmountable." When we consider such figures and the growth of exports from the United States and Australia, we can have an idea of the causal factors of the Agricultural depression and of the relative decline of agricultural prices. In fact, in the United States the farm depression has already persisted for over a decade. It is in the light of such factors that we can understand the competition to which the European farmer is exposed—competition which he has tried to meet partly by mechanizing his own agriculture, in part also by altering his line of production and finally by invoking the help of protection and of preference.

Belonging, as we Indians do, to a predominantly agricultural country, we are interested in another line of discussion which has

¹ Report on the Agricultural Crisis: Economic Committee of the League of Nations, pp. 79, 88 and 292.

been going on—that the agricultural depression is independent of the industrial crisis and can be regarded as an outside factor. The discussion was started by some remarks of the distinguished Prof. Schumpeter before the American Economic Association. His view is that there would have been in any case an agricultural depression even had there been no industrial depression.¹ To that contention it has been replied that both depressions were due mainly to the same factor *viz.*, the great changes in technique of production, and that it is part and parcel of the same downward secular trend of prices. In this particular controversy, the decisive matter is the vast growth of acreage, production and improvement of technique in agriculture—especially in case of cereals where the demand is comparatively inelastic and inexhaustible. And to say that there would have been an agricultural crisis in any case is not to deny the inter-relation of the agricultural and the manufacturing depression.

There is no reason to suppose that in this matter we are breaking entirely new ground; for most economists have emphasised the importance of agricultural outturn and conditions upon industrial fluctuations.² Some of the causal factors were different in the case of the agricultural and the industrial depressions; but the fundamental factor of growth of improvements and increase of scale of production was common, and so was the cyclical tendency.

The fact is that from the point of view of the advocate of Co-operation there is no occasion for a controversy between those who emphasise the currency aspect of the Depression and those who would point out the maladjustment of production to consumption. Are not these two aspects merely two different phases of the same general situation? The bed-rock fact is that there has been a great maladjustment in both directions and, in both cases, through want of the requisite co-operation. Surely on the side of gold and currency the action of America and France in drawing in so much gold and

¹ "American Economic Review," March 1931, p. 220.

² Pigou, "Industrial Fluctuations," p. 200.

sterilising it was the very reverse of Co-operation. Not that morally these countries were any more to blame than other countries which also scrambled for gold as far as their powers could go in that direction. Much closer co-operation should also have been shown in the way in which the exchange values of different currencies were stabilised. On the side of increased production, again, the constantly growing surplus capacity was added to without a thought as to the total effect—a state of things the very opposite of a co-operative policy. As Hamlin has observed in his "Menace of Over-production," "back of the business fluctuation of to-day is a potential capacity—a capacity to produce consistently more goods than income can absorb."¹ To the same effect Prof. Patterson says that "in the process of economic expansion and aggression, there is no great national or logical limit. No gain that is secured in the struggle brings final satisfaction, more is always desired. And just as long as economic organisation is along national lines, strain will exist."² In a word, we are here on the old economic theme of Maximum Satisfaction as applied to production on national as well as international scale. We remember the dictum of Marshall that "much remains to be done . . . in order to discover what are the limits of the work that society can with advantage do towards turning the economic actions of individuals into those channels in which they will add the most to the sum total of happiness." We cannot trust always to the "free play of self-interest to secure the largest possible welfare;" but the trust is never more betrayed by producers than in a highly dynamic age of production like the present with combinations, tariffs and state policies all alike tending to push production forward at any cost. Nevertheless those who would blame the currency side of the Depression, are not without excuse—for in the absence of that full International co-operation of banks and currency authorities, that is yet to come, it takes a much shorter time to disarrange or even ruin altogether that most important instrument of exchange—Currency.

¹ Hamlin, *op. cit.*, p. 168.

² Patterson, *op. cit.*, pp. 366—367.

CHANGES ON THE DEMAND SIDE

For understanding fully the effects of maladjustment in production we have to study not only figures of production but also the recent vicissitudes of consumption. We have seen the rigidity of production on the manufacturing side due to the requirements of mass production mainly; and on the agricultural side, caused by the well-recognised inelasticity of supply in this economic sphere; and we have now to envisage a factor which greatly aggravates the trouble arising from this situation—the instability of demand. On this side of our study valuable work has been done by Mr. Loveday the distinguished economist of Geneva and that work has been notably supplemented by Prof. Ohlin.¹ Take one more eminent witness Mr. L. C. Gray (Principal Economist in Charge, U. S. A. Department of Agriculture); he adds the weight of his observations to the effect that “such an overwhelming shrinkage in demand, of course, modifies materially the equation of demand and supply”² with the result that even though the volume of agricultural production had not increased stocks would have inevitably piled up. Here we are obviously at the beginning of a dynamic and realistic study of movements of demand which is quite different from the dogmatic slogan of “under-consumption” which is even now finding expression in so many directions.

The causes influencing demand which are relevant to our study, might be divided into two classes. In the first class might be placed those factors which have gone to produce instability of demand. One of the most important amongst them is the great change—or successive changes—in the distribution of income caused during the War and post-War period by such factors as inflation and deflation, rise of wages and growth of a new plutocracy. Another factor is the growth of *per capita* wealth in several countries and even the changes caused by the War in the age distribution. Now the results of these changes on consumption generally are pretty,

¹ Loveday *op. cit.*, pp. XIV & 86-92; Ohlin, *op. cit.*, pp. 1925.

² Proceedings of the American Academy of Political Science, June, 1961, p. 54.

obvious and clear. The rapid changes of wealth go to dislocate the ordinary standards of consumption and thus help to make demand unstable. Much the same effect is produced by the sudden accretion of wealth in the hands of classes which stood at or below the line of subsistence level. It is obvious that they have yet to form a standard of consumption suitable to their new resources; in a word, they have yet to be educated into the proper use of their new resources. But besides that circumstance, there are always a variety of choices open to the consumer as to how he can spend that portion of his income which is above the needs of mere subsistence. Here are all factors which make for shiftings of demand. The result is as Mr. Loveday has emphasised "that the problem of anticipating demand will become more and more difficult, and year by year the functions of sale and advertisement will become more important." Perhaps it might be added that these functions of sale and advertisement have, in the past, not been discharged in anything like the ideal manner and that the abuse of the systems of advertisement and instalment selling is in part responsible for the depression.¹ There is such a thing as anticipating, fatiguing and exhausting demand. That and the exactions of middlemen have been factors in the occurrence of what is called the consumers' strike.

We have however to take account of another set of causes which go directly to reduce and lower consumption. There is, for instance, the influence of the income deflation and of the lag between retail and wholesale price. Then again the constantly increasing burden of tariffs is oppressing the consumer and lowering his powers of purchase. Still another influence acting in the same direction is the reduction of foreign investments by creditor-countries which has reduced purchasing power in the debtor-countries. The vast burdens of reparations and taxation are also prime factors on this side; and lastly the depression of silver has made an undoubted contribution on the same side. It is this complex of factors that we have to bear in mind when talking of "underconsumption" as a cause of the present crisis.

¹ Kinsig, "World Economic Crisis," p. 41.

There is good ground for believing that had the world developed ere this a sound system of Consumers' Co-operation it would have suffered much less from these troubles on the demand side. With the middlemen's power and numbers curtailed by such co-operation the lag between retail and wholesale prices would certainly have been smaller. Moreover the conscious association of a large number of consumers would, to some extent, tend to stabilise demand, especially as the aim of co-operation is the uplifting of the mass of the people and raising their standard of living. In fact the development of Consumers' Co-operation is equivalent to educating the consumer and showing him how best to spend his money to his own and to general advantage.

We have seen the necessity of taking a long-period point of view in our study of influences on the side of production and demand which have a bearing on the problem of depression. The same is true, though to a smaller extent, when we come to envisage the monetary influences. Taking one aspect of what might be termed the "monetary complex" from which the world is suffering we find some hindrances to the smooth working of the gold standard going back very far into the past. Thus as regards a great many countries the complaint was justified that they were too anxious to increase their holdings of gold and too reluctant to part with it. Thus, in the pre-War writings of Hartley Withers and other experts, the complaint used to be made that in case of some countries "foreign exchanges very seldom go down to the gold point, because gold begins to go before they can get there."

THE MALDISTRIBUTION OF GOLD

But during the post-War period, the hindrances to the proper functioning of the gold standard have been multiplied and made far more formidable. For one thing, the reluctance to let surplus gold go out has at last found the unerring weapon of sterilisation of gold. The American policy of sterilising gold and of preventing it from having its full influence on prices has had important effects in the way of upsetting the proper working

of the gold standard. With such powerful forces as payment of reparations and high tariff barriers at hand to draw in gold and with the supplementary policy of sterilisation assuring a secure retention of that precious metal, the maldistribution of gold was not only unavoidable but was bound to increase by leaps and bounds.¹ One cannot conceive of a more deadly stranglehold on the gold standard. For, while the payment of the reparations necessitates an export surplus on the part of the debtor-country, the rising tariffs render the existence of such surpluses of exports impossible in the shape of commodities. Gold alone can therefore go to pay the reparations, and it is at once caught and retained in the trap called sterilisation. As Dr. Sprague has pointed out another and allied hindrance to the working of the gold standard is the fact that "America is a most unsatisfactory creditor-country from the point of view of the rest of the world." Nor does it stand alone in this respect. While the acceptance by America of the policy of sterilisation of gold was an important factor in the maldistribution of gold, there were influences acting in France leading to the accentuation of that movement. This is due as Dr. Jack has pointed out to "important obsolete characteristics" of the banking system of France. Since the Bank of France is still in a sense a rival to the Commercial banks, the latter do not generally resort to rediscounting of bills when they want to increase their resources. "Therefore, when the ordinary banks find that they require additional currency, the simplest course for them to adopt is to draw upon their balances abroad and repatriate gold which they deliver to the Bank of France in exchange for new notes to be issued." This is one of the important causes of "the exceptional drain of gold to France."²

A very interesting account, of the factors of maldistribution of gold has been given by Prof. John H. Williams of Harvard from the American point of view and, coming from such an authority, it deserves respectful consideration. His contentions are that "down

¹ Patterson, *op. cit.*, p. 110; "Selected Documents submitted to the Gold Delegation," pp. 53-55.

² Dr. D. T. Jack, "The Crisis of 1931," pp. 42-43.

to 1925 the United States was the only leading country on the gold standard. Gold came to us because there was nowhere else it could go. We were able to underbid any other nation in the English gold market because sterling was more depreciated here than elsewhere. We accumulated our gold almost entirely in the period prior to 1925. Since that time, though the movements inward and outward have been pretty violent, the total stock is substantially unchanged." Another reason for the flow of gold to America is then noted by the Professor: "Our balance of payments has been favourable to gold inflow whenever capital has not been exported in large amounts." He grants that perhaps an additional factor in the situation might have been "the management of the standard, the practice of offsetting gold flows by central bank operations in the open market." The loss of gold by England is attributed to the fact that she had resumed the gold standard at too high a figure and to her comparatively high export prices. The gain of gold by France is explained as due to the favourable balance of trade as well as to the fact that the export of capital was prohibited by law from France up to 1929. Other co-operating causes in the situation are stated to the effect that the "French have not been interested in the exportation of capital in any way," and to the withdrawing of large balances from London and other centres.¹

On these views it might be permitted to offer a few observations. While attention has been drawn to the economic strength of the two countries.—America and France—no mention is made of prime factors like tariff barriers and reparations. Again, attention has been justly drawn to the want of a suitable policy of capital exports from France. Lastly, Prof. Williams agrees with Dr. Sprague and Prof. Ohlin that the foreign investment policy of America is "one of the causes of this depression." This last statement is satisfactory so far as it goes; but what is most disconcerting in the range of discussions on this subject is that hardly any suggestions have been made for remedying the maldistribution

¹"Proceedings of the Academy of Political Science," June, 1931, pp. 111—118.

or indeed for preventing its increase. A defence which does not take proper account of factors like reparations, tariffs, and the sterilising policy as to gold, cannot very well convince.

Before we leave this aspect, we might emphasise that the maldistribution of gold has been complete in every sense of the word. While the resultant shortage of gold has helped to drive prices low in most countries, even France and America—which have received between them the lion's share of the world's gold—have not escaped the fall. Even though in the case of France there has been an increase of note issue, this additional supply of notes has gone partly into the reserves of banks and partly into hoards. So true it is that the maldistribution is no blessing either to them who lose or to those who gain the gold unduly.

SHORTAGE OF GOLD

Needless to say that this maldistribution of gold is a far more formidable factor in the Depression than the shortage of gold. That shortage is quantitatively not very great, at least if the world is content not to raise its price level by a drastic upward movement. There are obvious methods of economising gold which are being practised and others that have been suggested. Nevertheless it would not be quite in accordance with facts to deny all influence to the shortage of gold; for statistical experts are of opinion that our position as regards gold is such as would have necessitated in any case a fall of prices below the pre-War level with the restoration of the gold standard. But in any case, of the two aspects of the gold problem, it is the maldistribution which is far more important both in its relative gravity and difficulty of solution. Those who want to learn the comparatively minor importance of the shortage of gold as a factor of the present depression, or to be instructed that the monetary factor does not occupy that position of predominant importance that has sometimes been ascribed to it, might be referred to the recent work on "The International Gold Problem" which is a symposium on the subject at which distinguished members of the Royal Institute of International Affairs have assisted.

INTERNATIONAL MOVEMENTS OF CAPITAL

There is a close connection between the problems of the maldistribution of gold and that of the reluctance of creditor-countries to lend steadily and wisely to debtor-countries; or rather the two phenomena are only two aspects of the same economic fact. It is obvious that the economic situation must lose its equilibrium were the maldistribution not balanced by adequate lending. Instead of that wise policy being followed out, we find that by the year 1928 there was a great slackening in the loans by creditor-countries, and the movement has continued up to date in spite of certain spurts of lending—the long-term capital movements declining particularly of late. Indeed, one great country in particular which is at present pre-eminently strong in the creditor position, has become virtually an importer of capital. No doubt the creditor-countries did not lack reasons for acting as they have done. Thus a careful and ingenious apology was made out by Dr. Henry A. E. Chandler last year. He advanced two reasons why America could not lend more than it had done. In the first place, America had no favourable balance on commercial account apart from the amounts due to it on "allied debt and other foreign investment account;" and its loans were fully proportioned to the difference between these two factors. The other source, out of which America could have lent, was the money which foreigners had invested in the American market; but "it is not a fair question to ask whether we are under an obligation to continue to re-invest their money under conditions which, and in countries where they are unwilling to invest it themselves?" So also at the Assembly of the League in 1931, the point was made that the misuse of short-term credit made by debtor-countries justified the denial of further credits to them.

The defence would appear to be complete and convincing from the debating point of view, but not from the broad point of view of International Economics or of general co-operation. From the latter aspect, we see the want of a bold policy of foreign loans such as the status of great creditor-countries requires in general interest. A brilliant precedent to be followed out was the policy followed by

Governor Strong which was the cause of such prosperity to America as well as to the world at large. The principles laid down by him are those of *international monetary co-operation* in the best sense. Thus, speaking before the Royal Indian Currency Commission, he asserted that the gold which had come into the United States, was so mobilised and kept under control that it "may be drawn upon by the rest of the world to fortify their own monetary position."¹ This was the very ideal of International co-operation in the working of gold standard. But Governor Strong went further and made statements which are worth quoting against some of the practices followed in his own country later. Referring to any tendency to scramble for or hoard gold, he urged that "the resulting situation might render the functioning of the gold standard in other countries extremely unsatisfactory." Indeed, he went on to develop a doctrine of "trusteeship" of the United States for the additional gold which it held. The "trusteeship" was expressly defined so "that this gold is to be retained by the United States until it can be used for the purpose of restoration and development of a post-War world." The country which Governor Strong so ably and worthily represented, might now be reminded of his wise dicta and be called upon to fulfil the duties of that trusteeship. There can be no question that had a longer lease of life been vouchsafed to Governor Strong he would have developed the policy of monetary co-operation in a masterly fashion; and in an important sense, the death of Governor Strong might be considered as one of the contributory causes of the present depression. Praise is also due to his then colleague Dr. Sprague who was not at all behind him in advocating such international co-operation. He too subscribes to the view that if a country withdraws gold from the general market and clings to it, "it makes for a lack of co-operation with the rest of the world which would render the functioning of the gold standard very unsatisfactory." We might safely rely on these dicta of Governor Strong and Dr. Sprague to serve as guides to the true policy of monetary co-operation and as reply to the

¹ Royal Commission on Indian Currency and Finance, Q. 15, 317; 15, 229 & 15, 338.

apologists of the more recent policy of their country as regards gold.

BANKING POLICY, PRICE-LEVELS AND DISEQUILIBRIUM ON THE CAPITAL MARKET

We now come to consider the question of banking policy and of the control of investment and of prices by Central Banks. On this subject one hardly needs to point to the great contributions made by Mr. Keynes,¹ Prof. Ohlin and Prof. James W. Angell amongst others. The views expounded by the two first-named economists, do not differ very materially and might bear to be summarised and repeated. It has been urged that the banks have restricted credit and have kept interest rates higher than they need have been. And here we observe the existence of a vicious circle; for while this action of the banks was due partly to the shortage and maldistribution of gold, this latter state of things was in its turn caused by changes in balance of payments due and ultimately to contraction of capital movements. The result has been as Mr. Keynes has pointed out that the operations of producers ("genuine borrowers") went on being curtailed and prices tended to fall. At the same time, the appearance of distress borrowers—among whom might be classed not only governments which had to meet their obligations but businessmen who were in the same position—contributed to keep up the rate of interest. In this way the process was set up of curtailment of production, fall of prices and "spilling" of investments in the financing of losses. Prof. Ohlin is perhaps somewhat less critical of the policy followed by the banks. He speaks indeed of "the failure of the banking system to stimulate investment through a more liberal credit policy." While allowing for the fact that "business recession always brings some disturbances of the balance" (on the capital market) and for the "severity of the underlying fluctuations" on this occasion, he

¹ Keynes, "Treatise on Money," Vol. II, pp. 377—380; Ohlin, *op cit*, pp. 232—233.

yet concludes that "it is conceivable that a greater flexibility in the monetary system could have kept the disequilibrium on the capital within capital market within narrow proportions and thus mitigated the decline of the price level".¹

The opinions of banking experts on such a topic are entitled to careful study and we might consider with advantage the balanced views of Mr. McKenna in particular.² He shows that at any rate two of the factors in the price situation are within the control of banks, *viz.*, the quantity of money and the rates charged for loans. But the banks cannot control two other factors which are equally important—the rate at which money circulates and the use to which it is put. He shows that though between the years 1928 and 1930 the volume of money in America has been approximately stable yet this maintenance of money supply even when "supplemented by a vast release of funds from speculative activity has failed to prevent a precipitous fall of prices accompanied by a disastrous trade depression. . . . The existing supplies of money were immobilised to a great extent and the rate of turnover drastically reduced, as a result of the psychology of fear which developed from the stock market collapse." So also he shows from the recent experience of England that "a larger part of the total volume of money has been left idle by its owners," and here too it is proved that banks cannot push money into circulation independently of the factor of psychology or of the extent of saving. What if the additional money provided by the banks goes not into trade but into speculation or is merely immobilised by the dislocation of the markets? It has been also added that it is easy to say that it is the task of banks to control the price-level; but that it is less easy to overcome the difficulties in the way—to prescribe any standard for the rate at which credit should grow and to forecast the trend of prices. For as Prof. Edie (of Chicago) has observed recently, "price forecasting remains probably the weakest link in the whole modern technique of econo-

¹ Ohlin, *op. cit.* pp. 226—227.

² "Bankers' Magazine," March 1931, pp. 840—841 & 478—480.

mic forecasting."¹ What then do we conclude from these opposed contentions?

What seems to emerge is that it is no use criticising the banks for keeping to their former credit policies which were not duly related to normal growth of production and which led unconsciously but surely to alternative conditions of inflation and deflation. Nor is it any use blaming these banks for retaining their former monetary objectives and for envisaging the monetary standard as really automatic in the light of the past economic history. What has now to be recognised is that the gold standard—or for that matter, any standard of the future—is to be a matter of much more systematic management and that the banks are to bear a leading part in the scheme of management. It is not in any sense the fault of the banks that they could not foresee the necessity of rationalizing the whole scheme of world economy and of submitting it to a system of central planning in which their credit policy had a pivotal importance. But in future, they must keep this point in mind and try to evolve a scheme of credit statesmanship to correspond to the new conditions—a statesmanship of which the main plank is a wise co-operation between central banks. The tasks of banking co-operation will be dealt with later. But attention might be drawn here to the views expressed in Prof. Edie's recent valuable book on "Banks and Prosperity" which discusses how the co-operation of banks can be reasonably relied upon to prevent crises, to rescue gold standard from the jeopardy in which it has been placed and to "safeguard the world from convulsive movements of commerce employment and price levels." A new index of the extension of bank credit is proposed to be constructed on the bases of potentialities of production.

INELASTICITY OF THE PRICE SYSTEM

But even maldistribution and shortage of gold are not the only aspects of what I have called "the monetary complex" which is at

¹ Cf. Edie, "The Banks and Prosperity", pp. 146 & 177-178. Also note the same writer's paper on "Putting the new Era to the Test," (1980) and that of R. Burgess, "Guides to Bank of Issue-policy."

present oppressing the world. We have to take note of the great stress put on our price system by the vast cataclysm and of the abnormal behaviour of that price system during the post-War period. We have before us for one thing the maladjustment of wholesale and retail prices which is aggravating the crisis by increasing the reluctance of the consumers to purchase and by complicating wage policy.¹ Here we have to note a whole set of costs which are adjusting themselves but slowly to changed conditions the costs of transport, the cost of labour and the remuneration of capital employed to bring production within reach of the consumer. In these ways, hence here again, we are witnessing a case of maladjustment of costs. Another glaring maladjustment is between the prices of agricultural and manufacturing products. This also is a case, in part at least, of rigidity of costs—those costs consisting of the higher profits, wages and other costs of manufacturing industries. But this does not explain the whole gap. We have to take account also of the comparative inelasticity of agricultural supply. The weight of tariffs, too, was greater on the side of manufactured products. But the most important factor in the situation was pointed out by that ardent co-operator—Senator Michelis of Italy, President of the International Institute of Agriculture at Rome—when he observed that while manufactures possessed syndicates, agriculture was without them, which was a great disadvantage to the latter. Consequently the Syndicate must be extended to agriculture." Needless to say by syndicates he meant in this connection Co-operative institutions. Over and above these anomalies of relative prices, we have to take account of the inflexibility manifested in parts of the price system where monopoly of one sort or another has had its say. As has been well observed by Prof. Schumpeter, "both level and system of prices have lost some of the elasticity they used to have." He obviously refers in the main to the spread of monopolistic tendencies. For he went on to say "all commodities under strict control account for a special class of difficulties both when they fail to adopt themselves and

¹ Loveday, *op. cit.* pp. 121—122; Eising, *op. cit.* p. 33; Ohlin *op. cit.* pp. 86—85.

when the control breaks down, as happened with some of the most important of them."¹ Here is no small item in the debit account against monopoly and it justifies the mistrust with which it was regarded by the classical and neo-classical economists. Need we add that Co-operation is the very antithesis of monopoly?

REDUCED PLASTICITY OF WAGE-RATES

Many economists show a not unnatural hesitation to emphasise the influence of the rigidity of wage-rates on the crisis. But if we blame the inflexibility of the whole economic system, we might not even in the interests of labour itself shun the wages aspect. Students of the works of Marshall and Pigou are familiar with the great importance of plasticity of wage-rates—*i.e.*, that real wages should alter in response to changes in demand for products of labour. So far as a wise wage policy is adopted on these lines and wages are made less rigid, the fluctuations of depression and of unemployment can certainly be reduced. There is some reason to suppose that it is not only the system of commodity prices that has been losing part of its former elasticity. Even one who is very sympathetic towards the claims of labour—and what economist is not?—must take into consideration factors which tend to influence wage-rates persistently in the upward direction in the West, the political power of labour and the strength of labour organization. The difficulties thus produced are of course not equally great in all countries and they seem to be at their maximum in the case of England. Thus Mr. Keynes tells us that the resistance to an Income deflation are “overwhelmingly strong in the modern world of organised Trade Unions and a proletarian electorate.” He also adds that though the failure of the General Strike in 1926 afforded an opportunity of timely reduction in wages, “political and social considerations stood in the way.” No one could accuse economists like Mr. Keynes, Prof. Pigou, Sir Josiah Stamp or Mr. Loveday of being hostile to the true interests of labour. Yet, according to Prof. Pigou, a tangible amount of extra unemploy-

¹ “American Economic Review,” March 1931, p. 181.

ment is certainly due to the maintenance of real wages above the equilibrium level. Mr. Loveday remarks on "the lack of mobility and adaptability" as a characteristic of wages and labour in England. From America too there are pronouncements to the effect that "the widespread adoption of deliberate high-wage policies "have kept up wage-rates artificially during the current depression." But, as we shall see, a general statement of this sort though true of a fair number of countries is far from being true in the case of all countries; for in a good many countries there is room for increase of wages which would carry the double advantage of increasing the efficiency of labour and of enlarging the demand for products. We must beware of the tendency of some writers to generalize from the experience of their own countries. We shall not be very wrong then if we concluded that the labour factor of the depression has only a local influence, though such influence is exerted in some countries which carry the biggest weight and importance in economic matters. While, therefore, it is undoubtedly dangerous to pronounce any dictum on the topic which can apply to all countries individually, yet taking the world as a whole, one can accept the summing up of the problem by the German savant whom we have already quoted (Schumpeter) to the effect that "the depression has not been brought about by the rate of wages, but having been brought about by other factors is much intensified by this factor."

There can be no doubt that the problem of securing the plasticity of wage-rates is being rendered increasingly more difficult and complicated owing to the existence of quite a number of new influences. Thus the important changes on the demand side which we have already noticed—and particularly those on the side of the plasticity of the demand for various commodities—constitute so many factors making for additional difficulties. Obviously, the more dynamic the situation the greater is the difficulty of securing plasticity. Another influence has been pointed out as working on the same side—viz., "changes in the productivity of industry as a

whole."¹ We are in fact faced by important new developments impeding still further the plasticity of wage-rates and adding to the rigidity of the economic system.

If we undertook a direct reduction of wages as an immediate remedy in a period of deep Depression, the result might only be to reduce demand for commodities and thus to intensify the depression. The better course is to register as it were for all future use the need for plasticity of wage-rates which present depression has so well taught. It is not in the very midst of a great crisis that we can expect the normal sequence of effects to follow and hope that reduction of wages must needs bring about a reduction of prices and its usual corollary—an increase of demand and rise of profits.

When making a study of this topic, a reference might with advantage be made of the recent work on "Unemployment as a World-Problem" by Mr. Keynes, Mr. Karl Pribram and Mr. E. J. Phelan—Mr. Phelan has marshalled the arguments against any reduction of wages; while Mr. Keynes has chosen to deal with the more positive aspect of the matter—the inauguration of construction programmes by Governments. Here again, to our mind, no generally applicable answer can be given, as is also the case as regards the policy of wage manipulation. Not many governments are in the financial position to undertake such construction programmes. But in the case of those countries which are in a position to undertake such programmes, notably the countries which have gold, there can be no doubt that such a policy will be a suitable and fitting complement to that of the reduction of interest advocated by the same authority.

THE TARIFF SITUATION

The events of the War and of the post-war epoch had raised the protectionist system to its highest pitch and had shown us the worst evils of selfish economic nationalism. The commercial policy of the post-war period constituted a record in retrogression. The old system of European commercial treaties, which had been a fair counterpoise to the excesses of protectionism, was ruined. Under

¹ Prof. T. E. Gregory, "The Gold Standard and Its Future," pp. 46—47.

the influence of the desire for self-sufficiency in war, the ambition to help on new industries started in war time, the fear of depreciated exchange and growth of national antagonisms, new and deplorable tariff tendencies had made their appearance. Almost everywhere there was to be seen a long list of prohibitions on imports. The wide adoption of 'tarifs de combat' "coefficients of increase" and of specific tariffs made the economic warfare chronic. Moreover as prices had been falling, the burden of specific tariffs had been growing heavier and heavier automatically. Mr. Loveday has justly observed that "specific tariffs are typical of the most general weakness of modern economic legislation and organisation; they are rigid while values fluctuate and demand hovers." The result was that trade has been hampered, balances of trade have been worsened further and the downward tendency of prices has been accentuated.

Lest it might be thought that the picture of retrogression which has been drawn here is unduly pessimistic, let us see how the most recent general study of tariff policies depicts the situation: "The tariff policy of all other European countries has also been marked by a tendency towards higher tariffs. New or revised tariffs have been generally enacted, and in every case, a higher scale of duties has been adopted. Greater specialization, with resulting complicated schedules, has been also a characteristic of all post-war tariff reforms. In most cases, the duties are payable in gold, so that the protection afforded by them is not affected by currency depreciation. Especially remarkable is the tendency toward greater protection in the States newly created from the disruption of the Austrian and Russian Empires. They have resorted to high protection as the only means for achieving economic independence. In addition to the generally increased protection, a system of import and export restrictions, unknown in pre-war times, has been inaugurated in many cases, making the movement of goods from one country to another extremely difficult."¹

That system of Most Favoured Nation policy which had been the consolidating link of tariff levels in the pre-war days, had fallen

¹ Cf. O. Delle Donne, "European Tariff Policies since the World War," pp. 266-267.

almost into desuetude and was being undermined by the system of Customs quotas and in other ways.¹ Complaints were made particularly of the system when "quotas were granted on specially favourable terms to a country whose ordinary exports were much lower than those of other countries concerned." This was equivalent to establishing a system of formidable customs preferences on the top of high tariff walls. Other devices and notably preferential projects threatened to undo the proper interpretation of the Most Favoured Nation Clause.

The World Economic Conference held under the auspices of the League of Nations had called for a return to a more liberal commercial policy and to an unconditional Most Favoured Nation policy in particular. But though there was for some time an improvement in commercial policy that progress was swept away by the rising tide of the Depression. We should note here the *double* relation between the tariff situation and the depression. "The smooth flow from country to country alike of goods, services and securities" was the condition not only of the normal working of the gold standard but also of the economic system of the world. It was the excesses of tariff building that helped to upset the balances of trade and consequently to disorder investment and to exaggerate the maldistribution of gold. In the end, when the flood of depression had arisen to its height, the nations felt constrained to abandon all thoughts of a liberal policy of trade and to take shelter behind the hurriedly thrown-up earth-works of additional restrictions. The world had, in fact, to pay dearly for their long hesitation and the postponement of good resolutions. Had the movement towards the lowering of tariffs come a few years earlier, or had the world followed up at once the suggestions of the Conference of 1927, the economic history of the present epoch would have been changed.

Instead of any great lowering of tariffs has come, a notable but—let us hope temporary—protectionist reaction. First came the Warsaw Resolution of 1931 in which the main innovation consisted of preferential treatment which the agricultural countries of Western

¹ On this subject, the minutes of the Second Committee of the Assembly of the League of Nations (1930) form very instructive reading.

Europe proposed to receive from the manufacturing countries that would import their agricultural products. So far as the resolutions imply the co-operation of certain countries they are welcome; but these proposals went against the policy of the Most Favoured Nation Clause and indicated a policy of discrimination against overseas countries. The second step in the protectionist reaction consisted of proposals put forward in the Assembly of the League of Nations to go back upon the recommendations of the World Economic Conference and to formally impart to the Most Favoured Nation Clause a conditional and limited interpretation and meaning. Finally, came the third and final step of the reaction. The intensification of protectionism had long been endangering the commercial policy of free-trade countries which had to rely on exports. In particular, even many leading economists of Great Britain had begun to advocate a transition to protection. The abnormal capital movements and the threat to the balance of trade has driven even Great Britain—the home of free trade—towards protection. True, something has been gained by the depreciation of the sterling but that support is temporary and conditional. It is to be hoped that the land which produced an Adam Smith, a Ricardo and a Marshall, will be able to show how to get the best out of Protectionism while avoiding its evils.

THE PROBLEM OF REPARATIONS

The treatment of this topic has been kept advisedly for a late stage in this chapter, for as a factor of depression is quite general in its effects and exaggerates the action of every factor leading towards depression. The present depression is a triumphant vindication of the theories of Norman Angell and proves conclusively that reparations prove a curse alike to him who pays and to him who receives them. The French indemnity of 1870 led to the great "Krach" and heralded the great industrial depression of eighties and nineties. But that mischief was as nothing compared to the havoc wrought by our present enormous indemnities. The inevitable idea of scaling down the reparations or even of granting a moratorium as to them gives rise to widespread bitterness and to much economic un-

certainty. On the other hand, the possibility of paying them is quite out of the question. Eminent economists have been busy for years forming successive theories regarding the possibilities of their payment. One of the best was that the debtor-countries should develop a growing and immense excess of exports which would be adequate to these mammoth payments. But then the authors of these theories were themselves alarmed by the prospect of the future exporting power of debtor-countries after they had succeeded in developing such vast productive strength. In any case, we need not concern ourselves much with these speculations, since such excess of exports has not materialised, thus clearing the ground for fresh and fruitless theories.¹ Meanwhile the unpaid reparations have worsened the economic situation in every possible way. They have upset balances of trade and thus have powerfully influenced the maldistribution of gold. The fear of the potential excess of exports from debtor-countries—an excess by the way, which never realised—has set tariff builders to work with feverish energy at raising the tariff walls. The vain attempts to pay reparations has depreciated and ruined currencies which in its turn introduce the troubles of inflation and deflation. Moreover, balances of trade have been upset and, in an important measure, production has been misguided and deflected. For instead of being directed to meet a normal and healthy world demand, any increased productivity has been made the instrument of securing an artificial excess of exports as a means of effecting vast payments. In this way the reparations must be considered as an important factor in the maladjustment of production to demand. Nor is this all. They are a most fertile cause of the additional burdens of taxation and have contributed in this way also to cripple commerce and industry; while the need of debtor-countries to secure an excess of export at any cost has led to a great intensifying of competition. Finally, such embittered international competition and such crippling of commerce and industry have acted as brakes on international lending.

¹The reader should consult on this interesting topic "The Young Plan in Operation" in the "Proceedings of the Academy of Political Science," January, 1931.

Here we might pause to pay our tribute to the clarity of vision of Norman Angell who anticipated by more than two decades the lesson that mankind is only now learning—that war is unprofitable economically even to the victor. True the economic analysis of Norman Angell was not quite comprehensive, his main position being that “modern wealth and trade are intangible in the sense that they cannot be seized or interfered with to the advantage of a military aggressor.” Experience has taught mankind the further lesson that heavy reparations not only cannot be exacted but go far to reduce the wealth and prosperity of the whole world. Obviously they cannot be exacted—since what Germany has paid she has paid out of her borrowings, while the effects of the reparations on the world economy has been most disastrous. Even if the reparations could be paid by means of artificially cheapened exports that would upset the course of international exchange. It is a far cry from Norman Angell to Lloyd George. But even the former advocate and author of the system of heavy reparations has at last learned the whole lesson, denounced his own errors in the matter and has appealed to the world to abolish reparations and debts. America too is being taught that lesson not only by the hungry and hysterical crowds of the unemployed, but by eminent authorities like President Butler.

In a word the reparations form a veritable and gigantic octopus which has seized the economic world in its fatal grip. It is too much to say that the mere abolition of reparation would remedy the crisis. But certainly until this incubus passes away, there can be no return to healthy or sound economic conditions. Let us remember what a crash (Krach) was caused by a very much smaller measure of reparations in 1870 when the conditions were vastly easier for paying up. In the present case, every device was employed to swell the total reparations and no device—whether of piled up tariffs of the misuse of monetary mechanism—has been spared to make the payment impossible. Is not this policy the exact antithesis of International Co-operation? And need we wonder if these courses “bring upon us an economic blizzard”? The most enlightened economic opinion even in America deplors the

impingement of a vast non-economic factor like Reparations on the economic sphere and would vote willingly for either a scaling down of debts or for a long moratorium.

THE PSYCHOLOGICAL FACTOR

No diagnosis of the present depression can be complete without adverting even briefly to the psychological conditions intensifying it. As is well known, what Prof. Pigou has called errors of optimism and of pessimism both play an important part in industrial fluctuations. There were important influences in the present case which were sure to increase the extent of both kinds of errors. One important source of error, of course, is that "productivity and desire both move in jerks." On both sides, whether of demand or of supply, the jerks which have taken place in the present case, were unprecedented; what with the effects of new methods of production, of war and post-war changes in demand, of inflation and deflation economic forecasting was more than even difficult. The great booms that we have had a decade ago, were undoubtedly due in considerable measure to the effect of optimistic errors.

At present, after having had our fill of optimistic errors, we are naturally suffering from the opposite influence of pessimism. That pessimism is engendered by our ignorance regarding the course and future phases of the Depression. Moreover during past depressions, there never was so much material to feed the feeling of pessimism. No former depression had so many influences working for it and so many aspects of mischief. And the very fact that the press is daily busy discussing all of them naturally deepens the pessimism; for surely no other depression received or assured such widespread comment and discussion. It is quite possible that the danger from some of the aspects of the Depression might be unduly exaggerated in and by this daily discussion. There is a grain of truth in the saying that we are suffering even more from over-prediction than from over-production. The tendency or rather determination in some quarters to make political capital out of the distress of some nations naturally heightens the forebodings.

In his excellent work on the "World Economic Crisis," Dr.

Paul Einzig has done well to emphasise that the present Depression is mainly psychological in origin. But so far as this holds true what remedy or tonic can be so potent as International Co-operation? Obviously the prospect of such co-operation alone can revive the flagging energies of mankind and remove that economic diffidence which has been gathering force for over a decade.

EFFORTS AT APPLICATION OF THEORY OF TRADE CYCLES

While controversy has been active as regards the former aspects of our problem, the conflict of expert opinion remains to be noticed as to the place of the present Depression in the history of cycles. Many experts agree in believing that we are suffering from a long downward movement of prices similar to that witnessed in the 'eighties.' To these statisticians, it would appear that the length and severity of the present depression cannot be adequately explained unless we take into account the "downswing of the long wave." They also pointed the fact that during the past half a century or so "every second or third depression develops into a major depression." This "long-wave movement" is connected with the maladjustments of the advance of production of different kinds of commodities and of gold; and we have already seen the divergences of production in different industrial regions. The hypothesis of the long wave has also been supplemented in other ways. Thus, Mr. Willard L. Thorp argues that "we are certainly in the trough of a long wave, far in the downward wave of a Juglar cycle, and probably in the trough of a forty-month cycle." Thus, the coincidence of three cycles "intensified by agrarian crisis, protective tariffs, monetary policy, reparations and inter-allied debts" and other factors which we have considered is invoked to account for the depression before us. On the other hand, an authority like Prof. Ohlin considers it impossible to isolate and to trace the effect of any "long downward price wave" on account of the complexity and number of post-war factors. It is just here that much is to be gained from the study of similarities and dissimilarities of the present depression and its predecessors. Such a study has been carried out, though naturally not

completed, by Prof. Ohlin himself for the League of Nations. While the present crisis exceeds all former ones as regards the decline in prices there are great parallelisms between it and the depression of the "seventies" and "eighties." In both cases, there was an antecedent period of great technical progress; in both too there was an accompanying agricultural crisis, as also a shortage of gold brought on by monetary reforms. These resemblances will no doubt help to fix the precise character of the present depression in the history of cyclical fluctuations; but the full force of the resemblances can be appreciated only when the present Depression has ended. Nor can we neglect the circumstance that the present depression is separated by about fifty years from the last great depression—that of the 'eighties.' While the modal length of ordinary business cycles is from three to three and a half years, the "long waves" are believed to have an approximate duration of from forty to sixty years. The studies of Kondratieff and others establish a presumption that there are such "long cycles" of that length. Kondratieff attempted to show that since the last decades of the eighteenth century the world has witnessed "two-and-a-half such long waves." As the trough of the last such wave was reached in the period 1890—1896, we might possibly be in the trough of the next wave since we are about forty years distant from that period (Cf. W. Mitchell, "Business Cycles" pp. 226—132). The coincidence that the world is in the trough of such a long wave besides being in the trough of the inter-crisis cycles of Juglar might account in some measure for the violence of the present Depression. At any rate in the face of these fundamental analogies we would do well to emphasise the world-cycle aspect of the present cataclysm; for besides the above factors usually found in such cycles, we had the speculative boom in America and fears of its collapse which are to be expected at the approach of such crises.

In concluding our study of the causative aspects, let us indicate the main tendencies to which the present depression can be attributed. In the first place, there is the unregulated and constant extension not only of production but, what is more, of productive capacity. To use the words of Mr. Hamlin "the cost of maintaining this idle capacity has brought into general operation the law of diminishing income returns." It is suggested that the chief and basic regulative power—one which can act at both ends so as to adjust production and consumption mutually—is Co-operation (both productive and distributive). It was necessary to remind a world in which science is and has been adding constantly to productive equipment that innovations in production require as their complement an increasing measure and a special agency of adjustment on the part of the world economy. On the monetary aspect of the Depression, we find that in spite of the beginnings of co-operation between currency authorities there are still many influences at work—the very reverse of co-operative. The mercantilistic poison has not even now been ejected from monetary and banking practice; it not only persists but makes use of the most advanced forms and resources of banking to upset the working of the Gold Standard. The influence of high tariffs—it need scarcely be said—works against world co-operation by breaking up markets and making a great many of them too small to take up the results of mass production. By raising the prices of protected goods, high tariffs lower consuming power all round. Then came the Reparations of which the mischievous effects grow in every direction *pari passu* with the increase of economic solidarity. Who can estimate the harm done by the present system of Reparations when their amounts are utterly inordinate, while those nations which have to pay them find every possible hindrance placed in their task by the misuse of tariffs as well as of the monetary standard? Under such circumstances, these Reparations form the very anti-climax of co-operation between nations. Labour policy too is in part anti-social i.e., in so far as it places obstacles in the way of plasticity of wages. Finally, since, as we have seen, we have to deal with the important influence of the business cycle, we want such a modification of the present

economic system as to eliminate the business cycle. The query for the consideration of the reader is whether Co-operation is likely to be the medium of so combining the idea of a general planning of the world's economic activity with that of individual initiative as to furnish us with the pivot of the proper policy which is to serve as the necessary corrective of the business cycle?

CHAPTER II

DISCUSSION OF REMEDIAL SUGGESTIONS

Before noting and appraising the value of the remedial suggestions that have been advanced as regards particular aspects of the Depression, it is well to indicate the general direction in which our efforts to overcome it must converge. Needless to say that ours is a plea for a close collaboration and co-ordination, for in such co-operation lies the only hope of saving our economic fabric. To begin with the first steps to success—how except by a pooling of resources of debtor and creditor-countries is the great financial and credit cataclysm that threatens the world in the immediate future to be averted? Nor can we solve the problems of restoring and improving the gold standard and checking the fall of prices without co-operation in the field of banking and credit. That *vis medicatrix naturae* to which we never look in vain has already given us the first steps in this remedial programme of co-ordination and co-operation. Thus, America has set the pace as a creditor-country in affording help by its moratorium offer; and, had that offer been accepted in the proper spirit and not ruined by political bitterness, it would have formed a most fruitful first step to recovery. As Mr. Keynes has said, the world was waiting for the emergence of some definite and new outside factor. Unfortunately when such a factor did make its appearance, political bitterness at once marred the prospect. Then again banking co-operation has been tried so far only on a limited scale, and even there the Bank for International settlements has yet to go a long way before it works up to its programme. As regards the tariff problem, the League has done its best for securing a Tariff truce;

though unfortunately with far less success than it deserved. Coming to the basic problem of maladjustment of agricultural and manufacturing production, we see a beginning of co-ordination in the shape of international cartels and mergers. These are however the mere beginnings of rationalization on an international scale. Then, as to agricultural co-operation, we see that it has been progressing in some countries. In particular, the Federal Farm Board has been trying agricultural co-operation on the larger scale, including plans for adjustment of the acreage under wheat and cotton to the demand. But Co-operation has yet to rise to its full stature. It is only when Productive and Distributive Co-operation is integrated on the national scale that it can exert its full salutary influence upon international adjustment of production and demand. As we shall see, later, very important work is being done in the field and co-operative activities are it is being co-ordinated in a promising manner by the International Committee for Inter-co-operative Relations.

As one more example of the undoubted fact that Co-operation is beginning to be regarded more and more as the economic policy of the future, a reference might be made to a dictum in a paper read recently by Mr. H. A. F. Lindsay before the Society of Chemical Industry: "I suggest that science has outstripped economics—that science has been quicker to respond to the new spirit which is now abroad, a spirit which is best described *as a change over from the ideal of competition to the ideal of co-operation*, from the ideal of efficiency attained under pressure of environment and other outside forces to the ideal of efficiency to be attained by mankind working consciously, constructively, and in co-operation towards a common goal. We cannot eliminate competition altogether, and we probably would not do so if we could. But I suggest that as a constructive force it is too instinctive, too haphazard, and too unreasoning to be allowed to occupy the whole field. Its future position will be definitely subordinated to a new force more constructive, more controlled, and therefore itself better *qualified to exercise deliberate and conscious control.*"¹

¹ "Journal of the Society of Chemical Industry" February 5, 1932, p. 122.

During the discussion which followed on that paper, a distinguished economist observed that this view "seemed to him to be communism—although not of the Russian type". It might be remarked with due deference to that economist that there is some confusion of thought in this remark. While Communism rules out individual initiative, and competition expects far too much from it, it is for co-operation to effect a synthesis of the competitive and the social forces and initiative. To use the Hegelian phraseology, while competition is the thesis and communism is the anti-thesis, Co-operation is the synthesis.

As has been said before, our order of treatment of the remedial aspects of the Depression must differ somewhat from that adopted in the treatment of causation: for here more regard has to be paid to the urgency of the solution of each question, and hence such remedies as can be applied in the immediate future to the body economic to cure it of the acute phases of the ailment have a claim to precedence over real remedies which take a long time to improve radically the economic constitution. Hence the problem of Reparations as the most urgent has to be taken in hand first. It is the irony of fate that this, the most difficult step in international co-operation, has to be given the precedence as regards order of discussion. Still it is almost superfluous to urge that the problem of Reparations must take the precedence in any remedial programme as regards its claim to urgency of solution.

An examination of the history of the Reparations is the necessary background to the policy to be followed in the future with regard to them. There can be no question as regards the fact that Germany has made a tremendous and unexampled effort in the post-war epoch to set her financial and industrial house in order. Rationalization has been carried on in every line and yet the fact stands that she has been unable to pay the Reparations. Let an American authority on Economics speak on the subject: "The external debt (of Germany) seems to be growing, not diminishing. Instead of taking from Germany, the rest of the world is lending more and more to Germany. To date, the attempt to collect from Germany does not seem to have succeeded. Prior to

1924, the amounts actually paid by the German Government that could be credited to reparation account were not large. Since 1924, the amounts due have been punctually remitted, but only from the proceeds of the loans just mentioned.¹ Germany cannot in fact pay the reparations with the tariffs hindering her exports so successfully.

These are facts too patent to be neglected. The Dawes Plan and the Young Plan had to be formed successively in order to scale down the liabilities virtually. The Dawes Plan had to adopt the "capacity to pay" theory, to provide for active help to Germany in the shape of loans and to give her other relief. The Young Plan went even further and provided for temporary moratoria and conditional reparations. In spite of her magnificently carried out programme of payments, Germany cannot develop an export balance to pay her reparations simply because some of her creditors must needs go on pressing for payment of reparations while they are equally determined not to adjust their own economic conditions sufficiently to let Germany develop the necessary exports. Taking the world as a whole, and even the great industrial countries individually, many authorities are of the opinion that it would pay the nations to abolish all reparations. But even a drastic reduction of amounts and the granting of proper facilities for payment might suffice to meet the situation.

On this subject it is impossible to avoid some reference to the report of the Basle Committee of Inquiry. While emphasising the fact that the payments so far made by Germany had not been made out of her own resources, it rejected as impossible two suggestions that had been made as regards the manner in which Germany was supposed to be able to pay the reparations. These consisted of the mobilisation and sale of Germany's foreign assets, and the method of a drastic reduction of imports. Having rejected these, the Basle Committee could recommend only that the existing volume of Germany's foreign credits should be maintained, and, further, that "part at all events of the capital which has been withdrawn should be replaced from foreign sources." But as no foreign investor would lend to Germany with the whole weight of reparations

¹ Patterson, *op. cit.*, p. 156.

pressing her down, the Committee further recommends an assurance that "the international payments be made by Germany will not be such as to imperil the maintenance of her financial stability." Here is a new call for scaling down of the reparations supported by the united weight of an international committee of experts. That committee, it has to be remembered, decided *unanimously* that the procedure and safeguards laid down by the Young Plan were not meant to apply to the present most abnormal set of conditions. It is therefore futile to appeal to the unconditional character of annuities under that plan or to the maximum time limit of moratoria as determined by that scheme.

Obviously, it is a compromise which must guide the world on this subject. On the one hand, it would certainly be premature to abolish German reparations without waiting for the fate of the other war debts. Such a premature abolition of reparations from Germany without a preliminary general consideration and settlement of war debts, would result in inequality and injustice to other countries. If, on the one hand, the appeals of some creditor-countries to the letter of Treaties are valid merely from a lawyer's point of view (though not from the point of view of the economist) on the other hand, we cannot accept the dictum of a representative of the debtor-country that it will not or cannot pay any more reparations in future. If reparations are wiped out at once on one side, the question of war-debt cannot be postponed. For one thing, America has to be convinced that it is to her interest to wipe out war-debts along with reparations. The issues on this matter have been well put forward and considered by Prof. Cassel in the well-known Harris Lectures on "Foreign Investments"¹. He has shown the irrelevancy of America's adopting "simply a lawyer's point of view" in arguing that "we have nothing to do with the German indemnity; we have advanced loans to the European Allies in the War and we simply insist upon these loans being repaid." He adds that this legal argument has nothing to do with the great economic problems of war-debt payments; for "economically it cannot be doubted that the Allied countries have to pay the United

¹"Foreign Investments" (Harris Lectures for 1928), pp. 63 & 93.

States chiefly by means of the indemnity payment they receive from Germany." And since it is by their strongly protectionist policy that the would-be recipients of reparations have placed very great difficulties in the way of the payment of reparations by Germany, it is for America to choose between maintenance of high-tariff walls and receipt of war-debts. In a word, Prof. Cassel would have America adopt with respect to war obligations a solution "allowing the whole economic life of the world a fresh start."

But some little time is needed for pressing this conviction home and to induce America to make a change from her negative attitude. Hence, the value of the suggestion of Mr. Keynes which would have the Lausanne Conference prolong the moratorium for Germany over the current year—the time thus made available to be utilized by its creditors in arriving at a definite and ultimate determination of the liabilities of Germany. Nevertheless there can be no question of any further evading of this final and permanent scaling down. For a resort to moratoria as regards reparations and "stand still" agreements as regards ordinary debts on the commercial side leave the world in a growing state of uncertainty.¹

These considerations have prompted Sir Arthur Salter's recent and wise suggestions. His proposals have the merit of elasticity and adjustability to changing circumstances. Thus, the period of the moratorium is to be extended automatically on the basis of certain criteria which are laid down beforehand. So also the burden of Reparations is to be made adjustable by the issue of shares of the ordinary variety on German railways and industry. The burden of debts is also to be reduced generally by the raising of the world price-level to that of 1929.²

REMEDYING THE MALDISTRIBUTION OF GOLD

It is when we consider the urgent and essential need of remedying the maldistribution of gold that we come to realise the full importance of continuous lending by countries which are in a position

¹ The "New Statesman and Nation," 16th January, 1932.

² Cf. Sir Arthur Salter's recent book on "Recovery."

to do so. As the views of an outsider on this subject would be suspect, it is best to let authorities of the creditor-countries speak upon the subject. Prof. John H. Williams (of Harvard) has made some valuable observations on the subject which will bear quotation: "The principal alleviation to the present bad distribution of gold must be the flow of capital through the world. For some years prior to 1928 we did preserve more or less a balance in the world through the flow of capital from this country. We were exporting about \$ 1,000,000,000 a year; but first the stock market boom served as a magnet for foreign balances and depleted the reserves of the younger countries of the world which could ill afford to part with them. That I think to be one of the causes of this depression. Since that time, the depression itself has made for a bad international bond market. We ought to lend a sympathetic ear to all responsible suggestions as to ways and means of bringing about a great international flow of capital from the countries now holding so much of the world's gold, France and the United States." It is perhaps true that borrowing countries in some cases drew to an undue extent on foreign credit or misused it; but the remedy of excessive use of credit is not an excessive restriction of credit. There again it is an American authority who would guide us aright. "It is well to learn from past experience but a mistake to get too much out of it. The world has become so interdependent economically that it cannot function without credit. It is essential that the supply of credit be maintained."¹

That the lending countries have, besides helping the borrowing nations, not done so badly in the past on their own account is obvious. Here, again, it is best to let a financial authority from the great lending country do the talking. Thus Mr. Robert E. Kucsynski (Council Member, Institute of Economics, Washington) has told us that "in any case, the terms on which American loans were granted to Germany were by no means easy. The total cost—expenses of issue, interest (and premium) and incidental expenses of debt service—will annually average about 9 $\frac{1}{2}$ per cent of the net

¹ Of the paper read on "International Financial Problems" (1933) by Norman T. H. Davis (Member of the Financial Committee of the League of Nations).

proceeds to the borrower." He adds as a corollary that "the American bankers earned high commissions, the American investors received a high rate of interest, American exporters found an outlet in Germany." Further, he reaches the conclusion that "if America continues to export capital to Germany, she will find there an open market for her commodities, the Reparation plan will operate successfully, and the American savers will enjoy profitable investments." Nor had he any doubt that German borrowers were able to repay the loans; for he adds that "heavy as the terms of many American loans to Germany may be, if measured by the yield to the borrower, the total amount so far involved is not of a size as to make it doubtful that almost every borrower would be able to raise the funds necessary to fulfil his obligations when they became due.¹" It is obvious that it was only the latter abnormal developments that impaired the position of Germany as a debtor for most of the loans went to promote the economic and financial rehabilitation of Germany.

Surely the course of events has not falsified the anticipations of the financial authorities. For the position of Germany was not shaken until, during the short period of about six months, capital amounting to about £ 170,000,000 was withdrawn and the Reichsbank had parted in a still shorter period with nearly £ 50 millions in gold. The objections to letting her have the benefits of the Hoover moratorium led to further withdrawals of balances and funds. All this came on the top of the sudden contraction of international lending and investment which came on in 1929. But while recognizing the need of a sound and steady lending policy both for the solution of the reparations problem and for proper redistribution of gold, it has to be admitted that not all the creditor-countries however are in a position to lend. Take the case of England in particular. There can be little doubt that if the superfluous gold now in Paris and New York was at the disposal of Montagu C. Butler he would make short work of the depression. But the lending power of England is at present very restricted indeed. Some time back, the Colwyn Committee emphasised this and pointed

¹Lectures, 1928, pp. 179, 185, 187 & 190.

to the reduction in the volume of British savings due to the direct effects of War as well to the resultant changes in the distribution of national income and the high taxation. No wonder that many authorities in England are reconsidering and revising their "traditional belief in *laissez-faire*" in the matter of foreign loans in the interests of the maintenance of the equilibrium of domestic industry."

In the matter of the better utilization of gold and expansion of credit, we are entitled to look to America for a lead. The reason is that there alone there is at once a surplus stock of gold and a banking organization of an up-to-date character which can properly utilize it for the good alike of America and of the world. There also lingers the tradition of the wise and bold policy of the late Governor Strong; and that tradition is well represented by experts like Dr. Sprague and Prof. J. H. Williams whose views we have already noticed. The Gold Delegation has done well to emphasise the importance of the lending states maintaining an even flow of capital. And it might be added that at the Session of the League in 1931, it was an Indian delegate who had a similar recommendation added in the report of the Second Committee. As a matter of fact, in the matter of the expansion of credit, the initiative seems about to be taken by America and a bill has been just passed by the House of Representatives securing powers for expanding the currency. As regards the formation of the Reconstruction Finance Corporation and the widening of the borrowing powers of the American banks, Mr. Hartley Withers has been telling us that "it is all to the good that the American authorities, at least, are not afraid to meet a crisis of glut by the provision on bold lines of fresh purchasing power. They have shown themselves ready to put orthodoxy into the cupboard for the time being and to pledge the credit of the Government for the purpose of thawing frozen assets and releasing gold." All depends of course on the way in which these powers are utilized and interpreted, and whether the public ceases to hoard currency and begins to purchase more goods. The further step of stimulating and regulating foreign investment remains to be taken yet. In fact, the present depression has much to do with what might be called the interregnum in the

regions of international banking and investment. The old banker of the world (England) has at present been rendered unable through circumstances to carry on his old business of international investment; while the two new firms of world bankers are as yet somewhat new to their business. They have not yet had time to come to grips with their business and to develop a policy of steady and continuous lending.

THE PROPOSED STERLING BLOC

If the problem of the maldistribution of gold is not solved in this way, the world is not likely to wait for an indefinite time—until the balances of trade of France and America have become so adverse in the ordinary course of events that a natural redistribution of gold is effected in that way. Indeed, the period would be very long indeed in which such a consummation could be achieved. The economic strength of both France and the United States is well known—and that both on the agricultural and the manufacturing side. France which was once an agricultural country to a great extent, has vastly increased her industrial equipment at the expense of Germany. Consequently the reversing of the process of the maldistribution of gold in the ordinary course of events would be a very lengthy process indeed.

Under these circumstances, the rest of the world might co-operate as against the two monopolists in gold and proceed to form a sterling *bloc* as Sir Basil Blackett, Sir A. Salter and other eminent economists have been suggesting. Sir A. Salter has recommended preparations for a possible stabilisation on a commodity price index basis, working out the policy for this purpose in concert with the other countries which have gone off gold. He would however keep this policy in reserve as an alternative to that of co-operation on the part of America and France for restoring the proper working of the gold standard. The practicability and chances of success of such a policy go on increasing as the number of countries of which the currencies are linked to the sterling directly or indirectly has been growing. Virtually the whole empire is already on the sterling standard. Sir

Basil has remarked with great justice that "if by sacrificing the stability of exchange this country can be made master of its own economic destiny, not dragged at the wheels of the chariot of the Federal Reserve System of the U.S.A. or the Bank of France and can give real stability to the internal price level, the objective of a managed sterling currency system is at least one worth examining." Indeed, this is putting it rather mildly. For when Mr. Keynes and other economists were urging the abandonment of the gold standard, the main argument employed against them was that most countries had a preference for gold and desired its retention as monetary standard. But the policy followed by the countries having the lion's share of gold has been weaning other countries from their preference for gold. Very few would now differ from the dictum of Prof. L. Edie (formerly of the University of Chicago) that "what the outright foes of gold failed to accomplish has been in process of accomplishment by the friends of gold." In his view the gold standard has passed away in recent years and its place has been taken by the "banker standard" under which excessive variabilities of credit have been practised under the misleading title of "automatic elasticity of credit." There is no doubt a great deal of truth in these complaints, and if indeed the shortcomings which the gold standard has been developing of late cannot be removed, the alternative of a sterling standard deserves every consideration.

There are several advantages which might be gained by the successful adoption of this plan. In the first place, by the skilful adoption of a suitable price level not only would the possibility of a decline of prices be obviated, but trade competition could be so sharpened against the remaining gold standard countries that imports into them might be increased and balances of trade be rendered less abnormal. But, further, once a number of countries learn to co-operate closely in currency matters, that co-operation might be extended in its scope and might include the various aspects of common regulation of production, marketing and tariffs. The international management of the Sterling Standard will also serve as a most valuable apprenticeship in the art of currency management in general—one of the main lessons being the regulation of credit and

currency according to the rate of increase of normal production. Incidentally, Great Britain as the head of Sterling *bloc* would regain her prestige as the great financial centre and her former initiative in monetary matters. It is an encouraging sign that the Sterling has been fluctuating in value less than gold. But is it not also a proof of the mismanagement of the Gold Standard?

In his recent work on the "Gold Standard and its Future," Prof. T. E. Gregory has pointed out the weaker aspects of the Sterling *bloc* idea regarded as a permanent policy. He has shown that the monetary interests of the different parts of the Empire are by no means identical; and further that the creation of a currency union with Scandinavia would not add very much to the Economic strength of the sterling *bloc*. On the other hand, it is permissible to point out that the movement away from the Gold Standard is gathering force; that the countries going off that standard would scarcely like the idea of complete isolation as regards monetary policy; and that the monetary policy of the United Kingdom is such as may well inspire general confidence, so that other countries might do worse than join forces. As regards the duration of the Sterling *bloc*, that depends upon quite a number of other factors—upon the time within which a redistribution of gold is secured, upon the readiness of the countries possessing the lion's share of gold to restore the conditions facilitating a smooth working of the Gold Standard, and also upon the adequacy of the monetary stock of gold, even when so redistributed, to serve as the basis of a price level adapted to the needs of the period following the Depression. Finally, we note that the hesitation to accept a managed standard has been steadily undermined with every monetary development in the post-war period, and that the climax of this development has come with so many countries going off the Gold Standard.

IMPROVEMENT OF THE CURRENCY SYSTEM

In any event however—whether the problem of the maldistribution of gold is happily solved by means of a wise policy of international loans, or not—the world has to undertake the task of improving its monetary standard and of evolving a policy of banking

co-operation as a condition precedent. For it cannot be emphasised too strongly that the present depression might be said to have surprised the world and taken it unawares during a period of transition during which we were slowly pressing towards the ideal monetary standard and were attempting to solve the problem of international management of currency. The problem of this evolution has been occupying the world's energies for some decades. Thus the development of the Gold Exchange Standard, in which India took such a leading part, constituted but an early phase of that work. The recommendations of the Genoa Conference pointed the way to a further approach to the solution ; and had these suggestions been carried out wholeheartedly the world would have been furnished with an important prophylactic against depressions. But far too few of the Genoa suggestions were whole-heartedly adopted ; and the backslidings and hankering after by-gone ideals must bear much of the responsibility for our present troubles. However, that is the greater reason why we should expedite matters and hurry forward towards the goal pointed out to us by such experts as Mr. Keynes and Sir Josiah Stamp—" a central international control of gold supplies and credit."

The Reports of and documents supplied to the Gold Delegation of the League supply us with very useful proposals for improving the working of the gold standard. These proposals are on somewhat conservative lines but therefore all the more likely to command an early and general acceptance. The scope of its Report would have been wider and its results would have been more valuable, had its terms of reference permitted it to investigate the relationship between the present economic depression and the distribution of gold. But it is obvious that the Delegation has given itself a fairly free hand and its treatment of the monetary problem has gone much beyond the question of the demand and supply of gold. Not only has the Delegation suggested purely monetary reforms but it has gone on to discuss banking principles which would, if adopted, contribute to a more efficient working of the Gold Standard. The recommendations of the Gold Delegation are very materially supplemented by the instructive memoranda

supplied to it by experts. Several of these will long retain their value as permanent contributions to monetary theory and practice; for while the unanimous reports of any delegation or committee must needs be the pale fruits of compromise, the memoranda supplied by individuals are in a different position. The recommendations of the Delegation are therefore best studied in the light of these Selected Documents. Among the best known recommendations is the reduction of the reserve ratios—a distinction being made here between the “minimum gold” cover which is required to preserve confidence in the notes and the “surplus reserve” of which the function is to meet international obligations. On this point, we might well accept Dr. Trip’s dictum that “the rate for reducing the actual gold cover will have to be set by mutual agreement, and exclusively with a view to the world’s production and the world’s demand for gold,”—it being noted that the dictum emphasises the need for international co-operation. There will be general agreements also as to the idea of gold coin not being put back into circulation.

The next recommendation of the Delegation will require more elucidation, and, as it stands, is far from giving the as clear and unmistakable guidance to the central banks as is desirable. That recommendation is to the effect that only a gold influx or efflux caused by “temporary disequilibria” might be advisedly neutralised by central banking policy. Doubts have been raised as to how far this recommendation of the Delegation is consistent with another one which is to the effect that gold efflux and influx should in general be permitted to produce their effects.¹ The underlying idea seems to be that it is no part of the task of individual central banks to follow a policy which would interfere with the general distribution of gold but that they are not to be deprived of the powers of carrying out their policy of pre-war days in the matter of gold inflow or outflow taking place on the ordinary scale. A distinction might surely be made between the continuous gold inflow into the United States or France on account of war-debts or reparations and

¹ “Economist,” 31st January 1930, p. 218.

the ordinary movements of gold. It has also been remarked that the Delegation should have considered whether the gold standard itself has been helpful during the Depression. One who attempts a reply will of course admit that there is room for improving the gold standard as envisaged and understood at present; at the same time he will also be able to point to a number of abnormal factors which have militated against the smooth working of the standard in the post war period. Other noteworthy recommendations of the Delegation are meant to remove a defect which has crept into the working and practice of the Gold Exchange Standard of late. The Delegation has also advised the development of the bill market and the adoption or perfection of the technique of open market operations. Such operations, it must be admitted, constitute a comparatively new instrument of credit policy, and this aspect of credit policy has not yet had time to develop fully. Hence, both the extent of its influence and the proper scope and lines of its use are yet to be ascertained in the light of experience. Only one more recommendation of the Delegation might be noticed here—the one relating to the duty of the lending states to maintain an “even flow of capital.” It was obviously necessary to emphasise both on the theoretical and practical side the close relation between free international movements of capital and the smooth working of the gold standard.

Our study of the recommendations of the Gold Delegation and its documents should prepare us to envisage some of the main trends of the reform of the gold standard in the immediate future. The first feature to be emphasised is the utmost and most careful economy of gold, which is to be effected not only by avoiding the use of gold currency but also by adopting a suitable mechanism for variation of gold reserve requirements. Another measure to be adopted advisedly is the inclusion of suitable substitutes for gold as part of reserve requirement. It is further advisable to widen the interval between gold points, so that, as Mr. Keynes has pointed out, central banks, will be the better able “to protect the credit structure of their own country from the repercussions of purely

temporary disturbances abroad."¹ It is obviously the task of the central banks by a wise policy to reduce the movements of gold, especially those not warranted by the condition of the exchanges. Another important feature will be the effort to regulate long-period price changes. Students of Prof. Pigou's work on "Industrial Fluctuations" will remember his view that for individual countries there is only the option between stabilisation of prices and exchanges; but that through international co-operation a synthesis of the two aims is feasible—*i.e.*, if the central banks co-operate to limit the demand on gold and regulate prices, while steps are also taken to regulate the output of gold. The Genoa resolutions gave the world a lead in the matter and urged on the central banks the advisability of giving due weight not merely to the question of reserve proportions but to that of price stabilisation.

Above all, in order to work effectually, and on sound lines, the management of the improved monetary standard must be on international (better still expressed as "supernational") lines. Co-operation on the monetary side of planning is as necessary as we shall find it later on the side of production. To illustrate this it is necessary to point to failures of national programmes of and efforts at price stabilisation. Thus after the boom of 1920—21 some countries were hit hard by attempting deflation without regard to international conditions. So also those who worked the "dollar standard" assisted the process of maldistribution of gold by trying to eliminate the effects of the large influx of gold in order to stabilize the price level. Then, again, as a high American authority has put it recently, "they have sanctioned that excessive short-term variability of credit volume which it was the very heart and soul of the gold standard to prevent." And all this was done in the course of national policies followed out, undoubtedly, with the best of motives. Further, we have seen that only the co-operation of central banks and countries can secure a synthesis of price and exchange stabilization at the same time. And as to reduction of gold movements, we know

¹ Keynes *op. cit.*, vol. II, pp. 325—6 and 326—328; "Select Documents of the Gold Delegation," pp. 69—70.

that this is possible only if movements of credit are kept in consonance in different countries.

The advocates and the critics of the gold standard are alike agreed as to the advisability of a supernational management. That is clearly the advice of Mr. Keynes: "Provided that the world's currency system is managed with plenary wisdom by a supernational body, and provided that as a part of this scheme, gold is everywhere excluded from active circulation, then . . . the ideal standard of value, whatever that may be, is compatible with the forms of a gold standard of value."¹ Here at least there can be no doubt that all authorities are agreed as to the necessity of international co-operation. Indeed, in a very important and new sense, problems of currency have become of an international character. To those of us who began their economic studies thirty years ago this change in the point of view seems wonderful; but then it is only symbolical of the movement towards international co-operation in the whole range of economic life.

SCOPE AND OBJECTIVES OF BANKING POLICY AS REGARDS THE PRICE LEVEL

Having tried to envisage the lines along which the monetary standard is to be developed in the immediate future, we come to the agency of working out the policy i. e., to the work of the Central Banks, which are the controllers of credit and currency in this respect. We have, in the first instance, to examine their potentialities as well as the limitations to their powers in this respect; and in the first instance we shall examine the capacities of individual Central Banks in the matter of removing economic trouble. Here we meet with several conflicting opinions. As has been well noted, the practical bankers too often follow "the creed of negative leadership" and fight shy of responsibility. Few of them rise to the level of Sir C. Addis and argue that "we must be masters in our own house, the rulers and not the slaves of money." Only these can follow the advice of Mr. Keynes and assume responsibility for following a deliberate credit policy

¹ Keynes, *op. cit.*, Vol. II, p. 200.

which would control prices through influencing the rate of investment. Mr. Keynes admits indeed a number of limitations on the power of the Banking system to control price level, and his final opinion is that the banks' power is real mainly in the direction of preventing depressions and that it is much less tangible when it comes to remedying depressions.¹ But some of his critics would go further, and express scepticism even as regards the central banks' power to prevent depressions, on the ground that the economic and statistical methods of forecasting are yet imperfect. Moreover, they add that in trying to influence some of the prices favourably the banks might adversely affect other prices. Doubts are also expressed as to the effectiveness of the weapon of open market policy in bridging the gap between long and short-period rates for money.²

What then can we conclude safely as regards the outcome of this controversy? In the first place, it might be observed that, as shown by the Economic history of a century and more, banking policy has tried to adapt itself avowedly to the phases of the trade cycle—a fact which necessarily implies confidence in its power to influence both investment and prices. The potentialities of a stabilising discount policy are a matter on which there is little doubt. Moreover the armoury of the central banks has been enriched by the other weapon of open market operations. Nor can it be doubted that the short-term rate of interest, which the Central banks admittedly can influence, has some effect on the long-term rate of interest, and upon the bond-rate on investment and thus ultimately on prices.

What one may inquire, are the criteria which the central banks should utilise in guiding their credit policy? On this subject also the suggestions have been numerous. One set of authorities have emphasised the stabilisation of prices as the guide to banking policy, and the Macmillan Committee has given its blessings to the proposal. But to this it is objected that there is an ambiguity in this prescription and that the criterion

¹ Keynes, *op. cit.*, Vol. II, p. 851.

² Cf. "Quarterly Journal of Economics," August, 1931.

is not definite enough. For since we are in a period of rapidly declining prices which years' prices are to be accepted as the standard for stabilisation? and again, it is asked what is the objective standard or "signals" to be followed in working out the matter—whether a mere production standard, or that of the co-ordination, of production and distribution, or, on the other hand, a financial standard? Then there is the proposal of Mr. Keynes that the banks should have for their aim the equalising the market rate of interest to the natural rate and that they should control the price level through co-ordination of saving and investment. To that important suggestion the criticism has been advanced that the lowering of money rates does not always induce the business community to enlarge investment. One cannot always rely on cheap money to improve business activity; for, its psychological effect, it is alleged, is counteracted by the momentum of the trade depression. More recently Prof. Edie has advanced the idea of taking "the normal rate of growth of production" as a guide to the expansion of credit. But it is obvious that if in a period of stark depression like the present, the banks went on expanding credit, say, according to the suggested 3-per-cent normal expansion of production most of it would simply not be availed of and used.

So far as a practical conclusion can be aimed for immediate guidance under the present conditions, it is this that the central banks must proceed tentatively in the direction of providing cheaper money and of thus financing a trade revival. While the banks can make a beginning in this direction, the later stages of the policy will depend on the gradual response of business demand. There is no need to adopt the whole policy of "expansionists" to start with since the banks cannot control either the uses to which additional credit can be put by the business world or the psychological factors affecting the utilisation. The same consideration must govern the choice of the price level to which we should aim at reverting. Provided a beginning is made in raising prices and in lowering interest rates and the course is set in that direction, further experience will alone give a clear guide to the exact criterion to be adopted for future development when we reach more normal—or rather, less

abnormal—conditions. For the immediate present, the same course is prescribed by criteria like rate of production or the relations between the actual and natural rates of interest.

POTENTIALITIES AND LINES OF CO-OPERATION BETWEEN CENTRAL BANKS

It goes without saying that though there is scope on the above lines for the guidance and development of monetary policy by individual central banks, the success of the policy will be rendered far more likely by *co-operation on the part of central banks*. Since the War, such co-operation has been extending and Central Banks have been learning to take counsel together. In this matter, the world is under great obligations to eminent bankers like Mr. Montagu Norman, M. Moreau and above all to the late Governor Strong. The growing practice of keeping balances with Central Banks in free gold markets is at once a sign and a cause of such growing co-operation. An even more important matter was the co-operation of Central Banks in the task of currency stabilisation. But the experience of the present depression has suggested much closer co-operation between Central Banks, while the establishment of the Bank for International Settlements has greatly facilitated the task. It is with such co-ordination that the task of variation of legal reserve requirements of banks can be best taken in hand so as to economise gold. Economies in clearances between foreign countries too will by themselves be important for the same object. The defects which have crept into the working of gold standard can only be removed in these ways. On similar co-operative lines can the practice of any devices which have been adopted for absorbing more than the proportional share of gold (and of neutralising the effect of such accretions of gold on prices) be discouraged. Then there is the question of the regulation of gold points and of making them more effective which can only be tackled by the co-operation of central banks. There would also be great advantage in adopting the suggestion of Mr. Keynes regarding the widening of the margin between the buying and selling price of gold for banks. Encouragement has also to be given to the practice of central banks of holding

balances with each other, though the idea of treating such balances as parts of the minimum cover against demand liabilities deserves to be discouraged.

Indeed the range and sphere of banking co-operation is very wide indeed; but the greater and more remote developments of the future may be left out of sight in dealing with the problems of the day. For the full scope of the work of the Bank for International Settlements is yet to develop; nor can we ignore the difficulties in the way. It has, for instance, been pointed out that the potentialities of the co-operation of central banking are limited owing to "friction, heterogeneity, unequal development, difference in business organization and unequal sensitiveness to monetary and other factors as between different countries."¹ No doubt all this is true, and certainly such difficulties have to be faced; but the great engine of banking co-ordination and co-operation has already been installed in the shape of the Bank for International Settlements and it would be impossible to exaggerate "the highly important role which that bank can play in the sphere of steadying foreign exchanges, ameliorating flights of capital, organizing rescue parties for temporarily embarrassed situations, and in general of fostering co-operation between Central Banks with a view to minimizing the international shipments of gold." Above all it will serve as the best guide to central banks in developing and working a planned gold standard and in interpreting the rules according to which such a standard must function.

The recent pronouncements of the President of the Bank for International Settlements are of a character which encourage the high hopes entertained of that institution. The Bank is already carrying out the wider functions of regulating and stabilising the international movement of funds. It is also working at the tasks of "the transfer of capital to markets where it may be so needed either to counteract a temporary influx such as that experienced by Germany a few weeks ago, or to level out discrepancies in discount rates. It has moved funds in aid of currencies which have shown temporary weakness and assisted some countries in the organiza-

¹ Prof. Williams in "Quarterly Journals of Economics" August, 1931.

ation of discount markets. It is also contemplating the important measures for the formation of a foreign exchange settlement fund and an adjustment fund designed to prevent unnecessary movements of gold." ¹

PROPOSALS FOR THE REINSTATEMENT OF SILVER

Before closing the study of the remedial programme on the monetary side some reference is necessary to the projects that have been put forward for restoring silver to its former monetary position, and, at any rate for using the world's silver resources to supplement the gold supplies, so as to raise the level of prices. Among others who have written favourably on the topic might be mentioned Sir Robert Horne, Mr. J. F. Darling and Sir M. de P. Webb. In his older scheme, Mr. Darling contemplated the establishment of an Empire Bank and the creation of a new unit of inter-imperial financial adjustment (the "Rex" or the "Empire Pound"). More recently he has modified and simplified the project with the result that it amounts now to using silver to supplement gold reserve of the Bank of England and to the re-opening of Indian mints to silver. Sir Montagu Webb has also ably advocated this idea. Other writers agree so far as to advocate the general supplementing of gold reserves of banks by silver.²

The practical difficulties in the way of these projects are obvious. In the first place, the whole course of development of monetary practice has been towards a managed currency; and the difficulties of such management, already great enough will be multiplied with the added complication of having to reckon with the fluctuations in the volume and value of silver. No one can deny that there is some force behind Sir Arthur Salter's remark—"is it reasonable that the world should consider changing the world currency system, not for the sake of improving that system, but in order to influence the price of silver?" The problem of the ratio of silver to gold in value will also tax the

¹ Of the summary of the speech of the President of the Bank in the Economist of 22nd November 1930.

² Cf. Mr. Darling's book on "Monetary Leadership" and Sir M. de P. Webb's "The World Crisis, and The Only Way Out."

capacities of currency authorities; especially because while there are sure prospects of an increase in the production of silver, the prospects are much less favourable in the case of gold. Moreover, we have to reckon with the almost universal prejudice against the use of silver. Indeed, as is well known, the fall in the value of silver has been due not merely to the rapid increase in its production but in great measure to the large sales of silver coinage by quite a number of states. Finally, in the absence of an international agreement on the subject, the reinstatement of silver by some countries will do nothing to induce the countries which are hoarding gold at present to release it.

There can, of course, be no question that Bimetallism could be successfully restored if the world co-operated in working for it. With such International Co-operation, the difficulties even of the ratio to be fixed and also of the greater difficulties of management of the currency would disappear. But there are no signs of any general desire for such co-operation—even though its results would be obviously beneficial. The attitude not only of France but of many other countries is, to say the least, discouraging; and in the absence of a general and whole-hearted effort, any small group of countries which attempted to carry out the idea of Bimetallism would only serve as a dumping ground for the white metal. One can agree with Sir Robert Horne's statement that "alike in India, China and Persia confidence in silver has been undermined, and so long as mistrust continues. . . . we cannot expect these countries either to share fully in or to contribute towards, a trade revival." The suggestion that an International Conference on silver should be convened with a view to its re-introduction into the world's monetary system has a great deal to commend it. A less ambitious but more practical idea is that of international action for the much more limited purpose of regulation of the sales of silver—an idea which has been put forward by Sir George Schuster in India. The controversy is not with regard to the desirability of the object but as to the possibility of International Co-operation upon the subject. It is for the advocates of silver to put forward such a programme as will secure such co-operation.

In any case, the advocates of the reinstatement of silver would be well advised to be content with the more modest and practicable programme. For one thing, the problem of the price of silver is in an important sense a by-product of the problem of the Depression and the lifting of that Depression will automatically raise the price of silver. This is not to deny, either that the fall in the price of silver has reduced the purchasing power of certain nations, or that the raising of the price of silver will afford a needed stimulus. But neither can any one dispute the lesson which Economic history has taught the world so recently; for as soon as the depression of the eighties and the nineties cleared off, the demand for and the price of silver rose automatically with the increase in demand for the products of the East. So also when the tide turns in the present case and our Depression tends to terminate, the demand for the primary products produced by the Eastern countries is bound to increase, and *pari passu* the demand for silver will grow without loss of time.

POSSIBILITIES OF LOWERING THE TARIFF BARRIERS

The World Economic Conference had pointed to and emphasised the idea of solidarity of international life and of co-operative action in order to solve the tariff problem. But this co-operation can itself be achieved on various different lines. The first idea was the fixing of maximum tariff rates and their gradual lowering by international agreement. This proved an impossible task under the circumstances. Another suggestion—in which also the co-operative ideal expresses itself—consisted “in taking, not groups of commodities, but groups of countries”—*i. e.*, the method of regional agreements to be taken up and extended gradually.¹ There was also the connected idea of multilateral treaties which could lower tariffs. But here, too, the advantages have to be balanced against the disadvantages. For, while the trouble arising out of regard for third parties are evaded in multilateral treaties, there are to be faced, on the other hand, greater com-

¹ Minutes of the Second Committee of the Assembly of the League (1930), p. 20.

plications of negotiating the treaties.¹ But, as it happened, while the world leaders were trying to make up their mind and were hesitating between different methods of approach to the problem, the flood of depression was rising; and, as we see so often in some places when a great flood is coming on the only care of each person on the spot is to climb up the nearest tree without scrutinising too particularly its strength. So it happened in the case of the world slump. The great ideal of general co-operation for a comprehensive reduction of tariffs was abandoned while only the plan of regional preferences received a fair measure of support. Even here we are still awaiting decisive action. As regards such preferential projects one would venture to offer a few brief observations. If such a policy is carried out *within the framework of the League*, it would tend to break up the economic solidarity of that body. Consequently the agreements should be carried out only through ordinary channels of diplomacy; and, further, it is to be hoped that they are regarded as only stepping stones to the general policy of a comprehensive lowering of tariffs. Only under such conditions they can be regarded as useful remedial agencies.

What then is the policy to be followed in the immediate future as to tariffs? It is obvious that every effort should be made to carry out the policy proposed in the Report of the World Economic Conference as regards the lowering of tariffs through bilateral and multilateral treaties. Those delegates who have striven for the unconditional interpretation of the Most Favoured Nation clause, have been accused of rigidity of views. But surely the same reproach cannot be levelled against the proposals and interpretations of the Economic Committee which has drawn up its scheme with a full regard to the demands of prevailing conditions. Then, again, as to regional agreements these are not without their uses—provided always the machinery of the League is not employed to organise them. For, such regional agreements form an important recognition of the inadequacy and unsatisfactory

¹ Grotkopp, "Breaking down the Tariff Walls," pp. 71—80.

character of the present *regime* of high protectionism. But what is important is that these agreements and customs unions should be actually concluded and not merely be talked about. Finally, we might get some encouragement from the thought that the direct efforts for lowering the tariffs can be materially supplemented by two other lines of work—the organisation of Consumer's Co-operation, and the formation of International Industrial Agreements.

NEED OF ORGANISING CONSUMERS

For, we may be sure that there is a good deal to be learned from the failure of the frontal attack upon the tariff position initiated by the World Economic Conference. While fully appreciating the value of the move by that Conference, we cannot help thinking that actual results would have been much greater had it been supplemented by efforts to organise consumers in different countries on co-operative lines. This was emphasised by the Indian Delegation to the Assembly of the League last year. Provided the consumers, in each country, are organised properly, they themselves will bring a very strong pressure to bear upon their Governments in order to secure a reduction of tariffs. Moreover, in this case there will be no case or even suspicion of dictation from outside. While Conferences for reduction of tariffs and multilateral treaties will be trying to break down the high walls of tariff from the outside, consumers would supplement the work energetically from the inside.

RATIONALISATION, ITS METHODS AND TRUE CHARACTER

We come now to examine the methods of remedying the structural maladjustments and lack of flexibility on the side of production. Most studies of the depression emphasise "the existence of surplus capacity and instability in manufactures" and the lack of balance between production and consumption. The general name of Rationalisation has often been given to the various methods of improvement of production; but it is preferable to use the term to cover all instrumentalities which adjust production to the movements of demand and which keep

down costs. There is no recognised definition of Rationalisation and most writers adopt that given in the Report of the World Economic Conference of 1927. By Rationalisation, the authors of the Report "understand the methods of technique and of organisation designed to secure the minimum of waste of either effort or material. It includes the scientific organisation of labour, standardisation both of material and of products and simplification of processes and improvements in the system of transport and marketing." In this formal definition—if indeed it is to be taken as one—too much importance is given to the aspect of production as such and not enough importance has been given either to distribution or to the adjustment of production to demand. These aspects of the matter were not however quite ignored and they are brought out in the resolutions which followed the laying down of the definition as well as in the discussions of the Conference. Thus, the resolutions refer to matters like "simplifying the distribution of goods," and securing greater stability to the community and "to the consumer lower prices and goods more carefully adapted to general requirements." With the addition of these features, the description of Rationalisation supplied by the Conference might be regarded as fairly complete. One of the leading ideas is that of the reduction of costs of production, and a corollary of this is the closing down of the less efficient plants.

While adopting Rationalisation in order to lower costs and to adjust production to consumption, care will have to be taken to avoid certain dangers of the movement. Thus, there is the tendency to adopt too whole-heartedly the American version of Rationalisation without considering its suitability to local conditions—a course of action which might lead to the over-development of industrial equipment. At the Conference itself, Sir Arthur Balfour and M. Pirelli spoke of the inapplicability to European conditions of all the methods adopted in the United States. Nor is this all; the Conference did not lose sight of the temporary unemployment which might be the immediate result of the introduction of Rationalisation. Here the problem is very parallel to the immediate effects of the introduction of new machinery on the volume of employment. The problem

is thus not new and the investigations and discussions should proceed on known lines.

It was the merit of the Austrian Delegation to the World Conference to point out that, though usually Rationalisation implied large-scale production, yet the small producer by co-operating with others in his own position could join effectively the movement towards Rationalisation. Another Austrian representative spoke in a similarly hopeful strain about possibilities of rationalisation for the smaller states. The Conference benefited by these suggestions and inserted in its report the view that the efforts at Rationalisation should be extended to medium and small undertakings and even to individual workers and hand-craftsmen. The whole of this extension of the idea of Rationalisation to small-scale production was due to the efforts and initiative of Austrian delegates to the Conference. This useful championship of the co-operation of small producers in reaching the goal of Rationalisation was very probably due as much to the peculiar conditions of Austria in the post-war period as to the presence amongst its delegates of Dr. Schuller, an eminent Austrian economist.

It is also necessary to extend the idea of Rationalisation of industry from the national to the international plane. For one of the main bases of the idea of Rationalisation is the principle of comparative cost of production and that idea finds its application as well in national as in international affairs. As Mr. Henry M. Robinson (the delegate from U.S.A.) observed before the World Economic Conference, "Rationalisation was primarily an individual question, then technical, then national, and, finally, probably international." On the international scale—when it is reached slowly and laboriously—the localisation of branches of industries will be materially influenced by the free action of geographical division of labour. It was in this sense that "Rationalisation demanded international collaboration."¹

The recommendations show that the true development of the methods and scope of Rationalisation can be reached only after

¹ Proceedings of the World Economic Conference of 1927, Vol. II, pp 184—185 and 145—146; consult also Elemer Hantos, "L'Economie Mondiale," pp. 228—230.

some experience and careful examination. It has been recently pointed out that in popular imagination Rationalisation is being confused with other things like amalgamations and mergers; and as Sir Josiah Stamp has told us "the passion for quotas and for output restrictions forms in many cases a national menace." He also points out that "true rationalisation proceeds on lines of comparative technical efficiency and the greatest potential good for the future." In other words, as we have seen already, something like the principle of comparative cost lies at the base of true Rationalisation. In any case we have to beware of going on with over-organisation in the name of Rationalisation.

INTERNATIONAL INDUSTRIAL AGREEMENTS OR CARTELS AS A FORM OF RATIONALISATION

In some important respects cartels might be regarded as *avant couriers* of Rationalisation on the International side. The most powerful advocacy of such international ententes has come apart from Grossmann's masterly report on them for the League and from French publicists like M. Loucheur, M. de Rousiers and M. Francois-Poncet. Thus M. Loucheur claimed that the methods of international agreements has the triple advantage of utilising private interests and initiative, and of leading at once to the better organisation of production and the lowering of tariffs.¹ M. Francois-Poncet has urged that "the remedy for the crisis is to correct the operation of the machinery of production and distribution, to impose greater discipline in the matter of production and sale . . . That is the well-known method of agreements and cartels."² The recent report of 1931 on such Industrial Agreements issued by the section of the Economic Relations of the League also argues that such Industrial agreements are of advantage to producers through effecting a saving in cost price, by establishing an equilibrium between production and consumption and by stabilising sale prices. It is also argued that they benefit consumers by keeping prices

¹ See M. Loucheur's Preface to Dr. Guillaïn's *Les Problemes Douaniers Internationaux*.

² Commission of Enquiry for European Union, p. 22.

moderate and stable. As to the relation of these industrial agreements to protectionist duties they are alleged to lead to stabilisation of such duties on a moderate level. On the other hand, in the Report of the World Economic Conference of 1927, it has been argued that such agreements might possibly have adverse effects in the way of affording encouragement to monopolistic tendencies and the application of unsound business methods; they might also, it is added, check technical progress and lead to an artificial rise of prices to the detriment of consumers. In the face of such a diversity of views it is necessary to examine the main contentions advanced on either side of the matter.

Considering first the potentialities of reducing the costs of production through such agreements, they might be admitted to be considerable, in as much as they standardize production, lead to an interchange of experience between the combined firms and lower trading costs in various ways. Such economies are no doubt possible, but on two conditions—that production should be concentrated in the more efficient factories of the combine, and above all, that the *inferior factories where costs of production are heavy are closed down*—This is a question of fact, and, in some cases at least, the conclusive step of closing down the less efficient factories with higher costs has not been taken. Here is the final test to which the syndicates must submit successfully if their claims are to be upheld at the tribunal of Economics.

Then again in the process of balancing of production and consumption no doubt international industrial agreements can play a very effective part. It has been well said that these combines are bound to possess much greater knowledge of the facts of demand and supply than isolated producers can possibly have; and that they can better manipulate the supply and even the demand. Finally, they can even promote and develop new uses for commodities. On the other hand, even Grossmann has to admit that such agreements are not possible over the whole field of production, even on the manufacturing side—let alone in agriculture.

In the matter of the effects of the formation of such cartels upon the interests of the consumer, also, a balanced view is neces-

sary. A great many economists (including Grossmann himself, the author of the report mentioned above) emphasise the opinion that the consumer would have no chance against such cartels. On the other hand, it has been urged that so far, in the main, these cartels have caused a stabilisation and not a rise of prices; for they have been taught by bitter experience that any attempt to raise prices never fails to bring fresh competitors into the field. Not only have they to fear the growth of such competition but they have also to take into consideration the power of organised consumers in the shape of Co-operative Stores as well as the strength of trades' associations. Industrial consumption too is seldom unorganised. In any case there is reason to forecast the development of "far-sighted price policies," as Prof. Marshall put it.

As to the relation between international industrial agreements and tariff policy, there is at least a possibility that the existence of the former might help in lowering the tariffs. It can certainly be argued that much of the present-day dumping and the increase of protection which it has necessitated is due to the existence of a surplus capacity of production. If Industrial agreements reduce this excessive capacity the need for protection must be reduced.¹ Similarly it can be urged that much protection is due to the disequilibrium between supply and demand, and that the advent of an equilibrating factor like the International industrial agreements would make Protection superfluous. This happy result is of course conditional upon a wise policy being followed by such agreements—a policy which must avoid a monopolistic restriction of production in order to keep up prices, and which must avoid equally the other danger of keeping alive inefficient establishments.

Our conclusion is that international agreements and syndicates possess features which may make them hopeful instruments of Rationalisation, provided that their operative and price policies are laid down on right lines, and provided also they are subjected to proper international supervision. There is much in the dictum of Prof. Wiedenfeld that the future will show whether the present

¹ Guillaïn, *Les Problemes Douaniers Internationaux et la Societe de Nations*, p. 164; also Dr. Wilhelm Grotkopp's "Breaking down the Tariff Walls," pp. 81—85.

distress can teach the nations the value of the tie formed by the international agreements both as between states and individual persons. They are at present essentially in an experimental stage, and it is needful to lay down guiding lines which would prevent them from inflicting any injury upon the consumer or on the worker and from aiming at an undue development of monopolistic tendencies.

The Inter-Parliamentary Union in the course of its Conference in London in 1930, recommended the regulation of such industrial agreements; and M. Munch (representing Denmark) similarly urged the need of the regulation of such cartels before the Commission of Enquiry for European Union. This regulation has to be on both national and international lines, and is not likely to be an easy task, if we judge from the success of laws meant to control trusts and combinations. Nevertheless the sooner the task of regulation and control of industrial agreements is taken in hand the better. For, as we have seen in regarding the different aspects of the problem, there are great advantages to be obtained by a proper and controlled development of such international agreements, while the dangers of an uncontrolled and unguided growth are formidable. The policy should naturally be to remove gradually the anti-social and pronounced monopolistic features; for the removal of these features is sure to bring out more and more the co-operative and co-ordinating character of these countries. It can only be noted here that M. Oualid and others have advanced projects of an organisation both on national and international lines by which the International Industrial agreements and cartels might be prevented from causing injury either to consumers or to employees. Facts like any abnormal rise of prices or lowering of wages would be reported first to the national commissions on the subject; while the experience of nations on such matters might be pooled in the International Commission dealing with the matter. Thus there is a wide field for the co-operation of nations in the utilization and regulation of such cartels and agreements.

While we are on the subject of the Rationalisation of industry, attention might be drawn to a proposal emanating from an American

source of the co-operative control of production and prices. Prof. R. C. Epstein (of the University of Buffalo), has urged in the course of a study of "Industrial Production and Price Control" that one of the chief contributing factors of the present depression is "the unbridled creation of plant capacity." His proposal amounts to this, that in particular industries the experiment might be made to organize boards "*to work co-operatively in the allocation of extensions of plant capacity.*" The reason given is that "unless we control plant capacity, competitive recklessness causes discrepancies between supply and demand in certain industries to upset the rough equilibrium required between the parts of the industrial system if it is to function effectively." The project is referred to here to illustrate the growing tendency to rationalize industry on co-operative lines.

CO-OPERATION AND THE PRESENT AGRICULTURAL CRISIS

So far, in the main, we have studied the prospects of Rationalisation and co-operative control on the manufacturing side; but we have now to advert to the remedial agency specially suited to the agricultural crisis. The characteristics of that depression have been well studied in the valuable report of the Economic Committee of the League on the Agricultural Crisis. It is in a sense the fundamental study upon the subject and has made an important contribution to it. On the remedial side, it recommends the conclusion of bilateral treaties in order to abolish the system of export bounties and subsidies for agricultural products. A great deal is hoped for by the authors of the report from preferential arrangements of a regional character. The Committee goes on to say, "one may wonder whether it would really be chimerical for the two parties concerned—namely, the oversea countries on the one hand, and the Eastern European countries on the other, to endeavour to arrive at an understanding, permitting the former to continue to supply Europe, while at the same time enabling the latter to market the comparatively small surpluses of their production. It would be seen that the two groups of producing countries might get together, consult each other and, if possible, seek

an agreement. Even some of those experts, who have maintained free-trade views, have not been against such agreement if freely concluded. Only organisation of the market can put an end to the crisis." Another line of advance suggested is the extension of international agricultural credit. The merits of co-operation as the great remedial agency to be employed are fully discussed but it is added that "this work of co-operation will take time. It will be long before it can produce decisive results."¹

One feels somewhat ungrateful when criticising the recommendations of such a report. But it would appear that a convincing case can be made out at least for a change of emphasis as regards the recommendations. It is submitted that the main remedy is the spread and complete integration of the co-operative movement, the other suggestions, even if useful, are but of supplementary value. It will be some time before a number of important preferential arrangements can materialise. Nor can such arrangements or treaties serve either as complete guides to production or adjust production to demand fully, or remedy materially the disparity of prices as between agriculture and manufactures. They can only serve as a supplementary measure as regards agricultural production. The reason is that there are definite limitations to the efficacy of state action in regulating production.

The main fact which one has to remember is that the agricultural crisis is eminently international in character and that it has international factors affecting it; for that has a most important bearing on the choice of a remedial policy. In the light of this central consideration, one can easily account for the comparative failure of the local remedies, and the smaller efficiency of regional agreements. Thus the experiment tried with such vast resources by the Federal Farm Board showed the very limited scope of a policy of stabilising prices locally; and it is an American authority (Lipman) who admitted that "the farm relief problem is world wide one." Protection, export bounties and subsidies also have not had anything like the expected results in alleviating the

¹ Economic Committee's Report on the Agricultural Crisis, Vol. I, pp. 62, 66-70 & 73.

agriculturists' troubles. Nor can preferential treatment serve as the prime agency in remedying the Depression, especially as it might conceivably help some countries at the expense of other countries. A direct curtailment of production has its own difficulties, since it is particularly difficult to regulate agricultural production and there is, besides, the danger of causing a shortage of production.

What then is the main remedy for the agricultural crisis, and what should be the distinguishing characteristics of a really efficacious remedy of such a complicated disease? In the first place, it should be capable of general and world-wide application. It should be capable of raising the general standard of living and thus stimulating demand; and at the same time it should be able to reduce the costs of production of the agriculturist. It should directly reduce that increased burden of agrarian debt which has been the unhappy result of the present crisis. It must lead to a better organisation of markets, must regulate the sale of agrarian products and reduce the weight of middlemen's charges. It should be a social tonic, and should improve the *morale* of the agrarian against the danger of reckless dumping from any country which might seek thus to break the back of the system of individualistic capitalism.

As M. Michelis put it at the World Conference, agriculture has to *organize itself* in order to put itself on the same footing as manufactures in the matter of adjustability to changing condition. It is this handicap of agriculture which is at least partly responsible for the disparity from which agriculture suffers in the matter of the relative prices of agricultural and manufacturing products. But, in the case of agriculture, we cannot rely on mergers and combinations, nor even on forms of organisation imposed from above in the shape of centralised supervision and regulation by the state. Nor will bilateral treaties go to the root of the matter, being in their nature partial and palliative. For the proper regulation of agricultural trade and production, you must begin from below in the spirit of Raiffeisen. It is the co-operative structure when properly completed which alone can endow the agricultural system with the re-

quired self-consciousness, self-determination and self-regulation. That will give it the elasticity and power of adjustment to changes on the demand side which are bound to become quicker in tempo, for the world is becoming more and more dynamic both on the side of production and demand. The present depression is only the first great manifestation of that dynamic movement in the economic sphere, and in face of a future with immense potentialities of change, agriculture has to be re-organized. No international agreements between countries will, by themselves, solve the final and fundamental problem of regulation of production as well. For that we must resort to co-operation; since only when both producers and consumers are organized by co-operation and brought into touch with each other, can the regulation of production whether in the way of increase or curtailment of output be quite satisfactory. Without such an organization, a curtailment of output might cause an absolute and resultant shortage. But the case will be different when we have co-operative societies federated into national organizations of producers and consumers. Each nation must build up such parallel structures of co-operation in order to secure automatic adjustment of production to demand.

We have it on the high authority of the Economic Committee of the League that agriculture "has not sufficiently developed the commercial spirit. It is not sufficiently acquainted with the conditions governing the remunerative marketing of its products, whether on the home or foreign markets."¹ It might have been added that the problem of marketing has itself become far more difficult than ever in view of the practice of steady dumping, exports subsidies, discriminating tariffs, high export surpluses, and various sorts of state help and banking support extended in some countries to exporters. Even in the good old stationary and normal days, and in local marketing too, the farmer was much prejudiced by the absence of a co-operative structure. How much greater must be the difficulties of marketing now with all these new factors working? And what but the co-ordinated and co-operative organization of

¹ Vol. I, p. 61.

the producer and the consumer can meet the situation? Movements towards a co-operative organization of cereal exporters have already been going on in a few countries under the stress of prevalent conditions, and there are similar efforts in some cases on the side of purchasers. But the time is coming to push the movement forward and to make it general.

The Report on the Agricultural crisis has emphasised the necessity of the extension of international agricultural credit. The object is praiseworthy; but the movement might easily intensify the prevalent depression unless the granting of such credits is guided by co-operative organization. There is the very justifiable fear that "the granting of credits by an International Company might increase the production of cereals and other agricultural products the output of which was already excessive."¹ There is all the difference between placing large credits at the disposal of the individual agriculturist, without giving him any guidance regarding their wise utilisation, and the proper distribution of such credits through co-operative channels. At least we in India have been thoroughly taught by our experience the dangers of facile credit. But then it is objected that such development of co-operation will be a matter of time. Let it be pointed out in reply that—apart from immediate palliatives—every real remedy of the depression is bound to take time. Take for example, the proposed rationalisation of industry by means of international agreements. For years these have been discussed, but so far it has not been possible to take any steps to encourage or utilise them. It will take a fairly long time to frame national and international policies for the control or the encouragement of such syndicates. So also the development of the ideal monetary standard will require much hammering out of the principles, much construction of statistical material and a great deal of gleaning of experience by the authorities controlling currencies. But even admitting that the growth of co-operation is a relatively slow matter, is there any assurance that the agricultural depression is going to terminate at a very early date? That depres-

¹ Vol. I, p. 71.

sion is developing before our eyes and many experts are of opinion that it is likely to be with us for a fairly long time. And, further, it might easily be followed by growth of dumping from some great country which is hostile to the capitalistic economy. For here we have before us the horns of a dilemma. If the Five Year plan fails, then dumping is necessary for the very existence of its authors and workers. On the other hand, if it is successful, who can withstand the temptation to knock out the economic system of the capitalistic world enfeebled as it has been by an unprecedented war and an unheard of depression? Any way we should fortify the system by using the tonic of co-operation which alone can strengthen the agriculturists' *morale* in order to withstand these future dangers.

It must be admitted that so far the world has merely played or toyed with the idea of co-operation. Having discovered the merits of the co-operative system and its potentialities about the middle of the last century, it has delayed its comprehensive and full development by eight decades. Indeed the long depression of the Eighties was needed to induce many countries to give it a trial seriously. In the halcyon pre-war days the idea was pushed forward far too slowly. Even the World Economic Conference which met under the shadow of the present depression could scarcely be said to have done full justice to it. Now we have with us the Depression which will either end or mend capitalistic economy, and that economy has now to put forward its trump card—Co-operation—which combines the best features at once of Individualism and Collectivism. So far even in those countries which have come forward in the co-operative movement, the development has been uneven; the parallel and simultaneous development of distributive and consumers' co-operation is yet to come in many lands, as also the co-ordination of these two lines of activity.

WORK OF THE INTERNATIONAL COMMITTEE FOR INTER-CO-OPERATIVE RELATIONS

It is therefore that we welcome the establishment of the "International Committee for Inter-Co-operative Relations" in Geneva in 1930 under the auspices of the late M. Albert Thomas, the

head of the International Labour Organization. Its object is to promote the development of moral and economic relations between agricultural co-operation and consumers' co-operation. In order to envisage rightly the potentialities of linking up co-operative production and co-operative distribution it might be permitted to refer to a few of the lines of inquiry prosecuted by the above Committee. First might be noticed the report submitted to the Committee as to possibilities of direct and "organic" relations between agricultural co-operation and consumers' co-operation in the matter of wheat, flour and bread. The representatives of quite a number of European countries assisted in pooling experience and opinion. The question discussed was whether the two sorts of co-operative societies should work together through ordinary commercial contracts or through the establishment of say common mills or bakeries—thus joining up interests which were apparently antithetical. In the course of discussion, light was thrown upon many gaps in the co-operative development of the countries reported on. On this topic, a valuable report has been made by M. Poisson regarding a scheme for creation of a co-operative flour mill or bakery to be the joint property of distributive co-operative associations and agricultural co-operative societies for the sale of farmers' wheat. The underlying idea is that we should not be satisfied with the establishment of merely commercial relations between existing co-operative organisations on the side of producers and consumers, but should endeavour by parallel and simultaneous action to create and develop co-operative organisations which might be *organically* related with each other and even have common institutions. To take the example of the common flour mill, it might buy wheat all the year from the co-operative farmers' society at the average price of the year, charge a fixed grinding fee and then divide the surplus profit which it makes between producers of wheat and consumers of bread. Similarly a good deal of work was done on the co-operative exportation and importation of eggs in the case of Czechoslovakia, Germany and other countries—the idea here also being to bring productive and consuming co-operative societies into international contact. A plan is now being arranged with the

conjoint assistance of the International Commission of Agriculture and the International Co-operative Alliance and the International wholesale stores to bring the producers and consumers together on international lines.

Mention has also to be made of the efforts which have been made during the post-war epoch in Hungary to establish relations between agricultural co-operators on the one hand and urban consumers on the other, as regards the trade in cereals, eggs and dairy products in general. Here the initiative has been taken by the "Futura" which is the big commercial organ of central co-operative societies in Hungary. The consuming side is represented among others by the famous society called the "Hangya" as well as by the central distributive store for public servants. The foreign trade carried on by the "Futura" is also in great part worked through co-operative agencies, especially by distributive stores and societies in Austria, Czechoslovakia, Germany, Belgium, Switzerland, Italy and France. The work of the "Futura" marks indeed a notable advance. Roumania too has entered the field, at least on national lines, and its co-operative organisation is busy forming liens between rural centres and societies for production and sale of agricultural products, and consumers' co-operative societies formed in towns and villages. The task of such co-operative exchanges is facilitated by the existence of the "Centrale Co-operative d' Importation et d' Exportation" and the Central Co-operative Bank. The former possesses the importance of forming the point of contact between the opposed organs of co-operative distribution and production. It forms a guarantee for the transactions, and assists from its neutral position in the conclusion of the bargains, besides helping in their financing. In other countries too, great efforts are being made for developing international as well as national co-operation. Thus, in England the C. W. S. (English Co-operative Wholesale Society) acts in close connection with numerous agricultural societies of producers. Hence, it might be said that in England co-operative producers and consumers are coming into close touch and are educating and helping as well as encouraging each other. But, what is of even more importance, is the number of

overseas co-operative societies of producers who are in touch with the C. W. S. The case of New Zealand Produce Association is a special one; but the C. W. S. is directly in touch with producers in Denmark, the Channel Isles, Canada, Spain, France, etc. By the year 1920, the idea of bringing the C. W. S. in direct contact with co-operative producers in New Zealand was formed. These producers of New Zealand are represented by the New Zealand Producers' Co-operative Marketing Association, and an enormous trade is being carried on truly co-operative lines.

It is on such lines that agriculture will work out its salvation by co-operative methods. The task is well begun, and thanks to various bodies like the International Committee of Interco-operative Relations, it will be pursued energetically. India has so far been one of the countries in the van of co-operative progress; but there is room to join the new move for the co-ordination of distributive and productive co-operation which can do so much to mitigate the agricultural depression which otherwise might become chronic.

THE DEPRESSION IN INDIA

We in India too must borrow a leaf from this great volume of co-operative progress as a remedial factor, for we too have had our full share of the "Economic blizzard." Most features of the world Depression have been reflected here. Thus we see a rise in production—mostly on the industrial and mineral side—though even on the agricultural side in some directions our production exceeded effective demand and was characterised by its usual inelasticity. Coming to the price aspect of the Depression there, too, the change has been enormous and the prices of export staples have fallen between the years 1929 and 1931 by 50 per cent in case of raw jute, 49 per cent in case of oil seeds and 47 per cent in case of wheat to 85 per cent in case of rice.¹ In an important article on the subject Prof. Muranjan has observed that "the fall in prices in India has been brought about by the growth of output and business on the one hand, and the decrease in the rate of expansion of

¹ "Review of the Trade of India," 1930—31, p. 7.

currency and the violent fall in its velocity on the other."¹ The undoubted utility of this dictum would have been enhanced by pointing out that the very heavy fall of prices was also a causative factor in its turn, and was reducing the demand for currency as is shown by the heavy seasonal returns of rupees. Another aspect of price movement in India—where also a close parallelism with world conditions is traceable—is the divergence between the prices of primary articles and of manufactured products. Mr. H. A. F. Lindsay has made continuous and important studies of this aspect and has shown that the index numbers for the two kinds of products stood farthest apart in India during the period 1923-24, approached closest in 1928-29 and have again diverged. Another matter as to which a parallelism between the World conditions and the state of affairs in India might be safely presumed is the falling off of savings and investment; and yet on this subject the Indian figures can only be conjectural, in view of the many abnormal influences adversely affecting investment at home and encouraging investment abroad. The other main aspect of the Depression with reference to this country which we can notice here is the alteration of the balance of trade. A glance at Statement II of the Report of the Controller of Currency for 1930-31 shows the fall of the total favourable visible balance of trade from 53 crores in 1928—29 and 1929—30 to 38 crores in 1930—31; though it must be noted that the figures for the former two years were exceptionally high and the average for the pre-war quinquennium was 42 crores. Another remarkable feature of our recent balance of trade consists of the large amount of remittances on private account for investment purposes. The flight of capital was alarming enough, though it was interpreted by some as a sign that India was becoming a creditor-country. But, with a change in currency conditions, the alarm has abated and the flight has become much less serious.

¹Proceedings of the Fifteenth Conference of the Indian Economic Association, p. 295.

POTENTIALITIES OF THE DEVELOPMENT OF CO-OPERATION
IN INDIA

While not denying the merit of other remedies, we can see that, had we put our full strength into the development of Co-operation in India much could have been done to mitigate the evils of the Depression to the agriculturist class, and through the increase of its consuming power to the community in general. It is significant of the importance of the co-operative policy that the Economic Depression Inquiry Committee set up last year by the Government of Madras emphasised the potentialities of remedies on the co-operative line. The Committee did well to mention the value of co-operative supply and sale as well as of credit. For the fact is that although we have made a great drive forward in Credit co-operation we have failed to see that the distributive, productive and credit forms and aspects of co-operation are mutually complementary and add to each other's strength and solidity. It would have been well to use credit societies as the bases of sale and purchase societies and to organise co-operative purchase and sale unions. For until there is a parallel development of co-operative production and distribution, one cannot employ the co-operative method and agency for regulation of production and prices and for giving them greater stability. Throughout the world, the present crisis is "a crisis of disorganisation, a crisis in respect of the sale of agricultural products."

In fact, the opinion in co-operative circles in this country has already been moving towards the necessity of this harmonious development. Let us quote from the very important and recent work on "Co-operation in Bombay" by Prof. H. L. Kaji: "It must not be forgotten further that in the economic organisation of society, Distribution is as important as, if not more than, production . . . If Raiffeisen Banks attempt to help the agriculturist producers and if Schulze-Delitzsch and Luzzati Banks, the urban artisan, trader and other small producer, the Store recasts the distributive system effectually and organises the society from the other end, that of consumers . . . Whether it is consumption for production or consumption

for existence, *the store movement really is the instrument of organising, and remodelling the whole system of supply.*" It might be added that, as we have seen, throughout the world during the post-war epoch the lesson has been learned of parallel and co-ordinated development of Co-operation. We in India should also take that lesson to heart. For it is only a fully-developed system of Co-operation—one which is fully integrated as well as diversified—that can be of substantial assistance to India at periods of such great maladjustments. Unfortunately, for various reasons, the problem of the successful management of Co-operative stores has been found to be particularly difficult in India. On the Bombay side, a great experiment was tried during the war time. Besides the large number of stores which were started, there was an attempt at organizing a Wholesale Society. But the attempt failed very soon in spite of the activity of a special Assistant Registrar for Purchase and Sale who was appointed to assist it. In other parts of India, too, there have been numerous examples of failures of stores.

But the problem of Consumers' Co-operation in India though difficult to solve is by no means impossible to solve. Already a decade ago Dr. Slater, a zealous co-operator, had put forward a series of valuable suggestions which might have been adopted with advantage. Prof. Kaji and Mr. R. N. Mehta (Manager, Provincial Co-operative Bank, Bombay) have also put forward sound and useful suggestions based on their wide experience. These gentlemen have, for example, emphasised the need of simultaneous inauguration of a Wholesale Society and of a number of affiliated retail stores in each province. These two agencies would supplement each other; for the stores would give custom to the Wholesale, while the latter would help to finance the former and to keep them from falling under outside control. In any case, we have reason for high hope looking at the success achieved at least in normal times on Bengal side, by our jute sale organisation and Nowgong societies for production and sale of the *ganja*.

This is not to deny the claims or the utility of other lines of co-operative development in our country. Co-operation will no

doubt contribute much, for example, to a sober and steady progress of the Labour Movement on right lines. We have to profit alike from the drawbacks and the excesses of the Labour Movement in other lands. We have to exert ourselves to the utmost to meet the just claims of labour and to assist it to develop its skill and capacities and to get rid of that incubus of debt which is piling up here by a process parallel to that on the agricultural side. In no country, again, are the prospects of the small producer and industrialist better worth improving than in India; and this task can be achieved through the instrumentality of co-operation. It is an unhealthy and unsound procedure to hand over production mainly or solely to giant businesses; and here, too, the redemption of our industrial system and its spread over the country might lie with co-operative enterprise. In that respect our task in India is easier; for, while in the advanced industrial countries great and developed schemes of production and distribution have to be repaired in the light of experience of depressions, crises and class-antagonisms, we in India are yet in the initial stages of such development and can lay down better lines of evolution, thus saving much waste and duplication of effort.

VALUE OF INDIA'S FINANCIAL CO-OPERATION TO THE WORLD

But if on the side of Co-operation on the national plane India is still mustering her full strength, on the side of international co-operation she has made a signal display of her power. The exports of gold amounting to about 56 crores has not only stopped the flight from the rupee and sustained her own exchange, balance of trade and public finance but has also assisted the world materially in the matter of business stabilisation. The paying up of Indian loans has been a factor not only in the improvement of Indian finance, but in setting money free in the great centre of world finance and has enabled that centre to meet her foreign short-term loans. Not that countries like Great Britain did not contribute of their gold; nor did we in India proceed so far as to melt down coronets and swords of honour. But it might be asserted that the material as well as the psychological value of the Indian contribution was the greater. For

what had been utterly unexpected had happened ; and the mysterious "wealth of Ormus and of Ind" was becoming at last a factor to be reckoned with on the supply side of the monetary situation. It was indeed a brilliant display of the great financial power of India. While some countries with the most advanced forms of banking have been sterilising and virtually hoarding gold, it was left for the country which had been reputed 'the sink of the world's gold' to come forward to help the world in her direst need. We need not however draw the unduly optimistic inference from this that India can suddenly transform herself into a creditor-country.¹ Economic history teaches us how great the difficulties are in the way of such a sudden transformation. Take the case of a country like the United States, exceptionally endowed by nature and possessed with unequalled talents, too, for pushing these advantages ; and yet Prof. Taussig—an authority second to none—confesses himself surprised that even after some decades of unprecedented increase of resources America was able to become a creditor country during the war-period. "The remarkable thing is that the later transitions, involving the shift from an established borrowers' position to the position of an established leader, should be compressed within less than a single decade."² Thus we find that an eminent economic authority is left wondering that even the last phase of the transformation to the position of a creditor country was achieved by the United States within a decade, in spite of its vast and constantly expanding savings and the destruction of capital in Europe. Moreover, Prof. Taussig was right in adding that "quite possibly the eventual outcome will prove to be less revolutionary than these first experiences seem to indicate." For America has proved to be a shy and fitful creditor at the best. Turning from this great example to Indian conditions, no one can seriously assert that Indian savings have been growing at anything like a very rapid pace or anything comparable to the American precedent. Nor can we doubt, on the other hand, that in the near

¹ Reference might be made to a very instructive article on this subject by Mr. Ramchandra Rau in "Indian Journal of Economics," January 1932.

² Taussig, "International Trade," pp. 827—839.

future the demand for capital for the development of Indian industrialism and for the rationalization of agriculture will far exceed anything that we can save up in India for decades to come. Nor can we depend—as banking conditions are at present—on putting forth much more of our gold; for it is the one luxury of, as well as the bank for holding the last reserves of a large portion of our population. Only a great change in our banking system as well as in our social conditions and in our standard of living, can mobilize and make available much more of our gold. It is only as the general standard of living improves in India and includes many more objects of luxury, distinction and social prestige, that gold can be turned mainly to its monetary use. We cannot safely draw inferences from what has happened under unprecedented conditions of great distress to the potentialities of normal times.

Nevertheless, the monetary power shown by India recently might well fill us with high hopes, and assure us that a new and brilliant chapter in the monetary history of India could be opened, even with our present resources, could we but start an adequate banking system with an efficient and well-planned Reserve Bank at its head. With the growth of the banking habit, our savings can increase rapidly, for the Indian is thrifty to a fault. Only, at present, on account of the want of a proper banking system a great deal of our savings never mature into investments. One can also well imagine the value of a Central Bank in mobilising our gold supplies and in regulating not only their ingress and egress but their full utilisation and employment. The relief afforded by the present gold exports from India to the world is only a sample of the vast financial power into which India can develop in time. While then, on the one hand, it is our duty to start a Central Bank on the best precedents and principles, so as to invite the confidence of the world, it is also the duty of those countries which are in a position to help in the matter to co-operate with us, so that our Central Bank should start with the necessary gold reserves.

RECIPROCIITY AND PREFERENTIAL AGREEMENTS AS METHODS
OF INTERNATIONAL CO-OPERATION

Perhaps in conclusion, it might be permissible to refer to a recent article in the "Times" by the present writer upon the potentialities of commercial reciprocity between countries like India and Great Britain, and to develop the subject a little further. During the course of the present Depression, the remedial potentialities of agreements for reciprocal commercial advantages between countries have been repeatedly indicated. The Indian Delegation has opposed the conclusion of such agreements *through the instrumentality of the League*, since the objects of the League must be of a universal character and it should not be made the agency for striking private bargains. But given the proper conditions of reciprocity and the suitable *modus operandi*, there can be no denying their value. These conditions are that the chief lines of production in the two countries concerned should be more of a complementary than of a competitive character; that the reciprocal demand for each other's goods must be strong and urgent, and, generally speaking, that the two countries should not be in the same stage of evolution of capitalism and business enterprise. Freedom of bargaining power and advantage to be secured for both sides are also to be postulated. It is on these grounds that the agricultural countries of Western Europe are seeking Reciprocity with those of Western Europe. No doubt the constant efforts to realise regional agreements in the case of Central Europe must bear fruit. But there is scope for Reciprocity in many other directions. For example, in a wide area like the British Empire there must be some parts which are in a position to practise reciprocity to mutual advantage.

The case for Reciprocity within the Empire was however prejudiced and its realisation was delayed by the movement for Imperial Preference, which implied only one-sided gains. Consequently, Indian opinion including in this case official opinion—was entirely against the idea. From the days of Lord Curzon's minute in 1903 to those of the Fiscal Commission's Report the trend of opinion was uniform that India has very little to gain

in return, and that she has a great deal to lose or risk by adopting a policy of Preference. Under the circumstances then existing, no one could quarrel with that dictum, since Great Britain was then a free-trade country and had nothing to offer us as a *quid pro quo*. Her whole attitude then was indeed the antithesis of her present one. The present position of opinion in the United Kingdom in the matter has been thus defined recently by the Secretary of State for the Colonies (Sir P. Cunliffe Lister): "There is another kind of business deal the kind that is becoming, I am glad to say, more common to-day, where people may be competitors, but in a way wherein there is a community of interests. The real business deal that 'comes off' to-day and lasts, is the business deal where the principals sit down as partners meaning to get the best out of the deal because they have a common interest to serve, where they can talk frankly about their own economic and political difficulties".¹ This pronouncement is as important as it is authoritative, in as much as it marks the evolution and transition from Preference to Reciprocity—an evolution which has taken a quarter of a century in time, and has required a radical change in the economic condition of the Empire as its condition precedent.

As we have seen, the idea of Imperial Preference found no favour in India; but a very different treatment has been accorded, to that of Reciprocity as equal partners. If we turn up the evidence given before the Fiscal Commission, we shall discover quite a number of pronouncements from Indian economists of note very favourable to the policy of Reciprocity; and obviously no occasion could have been more suitable for producing such dicta. Thus Mr. Harkishen Lal—the well-known Punjabi banker, publicist and Minister—told the Fiscal Commission that he was for a policy of "Imperial Preference with reciprocation." So also Mr. Manu Subedar urged that "with the United Kingdom there are so many outstanding political questions to settle that the granting or withholding of favourable treatment must be part of the entire bargain which may ultimately come to be settled with them."

¹ The "Times," 16th February, 1932.

The reasons for the manifestation of such views in favour of the policy of Reciprocity are not difficult to trace. The main objection to the idea of Preference was the one-sided nature of the gain aimed at. But the general economic situation had also changed radically since the first decade of the century when Preference was a live issue. In those days, the main danger to the nascent industries of India came from British imports. But the situation has been changed radically by the steady decline of British imports into India, by the introduction of Protection both into Great Britain and in India, and by the far greater competitive strength shown in Indian markets by Japan and other foreign countries.

There has been, it might be pointed out, a parallel development in the Economic history of Great Britain and of India during the present century. The dominance of the former as a manufacturing power has been greatly weakened by the rise of manufactures in a great many other countries. Sir Josiah Stamp has put the matter with admirable clearness and brevity: "Our industrial children abroad have grown up and compete with us. We cannot for ever supply both cheap cotton goods and also cotton machinery to the East. Many of our export supremacies have thus passed."¹ But if Great Britain has been losing the power which she had held for a century as the dominant manufacturing country, something like the same development has been depriving India of the pride of place which she had held for over two thousand years as the exporter of primary products. For the scientific exploitation of the Eastern Archipelago, of South America and of Africa by European powers is bound to cut out the markets for India's raw materials. Thus Argentina is overshadowing India in the matter of linseed, and Java as regards tea. The exporting power of India as regards wheat and even in the matter of rice is being shaken; and looking to the vast areas being opened up exploited for raw materials there appears no end to this growing competition. Only recently we find Indian hemp was being cut out in Germany by the African Sisal.

¹ Sir J. Stamp, "Papers on Gold and the Price Level," p. 57.

If then both Great Britain and India are losing their markets, and if they are so constituted as to be the steady and suitable markets for each other's products, the need for and wisdom of resorting to a policy of Reciprocity is obvious. The ground for this has been cleared by the better defined idea of Reciprocity which is now being put forward in Great Britain.

But this is not the place to develop fully the particular theme of Reciprocity between Great Britain and India. At the same time it might be pointed out that the subject is closely allied to the main line of our treatment. For the topic of the rapid growth of production of primary materials has been and will be for a long time one of supreme interest for the world; while the problems of adjustment of markets to such increasing supply is also of vital importance from the point of view of economic equilibrium. Nevertheless, the subject was taken up here only as an illustration of the growth of Reciprocity in the world for which there is wide scope. It undoubtedly enlarges the areas of commerce and exchange. It is certainly a useful form of international co-operation, and it mitigates not only depressions but other economic dangers. While in the case of British Empire, Reciprocity is the successor to the idea of Imperial Preference, in many other parts of the world it will take the place of Economic Imperialism; for undoubtedly it is the antithesis of the old policy of Imperialism and of exploitation. The logic of events and the increasing economic solidarity of the world have effectively exploded the fallacies underlying the conception of Economic Imperialism. The policy of economic exploitation having lost its attraction and its potentialities in the light of the new ideals of equal co-operation of nations, some other policy is required to take its place; and the notion of Reciprocity is the natural heir to that of Economic Imperialism. We might anticipate that it is under the expanding *regime* of this policy of Reciprocity that the economically advanced countries will assist in future the systematic, timely and expeditious progress of less-developed lands. The potentialities and even anticipations of the spread of such Reciprocity are not hard to find. Thus, if Chinese Economists like Dr. Tsung-yu-Sze are, on

the one hand, announcing that "it is not China's wish to refuse foreign co-operation" in economic matters, we find, on the other hand, American Economists like Culbertson and Buell discussing the lines on which the supply of foreign capital could be placed at the disposal of China. In fact, the present generation might be congratulated on witnessing the last phases of the policy of Economic Imperialism which has dominated the world for untold centuries, as well as on seeing the rise and development of the wise and mutually beneficial policy of International Reciprocity. It need scarcely be added that the record of Economic Imperialism was that of one-sided exploitation, in many cases, while the notion of Reciprocity is essentially based upon the principle of International Co-operation. When we consider the importance of the movements like the Warsaw Conference, the work going on for securing an economic *bloc* of the Danubian countries, the strivings after a Customs union of Europe and the expectations entertained of the Ottawa Conference, we feel that the world is entering upon a new era of Reciprocity.

There can be no doubt that we are about to witness a considerable extension of the policy of Reciprocity. The last quinquennium alone has produced several projects and projects of that nature in Europe. The scheme of a customs Union of Europe has been exercising a great fascination on so many minds; but there are difficulties in the way of the economic consolidation of Europe as a whole, even in spite of the Locarno agreements and their salutary influence. In any case even, if such a project succeeds in future, it will be introduced only gradually and by stages. As Prof. Elemer Hantos has remarked there will be successive stages of any such unification of Europe and it will be necessary to begin with groups of countries which are dependent upon each other economically and geographically. M. Briand's scheme for a European Union was admirably presented in general features, but that great statesman lacked the gift of working out practical details. In the hands of the Commission of Enquiry on European Union, the project has become somewhat anæmic. The next project for a system of preferences was formed at Warsaw in 1930. It would

have had a better chance of success had not an attempt been made to implement it through the League of Nations. Such an attempt was bound to fail since the League's line of work must be universal and not regional. But the economic factors making for regional and preferential agreements are so strong that a new attempt is being made to form something approaching a Customs Union of the five Danubian States—Austria, Hungary, Rumania, Jugoslavia and Czechoslovakia. The project is meant to undo the fragmentation of the Austrian Empire, to lower tariff barriers and to supply a remedy against the great agricultural depression. The main difficulty seems to be that several of the states which desire to enter the Danubian Union, have Most Favoured Nation treaties with outside states, and these states would share any preferences which would be granted within the future Unions. Attempts are being made to induce these outside states to waive their rights under such treaties. In any case, we might feel pretty sure that eventually some sort of preferential system will materialise—so great is the need felt for it. Needless to say that the economic value of such agreements for Reciprocity or preference is smaller than that of a general Economic disarmament and an all-round lowering of tariff barriers. Nevertheless such multilateral agreements of a preferential character are to be welcomed as steps leading towards general agreements for lowering tariffs and as indications of the growth of International Co-operation.

Anything like a general survey of the Economic conditions and trends of the day must impress the mind of the observer with one lesson—that we are approaching one of the great turning points of the Economic History of the world. The benefits and advantages of the competitive aspects of Economics have been emphasised—even perhaps over-emphasised during the past two or three centuries; and competition has tended to be the guiding principle in the Economic life alike of individuals and of nations. But the dominance of that guiding principle began to be shaken by the end of the last century when we began to speak with enthusiasm of the imminent transition “from Individualism to Collectivism.” The first three decades of this century has given us a new slogan—that of the “planned

economy"—planned both in relation to individuals in a country and to the nations of the world. But planned economy can be the objective result of various economic principles—of Socialism, of Communism or of Co-operation. Here lies the choice of principles before the world, and the result can be foreseen with tolerable clearness. Few nations are prepared to abandon the competitive principle with all its undoubted advantages completely—to break with it (and with past historical evolution) altogether, and to rush to the opposite extreme of submerging the individual existence of man entirely into the sea of mass—perhaps crowd-action. We want to combine the best results of both principles of Individualism and of Collectivism. We cannot afford the excesses either of the "Libertarians" or of the "Compulsarians"—as the two opposite schools have been termed by Prof. Carver. We can deplore the evils of Individualism and of the present system of capitalistic and competitive economy; but we cannot, with advantage, undo the evolution of recent centuries. The wastes of competition even in normal times—the still greater wastes of the business cycle—we frankly and freely admit; but even the recognition of these cannot make us ignore the still more dangerous or repulsive aspects of Socialism—let alone of Communism.

Were we to adopt the alternative of Socialism, we should be getting rid of a mighty engine of progress—the institution of private property. We cannot afford to lose such a great economic stimulus. Nor, on the other hand, can we allow the institution of property to be made the instrument of social injustice. It is under a regime of Co-operation that the institution of property is secured while the use of property by the individual is controlled by the organisation of producers on the one hand and of consumers on the other.

It is well to be clear about the nature and potentialities of Socialism as well as about its limitations. There can be no doubt that the Economic functions of the state will and might experience an extension in some directions with advantage. But such extension must leave ample scope for the enterprise and initiative of the individual and also of the co-operative group on the one hand. Nor,

on the other hand, should such extension stand in the way of the growth of Economic Internationalism. The extension of state activity must needs be supplemented by such group action within the state on co-operative lines; for the whole community is too large a body to function efficiently as a single economic unit of conscious organisation, while the best form of the functioning of smaller groups within the state is that of co-operative organization. In fact both on the political and on the economic side the range of the activity of the state must be limited by the necessity of giving their due to group activity on the one hand and to Internationalism on the other.

Economists are coming to the conclusion that neither Individualism nor Socialism, as conceived at present, can yield either maximum efficiency in production or maximum welfare as regards consumption. Thus Mr. Keynes has told us that what he calls "the true Socialism of the future will emerge from an endless variety of experiments directed towards discovering the respective appropriate spheres of the Individual and the Social." So also Mr. Hobson in company with many other Economists believes that the problem of Socialism vs. Individualism turns upon the problem of incentives; and that we cannot, in the light of this fundamental fact, assert that the choice lies solely between Socialism and Individualism. If then it is a question of proper incentives and stimuli in the matter of production and distribution, few will dispute the efficiency of Co-operation in this respect. Obviously that *de facto* Co-operation and profit-and-loss sharing which prevails so widely in the world as Prof. Marshall has shown, requires to be largely developed.

In his valuable study of "Capitalist Enterprise and Social Progress," Mr. Maurice Dobb notices that repeated proposals were recently made as regards "super-imposing an element of conscious control on the economic anarchy of the industrial system." He asserts the need for remedying the present instability of the capitalistic system, and prophesies that "the future will see economic anarchy more and more encroached upon by forms of conscious control." While there are many kinds of conscious control (e.g., the extension of the Economic functions of the state or international regulation) the best form of social control must be based on the organization of the producers

and the consumers—an organization which is best carried out on co-operative lines. It is such an organization of the smaller producers, and especially that of consumers, which alone can upset the regime of Mr. Dobb's "first giant"—the great monopolist and financier, the giant *entrepreneur*.

Mr. Dobb proceeds to consider various suggestions for overcoming the economic anarchy of the day. He passes under review a number of potential remedial agencies, among them the growing Labour Movement, Collectivism, "the Semi-Collectivist prescription of the neo-Liberal," and finally Communism. He envisages the views of the Distributivists and notes that while they were once held only by a few eminent members of the *Intelligensia*—like Mr. Chesterton and Mr. Belloc—"since the War, it has been given a political significance by the rise of peasant movements in Central Europe, whose aims seem to be of this kind. Should their attack on modern industrialism gather strength in the future this re-establishment of diffused ownership may well become a political issue with which a reckoning will have to be made." He might have added that it is in this region of Europe where such "Distributivists" hold the reins of power that great advances have been made in Co-operative policy and the greatest zeal has been shown for the principles of Co-operation.

It is a piece of good fortune that while mankind is at the cross roads—contemplating the spectacle of the greatest evils that competitive economy can witness and pondering over the various methods and potentialities of "planned economy"—a lead has been given to the world by the great experiments in International economic co-operation being carried out at Geneva. International Co-operation, though begun long before our days, has become a reality during the last decade; and the Economic historian of the future will note the year of the assembling of the World Economic Conference of 1927 as the greatest landmark in the progress of International Co-operation. But the necessity of the practice of co-operation was obvious both as regards individuals and as regards nations. You cannot appeal for it in one of these spheres

without creating a demand for it in the other. Thus the World Economic Conference, though making International Co-operation its prime object, had to emphasise the importance of Distributive, Productive and Credit Co-operation as the great curative economic agent and the guiding principle behind a great deal of what has been termed "Rationalization," both in the field of agriculture and that of manufactures. Hence that field of Co-operation is also being cultivated, and here again Geneva has been a great focus of activity. Has any greater compliments been ever paid to Co-operation than this—that in the midst of the greatest Depression known to mankind Co-operation is appealed to at every turn of the long search for remedies?

Here then lies a great field of work for economists; and to do them justice they have already begun vigorous work on it. All studies of "World Economics" must need be studies in International Co-operation and we possess a large and growing number of such studies. But we are still awaiting the advent of some outstanding economist who will perform the same service for this new aspect of Economics that was rendered to Competitive Economics by Adam Smith.

The well-known phrase "from Status to Contract" justly summarises the economic task of the last few centuries. But it might be supplemented as regards future development by adding "and from Contract to direct and conscious Co-operation." The need and importance of this addition will be made clearer by a brief explanation. During the last three centuries, the economic world was busy building up a series of great competitive institutions. There was, for example, the development of *entrepreneurship* and of the power of Finance in their various forms. There was also the formation of the Wage-System and of the industrial proletariat. Corresponding to the rise of these and other competitive institutions, the science of Economics became, to a great extent, either a "Science of Prices" or "the Economics of Enterprise." The object of the policy of *Laissez faire* was to facilitate the working and the momentum of competition both upon the national and international planes. But the last few decades have witnessed a great change

both in the Economic outlook and in Economic Institutions Economic Science is becoming more and more a study of Economic welfare. On the Institutional side, we have the use of such a co-operative institution as the Bank for International Settlements in the region of finance. Further co-operative methods and institutions have found a highly favourable soil in the sphere of Money and Banking. In the world of Labour we hear more about plans of Profit-Sharing, of Co-partnership and Employee representation. One remembers Marshall's words when he spoke of progress from a *de facto* profit and loss sharing to conscious profit and loss sharing and thence to the "still higher but much more difficult level of true Co-operation." When we come to international trade and production, we are led to think of the Ottawa programme of "Complementary production" and "Empire rationalisation." Then again, we have International Industrial agreements which are obviously a means of moderating international Competition. Such a rapid development of co-operative institutions is due to the fact that a mainly competitive system left too much room for maladjustment, instability, and conflicts. It was essentially unstable not only on account of the conflicts but on account of the excesses of unregulated competition. Hence, the necessity of inaugurating a comprehensive co-operative policy. To quote again the great Cambridge economist: "the world is only just beginning to be ready for the higher work of the co-operative movement; and its many different forms, may, therefore, be reasonably expected to attain a larger success in the future than in the past."